

ASSESSMENT REPORT

FLOC PROPERTY

COMBINED HELICOPTER-BORNE
MAGNETIC AND ELECTROMAGNETIC SURVEY
(Floc 1-9: YB53629-YB53637)

AND

SOIL AND ROCK GEOCHEMICAL SURVEY

(Floc 1-9: YB53629-YB53637) *2001*
(Floc 10-128: YB53726-YB53844) *expired*
(Floc 130-277: YB53978-YB54125) *expired*

NTS 116 B/4

LAT. 64°08'N; LONG. 139°45'W

Period of Work

(June 3-14 and Aug 16-22, 1995)



May 23, 1996

K. R. Pride

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mill Act and is allowed as
reproduction work in the amount
of \$ 12,100.

M. Burke

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

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LIST OF MAPS

The survey data are presented in sets of numbered maps in the following format:

I **BLACK LINE MAPS: (Scale 1:20,000)**

Map No.	Description
1-1	Base Map; screened topographic base map plus survey area boundary, and UTM grid.
1-2	TOTAL FIELD MAGNETIC CONTOURS; with base map and flight lines.
1-3	HEM OFFSET PROFILES; coaxial 935 Hz data with flight lines, base map and EM anomaly symbols.
1-4	HEM OFFSET PROFILES; coaxial 4,600 Hz data with flight lines, base map and EM anomaly symbols
1-5	SOIL GEOCHEMISTRY and GEOLOGY MAP (1:25,000)
1-6	CLAIM MAP (1:50,000)

I. GEOPHYSICAL REPORT

1. INTRODUCTION

This report describes an airborne geophysical survey flown over the Floc Property for Cominco Exploration by Aerodat Inc. Principal geophysical sensors include a five frequency electromagnetic system and a high sensitivity cesium vapour magnetometers. Ancillary equipment consists of a colour video tracking camera, a Global Positioning System (GPS) for navigation, a radar altimeter and a base station magnetometer.

Block No.	Date Flown	No. of Flights	Line Direction	Area km ²	Line km.	NTS
10-Floc	June 14	2	55°	47	147	116 B4

2. SURVEY AREA

The survey block is located approximately 15 km west-northwest of Dawson City and is accessible by the Top of the World Highway. Topography is shown on the 1:20,000 scale NTS map, plate 1-1. Local relief is generally rugged in the stream valleys but tops of hills are rounded. Elevations range from about 150 m to over 1,050 m.

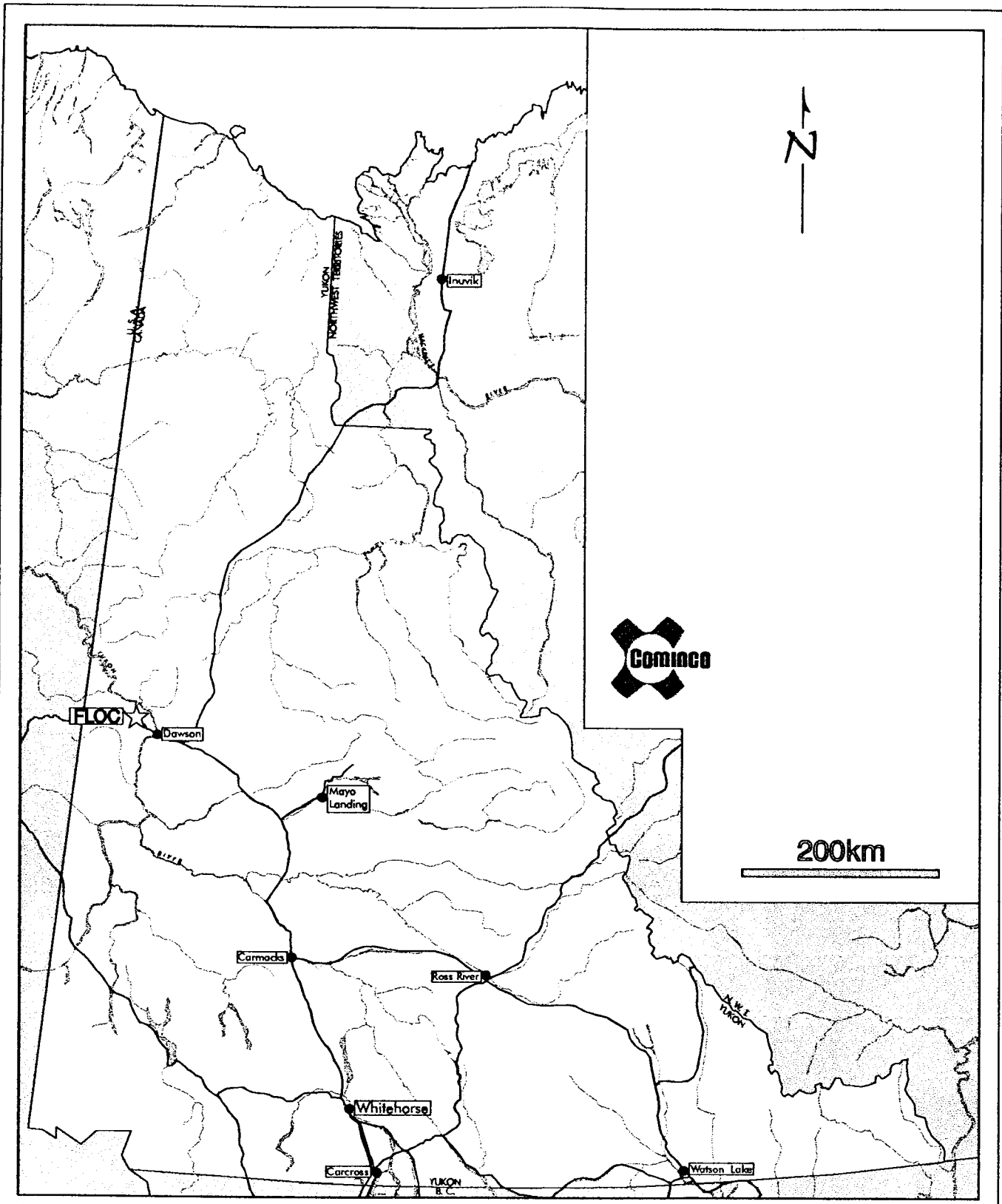
The survey area is shown on the following map, (figure 2, page 6) including local topography and latitude - longitude coordinates. The flight line direction is north-south.

3. SURVEY PROCEDURES

The survey of the Floc Property was completed on June 14, 1995. A total of 2 survey flights were required to complete the project as detailed in the previous table. Principal personnel are listed in Appendix II. Aircraft ground speed is maintained at approximately 60 knots (30 metres per second). The nominal EM sensor height is 30 metres (100 feet), consistent with the safety of the aircraft and crew.

A global positioning system (GPS) consisting of Magnavox MX 9212 operated in differential mode guides aircraft navigation and flight line control. Field processing of the differential GPS data in the field utilizes a PC using software supplied by the manufacturer. One system is installed in the survey helicopter. This involved mounting the receiver antenna on the tail boom. A second system acts as the base station.

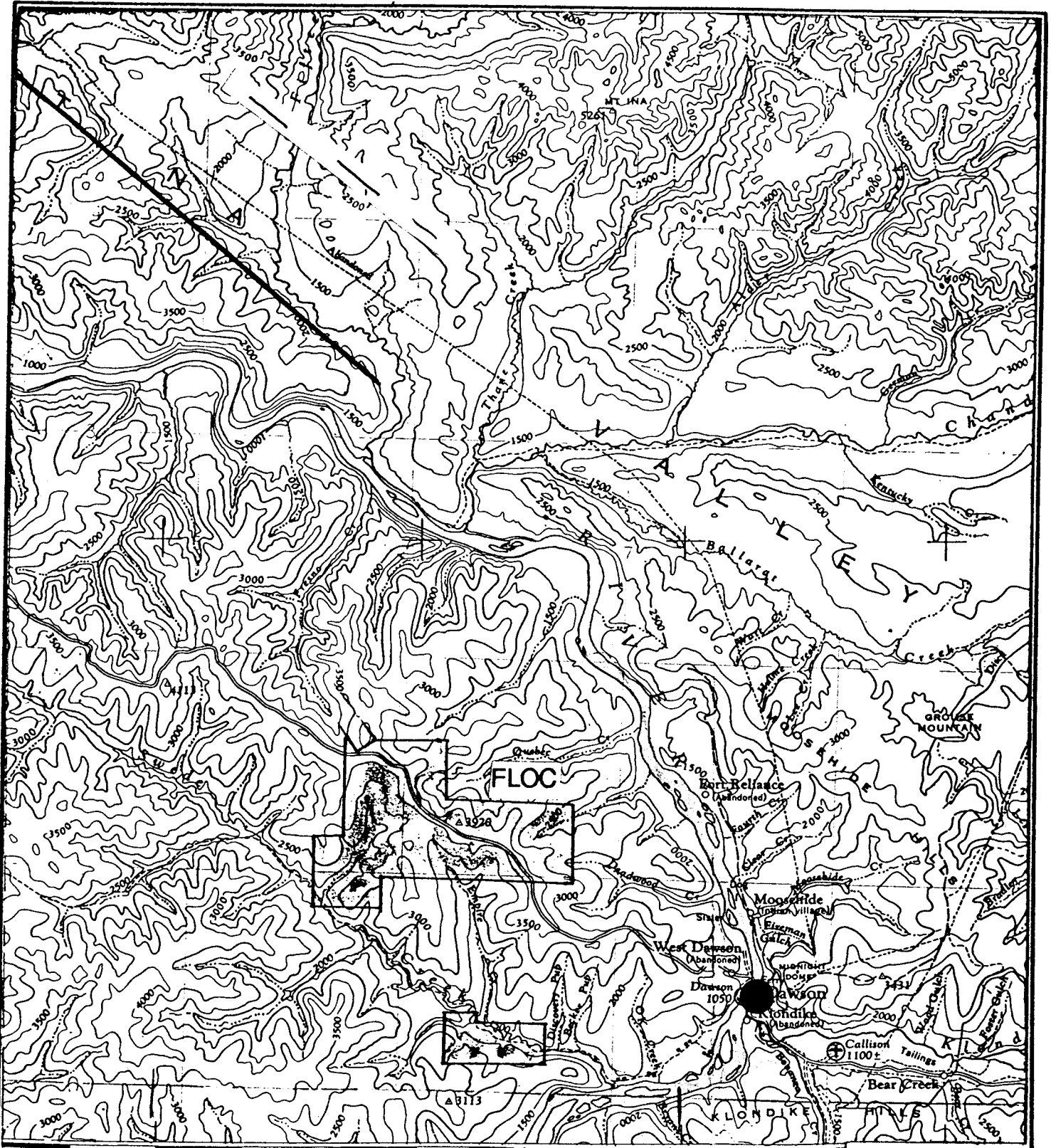
The published NTS maps provide the UTM coordinates of the survey area corners. These coordinates program the navigation system. The navigation system guides the pilot along the survey traverse lines marked on the topographic map. The operator also enters manual fiducials over prominent topographic features.



Drawn by:		Traced by: a. m. a.	
Revised by:	Date:	Revised by:	Date:

FLOC PROPERTY Location Map

Scale: As Shown Date: Dec. 13, 1995 Plate: FIGURE 1



 116 B/4

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

FLOC PROPERTY LOCATION MAP

Scale: 1:250,000 Date: DEC. 13, 1995 Plate: FIGURE 2

Aircraft position is registered by the navigation system. The operator calibrates the geophysical systems at the start, middle (if required) and end of every survey flight. During calibration the aircraft is flown away from ground effects to record electromagnetic zero levels.

4. DELIVERABLES

The maps and report on the results of the survey is presented in two copies. The report includes folded white print copies of all black line maps. The black line maps show topography, UTM grid coordinates and the survey boundary. A full list of all map types is at the beginning of this report. A summary follows:

- 1-1 Base Map
- 1-2 Total Field Magnetic Contours
- 1-3 HEM Offset Profiles - 935 Hz
- 1-4 HEM Offset Profiles - 4,600 Hz

5. AIRCRAFT AND EQUIPMENT

5.1 Aircraft

The survey aircraft was an Eurocopter AS350BA helicopter, piloted by K. Hyllestao, owned and operated by Peace Helicopters Ltd. of Peace River, Alberta. M. Barry of Aerodat acted as navigator and equipment operator. Aerodat performed the installation of the geophysical and ancillary equipment. The survey aircraft flies at a mean terrain clearance of 60 metres (200 feet).

5.2 Electromagnetic System

The electromagnetic system is an Aerodat five frequency configuration. This survey utilized the Hornet bird which has frequencies of 917 Hz and 4,507 Hz for the coaxial coil pairs and 867 Hz, 4,127 Hz and 32,330 Hz for the coplanar coil pairs. The transmitter-receiver separation is seven metres. Inphase and quadrature signals are measured simultaneously for the five frequencies with a time constant of 0.1 seconds. The HEM bird is towed 30 metres below the helicopter.

5.3 Magnetometer

A Scintrex H8 cesium, optically pumped magnetometer sensor, measures the earth's magnetic field. The sensitivity of this instrument is 0.001 nanoTesla at a sampling rate of 0.2 seconds. The sensor is towed in a bird 15 metres below the helicopter 45 metres above the ground.

5.4 Ancillary Systems

Base Station Magnetometer

An IFG-2 proton precession magnetometer is set up at the base of operations to record

diurnal variations of the earth's magnetic field. The date, time and current total field magnetic value are automatically recorded every 10 minutes.

Radar Altimeter

A King KRA-10 radar altimeter records terrain clearance. The output from the instrument is a linear function of altitude.

Tracking Camera

A Panasonic colour video camera records the flight path on VHS video tape. The video tape also shows the flight number, 24 hour clock time and manual fiducial number.

Global Positioning System (GPS)

The GPS is a U.S. Department of Defense program that provides world-wide, 24 hour, all weather position determinations. GPS consists of three segments: 1) a constellation of 24 satellites, 2) ground stations that control the satellites, 3) a receiver.

Analog Recorder

An RMS dot matrix recorder displays the data during the survey. Data is recorded with positive- up and negative- down. The analog zero of the radar altimeter is 5 cm from the top of the analog record. A helicopter terrain clearance of 60 m should therefore be seen some 3 cm from the top of the analog record. Chart speed is 2 mm/second and the 24 hour clock is printed every 20 seconds. The total magnetic field value is printed every 30 seconds. The ranges from the radar navigation system are printed every minute.

Digital Recorder

A DGR-33 data system records the digital survey data on magnetic media.

6.0 DATA PROCESSING AND PRESENTATION

6.1 Base Map

The base map is taken from a photographic enlargement of the NTS topographic maps. A UTM reference grid (lines every kilometre) and the survey area boundary are added.

6.2 Flight Path Map

The GPS receiver takes in coded data from satellites in view and there after works out the range to each satellite. The coded data must therefore include the instantaneous position of the satellite relative to some earth-fixed coordinate system. Normally the receiver must see 4 satellites for a full positional determination; the position of the

receiver is updated every second. The horizontal position accuracy is 25 m but the system may be degraded for civilian use and the autonomous accuracy is then 100 m. However, using two GPS receivers simultaneously, differential corrections can determine a position accuracy of 5 m. The flight path map is drawn using linear interpolation between x, y positions from the navigation system. These positions are updated every second (or about 1.5 m at a scale of 1:20,000). These positions are expressed as UTM eastings (x) and UTM northings (y). The flight path map is merged with the base map by matching UTM coordinates from the base maps and the flight path record. The match is confirmed by checking the position of prominent topographic features as recorded by the manual fiducial marks or as seen on the flight path video record.

6.3 Electromagnetic Survey Data

The electromagnetic data are recorded digitally at a sample rate of 10 per second with a time constant of 0.1 seconds. A two stage digital filtering process rejects major spheric events and reduces system noise.

Local spheric activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major spheric events. The signal to noise ratio is further enhanced by the application of a low pass digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant gives minimal profile distortion.

Following the filtering process, a base level correction is made using EM zero levels determined during high altitude calibration sequences. The correction applied is a linear function of time that ensures the corrected amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data is the basis for determination of apparent resistivity (see section 6.6).

6.4 Total Field Magnetics

The aeromagnetic data are corrected for diurnal variations by adjustment with the recorded base station magnetic values. No corrections for regional variations are applied. The corrected profile data are interpolated on to a regular grid using an Akima spline technique. The grid provided the basis for threading the presented contours. The minimum contour interval is 2 nT with a grid cell size of 25 m.

7. ELECTROMAGNETIC ANOMALY SELECTION

Usually two sets of stacked colour coded profile maps of one coaxial and one coplanar inphase and quadrature responses are used to select conductive anomalies of interest.

Selection of anomalies is based on conductivity as indicated by the inphase to quadrature ratios of the 935 Hz and/or 4,600 Hz coaxial data, anomaly shape, and anomaly profile characteristics relative to coaxial and corresponding coplanar responses (see discussion and figure in Appendix II). It is difficult to differentiate between responses associated with the edge effects of flat lying conductors and actual poor conductivity bedrock conductors on the edge of or overlain by flat lying conductors. Poor conductivity bedrock conductors having low dips will also exhibit responses that may be interpreted as surficial overburden conductors. In such cases, where the source of the conductive response appears to be ambiguous, the anomaly is still selected for plotting. In some situations the conductive response has line to line continuity and some magnetic association thus providing possible evidence that the response is related to an actual bedrock source.

The calculation of the depth to the conductive source and its conductivity is based on the 4,600 Hz data assuming a thin vertical sheet model. The amplitude of the inphase and quadrature responses are used for the calculations which are automatically determined by computer. These data are listed in appendix II and the depth and conductivity values are shown with each plotted anomaly. Further detailed discussion and illustration of the determination of these values is contained in Appendix II.

Anomalies having amplitudes below a certain level and/or low conductivity value are given a zero rating with the category increasing for increasing conductivity values that are statistically reliable.

