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ASSESSMENT REPORT

describing

GEOPHYSICAL SURVEYS

at the

RUBY RANGE PROJECT

Angus 1-6

Shut 1-4

Delor 1-129

Malou 1-52

Latitude 61°12'N, Longitude 137°45'W
NTS 115H/4

in the

Whitehorse Mining District
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

KLONDIKE GOLD CORP.

and

CASH MINERALS LTD.

by

W. Douglas Eaton, B.Sc. Geology
November 2004

Costs associated with this report have been approved in the amount of \$ 76,400.00 for assessment credit under Certificate of Work No. QW2763
A. Sautterick
Mining Recorder
Whitehorse Mining District

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INTRODUCTION

This report was prepared for Cash Minerals Ltd. and describes horizontal loop electromagnetic surveys done in 2004 at the Ruby Range property in southwestern Yukon. The report incorporates results from earlier work with those from the 2004 program. The geophysical surveys and grid preparation were done by a 2 to 6 person crew operating from a tent camp on the property between August 13 and September 10, 2004. The geophysical surveys were conducted by Aurora Geosciences Ltd. of Whitehorse. The overall program was managed by Archer, Cathro & Associates (1981) Limited under the author's supervision. The author's Statement of Qualifications appears in Appendix I.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The property is located about 45 km north-northwest of Haines Junction in southwestern Yukon Territory at latitude 61°12'N and longitude 137°45'W on NTS map sheet 115H/4 (Figure 1). It consists of 191 mineral claims (Figure 2) registered with the Whitehorse Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited, which holds the claims in trust for Cash Minerals Ltd. Data concerning claim registration are listed below.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Angus 1-6	YB20532-YB20537	March 10, 2008
Shut 1-4	YA95641-YA95644	March 10, 2012
Delor 1-10	YB37735-YB37744	March 10, 2012
11-24	YB38302-YB38315	March 10, 2012
25-48	YB47116-YB47139	March 10, 2009
49-129	YB54418-YB54498	March 10, 2009
Malou 1-6	YB35901-YB35906	March 10, 2012
7-14	YB37727-YB37734	March 10, 2012
15-20	YB38136-YB38141	March 10, 2012
21-26	YB38218-YB38223	March 10, 2012
27-40	YB38316-YB38329	March 10, 2012
41-52	YB47140-YB47151	March 10, 2009

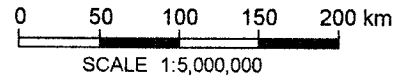
* Expiry dates do not include 2004 work that has not yet been filed for assessment credit.

The Shut 1-4 and Angus 1-6 are owned 100% by Cash. The remainder are owned by J. Peter Ross and are under option to Cash, which can earn a 100% interest subject to a 3% net smelter return royalty, 2% of which can be purchased incrementally for a total of \$1.5 million. To complete earn-in on its interest Cash must pay Ross \$45,000 before May 30, 2006.

The 2004 program was funded by Klondike Gold Corp. under terms of a June 29, 2004 option agreement with Cash. That agreement gives Klondike the right to earn a 50% interest in the

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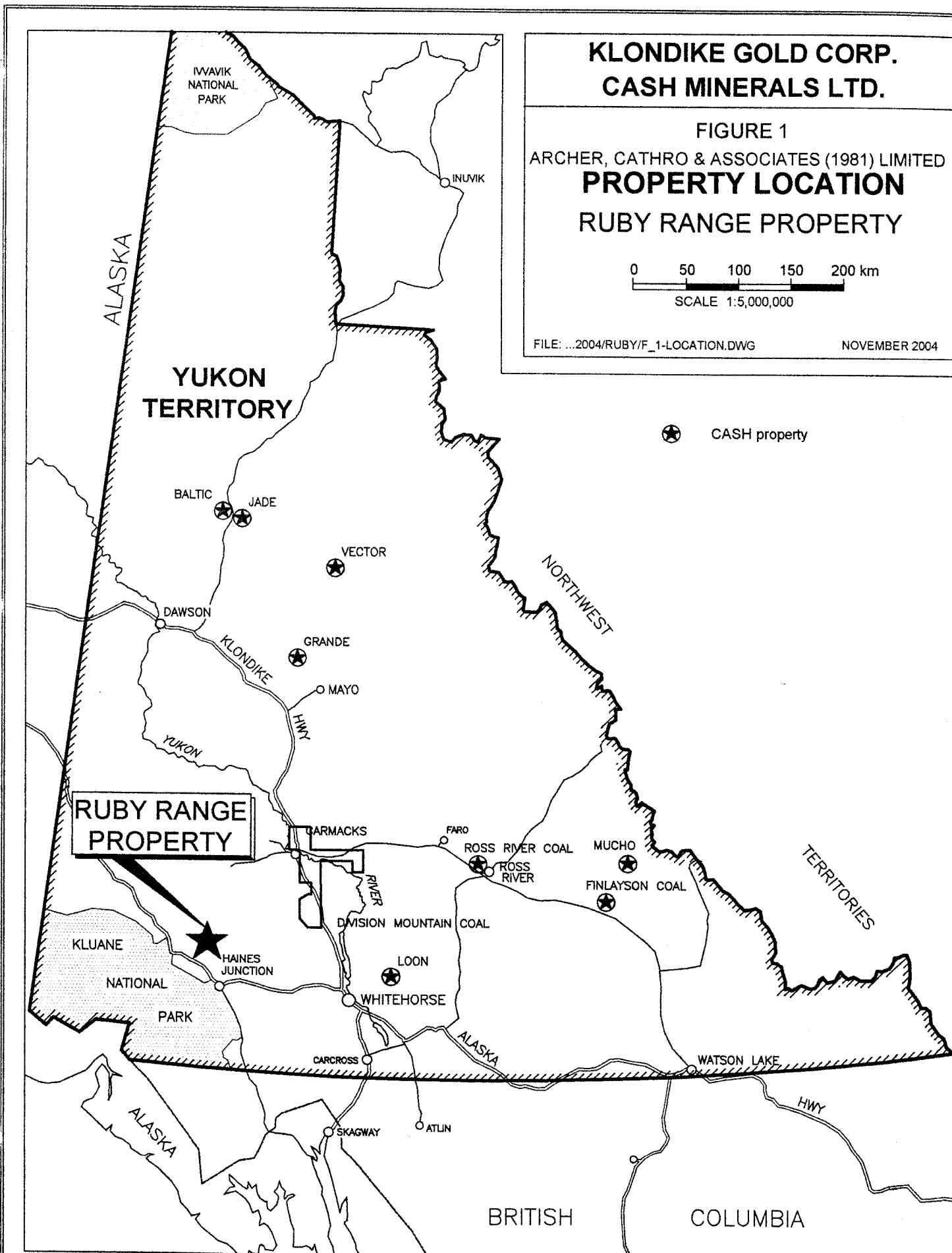
FIGURE 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
PROPERTY LOCATION
RUBY RANGE PROPERTY



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NOVEMBER 2004

★ CASH property





ANGUS CLAIMS

DELOR CLAIMS

SHUT CLAIMS

MALOU CLAIMS

Killermun Lake



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FIGURE 2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**CLAIM LOCATION
RUBY RANGE PROPERTY**

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DATE: NOVEMBER 2004

property by making cash payments totalling \$185,000 before June 30, 2010; issuing Cash 500,000 of its shares before June 30, 2008; and, incurring work expenditures totalling \$600,000 before December 31, 2006. Klondike can earn an additional 30% interest in the property by incurring another \$1,000,000 in work expenditures and the final 20% interest by bringing the property into commercial production by December 31, 2015. If