Very conductive flat lying material is contributing to the electromagnetic responses in some of the areas. These areas are characterized by identically shaped coaxial and coplanar response profiles. This is a typical response shape usually seen over a flat lying conductor as illustrated in Appendix II, in the figure entitled "HEM Response Profile Shapes" profile I. These areas are best defined on resistivity map products. In the more conductive flat lying zones HEM intercepts at response peaks have been chosen to show the conductivity levels associated with these flat lying sources.

Flat ribbon type sources are characterized by a M shaped coaxial anomaly with a single peaked coplanar anomaly centred in the trough between the two coaxial peaks. This is illustrated in Appendix II in the same figure as previously mentioned. The coaxial peak of these types of profiles define the edge of the conductive source.

7.1 Interpretation

It is very rare not detecting a single conductor during an AEM survey over a 147 line km block. The Floc property shows no low frequency anomalies and only one very weak four-liner in the west end of the block. This may reflect a weakly conductive fracture which cuts obliquely across a magnetic low. The magnetics show strong NW-SE trending, wide highs separated by narrow pronounced lows. These correlate with Tertiary age porphyry dykes. N60E breaks are also seen but there are no targets which warrant follow-up.

II. GEOCHEMICAL REPORT

1. SUMMARY

During the period of June 3-14, and August 16-22, 1995, a geochemical survey was carried out on the Floc Property. A program of contour soil and silt sampling (273 samples) was designed to follow-up drainage basins anomalous in Cu/Zn/Pb, outlined by a 1978 RGS survey and by a 1979 Cominco survey. Preliminary geological mapping by Cominco indicates that the claims are underlain by the Nasina Assemblage, consisting of Devon.-Mississippian black meta-pellites, quartzites and thin felsic meta-tuffs and the Klondike Schist Assemblage, consisting of Permian(?) felsic meta-tuffs, rhyolite, mafic meta-tuffs, meta-gabbro and intercalated meta-pellites and quartzites.

The results of whole rock geochemistry on samples of quartz-sericite schist and chlorite schist as well as siliceous cherty units of possible volcanic affinity, confirmed the field observations that the Klondike Schist, previously mapped by the GSC as meta-sediments, contains a significant calcalkaline-felsic volcanic component including quartz-eye rhyolite, massive flow-banded rhyolite, crystal and ash tuffs and an alkaline component including mafic sills, flows and coarse lapilli.

Contour soil sampling detected three areas anomalous in Cu/Zn/Pb/Ag. Geological mapping and prospecting sourced one of the anomalies to finely disseminated chalcopyrite, galena and sphalerite along foliation layering in felsic-meta-tuffs.

Lead isotope analyses of galena from the above mineralization indicate a Permian age which is younger than the VMS deposits at KZK and Wolverine. Two soil samples anomalous in Pb from other parts of the Floc property were also submitted for Pb-isotope analyses. These also indicate a Permian age, probably from a similar mineralized source.

2. LOCATION

The Floc Property (NTS:116B/4) is located 15 km west of Dawson and straddles the Top of the World Highway. Access is by truck and helicopter from Dawson City. The property is heavily vegetated with moss-mat, buck-brush and black spruce which limits rock exposures to less than 1%.

3. TENURE

The Floc Property is 100% owned by Cominco Ltd. and comprises 276 mineral claims. The Floc 1-9 claims, having record numbers YB53629-YB53637, were recorded on June 2, 1995, the Floc 10-128, having record numbers YB53726-YB53844, were recorded on June 30, 1995 and the Floc 130-277, having record numbers YB53978-YB54125, were recorded on July 25, 1995.

4. THE 1995 PROGRAM

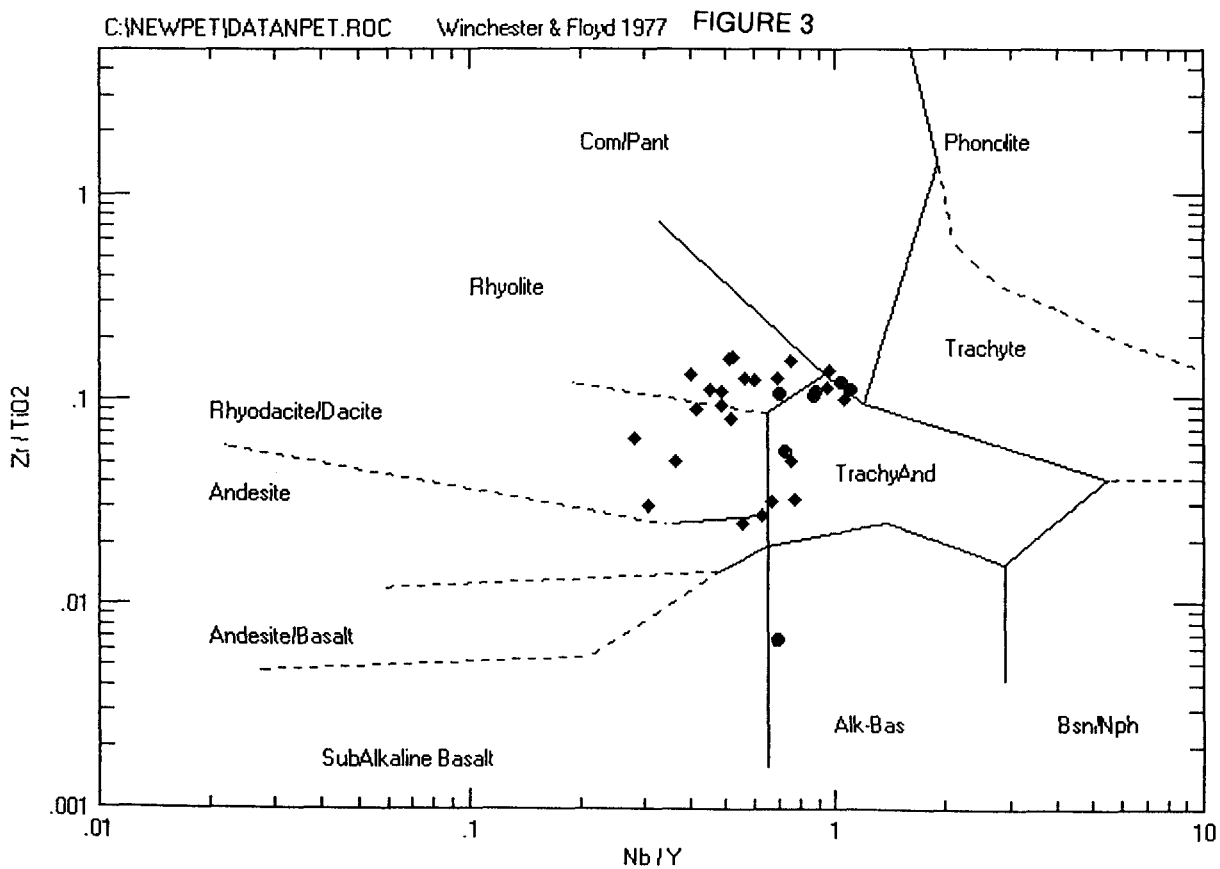
The geochemical program was carried out between June 3-14 and August 16-22, 1995. The collection of 273 soil and silt samples was designed to follow-up anomalous drainage basins highlighted by a 1978 RGS stream sediment survey and a 1979 Cominco survey. Permafrost on the north-facing slopes made soil sampling difficult. The geochemical sample locations and analytical data are presented in plate 1-5 and Appendix IV.

4.1 Contour Soil Sampling

Soil samples were collected from the B-horizon using a long-narrow profile spade and placed in pre-numbered kraft paper sample bags and then shipped to Cominco's Exploration Laboratory at 1486 East Pender St., Vancouver, B. C. for analyses. The samples were dried and sieved to -80 mesh, then 0.50 grams of the -80 mesh fraction was digested in acid (3HNO₃: 1HCL) and analyzed for Cu, Zn, Pb by Atomic Absorption.

4.2 Whole Rock Geochem

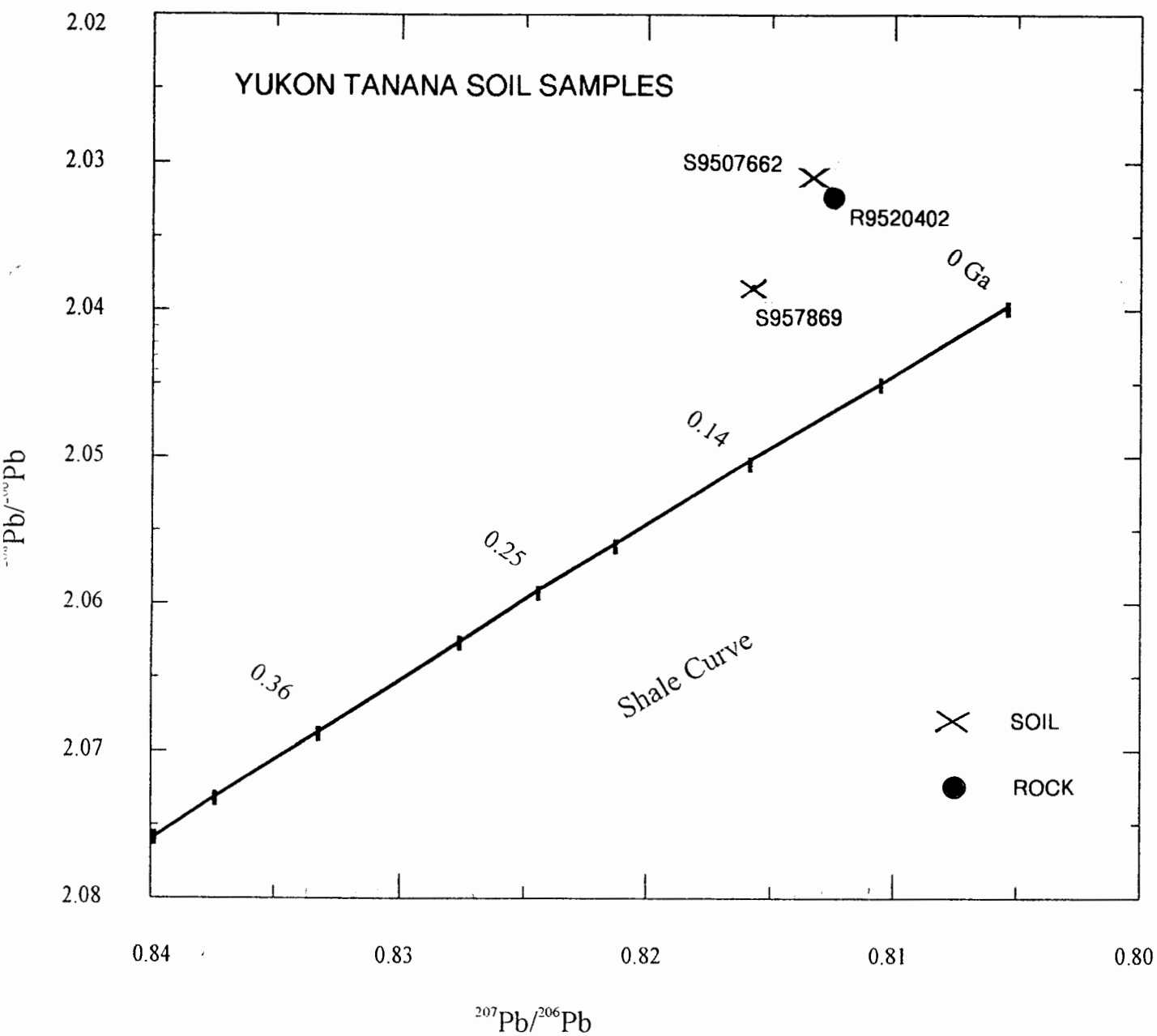
The whole rock analysis involved crushing and milling 3 grams of material. Cu, Pb, Zn, Ni and Ag were obtained by Atomic Absorption after aqua regia decomposition. Ba, Nb, Y and Zr were obtained by X-Ray fluorescence of a pressed pellet. Major element oxides were obtained by Lithium Borate fusion/X-Ray fluorescence. ICP analyses involved 0.5 grams of material digested in hot aqua regia. The Winchester and Floyd plot, figure 3, indicates a significant felsic volcanic component to the suite of rocks from the Floc Property. The analytical data are presented in Appendix V.



4.3 Lead Isotope Geochem

Pb-isotope analytical work on two lead-bearing soil samples and one galena-sulphide sample was conducted by the University of B. C.'s Geochronology Lab. The data are listed below and are plotted on figure 4.

Lab No.	ppm Pb	$^{206}\text{Pb}/^{204}\text{Pb}$	$^{207}\text{Pb}/^{204}\text{Pb}$	$^{208}\text{Pb}/^{204}\text{Pb}$
R9520402 rock	17,100	19.32	15.714	39.278
S957869 soil	995	19.256	15.716	39.244
S9507662 soil	1300	19.376	15.746	39.417

Figure 4: $^{208}\text{Pb}/^{206}\text{Pb}$ vs $^{207}\text{Pb}/^{206}\text{Pb}$ 

5. CONCLUSIONS AND RECOMMENDATIONS


Follow-up of the 1978-1979 stream sediment Cu/Pb/Zn anomalies with contour soil sampling highlighted three areas anomalous in Cu/Pb/Zn. The soil values were generally an order of magnitude higher than the silt values. For example, a stream sediment sample containing 12 ppm Cu, 43 ppm Pb, 112 ppm Ag is 2 km down stream from a 200m x 400 m area of up to 134 ppm Cu, 980 ppm Pb, 644 ppm Zn. Prospecting this anomaly was successful in locating mineralization in bedrock (0.14% Cu, 1.7% Pb, 0.71% Zn, 65 ppm Ag across 30 cm. Two other areas of anomalous Pb in contour soils, 995 ppm Pb and 1300 ppm Pb, occur 1 km up-stream from silts carrying 35 ppm Pb and 40 ppm Pb respectively. Pb-isotope analyses of these soils and the above mentioned showing, indicated a Permian age.

Whole rock geochemistry of strongly foliated quartz-muscovite and quartz-sericite schist, confirmed field observations that these rocks represent felsic volcanic rocks (rhyolite, ash tuffs and crystal tuffs) and similarly, chlorite-biotite schists represent mafic volcanic rocks (alkaline basalt, lapilli tuff and gabbroic sills).

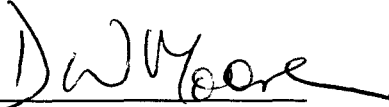
The results of the Pb-isotope analyses on galena from mineralized outcrop and lead-bearing soils indicate a Permian age; similar to the age of the felsic volcanic host rocks. Several small Cu/Pb/Zn VMS occurrences in the Dawson area, hosted by Permian felsic volcanics, have similar Pb-isotope ages (Baldy, Bor, Winage, Bronson). In the Pelly Mt. area, Dev.-Miss. felsic volcanic rocks are an important host to VMS deposits such as KZK and Wolverine. To date there are no known VMS deposits hosted by Permian felsic volcanics within the Yukon Tanana Terrane.

The airborne survey did not detect a single conductor, and it would appear that the Cu/Pb/Zn mineralization and the soil anomalies on the Floc Property do not indicate significant near-surface mineralization. One area of highly anomalous contours soils was not covered by the survey. Within the unglaciated areas between Dawson and Carmacks, sulphide deposits such as Casino and Williams Ck. exhibit oxidation to a depth of 100-150 m. Since the effective depth penetration of the Aerodat survey is 60-80 metres, there is a possibility that an unoxidized sulphide deposit below 100-150 m may have gone undetected.

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APPENDIX I: STATEMENT OF EXPENDITURES

FLOC 1-9

Aerodat Inc. Airborne EM and Mag Survey 147 lkm x \$73 \$ 10,731.00

FLOC 10-277

Helicopter (2 hrs at \$ 750/hr) 1,500.00

Geochemical analyses (237soils x \$10.75/sample+ 33 rocks x\$42/sample) 3,933.00

Salaries 1,600.00

Domicile 1,200.00

Report preparation 250.00

8,483.00

Total : \$ 19,214.00

APPENDIX II

GENERAL INTERPRETIVE CONSIDERATIONS

GENERAL INTERPRETIVE CONSIDERATIONS

Electromagnetic

The Aerodat electromagnetic system utilized two different transmitter-receiver coil geometries. The traditional coaxial coil configuration is operated at widely separated frequencies. The horizontal coplanar coil configuration is similarly operated at different frequencies where at least one pair is approximately aligned with one of the coaxial frequencies.

The electromagnetic response measured by the helicopter system is a function of the "electrical" and "geometrical" properties of the conductor. The "electrical" property of a conductor is determined largely by its electrical conductivity, magnetic susceptibility and its size and shape; the "geometrical" property of the response is largely a function of the conductor's shape and orientation with respect to the measuring transmitter and receiver.

Electrical Considerations

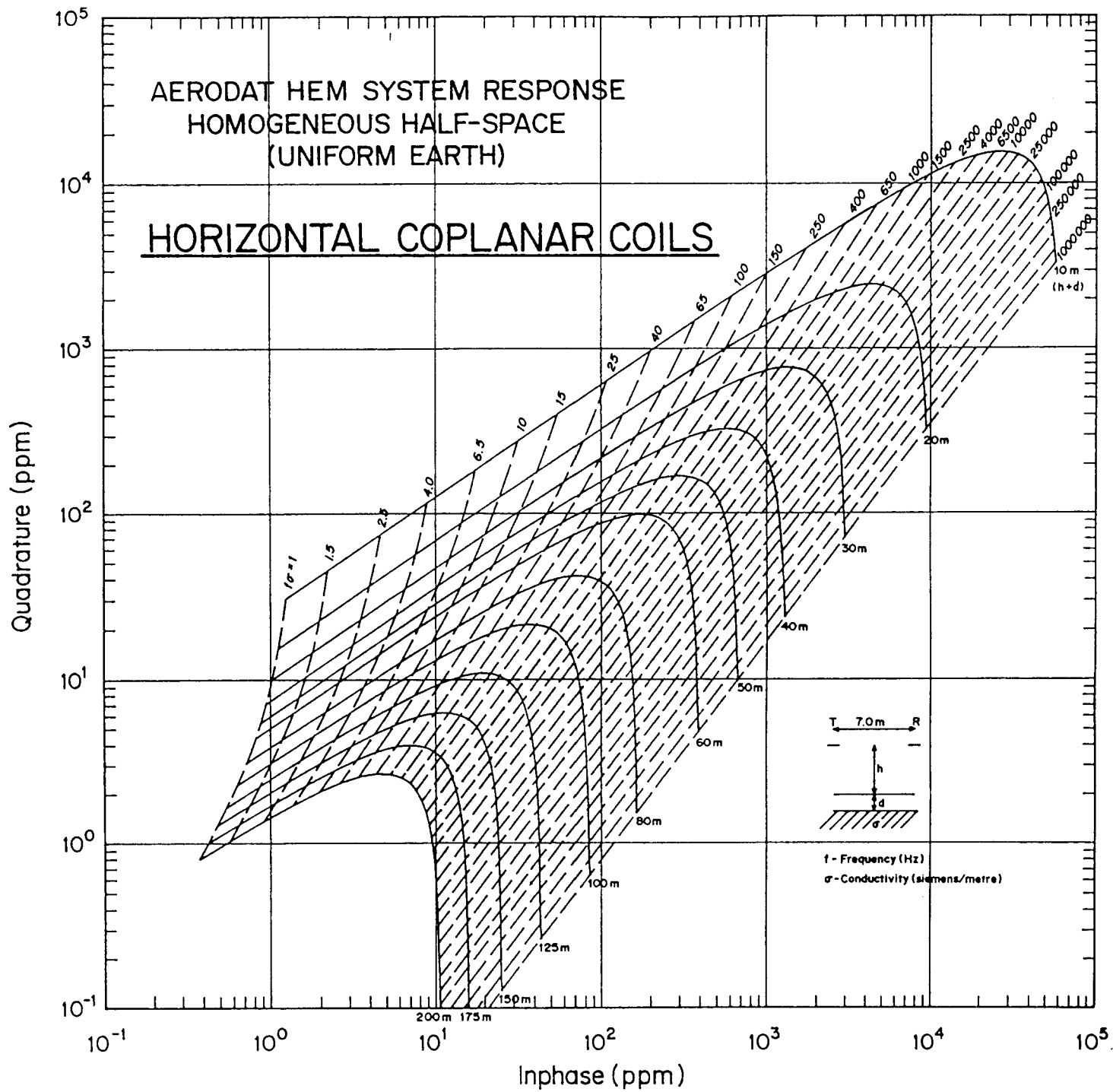
For a given conductive body the measure of its conductivity or conductance is closely related to the measured phase shift between the received and transmitted electromagnetic field. A small phase shift indicates a relatively high conductance, a large phase shift lower conductance. A small phase shift results in a large inphase to quadrature ratio and a large phase shift a low ratio. This relationship is shown quantitatively for a non-magnetic vertical half-plane and half space models on the accompanying phasor diagrams. Other physical models will show the same trend but different quantitative relationships.

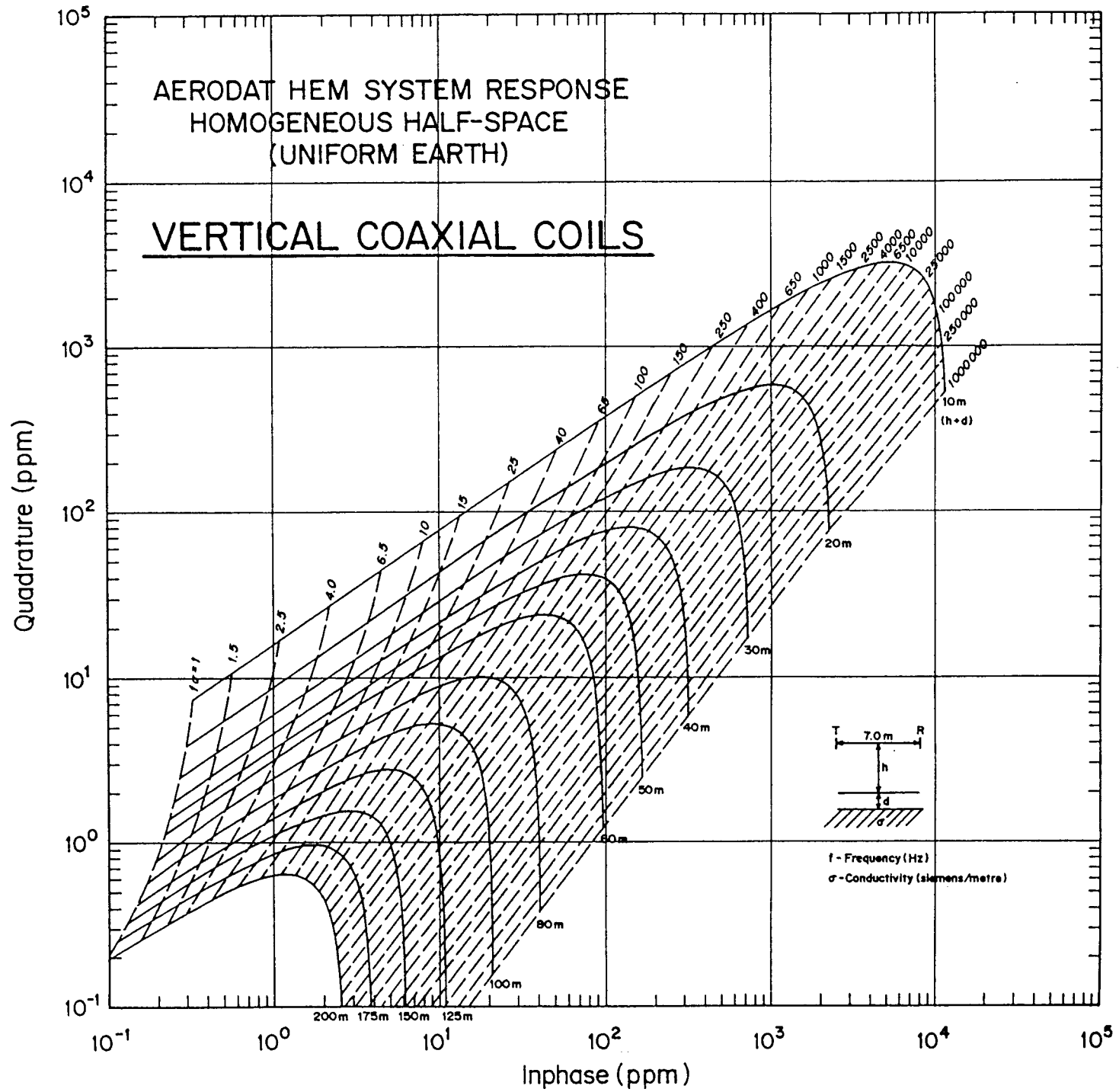
The phasor diagram for the vertical half-plane model, as presented, is for the coaxial coil configuration with the amplitudes in parts per million (ppm) of the primary field as measured at the response peak over the conductor. To assist the interpretation of the survey results the computer is used to identify the apparent conductance and depth at selected anomalies. The results of this calculation are presented in anomaly listings included in the survey report and the conductance and inphase amplitude are presented in symbolized form on the map presentation.

The conductance estimate is most reliable when anomaly amplitudes are large and background resistivities are high. Where the anomaly is of low amplitude and background resistivities are low, the conductance estimates are much less reliable. In such situations, the conductance estimate is often quite low regardless of the true nature of the conductor. This is due to the elevated background response levels in the quadrature channel. In an extreme case, the conductance estimate should be discounted and should not prejudice target selection.

AERODAT HEM SYSTEM RESPONSE
 HOMOGENEOUS HALF-SPACE
 (UNIFORM EARTH)

HORIZONTAL COPLANAR COILS





The conductance and depth values as presented are correct only as far as the model approximates the real geological situation. The actual geological source may be of limited length, have significant dip, may be strongly magnetic. Its conductivity and thickness may vary with depth and/or strike and adjacent bodies and overburden may have modified the response. In general the conductance estimate is less affected by these limitations than is the depth estimate, but both should be considered as relative rather than absolute guides to the anomaly's properties.

Conductance in mhos is the reciprocal of resistance in ohms and in the case of narrow slab-like bodies is the product of electrical conductivity and thickness.

The higher ranges of conductance, greater than 2-4 mhos, indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials that conduct electronically are limited to certain metallic sulphides and to graphite. High conductance anomalies, roughly 10 mhos or greater, are generally limited to massive sulphides or graphites.

Sulphide minerals, with the exception of such ore minerals as sphalerite, cinnabar and stibnite, are good conductors. Sulphides may occur in a disseminated manner that inhibits electrical conduction through the rock mass. In this case the apparent conductance can seriously underrate the quality of the conductor in geological terms. In a similar sense the relatively non-conducting sulphide minerals noted above may be present in significant concentrations in association with minor conductive sulphides, and the electromagnetic response will only relate to the minor associated mineralization. Indicated conductance is also of little direct significance for the identification of gold mineralization. Although gold is highly conductive, it would not be expected to exist in sufficient quantity to create a recognizable anomaly. Minor accessory sulphide mineralization may however provide a useful indirect indication.

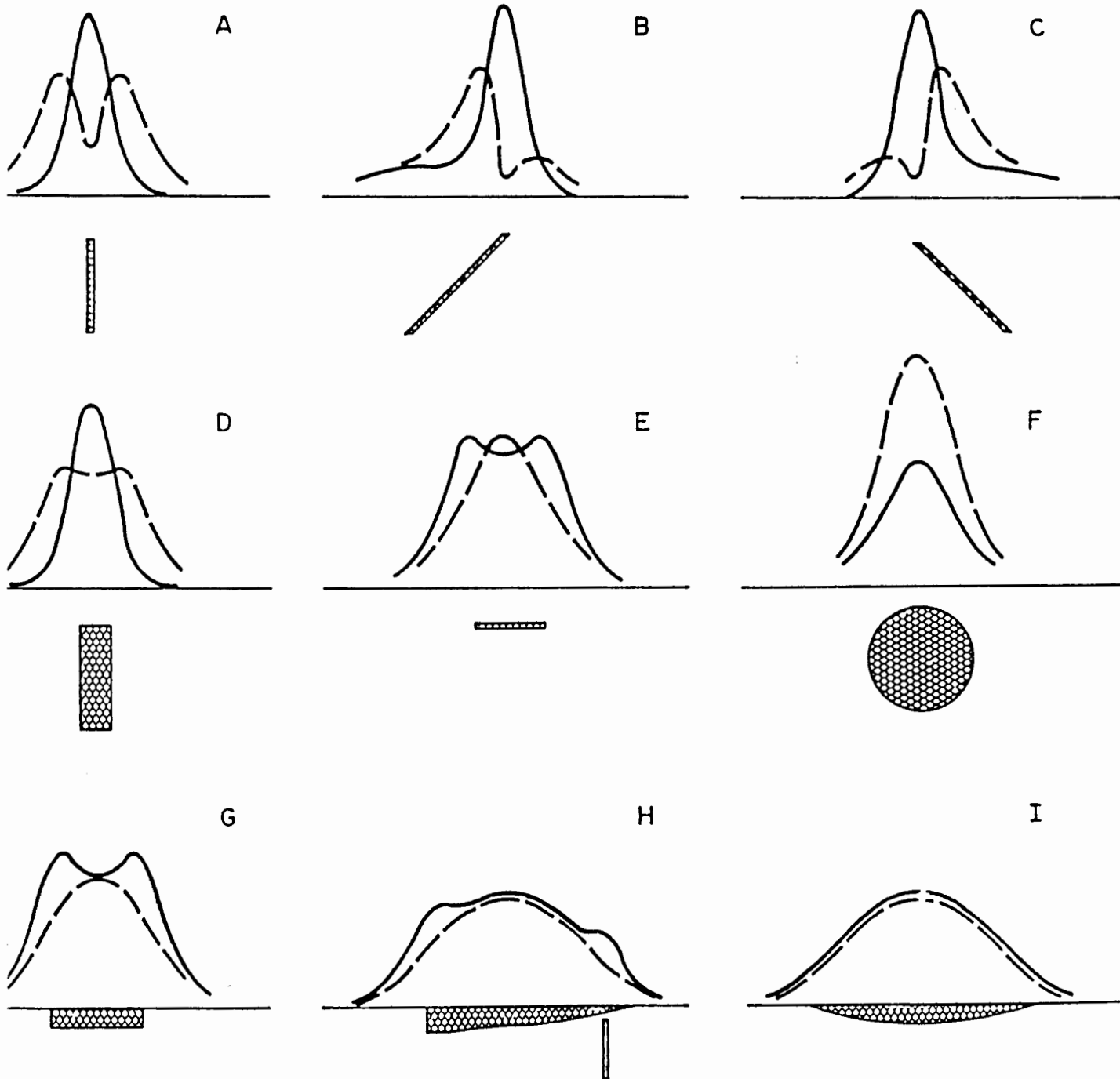
In summary, the estimated conductance of a conductor can provide a relatively positive identification of significant sulphide or graphite mineralization. A moderate to low conductance value does not rule out the possibility of significant economic mineralization.

Geometrical Considerations

Geometrical information about the geologic conductor can often be interpreted from the profile shape of the anomaly. The change in shape is primarily related to the change in inductive coupling among the transmitter, the target, and the receiver. The accompanying figure shows a selection of HEM response profile shapes from nine idealized targets. Response profiles are labelled A through I. These labels are used in the discussion which follows.

HEM RESPONSE PROFILE SHAPE AS AN INDICATOR OF CONDUCTOR GEOMETRY

COAXIAL vertical scale 1 ppm/unit
 COPLANAR vertical scale 4 ppm/unit



In the case of a thin, steeply dipping, sheet-like conductor, the coaxial coil pair will yield a near symmetric peak over the conductor. On the other hand, the coplanar coil pair will pass through a null couple relationship and yield a minimum over the conductor, flanked by positive side lobes (Profile A). As the dip of the conductor decrease from vertical, the coaxial anomaly shape changes only slightly, but in the case of the coplanar coil pair the side lobe on the down dip side strengthens relative to that on the up dip side (Profiles B and C).

As the thickness of the conductor increases, induced current flow across the thickness of the conductor becomes relatively significant and complete null coupling with the coplanar coils is no longer possible (Profile D). As a result, the apparent minimum of the coplanar response over the conductor diminishes with increasing thickness, and in the limiting case of a fully 3 dimensional body or a horizontal layer or half-space, the minimum disappears completely.

A horizontal conducting layer such as a horizontal thin sheet or overburden will produce a response in the coaxial and coplanar coils that is a function of altitude (and conductivity if not uniform). The profile shape will be similar in both coil configurations with an amplitude ratio (coplanar:coaxial) of about 4:1* (Profiles E and G).

In the case of a spherical conductor, the induced currents are confined to the volume of the sphere, but not relatively restricted to any arbitrary plane as in the case of a sheet-like form. The response of the coplanar coil pair directly over the sphere may be up to 8* times greater than that of the coaxial pair (Profile F).

In summary, a steeply dipping, sheet-like conductor will display a decrease in the coplanar response coincident with the peak of the coaxial response. The relative strength of this coplanar null is related inversely to the thickness of the conductor. A pronounced null indicates a relatively thin conductor. The dip of such a conductor can be inferred from the relative amplitudes of the side-lobes.

Massive conductors that could be approximated by a conducting sphere will display a simple single peak profile form on both coaxial and coplanar coils, with a ratio between the coplanar to coaxial response amplitudes as high as 8*.

Overburden anomalies often produce broad poorly defined anomaly profiles (Profile I). In most cases, the response of the coplanar coils closely follows that of the coaxial coils with a relative amplitude ration of 4*.

Occasionally, if the edge of an overburden zone is sharply defined with some significant depth extent, an edge effect will occur in the coaxial coils. In the case of a horizontal conductive ring or ribbon, the coaxial response will consist of two peaks, one over each edge; whereas the coplanar coil will yield a single peak (Profile H).

- It should be noted at this point that Aerodat's definition of the measured ppm unit is related to the primary field sensed in the receiving coil without normalization to the maximum coupled (coaxial configuration). If such normalization were applied to the Aerodat units, the amplitude of the coplanar coil pair would be halved.

Magnetics

The Total Field Magnetic Map shows contours of the total magnetic field, uncorrected for regional variation. Whether an EM anomaly with a magnetic correlation is more likely to be caused by a sulphide deposit than one without depends on the type of mineralization. An apparent coincidence between an EM and a magnetic anomaly may be caused by a conductor which is also magnetic, or by a conductor which lies in close proximity to a magnetic body. The majority of conductors which are also magnetic are sulphides containing pyrrhotite and/or magnetite. Conductive and magnetic bodies in close association can be, and often are, graphite and magnetite. It is often very difficult to distinguish between these cases. If the conductor is also magnetic, it will usually produce an EM anomaly whose general pattern resembles that of the magnetics. Depending on the magnetic permeability of the conducting body, the amplitude of the inphase EM anomaly will be weakened, and if the conductivity is also weak, the inphase EM anomaly may even be reversed in sign.

The interpretation of contoured aeromagnetic data is a subject on its own involving an array of methods and attitudes. The interpretation of source characteristics for example from total field results is often based on some numerical modelling scheme. The vertical gradient data is more legible in some aspects however and useful inferences about source characteristics can often be read off the contoured VG map.

The zero contour lines in contoured VG data are often cited as a good approximation to the outline of the top of the magnetic source. This only applies to wide (relative to depth of burial) near vertical sources at high magnetic latitudes. It will give an incorrect interpretation in most other cases.

Theoretical profiles of total field and vertical gradient anomalies from tabular sources at a variety of magnetic inclinations are shown in the attached figure. Sources are 10, 50 and 200 m wide. The source-sensor separation is 50 m. The thin line is the total field profile. The thick line is the vertical gradient profile.

The following comments about source geometry apply to contoured vertical gradient data for magnetic inclinations of 70 to 80°.

Outline

Where the VG anomaly has a single sharp peak, the source may be a thin near-vertical tabular source. It may be represented as a magnetic axis or as a tabular source of measurable width - the choice is one of geological preference.

Where the VG anomaly has a broad, flat or inclined top, the source may be a thick tabular source. It may be represented as a thick body where the width is taken from the zero contour lines if the body dips to magnetic north. If the source appears to be dipping to the south (i.e. the VG anomaly is asymmetric), the zero contours are less reliable indicators of outline. The southern most zero contour line should be ignored and the outline taken from the northern zero contour line and the extent of the anomaly peak width.

Dip

A symmetrical vertical gradient response is produced by a body dipping to magnetic north. An asymmetrical response is produced by a body which is vertical or dipping to the south. For southern dips, the southern most zero contour line may be several hundred meters south of the source.

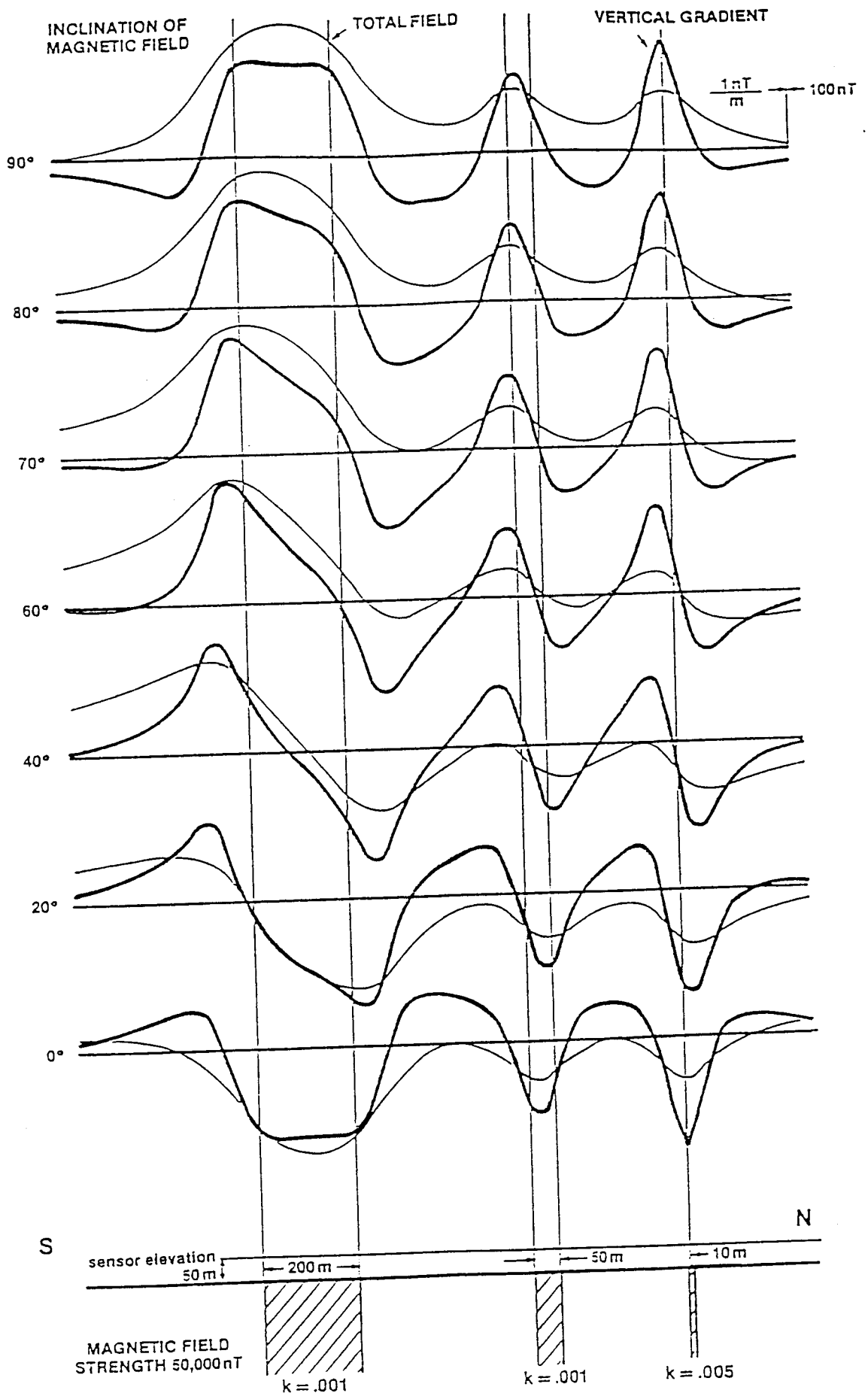
Depth of Burial

The source-sensor separation is about equal to half of the distance between the zero contour lines for thin near-vertical sources. The estimated depth of burial for such sources is this separation minus 50 m. If a variety of VG anomaly widths are seen in an area, use the narrowest width seen to estimate local depths.

VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is locally horizontal and normal to a line pointing at the transmitter.

The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and vertical quadrature component from two VLF stations. These stations are designated Line and Ortho. The line station is ideally in a direction from the survey area at right angles to the flight line direction. Conductors normal to the flight line direction point at the line station and are therefore optimally coupled to VLF magnetic fields and in the best situation to gather secondary VLF currents. The ortho station is ideally 90 degrees in azimuth from the line station.



The relatively high frequency of VLF (15-25) kHz provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measurable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground to depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically, it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the flight direction are most clearly rendered and usually dominate the map presentation.

The total field anomaly is an indicator of the existence and position of a conductor. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

Conversely a negative total field anomaly is often seen over local resistivity highs. This is because the VLF field produces electrical currents which flow towards (or away from) the transmitter. These currents are gathered into a conductor and are taken from resistive bodies. The VLF system sees the currents gathered into the conductor as a total field high. It sees the relative absence of secondary currents in the resistor as a total field low.

As noted, VLF anomaly trends show a strong bias towards the VLF transmitter. Structure which is normal to this direction may have no associated VLF anomaly but may be seen as a break or interruption in VLF anomalies. If these structures are of particular interest, maps of the ortho station data may be worthwhile.

Conductive overburden will obscure VLF responses from bedrock sources and may produce low amplitude, broad anomalies which reflect variations in the resistivity of thickness of the overburden.

Extreme topographic relief will produce VLF anomalies which may bear no relationship to variations in electrical conductivity. Deep gullies which are too narrow to have been surveyed at a uniform sensor height often show up as VLF total field lows. Sharp ridges show up as total field highs.

The vertical quadrature component over steeply dipping sheet-like conductor will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the depth.

The vertical quadrature component is rarely presented. Experience has shown the total field to be more sensitive to bedrock conductors and less affected by variations in conductive overburden.

Apparent Resistivity/Conductivity Maps

Overburden and different types of bedrock may be modelled as a large area horizontal conductor of fixed thickness. A phasor diagram may be constructed, in the same fashion as for the vertical sheet, to convert the measured HEM in-phase and quadrature response to a depth and conductivity value for a horizontal layer. Traditionally if the thickness is large, an infinite half-space, the associated conductivity value is referred to as "apparent conductivity". We have generalized the use of the word "apparent" to include any model where the thickness of the layer is a fixed as opposed to a variable parameter. The units of apparent resistivity are ohm-m and those of apparent conductivity are the inverse mhos/m or siemen/m. If the chosen model layer thickness is close to the true thickness of the conductor then the apparent conductivity will closely conform to the true value; however, if the thickness is inappropriate the apparent value may be considerably different from the true value.

The benefit of the apparent conductivity mapping is that it provides a simple robust method of converting the HEM in-phase and quadrature response to apparent change in ground conductivity.

A phasor diagram for several apparent resistivity models is presented. The general forms for the various thicknesses is very similar and also closely resembles the diagram for the vertical sheet. The diagrams also show the curves for apparent depth. As with the conductivity value the depth value is meaningful if the model thickness closely resembles the true conductive layer thickness. If the HEM response from a thin conducting layer is applied to a thick layer model the apparent conductivity and depth will be less than the true conductivity and depth.

APPENDIX III
ANOMALY LISTINGS
FLOC PROPERTY

AREA 10 TANANA PROJECT

FLOC PROPERTY

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR BIRD				
				INPHASE	QUAD.	CTP	DEPTH	HEIGHT		
						MHOS	MTRS	MTRS		
31	10350	A/	0	-0.4	5.5	0.0	0	40	569867.3	7107942.5
31	10350	B/	0	1.6	8.3	0.0	0	43	570066.8	7108066.5
31	10340	A/	0	1.2	4.5	0.0	1	50	569952.0	7108204.5
31	10330	A/	0	-1.3	7.5	0.0	0	39	571211.3	7109401.0
31	10320	A/	0	-0.4	4.7	0.0	0	37	569696.5	7108754.5
31	10320	B/	0	1.5	6.8	0.0	0	54	569109.2	7108440.0
31	10310	A/	0	-1.7	10.7	0.0	0	33	568415.9	7108309.5
31	10310	B/	0	1.8	7.4	0.0	6	35	568928.9	7108629.0
31	10310	C/	0	0.5	9.8	0.0	0	32	569122.5	7108748.0
31	10310	D/	0	0.1	5.5	0.0	0	33	569271.8	7108871.5
31	10310	E/	0	-1.3	5.1	0.0	0	26	570424.5	7109619.5
31	10300	A/	0	1.9	9.3	0.0	0	39	570907.6	7110286.0
31	10300	B/	0	3.7	9.5	0.1	8	36	570659.1	7110135.0
31	10300	C/	0	3.3	6.9	0.2	18	34	569455.1	7109340.0
31	10300	D/	0	1.7	3.5	0.1	24	42	568915.7	7108942.5
31	10300	E/	0	2.3	5.5	0.1	16	38	568706.6	7108818.0
31	10290	A/	0	1.5	7.1	0.0	0	42	568402.0	7109176.0
31	10290	B/	0	1.0	8.9	0.0	0	35	568519.5	7109234.5
31	10290	C/	0	0.9	9.8	0.0	0	34	569380.3	7109593.5
31	10280	A/	0	0.1	9.8	0.0	0	43	569922.2	7110395.5
31	10280	B/	0	1.8	8.5	0.0	2	35	569217.0	7109855.5
31	10270	A/	0	-0.7	11.1	0.0	0	37	568263.9	7109663.0
31	10270	B/	0	-0.1	11.4	0.0	0	39	568681.9	7109857.5
31	10270	C/	0	1.5	8.4	0.0	0	36	569879.3	7110749.0
31	10270	D/	0	1.2	8.8	0.0	2	30	570008.4	7110830.5
32	10260	A/	0	3.0	13.5	0.0	0	35	569420.8	7110774.0
32	10260	B/	0	5.2	8.3	0.3	14	38	568889.5	7110429.5
32	10260	C/	0	2.2	13.4	0.0	8	21	568575.2	7110121.0
32	10260	D/	0	1.9	5.3	0.0	0	52	567171.6	7109305.0
32	10260	E/	0	2.4	6.3	0.1	0	54	567063.7	7109234.5
32	10250	A/	0	1.6	8.2	0.0	0	45	566954.0	7109485.0
32	10250	B/	0	2.1	9.4	0.0	0	57	567884.6	7110165.5
32	10250	C/	0	1.6	10.7	0.0	0	32	569552.1	7111234.5
32	10240	A/	0	2.8	5.8	0.1	7	48	567704.8	7110364.5

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

AREA 10 TANANA PROJECT

FLOC PROPERTY

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR BIRD				
				INPHASE	QUAD.	CTP	DEPTH	HEIGHT		
						MHOS	MTRS	MTRS		
32	10240	B/	0	2.0	6.4	0.0	11	36	566721.3	7109681.0
32	10230	A/	0	1.4	6.1	0.0	0	44	566159.7	7109642.0
32	10230	B/	0	0.0	8.2	0.0	0	46	566405.6	7109841.5
32	10230	C/	0	0.5	8.8	0.0	0	49	566518.2	7109915.5
32	10230	D/	0	2.8	9.0	0.1	0	45	568405.1	7111220.0
32	10220	A/	0	5.4	15.0	0.1	0	40	568321.0	7111420.5
32	10220	B/	0	3.1	7.7	0.1	16	32	566280.3	7110093.0
32	10210	A/	0	1.0	10.9	0.0	0	38	566090.9	7110316.0
32	10210	B/	0	-0.5	7.9	0.0	0	39	568010.1	7111639.5
32	10200	A/	0	0.9	9.3	0.0	1	27	567853.8	7111885.5
32	10200	B/	0	2.4	10.7	0.0	0	37	567125.9	7111372.0
32	10200	C/	0	1.6	6.4	0.0	6	38	565893.2	7110529.0
32	10190	A/	0	0.4	12.0	0.0	0	36	566979.3	7111641.0
32	10190	B/	0	-0.2	9.3	0.0	0	40	567623.9	7112123.5
32	10180	A/	0	1.7	6.2	0.0	10	35	566883.5	7111908.5
32	10180	B/	0	1.6	10.9	0.0	0	32	566368.1	7111614.5
32	10170	A/	0	0.0	7.7	0.0	0	43	565140.3	7111158.5
32	10170	B/	0	0.2	8.8	0.0	0	47	565333.0	7111287.5
32	10170	C/	0	-0.8	7.3	0.0	0	55	565949.2	7111671.0
32	10170	D/	0	0.5	10.5	0.0	0	37	567691.9	7112808.5
32	10160	A/	0	1.5	11.1	0.0	0	38	566687.3	7112510.5
32	10160	B/	0	0.8	6.4	0.0	0	38	566267.4	7112265.5
32	10160	C/	0	0.0	6.8	0.0	0	40	565792.0	7111934.0
32	10160	D/	0	0.6	4.1	0.0	0	45	565137.7	7111459.5
32	10160	E/	0	0.3	4.8	0.0	0	38	564953.9	7111341.0
32	10150	A/	0	-0.6	5.1	0.0	0	47	564828.3	7111717.5
32	10150	B/	0	0.8	10.9	0.0	0	38	566698.5	7112908.5
32	10150	C/	0	-1.0	9.2	0.0	0	46	566979.4	7113091.5
32	10150	D/	0	0.8	7.6	0.0	0	51	567122.5	7113190.5
32	10140	A/	0	-1.1	5.1	0.0	0	54	564667.5	7111889.5
32	10110	A/	0	1.4	9.2	0.0	0	41	564025.3	7112620.5
32	10110	B/	0	2.5	5.5	0.1	24	31	564868.1	7113174.0
32	10110	C/	0	2.1	6.7	0.0	14	32	565020.1	7113270.5
32	10110	D/	0	0.7	10.2	0.0	0	39	565298.4	7113463.0

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

AREA 10 TANANA PROJECT

FLOC PROPERTY

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR BIRD				
				INPHASE	QUAD.	CTP	DEPTH	HEIGHT		
						MHOS	MTRS	MTRS		
32	10090	A/	0	-0.1	4.9	0.0	0	47	563025.9	7112661.5
32	10080	A/	0	1.7	7.3	0.0	10	31	562926.1	7112872.5
32	10070	A/	0	0.4	5.2	0.0	0	35	562795.8	7113273.5
32	10070	B/	0	0.3	9.5	0.0	0	40	563455.6	7113644.5
32	10060	A/	0	1.0	5.2	0.0	20	23	563338.5	7113939.0
32	10060	B/	0	1.2	4.9	0.0	12	36	562675.8	7113431.5
32	10050	A/	0	3.2	15.8	0.0	0	31	561062.6	7112776.5
32	10040	A/	0	-0.1	16.6	0.0	0	29	560965.6	7112997.5
32	10040	B/	0	-2.2	8.8	0.0	0	48	560352.2	7112667.5
32	10030	A/	0	-1.7	9.0	0.0	0	45	560812.5	7113369.5
32	10020	A/	0	-0.4	8.0	0.0	0	34	562897.4	7115121.5
32	10020	B/	0	-1.3	9.0	0.0	0	33	562791.8	7115061.0
32	10020	C/	0	3.0	11.8	0.0	5	31	560759.9	7113638.5
32	10010	A/	0	4.0	13.2	0.1	5	31	559244.7	7112923.5
32	10010	B/	0	5.9	16.2	0.1	0	37	559356.5	7113021.5
32	10010	C/	0	3.3	12.2	0.0	5	31	559988.6	7113452.5
32	10010	D/	0	0.9	7.9	0.0	0	46	560669.6	7113939.5
32	10010	E/	0	-0.1	5.1	0.0	0	55	560909.7	7114083.0

FLOC PROPERTY

It is very rare not detecting a single conductor during and AEM survey over a 135 line km block. The Floc property shows no low frequency anomalies and only one very weak (OP response only) four-liner in the west end of the block. This may reflect a weakly conductive fracture (it cuts obliquely across a magnetic low).

The magnetics show strong NW-SE trending, wide highs separated by narrow pronounced lows. N60°E breaks are also seen. There are no targets which warrant follow-up.

APPENDIX IV

GEOCHEMICAL DATA: SOIL SAMPLES

Floc				Labno				Fieldno				Cu				Pb				Zn				Ag			
Labno	Fieldno	Cu	Pb	Zn	Ag	Labno	Fieldno	Cu	Pb	Zn	Ag	Labno	Fieldno	Cu	Pb	Zn	Ag	Labno	Fieldno	Cu	Pb	Zn	Ag				
S9527083	280457	42	346	277	<4	S9527028	307200	18	60	73	<4	S9527028	307200	18	60	73	<4	S9527028	307200	18	60	73	<4				
S9527084	280458	45	381	506	<4	S9527029	307201	13	26	41	<4	S9527029	307201	13	26	41	<4	S9527029	307201	13	26	41	<4				
S9527085	280459	82	706	323	<4	S9527030	307202	15	12	45	<4	S9527030	307202	15	12	45	<4	S9527030	307202	15	12	45	<4				
S9527086	280460	36	244	201	<4	S9527031	307203	12	16	38	<4	S9527031	307203	12	16	38	<4	S9527031	307203	12	16	38	<4				
S9527087	280461	35	268	230	<4	S9527032	307204	6	20	22	<4	S9527032	307204	6	20	22	<4	S9527032	307204	6	20	22	<4				
S9527088	280462	31	117	96	<4	S9527033	307205	9	24	24	<4	S9527033	307205	9	24	24	<4	S9527033	307205	9	24	24	<4				
S9527089	280463	41	167	158	<4	S9527034	307206	17	44	123	<4	S9527034	307206	17	44	123	<4	S9527034	307206	17	44	123	<4				
S9527090	280464	32	80	97	<4	S9527035	307207	10	34	64	<4	S9527035	307207	10	34	64	<4	S9527035	307207	10	34	64	<4				
S9526872	307001	41	15	110	<4	S9527036	307208	12	38	66	<4	S9527036	307208	12	38	66	<4	S9527036	307208	12	38	66	<4				
S9526873	307002	52	17	127	<4	S9527037	307209	8	44	41	<4	S9527037	307209	8	44	41	<4	S9527037	307209	8	44	41	<4				
S9526874	307003	46	15	88	<4	S9527038	307210	11	44	68	<4	S9527038	307210	11	44	68	<4	S9527038	307210	11	44	68	<4				
S9526875	307004	39	13	113	<4	S9527039	307211	14	31	98	<4	S9527039	307211	14	31	98	<4	S9527039	307211	14	31	98	<4				
S9526876	307005	39	14	95	<4	S9527040	307212	31	157	253	<4	S9527040	307212	31	157	253	<4	S9527040	307212	31	157	253	<4				
S9526877	307006	26	7	64	<4	S9527041	307213	16	169	227	<4	S9527041	307213	16	169	227	<4	S9527041	307213	16	169	227	<4				
S9526878	307007	33	9	87	<4	S9527042	307214	14	338	274	<4	S9527042	307214	14	338	274	<4	S9527042	307214	14	338	274	<4				
S9526879	307008	23	10	83	<4	S9527043	307215	24	133	240	<4	S9527043	307215	24	133	240	<4	S9527043	307215	24	133	240	<4				
S9526880	307009	43	10	125	<4	S9527044	307216	15	114	124	<4	S9527044	307216	15	114	124	<4	S9527044	307216	15	114	124	<4				
S9526881	307010	38	9	99	<4	S9527045	307217	50	213	289	<4	S9527045	307217	50	213	289	<4	S9527045	307217	50	213	289	<4				
S9526882	307011	43	7	93	<4	S9527046	307218	28	237	73	<4	S9527046	307218	28	237	73	<4	S9527046	307218	28	237	73	<4				
S9526883	307012	36	9	80	<4	S9527047	307219	15	129	105	<4	S9527047	307219	15	129	105	<4	S9527047	307219	15	129	105	<4				
S9526884	307013	29	5	66	<4	S9527048	307220	10	73	147	<4	S9527048	307220	10	73	147	<4	S9527048	307220	10	73	147	<4				
S9526885	307014	36	7	103	<4	S9527049	307221	9	48	66	<4	S9527049	307221	9	48	66	<4	S9527049	307221	9	48	66	<4				
S9526886	307015	22	11	58	<4	S9527050	307222	37	427	152	<4	S9527050	307222	37	427	152	<4	S9527050	307222	37	427	152	<4				
S9526887	307016	13	18	49	<4	S9527051	307223	13	100	122	<4	S9527051	307223	13	100	122	<4	S9527051	307223	13	100	122	<4				
S9526888	307017	34	5	22	<4	S9527052	307224	36	447	343	<4	S9527052	307224	36	447	343	<4	S9527052	307224	36	447	343	<4				
S9526889	307018	18	10	37	<4	S9527053	307225	28	299	349	<4	S9527053	307225	28	299	349	<4	S9527053	307225	28	299	349	<4				
S9526890	307019	32	9	72	<4	S9527054	307226	25	259	207	0.4	S9527054	307226	25	259	207	0.4	S9527054	307226	25	259	207	0.4				
S9526891	307020	20	9	60	<4	S9527055	307227	21	327	109	<4	S9527055	307227	21	327	109	<4	S9527055	307227	21	327	109	<4				
S9526892	307021	29	11	65	<4	S9527056	307228	16	76	84	<4	S9527056	307228	16	76	84	<4	S9527056	307228	16	76	84	<4				
S9526893	307022	23	14	70	<4	S9527057	307229	19	66	93	<4	S9527057	307229	19	66	93	<4	S9527057	307229	19	66	93	<4				
S9526894	307023	39	8	130	<4	S9527058	307230	14	37	70	<4	S9527058	307230	14	37	70	<4	S9527058	307230	14	37	70	<4				
S9526895	307024	15	9	222	<4	S9527059	307231	14	41	82	<4	S9527059	307231	14	41	82	<4	S9527059	307231	14	41	82	<4				
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S9526897	307026	3	15	30	<4																						
S9526898	307027	6	22	22	<4																						
S9526899	307028	4	22	22	<4																						
S9526900	307029	9	18	24	<4																						
S9526901	307030	9	19	36	<4																						
S9526902	307031	9	12	26	<4																						
S9526903	307032	16	11	69	<4																						
S9526904	307033	10	13	19	<4																						
S9526905	307034	18	17	19	<4																						
S9526906	307035	15	21	24	<4																						
S9526907	307036	19	40	35	<4																						
S9526908	307037	9	37	23	<4																						
S9526909	307038	13	21	31	<4																						
S9526910	307039	12	30	37	<4																						
S9526911	307040	19	21	52	<4																						
S9526912	307041	29	39	27	<4																						
S9526913	307042	38	56	67	<4																						
S9526914	307043	20	37	70	<4																						
S9526915	307044	21	21	58	<4																						
S9526916	307045	24	17	55	<4																						
S9526917	307046	14	14	47	<4																						
S9526918	307047	14	31	63	<4																						
S9526919	307048	13	46	48	<4																						
S9526920	307049	13	22	48	<4																						
S9526921	307050	19	17	54	<4																						
S9526922	307051	15	21	47	<4																						
S9526923	307052	21	22	46	<4																						
S9526924	307053	13	22	52	<4																						
S9526925	307054	12	20	52	<4																						
S9526926	307055	18	17	52	<4																						
S9526927	307056	23	16	61	<4																						
S9526928	307057	21	20	45	<4																						
S9526929	307058	17	13	39	<4																						
S9526930	307059	26	17	51	<4																						
S9526931	307060	27	12	76	<4																						
S9526932	307061	7	13	39	<4																						
S9526699	307251	14	33	32	<4																						
S9526700	307252	10	15	14	<																						

Floc		Cu	Pb	Zn	Ag
Labno	Fieldno				
S9507640	273408	7	25	63	0.5
S9507641	273409	16	28	58	0.8
S9507642	273410	12	29	64	< 4
S9507643	273411	10	18	65	0.8
S9508097	273412	9	28	53	< 4
S9507644	273413	17	45	98	< 4
S9507645	273414	18	51	89	0.4
S9507646	273415	7	22	57	0.6
S9507647	273416	16	33	70	0.4
S9507648	273417	5	14	47	0.5
S9507649	273418	4	6	60	1.4
S9507650	273419	10	28	154	0.7
S9507651	273420	10	18	97	0.5
S9507652	273421	5	35	160	0.6
S9507653	273422	6	19	82	0.7
S9507654	273423	3	10	70	< 4
S9507655	273424	8	76	111	0.5
S9507656	273425	13	45	137	< 4
S9507657	273426	16	55	175	0.5
S9507658	273427	13	35	116	0.5
S9507659	273428	19	127	146	< 4
S9507660	273429	13	128	86	0.9
S9507661	273430	32	639	149	2
S9507662	273431	32	1300	132	2.2
S9507663	273432	19	51	351	0.8
S9507395	273758	42	180	151	0.4
S9507396	273759	101	510	349	< 4
S9508067	273760	11	64	63	< 4
S9508068	273761	11	21	44	< 4
S9507397	273761	8	87	83	0.4
S9507398	273762	14	33	90	< 4
S9507399	273764	6	21	58	0.4
S9507400	273765	13	33	89	< 4
S9508069	273766	3	8	35	< 4
S9508070	273767	5	8	35	< 4
S9507401	273768	13	21	85	< 4
S9508071	273769	11	34	49	< 4
S9508072	273770	12	70	47	< 4
S9507402	273771	8	7	62	< 4
S9507403	273772	6	22	52	< 4
S9507404	273773	6	7	63	< 4
S9507405	273774	9	24	43	0.4
S9508073	273775	6	18	48	< 4
S9507406	273776	8	10	53	< 4
S9507407	273777	7	11	54	< 4
S9507408	273778	8	8	52	< 4
S9507409	273779	14	11	132	< 4
S9507410	273780	9	6	114	< 4
S9507411	273781	13	7	62	< 4
S9508074	273782	5	21	61	< 4
S9511259	279201	13	73	73	< 4
S9511260	279202	9	28	46	< 4
S9511261	279203	12	24	38	< 4
S9511262	279204	19	33	57	< 4
S9511263	279205	16	19	50	0.6
S9511264	279206	17	35	68	0.4
S9511265	279207	15	33	62	< 4
S9511266	279208	11	19	48	0.4
S9511267	279209	6	20	30	< 4
S9511268	279210	11	17	35	< 4
S9511269	279211	11	25	45	< 4
S9526539	280002	30	11	98	< 4
S9526540	280003	40	8	86	< 4
S9526541	280004	49	14	96	< 4
S9526542	280005	60	13	100	< 4
S9526543	280008	53	11	78	< 4
S9526544	280009	73	< 4	81	< 4
S9526545	280010	51	14	85	< 4
S9526546	280011	39	12	87	< 4
S9526547	280012	55	14	99	< 4
S9526548	280013	70	15	243	< 4
S9526549	280014	44	16	111	< 4
S9526550	280015	25	11	97	< 4
S9526551	280016	26	11	71	< 4
S9526552	280017	26	14	83	< 4
S9526553	280018	13	12	71	< 4
S9526554	280019	15	9	53	< 4
S9526555	280020	58	16	120	< 4
S9526556	280021	39	17	107	< 4
S9526557	280022	65	16	235	< 4
S9526558	280023	24	12	74	< 4
S9526559	280024	58	13	100	< 4
S9526560	280026	28	37	74	< 4
S9526561	280027	15	30	65	< 4
S9526562	280028	12	22	47	< 4
S9526563	280029	13	22	49	< 4
S9526564	280030	16	24	39	< 4
S9526565	280031	12	68	37	< 4
S9526566	280032	16	4	53	< 4
S9526567	280033	13	38	47	< 4
S9526568	280034	15	41	56	< 4
S9526569	280035	14	45	58	< 4
S9526570	280036	12	19	41	< 4
S9526571	280037	9	15	31	< 4
S9526572	280038	19	26	60	< 4
S9526573	280039	13	28	58	< 4
S9526574	280040	63	60	121	< 4
S9526575	280041	17	17	90	< 4
S9526576	280042	16	23	75	< 4

Floc		Cu	Pb	Zn	Ag
Labno	Fieldno				
S9526577	280043	5	11	46	< 4
S9526578	280044	9	29	113	< 4
S9526579	280045	13	21	60	< 4
S9526580	280046	14	21	64	< 4
S9526581	280047	16	18	64	< 4
S9526582	280048	13	30	69	< 4
S9526583	280049	11	22	58	< 4
S9526584	280050	8	12	47	< 4
S9526585	280051	11	26	65	< 4
S9526586	280052	29	52	113	< 4
S9527061	280435	12	12	38	< 4
S9527062	280436	13	67	68	< 4
S9527063	280437	15	104	109	< 4
S9527064	280438	13	64	75	< 4
S9527065	280439	13	89	88	< 4
S9527066	280440	32	233	227	< 4
S9527067	280441	30	168	258	< 4
S9527068	280442	74	445	61	< 4
S9527069	280443	26	174	175	< 4
S9527070	280444	67	446	582	< 4
S9527071	280445	10	79	46	< 4
S9527072	280446	22	259	64	< 4
S9527073	280447	16	137	58	< 4
S9527074	280448	10	45	52	< 4
S9527075	280449	11	31	49	< 4
S9527076	280450	7	79	40	< 4
S9527077	280451	15	78	99	< 4
S9527078	280452	23	149	172	< 4
S9527079	280453	43	327	316	< 4
S9527080	280454	134	980	644	< 4
S9527081	280455	35	523	249	< 4
S9527082	280456	48	292	315	< 4

APPENDIX V

GEOCHEMICAL DATA: ROCK SAMPLES

ICP PACKAGE 10.5 gram sample digested in hot reverse aqua regia (soil,silt) or hot Aqua Regia(rocks).

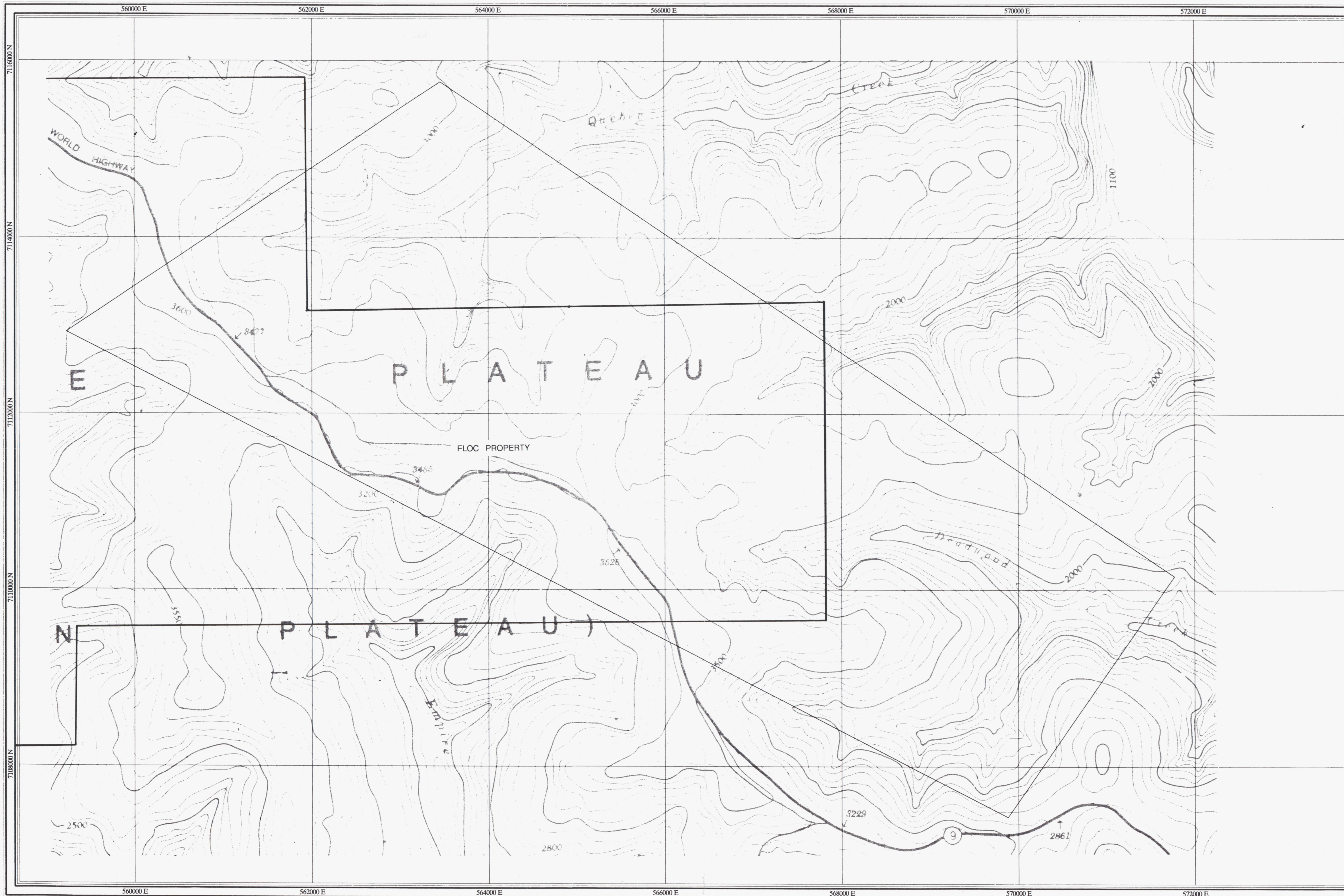
LAB NO	FIELD NUMBER	Cu	Pb	Zn	Ag	As	Ba	Cd	Co	Ni	Fe	Mo	Cr	Bi	Sb	V	Sn	W	Sr	Y	La	Mn	Mg	Ti	Al	Ca	Na	K
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%
R9511648	KR95-7	9	10	42	<.4	8	250	<1	<1	1	.27	<2	54	<5	<5	<2	<2	<2	2	13	15	26	.03	<.01	.19	.01	.01	.14
R9511649	KR95-8	3	20	11	<.4	21	86	<1	<1	1	.65	<2	34	<5	<5	<2	<2	<2	2	6	7	14	<.01	<.01	.10	<.01	<.01	.09
R9511650	KR95-9	22	<4	29	<.4	8	54	<1	14	28	1.87	<2	167	<5	<5	17	2	<2	9	5	2	268	1.47	.07	1.31	.39	.01	.01
R9511651	KR95-10	56	<4	67	<.4	11	35	<1	31	79	5.47	<2	162	<5	<5	99	6	<2	10	7	<2	711	4.57	.12	3.48	.49	.01	.11
R9511652	KR95-10A	26	<4	49	<.4	2	15	<1	20	40	2.63	<2	133	<5	<5	41	7	<2	17	3	<2	640	2.27	.11	1.81	.64	.02	.01
R9511653	KR95-11	6	<4	70	<.4	7	203	<1	4	12	1.29	<2	20	<5	<5	<2	5	<2	11	6	8	204	.41	<.01	.66	.46	<.01	.13
R9511654	KR95-12	3	22	97	<.4	14	74	1	16	39	1.14	<2	47	<5	<5	13	6	<2	18	3	<2	316	1.19	.06	.99	.32	.01	.07
R9511655	KR95-13	8	6	47	<.4	7	74	<1	<1	4	.32	<2	38	<5	<5	<2	<2	<2	3	7	10	22	.03	<.01	.13	.02	.01	.08
R9511656	KR95-14	86	453	200	1.0	53	153	4	<1	4	1.51	9	66	<5	<5	<2	5	<2	5	5	15	941	.02	<.01	.23	.01	<.01	.21
R9511657	KR95-15	18	<4	89	.5	7	290	<1	1	6	2.38	<2	85	<5	<5	12	3	<2	12	12	11	428	.59	.06	1.01	.15	<.01	.27
R9511658	KR95-16	3	13	49	<.4	4	98	<1	<1	2	.44	2	34	<5	<5	<2	3	<2	6	6	10	102	.48	<.01	.49	.04	<.01	.10
R9511659	KR95-17	1	14	3	<.4	18	210	<1	<1	2	.69	2	86	<5	<5	<2	<2	<2	10	<2	8	10	<.01	<.01	.10	<.01	.01	.18
R9511660	KR95-18	2	5	19	<.4	4	144	<1	<1	2	.13	<2	52	<5	<5	<2	3	<2	15	3	4	32	.01	<.01	.17	.07	.02	.12
R9511661	KR95-19	3	10	51	<.4	4	40	<1	<1	1	.24	<2	41	<5	<5	<2	4	<2	4	7	5	10	<.01	<.01	.12	.02	.01	.18
R9511662	KR95-20	2	17	21	<.4	5	108	<1	<1	2	.29	<2	66	<5	<5	<2	2	<2	2	16	22	46	.03	<.01	.12	.01	<.01	.09
R9511663	KR95-21	1	5	3	.5	2	2083	<1	1	1	.19	<2	39	<5	<5	<2	<2	<2	2	<2	9	<5	<.01	<.01	.06	<.01	.01	.07
R9511664	KR95-22	140	379	20	9.2	53	219	<1	2	10	.67	<2	60	<5	<5	<2	<2	<2	2	<2	<2	6	<.01	<.01	.04	<.01	.01	.06
R9511665	KR95-23	19	83	9	3.4	5	222	<1	<1	3	.67	<2	71	<5	<5	<2	2	<2	20	2	7	30	.01	<.01	.10	.02	.03	.14

LITHOGEOCHEM

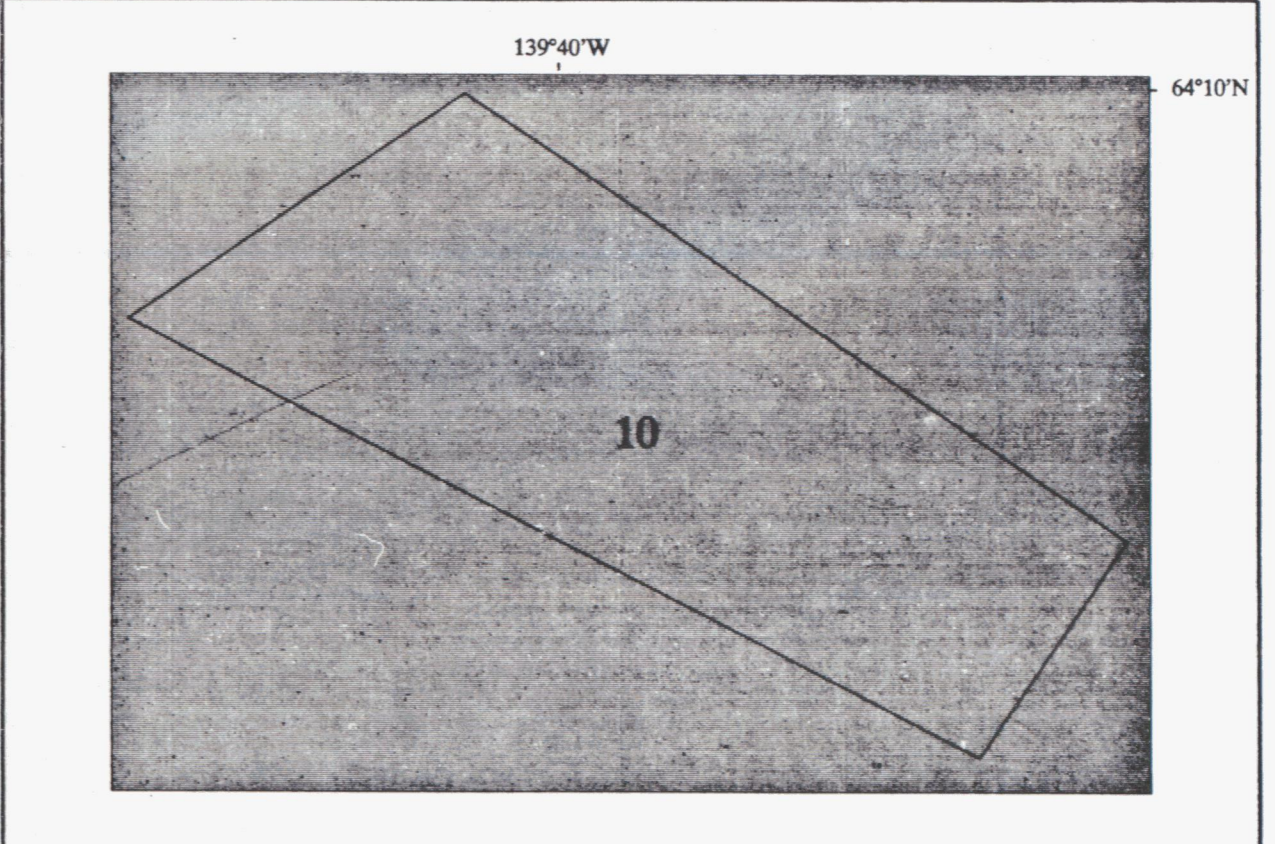
LAB NO	FIELD NUMBER	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	LOI	Total	Nb	Zr	Y	S	CO2	NI
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	%	%	ppm
511648	KR95-7	78.62	0.08	11.64	.67	0.55	0.01	0.79	0.14	2.67	2.71	0.01	0.43	1.41	99.73	15	126	41	<0.01	<0.2	<1
511649	KR95-8	77.41	0.08	11.30	.31	0.60	0.01	0.03	0.10	1.43	7.17	0.01	0.35	.55	99.35	15	122	24	<0.01	<0.2	<1
511650	KR95-9	50.60	1.23	15.49	2	5.71	0.14	8.18	9.35	3.21	0.27	0.20	0.03	3.22	99.63	7	139	42	<0.01	<0.2	22
511651	KR95-10	47.54	1.85	17.68	2.32	8.02	0.18	9.09	1.44	4.23	1.35	0.16	0.03	6.02	99.91	11	193	31	<0.01	<0.2	72
511652	KR95-10A	49.00	1.97	17.27	4.1	4.59	0.19	6.25	7.86	4.71	0.14	0.42	0.01	3.46	99.97	21	240	50	<0.01	<0.2	38
511653	KR95-11	60.37	0.48	18.64	3.53	1.70	0.06	1.56	3.47	2.10	3.98	0.11	0.52	2.97	99.49	15	276	31	<0.01	<0.2	7
511654	KR95-12	48.52	0.90	16.87	2.36	4.71	0.16	8.46	10.25	2.07	1.73	0.13	0.16	3.27	99.59	8	78	23	<0.01	<0.2	40
511655	KR95-13	85.86	0.08	7.74	.16	0.61	0.02	0.32	0.26	2.35	1.42	0.01	0.11	.88	99.82	12	118	25	<0.01	<0.2	<1
511656	KR95-14	74.85	0.10	12.20	2.79	0.44	0.15	1.42	0.09	0.02	4.61	0.02	0.33	2.59	99.61	19	143	12	<0.01	<0.2	<1
558	KR95-15	70.74	0.46	11.95	4.96	0.57	0.09	1.71	1.22	0.04	4.27	0.13	0.49	2.76	99.39	15	134	20	0.02	<0.2	2
558	KR95-16	74.66	0.16	12.42	1.77	0.32	0.05	2.62	0.77	0.55	3.21	0.01	0.39	2.42	99.35	15	206	19	<0.01	<0.2	<1
511659	KR95-17	80.97	0.09	9.47	.77	0.41	0.01	0.07	0.10	1.68	4.46	0.01	0.32	1.07	99.43	10	130	18	0.30	<0.2	<1
511660	KR95-18	76.44	0.11	12.41	1.16	0.36	0.03	0.64	1.95	2.86	2.21	0.01	0.24	1.25	99.67	17	151	35	<0.01	<0.2	<1
511661	KR95-19	78.26	0.08	11.43	.92	0.51	0.04	0.51	0.38	2.67	3.70	0.01	0.06	1	99.57	10	124	21	<0.01	<0.2	<1
511662	KR95-20	86.11	0.07	6.83	.34	0.44	0.02	0.11	0.12	1.19	1.86	0.01	0.13	1.06	98.79	6	79	23	<0.01	<0.2	<1
511663	KR95-21	79.30	0.09	10.49	0.22	0.08	0.01	0.01	0.09	3.12	4.62	0.01	0.83	0.49	99.36	13	133	13	0.10	<0.2	<1
511664	KR95-22	86.15	0.34	6.49	.59	0.39	0.02	0.14	0.09	2.47	1.28	0.01	0.25	1.01	99.23	18	157	12	0.50	<0.2	4
511665	KR95-23	79.55	0.52	9.66	.61	0.61	0.02	1.10	0.12	1.67	2.93	0.04	0.28	2	99.11	12	111	13	0.24	<0.2	<1

Report date 31 OCT 1995

LAB NO	FIELD NUMBER	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	LOI	TOTAL	Nb	Y	Zr	Cu	Pb	Zn	Ag
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
R9524129	J11-5	76.89	0.10	12.45	1.53		0.03	0.22	2.53	3.87	1.11	0.02	0.12	0.83	99.70	23	44	158	<1	4	18	<.4
R9524130	J11-9	69.66	0.74	12.44	4.83		0.12	2.49	2.31	1.87	2.54	0.18	0.23	2.33	99.74	15	27	184	8	8	74	<.4
R9524131	J12-3	76.58	0.07	11.63	0.68		0.02	0.10	0.08	0.66	9.06	0.01	0.23	0.36	99.48	15	20	107	1	5	5	<.4
R9524132	J12-6	69.11	0.50	13.43	3.88		0.24	0.10	4.67	3.95	0.69	0.14	0.04	1.13	97.88	12	33	247	47	1700	3960	3.4
R9524133	A18-2	76.24	0.12	13.00	1.31		0.02	0.81	0.08	3.38	2.58	0.01	0.26	2.17	99.98	17	35	128	2	5	8	<.4
R9524134	A19-10	78.11	0.14	10.93	1.79		0.03	0.20	0.10	0.52	6.70	0.02	0.21	0.74	99.49	22	39	177	2	22	18	.4



Square: Grid North
 Star: True North
 Arrow: Magnetic North
 Angles presented are approximate mean deviations for centre of NTS sheet. Use diagram for reference only.
 Grid North - True North : 0.7"
 Grid North - Magnetic North : 29.4"
 Annual change : 0.17"

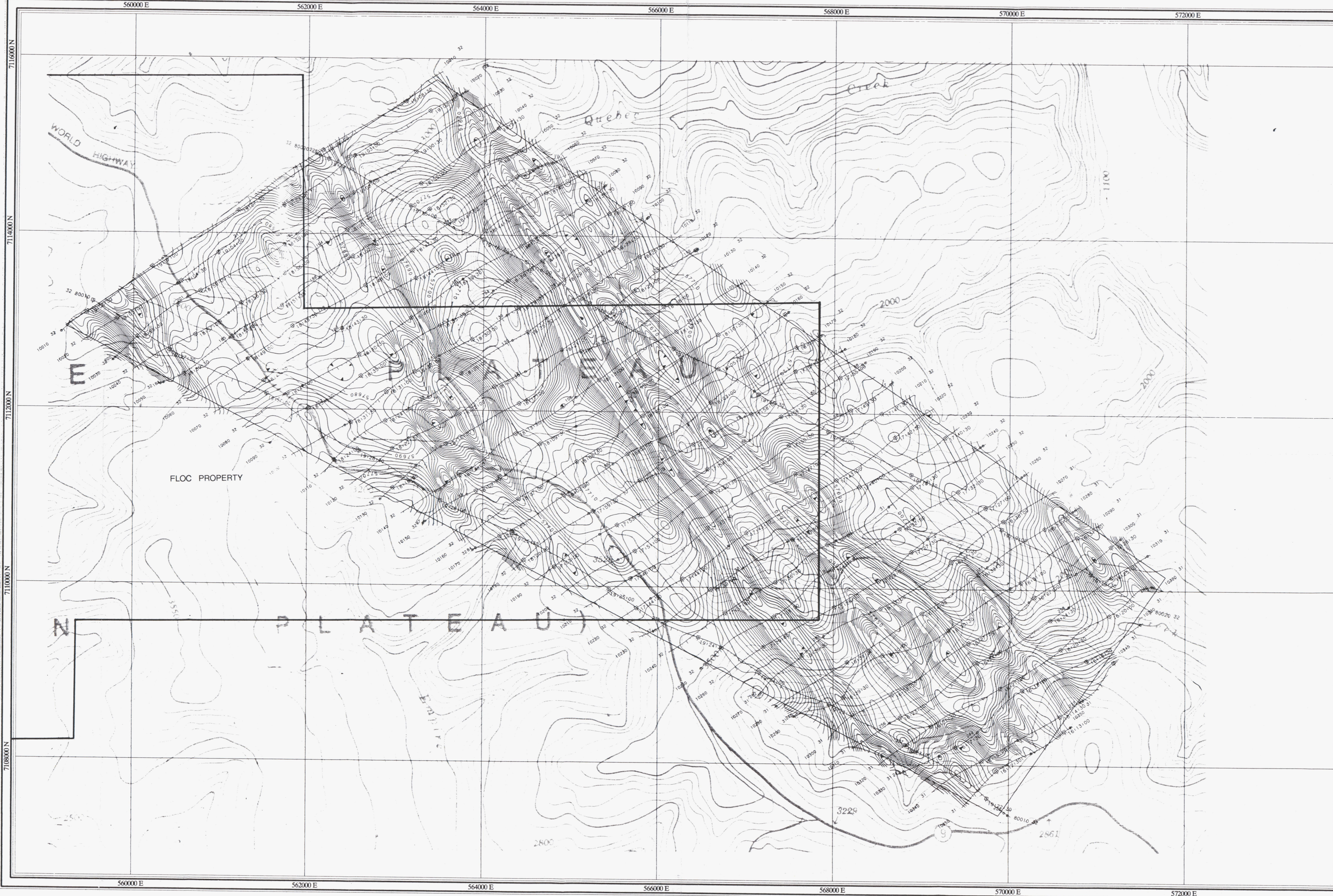


COMINCO EXPLORATION

BASE MAP
FLOC PROPERTY
YUKON

SCALE 1:20 000

 AERODAT INC.	Date Flown : JUNE 1995
	NTS : 116 B/4
	Project : J9518 Map Ref : 1 - 1



TOTAL FIELD MAGNETICS

Total field magnetic intensity contour data, measured by a cesium high sensitivity magnetometer at an average sensor elevation of 45m, and corrected for diurnal variation.

Map contours are in nanoTeslas, and are multiples of those listed below:

- 2 nT
- 10 nT
- 50 nT
- 250 nT
- 1000 nT



Square: Grid North
Star: True North
Arrow: Magnetic North

Angles presented are approximate mean deviations for centre of NTS sheet. Use diagram for reference only.

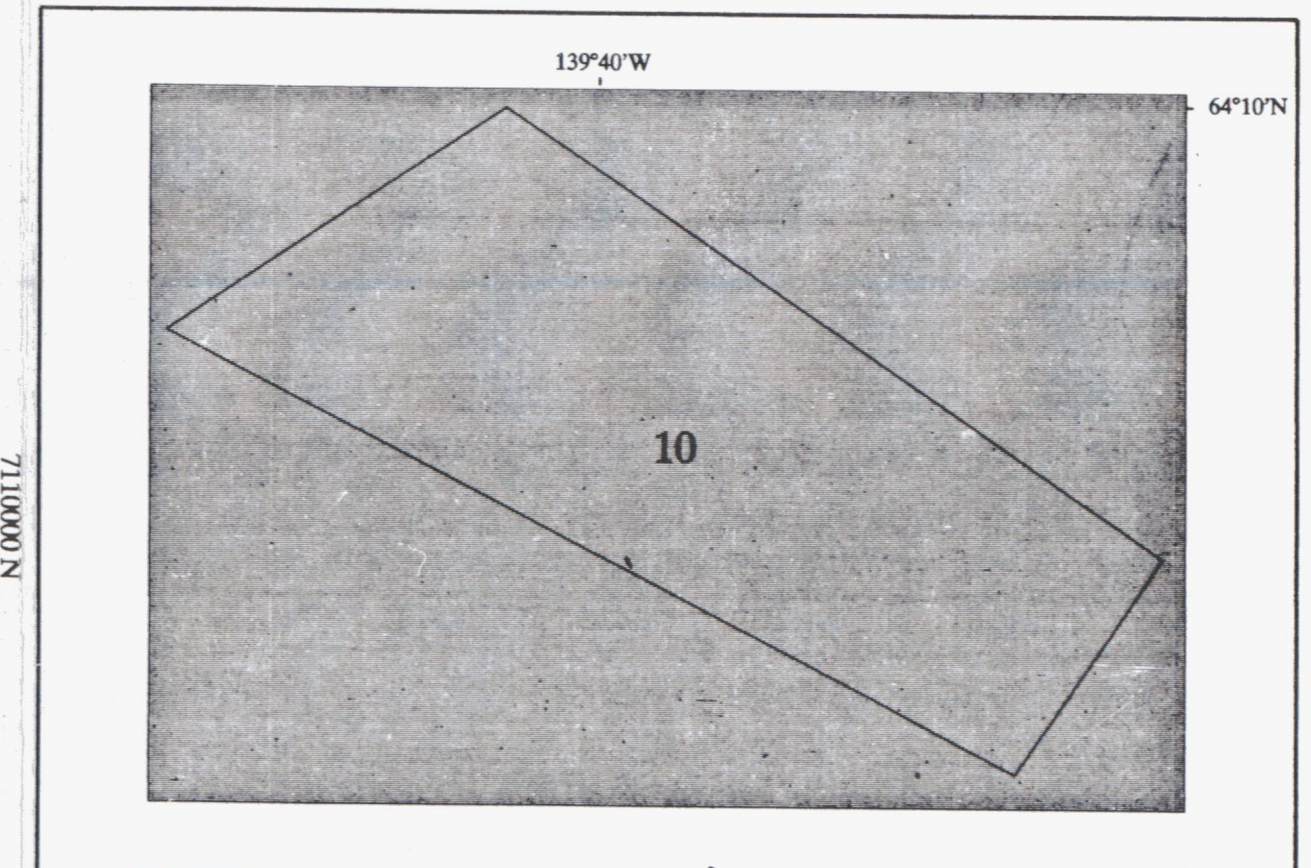
Grid North - True North : 0.7°
Grid North - Magnetic North : 29.4°
Annual change : 0.17°

FLIGHT PATH

Navigation and flight path recovery was conducted using a Global Positioning System (GPS) satellite navigation system.

Lines were flown at an azimuth of 55 - 235°, with an average line spacing of 300m.

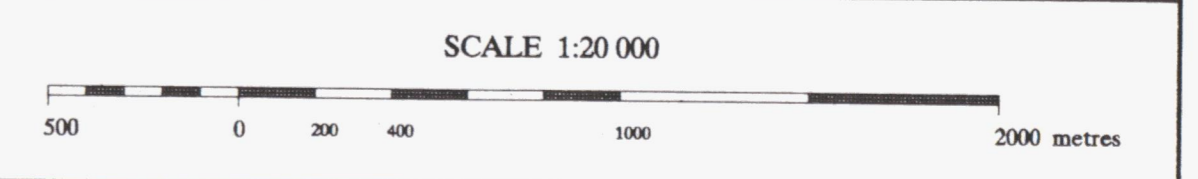
Average helicopter-terrain clearance of 60m was monitored by radar and barometric altimeters.



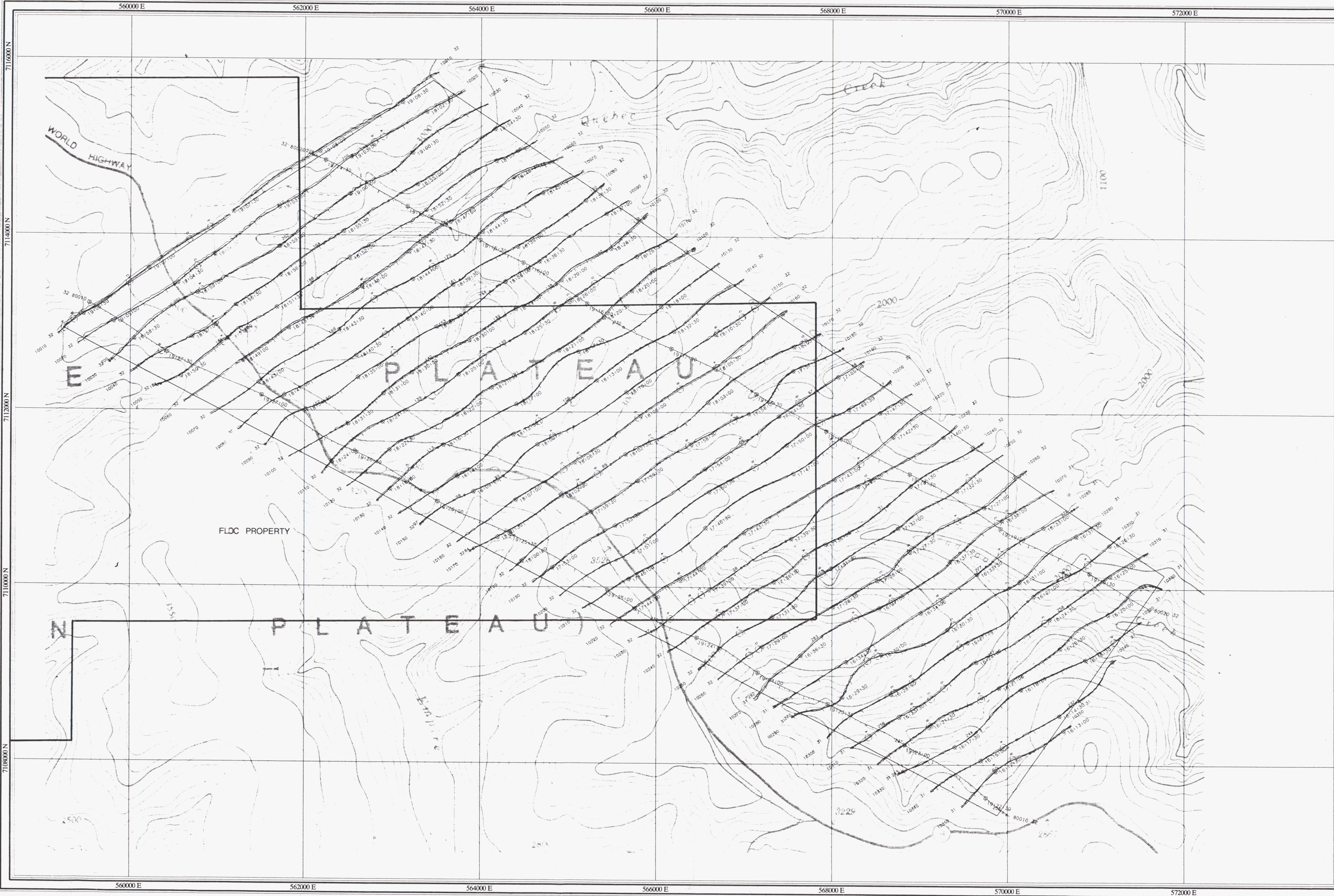
COMINCO EXPLORATION

TOTAL FIELD MAGNETICS

FLOC PROPERTY
YUKON



Date Flown : JUNE 1995
NTS : 116 B/4
Project : J9518 Map Ref : 1 - 2

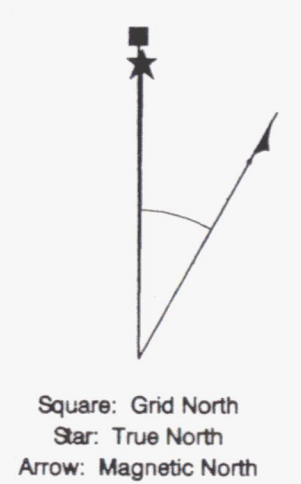


EM PROFILES

Inphase and quadrature components (thick/thin) of measured EM responses. Coaxial and coplanar coil pairs operating at fixed frequencies are mounted in a towed bird, with an average coil separation of 6.5m, and an average sensor elevation of 30m.

Profiles are presented as offsets from flight lines, using the vertical scales listed below:

COAXIAL
935 Hz - 2 ppm/mm



Square: Grid North
Star: True North
Arrow: Magnetic North

Angles presented are approximate mean deviations for centre of NTS sheet. Use diagram for reference only.

Grid North - True North : 0.7°
Grid North - Magnetic North : 29.4°
Annual change : 0.17°

FLIGHT PATH

Navigation and flight path recovery was conducted using a Global Positioning System (GPS) satellite navigation system.

Lines were flown at an azimuth of 55 - 235°, with an average line spacing of 300m.

Average helicopter-terrain clearance of 60m was monitored by radar and barometric altimeters.

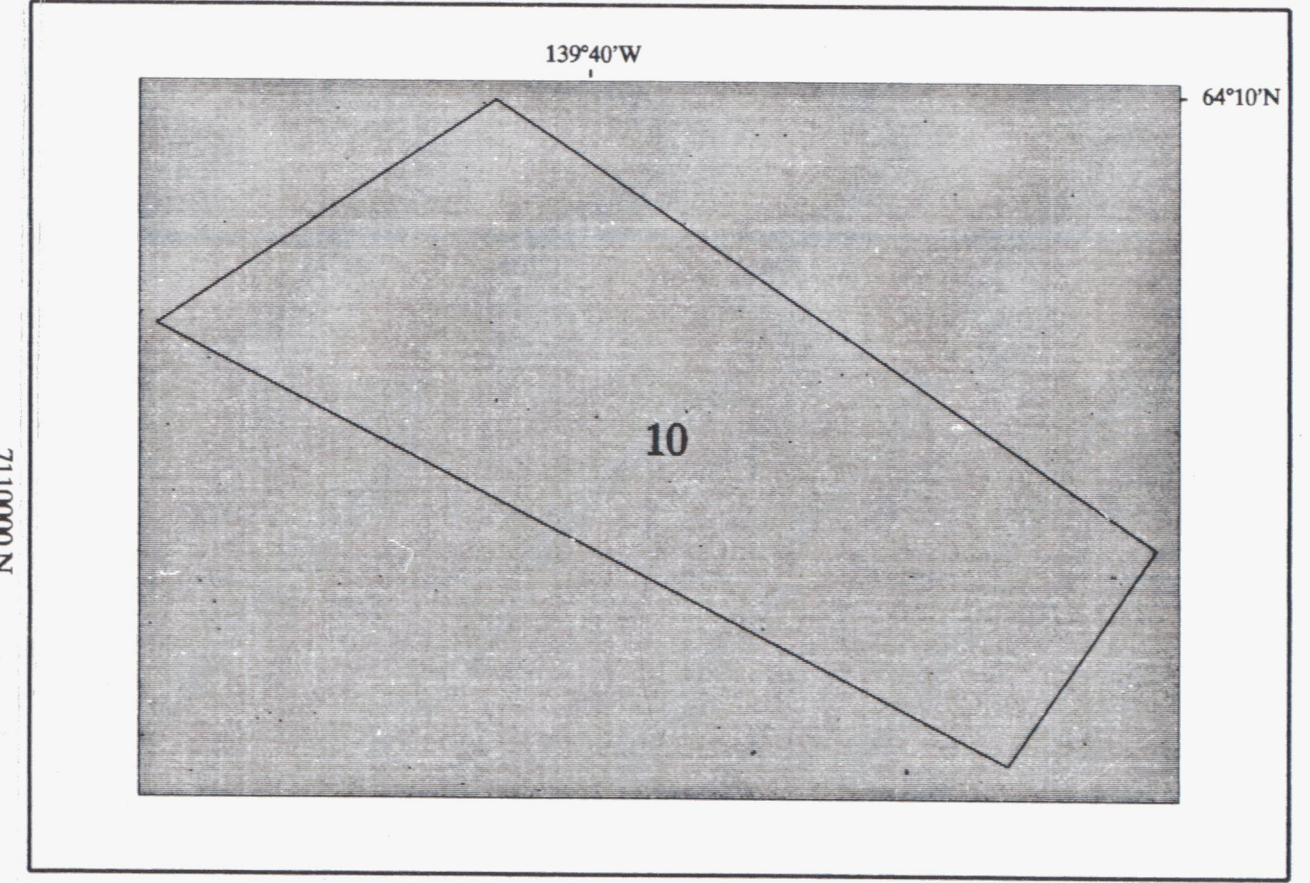
EM ANOMALIES

EM anomalies selected by computer algorithm and manually confirmed. Selection is based on the response correlation to theoretical sources such as a steeply dipping conductor.

Calculation of conductance is based on the response of the 4600 Hz coaxial data, and forms the basis for anomaly classification.

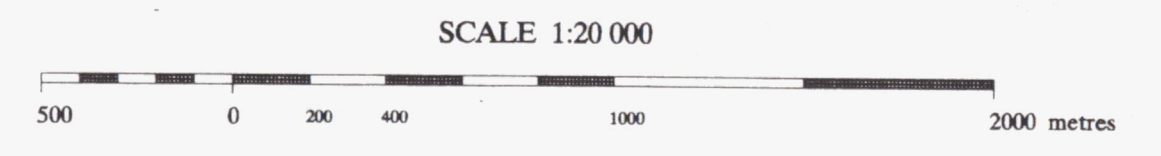
Letter codes are used to identify individual anomalies on a line, and the inphase amplitude of the 4600 Hz response is annotated opposite.

- 0 - 1 mhos
- 1 - 2 mhos
- 2 - 4 mhos
- 4 - 8 mhos
- 8 - 16 mhos
- 16 - 32 mhos
- > 32 mhos

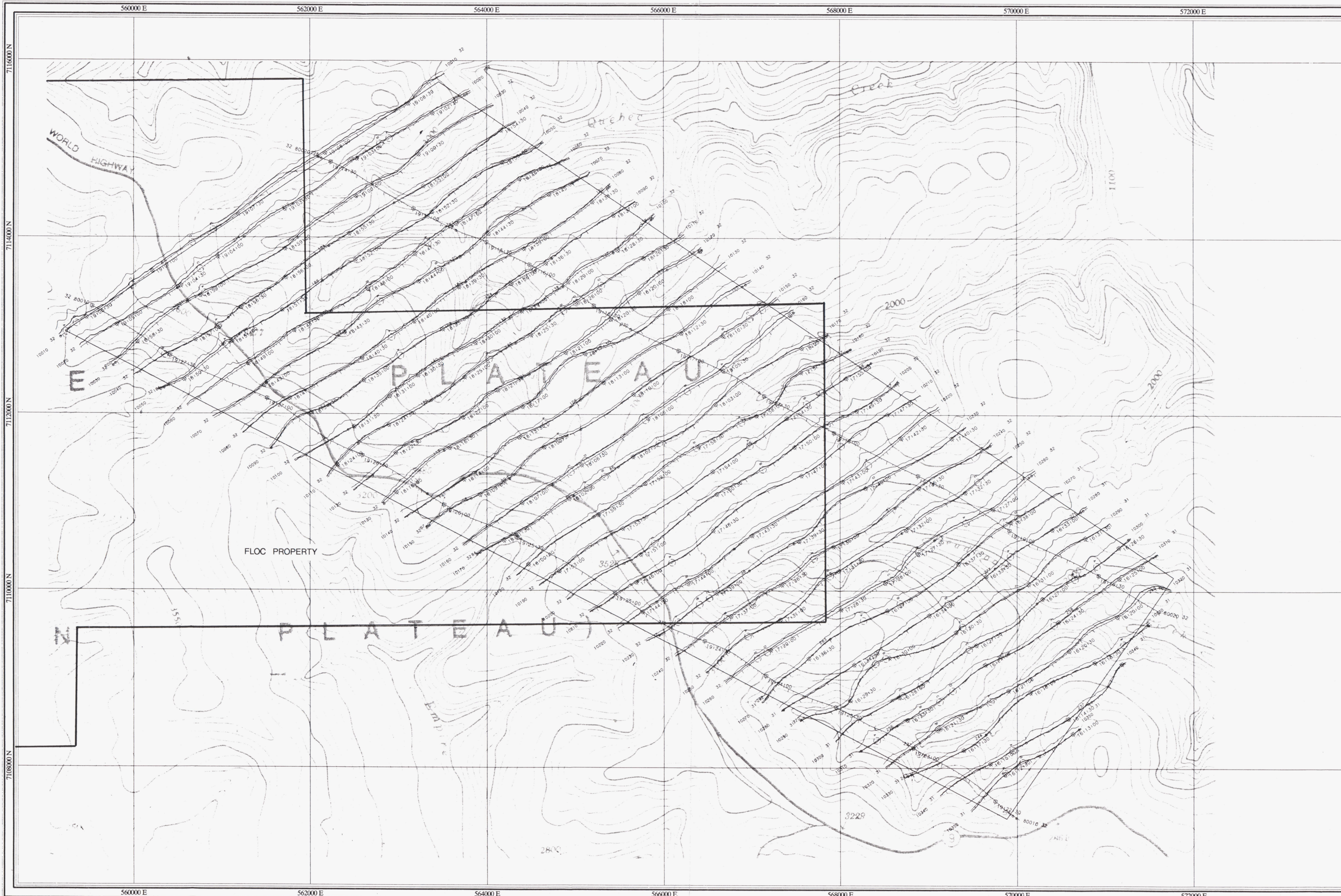


COMINCO EXPLORATION

EM PROFILES
935 Hz COAXIAL
FLOC PROPERTY
YUKON



Date Flown : JUNE 1995
NTS : 116 B/4
Project : J9518 Map Ref : 1 - 3



EM PROFILES

Inphase and quadrature components (thick/thin) of measured EM responses. Coaxial and coplanar coil pairs operating at fixed frequencies are mounted in a towed bird, with an average coil separation of 6.5m, and an average sensor elevation of 30m.

Profiles are presented as offsets from flight lines, using the vertical scales listed below:

COAXIAL
4600 Hz - 2 ppm/mm

Square: Grid North
Star: True North
Arrow: Magnetic North

Angles presented are approximate mean deviations for centre of NTS sheet. Use diagram for reference only.

Grid North - True North : 0.7°
Grid North - Magnetic North : 29.4°
Annual change : 0.17°

FLIGHT PATH

Navigation and flight path recovery was conducted using a Global Positioning System (GPS) satellite navigation system.

Lines were flown at an azimuth of 55 - 235°, with an average line spacing of 300m.

Average helicopter-terrain clearance of 60m was monitored by radar and barometric altimeters.

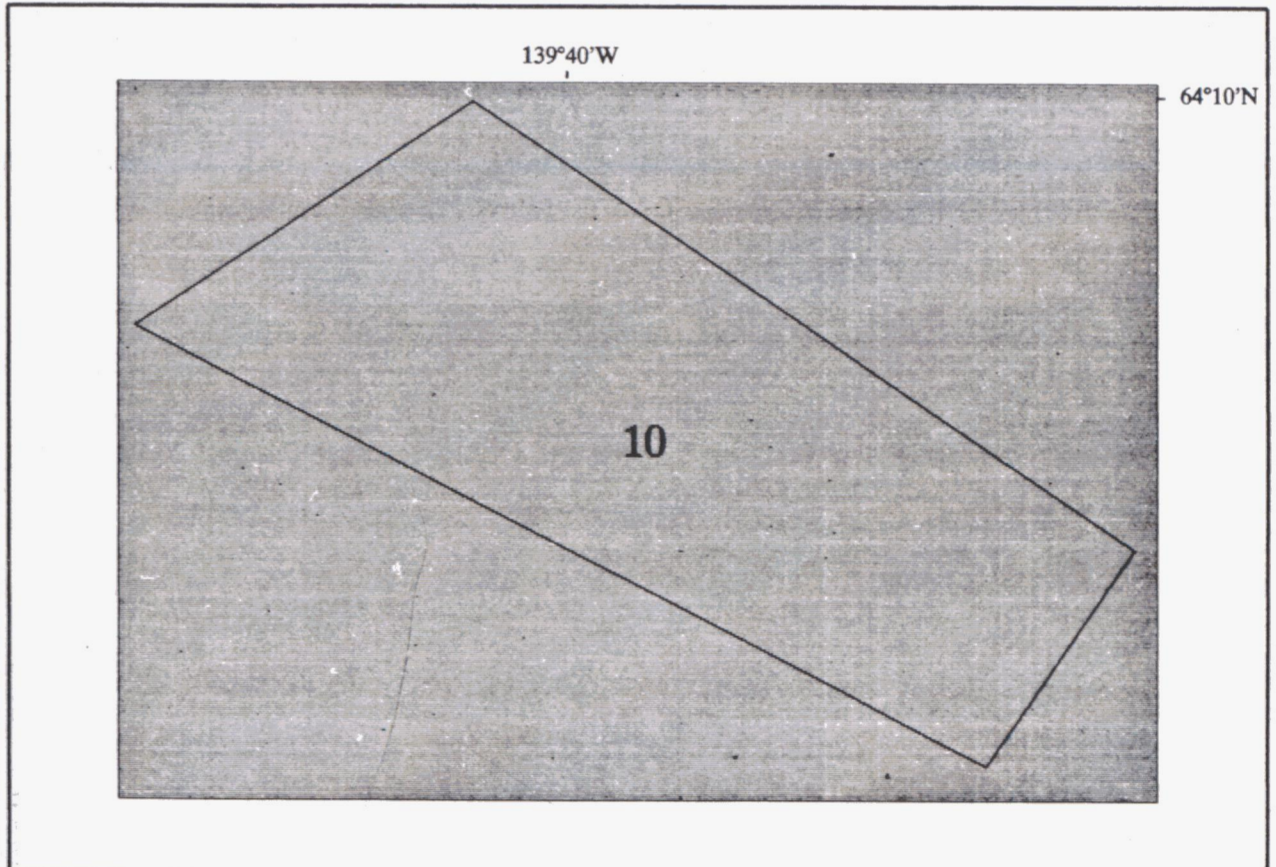
EM ANOMALIES

EM anomalies selected by computer algorithm and manually confirmed. Selection is based on the response correlation to theoretical sources such as a steeply dipping conductor.

Calculation of conductance is based on the response of the 4600 Hz coaxial data, and forms the basis for anomaly classification.

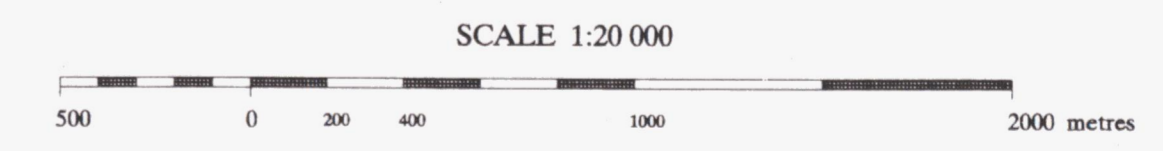
Letter codes are used to identify individual anomalies on a line, and the inphase amplitude of the 4600 Hz response is annotated opposite.

- 0 - 1 mhos
- 1 - 2 mhos
- 2 - 4 mhos
- 4 - 8 mhos
- 8 - 16 mhos
- 16 - 32 mhos
- > 32 mhos



COMINCO EXPLORATION

EM PROFILES
4600 Hz COAXIAL
FLOCC PROPERTY
YUKON



Date Flown : JUNE 1995
NTS : 116 B/4
Project : J9518 Map Ref : 1 - 4

Floc Label	Field No	Cu	Pb	Zn	Ag
8907040	273408	15	28	58	0.8
8907041	273409	16	29	59	0.9
8907042	273410	17	30	60	1.0
8907043	273411	18	31	61	1.1
8907044	273412	19	32	62	1.2
8907045	273413	20	33	63	1.3
8907046	273414	21	34	64	1.4
8907047	273415	22	35	65	1.5
8907048	273416	23	36	66	1.6
8907049	273417	24	37	67	1.7
8907050	273418	25	38	68	1.8
8907051	273419	26	39	69	1.9
8907052	273420	27	40	70	2.0
8907053	273421	28	41	71	2.1
8907054	273422	29	42	72	2.2
8907055	273423	30	43	73	2.3
8907056	273424	31	44	74	2.4
8907057	273425	32	45	75	2.5
8907058	273426	33	46	76	2.6
8907059	273427	34	47	77	2.7
8907060	273428	35	48	78	2.8
8907061	273429	36	49	79	2.9
8907062	273430	37	50	80	3.0
8907063	273431	38	51	81	3.1
8907064	273432	39	52	82	3.2
8907065	273433	40	53	83	3.3
8907066	273434	41	54	84	3.4
8907067	273435	42	55	85	3.5
8907068	273436	43	56	86	3.6
8907069	273437	44	57	87	3.7
8907070	273438	45	58	88	3.8
8907071	273439	46	59	89	3.9
8907072	273440	47	60	90	4.0
8907073	273441	48	61	91	4.1
8907074	273442	49	62	92	4.2
8907075	273443	50	63	93	4.3
8907076	273444	51	64	94	4.4
8907077	273445	52	65	95	4.5
8907078	273446	53	66	96	4.6
8907079	273447	54	67	97	4.7
8907080	273448	55	68	98	4.8
8907081	273449	56	69	99	4.9
8907082	273450	57	70	100	5.0
8907083	273451	58	71	101	5.1
8907084	273452	59	72	102	5.2
8907085	273453	60	73	103	5.3
8907086	273454	61	74	104	5.4
8907087	273455	62	75	105	5.5
8907088	273456	63	76	106	5.6
8907089	273457	64	77	107	5.7
8907090	273458	65	78	108	5.8
8907091	273459	66	79	109	5.9
8907092	273460	67	80	110	6.0
8907093	273461	68	81	111	6.1
8907094	273462	69	82	112	6.2
8907095	273463	70	83	113	6.3
8907096	273464	71	84	114	6.4
8907097	273465	72	85	115	6.5
8907098	273466	73	86	116	6.6
8907099	273467	74	87	117	6.7
8907100	273468	75	88	118	6.8
8907101	273469	76	89	119	6.9
8907102	273470	77	90	120	7.0
8907103	273471	78	91	121	7.1
8907104	273472	79	92	122	7.2
8907105	273473	80	93	123	7.3
8907106	273474	81	94	124	7.4
8907107	273475	82	95	125	7.5
8907108	273476	83	96	126	7.6
8907109	273477	84	97	127	7.7
8907110	273478	85	98	128	7.8
8907111	273479	86	99	129	7.9
8907112	273480	87	100	130	8.0
8907113	273481	88	101	131	8.1
8907114	273482	89	102	132	8.2
8907115	273483	90	103	133	8.3
8907116	273484	91	104	134	8.4
8907117	273485	92	105	135	8.5
8907118	273486	93	106	136	8.6
8907119	273487	94	107	137	8.7
8907120	273488	95	108	138	8.8
8907121	273489	96	109	139	8.9
8907122	273490	97	110	140	9.0
8907123	273491	98	111	141	9.1
8907124	273492	99	112	142	9.2
8907125	273493	100	113	143	9.3
8907126	273494	101	114	144	9.4
8907127	273495	102	115	145	9.5
8907128	273496	103	116	146	9.6
8907129	273497	104	117	147	9.7
8907130	273498	105	118	148	9.8
8907131	273499	106	119	149	9.9
8907132	273500	107	120	150	10.0



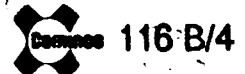
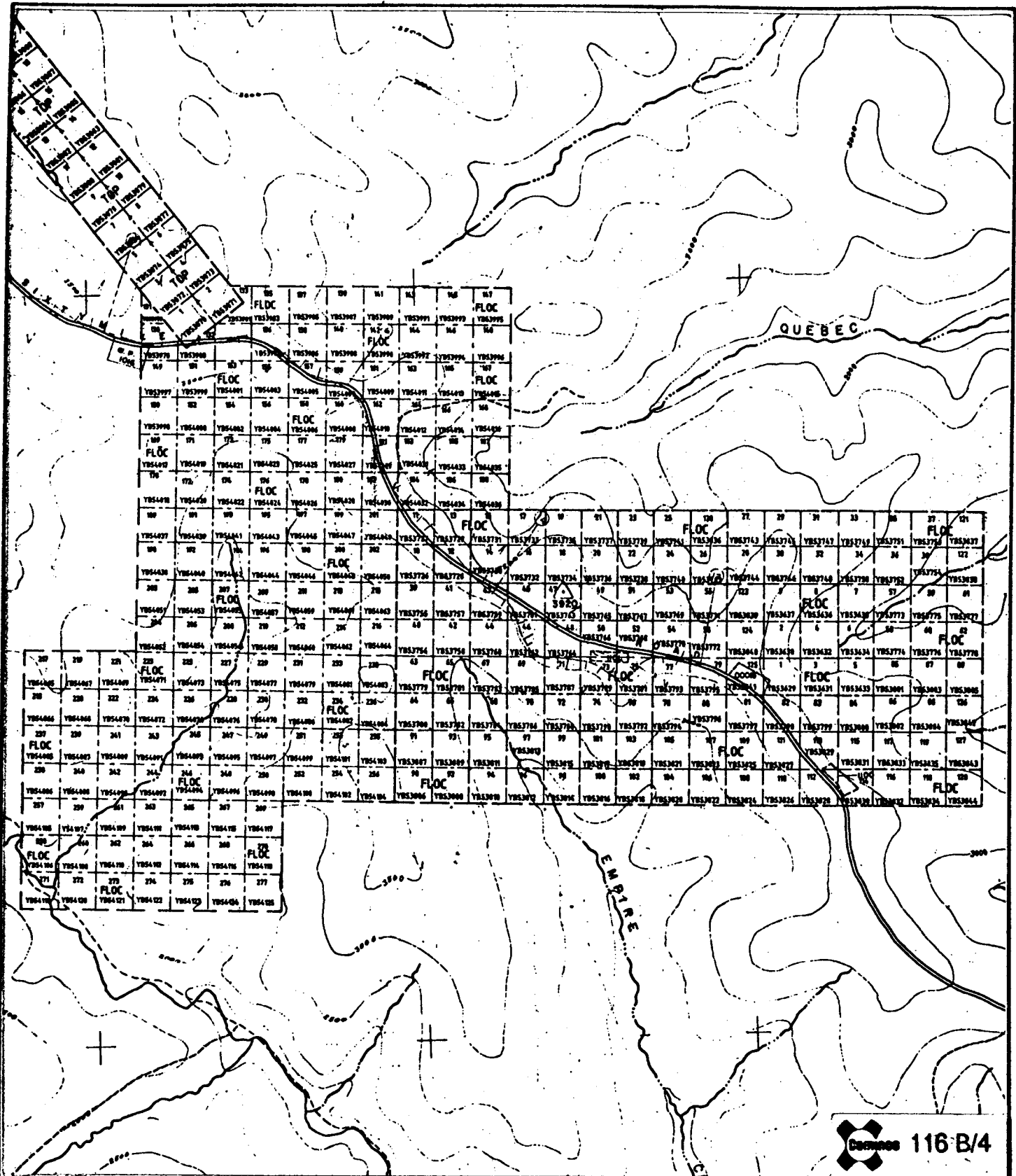
- ### LEGEND
- 6 Dykes: quartz-phenocrystic, rhyolite to rhyodacite porphyry dykes (age unknown). Dykes range from 2m to 30m wide.
 - 5 Sills: medium to coarse-grained gabbroic sills. Compositionally, sills are sub-alkaline basalts (age unknown).
- Miss-Permian
- 4 Rhyolite: massive, medium to thick-bedded flows. Siliceous, pyritic with blue-quartz-eye phenocrysts. Sericitic alteration common.
 - 3 Felsic Tuffs: foliated-schistose, quartz-sericite ± chlorite. Minor crystal-tuffs, with phenocrysts of feldspar and blue-quartz. Strong sericitic alteration and chalcocopyrite, sphalerite and galena.
 - 2 Mafic Flows and Tuffs: dark green, weakly foliated andesitic basalt to sub-alkaline basalt flows. Minor specular hematite and chalcocopyrite. Graded bedded tuffs have a sub-alkaline basalt geochemical signature.
- Devon-Miss
- 1 Phyllite: Nasina Group black clastics. Underlies and intercalated with units 3 & 4 felsic volcanics.

- 307251 — 307290 Soil Sample Traverse (Field Number)
- 273782 Silt Sample (Field Number)
- X J11 - 9 Rock Sample (Field Number)

Label	Field No	Cu	Pb	Zn	Ag
8907103	307200	18	30	73	0.4
8907104	307201	19	31	74	0.5
8907105	307202	20	32	75	0.6
8907106	307203	21	33	76	0.7
8907107	307204	22	34	77	0.8
8907108	307205	23	35	78	0.9
8907109	307206	24	36	79	1.0
8907110	307207	25	37	80	1.1
8907111	307208	26	38	81	1.2
8907112	307209	27	39	82	1.3
8907113	307210	28	40	83	1.4
8907114	307211	29	41	84	1.5
8907115	307212	30	42	85	1.6
8907116	307213	31	43	86	1.7
8907117	307214	32	44	87	1.8
8907118	307215	33	45	88	1.9
8907119	307216	34	46	89	2.0
8907120	307217	35	47	90	2.1
8907121	307218	36	48	91	2.2
8907122	307219	37	49	92	2.3
8907123	307220	38	50	93	2.4
8907124	307221	39	51	94	2.5
8907125	307222	40	52	95	2.6
8907126	307223	41	53	96	2.7
8907127	307224	42	54	97	2.8
8907128	307225	43	55	98	2.9
8907129	307226	44	56	99	3.0
8907130	307227	45	57	100	3.1
8907131	307228	46	58	101	3.2
8907132	307229	47	59	102	3.3
8907133	307230	48	60	103	3.4
8907134	307231	49	61	104	3.5
8907135	307232	50	62	105	3.6
8907136	307233	51	63	106	3.7
8907137	307234	52	64	107	3.8
8907138	307235	53	65	108	3.9
8907139	307236	54	66	109	4.0
8907140	307237	55	67	110	4.1
8907141	307238	56	68	111	4.2
8907142	307239	57	69	112	4.3
8907143	307240	58	70	113	4.4
8907144	307241	59	71	114	4.5
8907145	307242	60	72	115	4.6
8907146	307243	61	73	116	4.7
8907147	307244	62	74	117	4.8
8907148	307245	63	75	118	4.9
8907149	307246	64	76	119	5.0
8907150	307247	65	77	120	5.1
8907151	307248	66	78	121	5.2
8907152	307249	67	79	122	5.3
8907153	307250	68	80	123	5.4
8907154	307251	69	81	124	5.5
8907155	307252	70	82	125	5.6
8907156	307253	71	83	126	5.7
8907157	307254	72	84	127	5.8
8907158	307255	73	85	128	5.9
8907159	307256	74	86	129	6.0
8907160	307257	75	87	130	6.1
8907161	307258	76	88	131	6.2
8907162	307259	77	89	132	6.3
8907163	307260	78	90	133	6.4
8907164	307261	79	91	134	6.5
8907165	307262	80	92	135	6.6
8907166	307263	81	93	136	6.7
8907167	307264	82	94	137	6.8
8907168	307265	83	95	138	6.9
8907169	307266	84	96	139	7.0
8907170	307267	85	97	140	7.1
8907171	307268	86	98	141	7.2
8907172	307269	87	99	142	7.3
8907173	307270	88	100	143	7.4
8907174	307271	89	101	144	7.5
8907175	307272	90	102	145	7.6
8907176	307273	91	103	146	7.7
8907177	307274	92	104	147	7.8
8907178	307275	93	105	148	7.9
8907179	307276	94	106	149	8.0
8907180	307277	95	107	150	8.1
8907181	307278	96	108	151	8.2
8907182	307279	97	109	152	8.3
8907183	307280	98	110	153	8.4
8907184	307281	99	111	154	8.5
8907185	307282	100	112	155	8.6
8907186	307283	101	113	156	8.7
8907187	307284	102	114	157	8.8
8907188	307285	103	115	158	8.9
8907189	307286	104	116	159	9.0
8907190	307287	105	117	160	9.1
8907191	307288	106	118	161	9.2
8907192	307289	107	119	162	9.3
8907193	307290	108	120	163	9.4

093478 #1

FLOC PROPERTY			
Drawn by:	Traced by:		
Reviewed by:	Date:	Reviewed by:	Date:
GEOLOGY & GEOCHEM			
DAWSON M. D., YUKON			
Scale: 1:25,000	Date: Dec., '95	Plate: 1-5	



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

FLOC PROPERTY CLAIM MAP

Scale: 1:65,800 Date: DEC. 13, 1995 Plate: 1-6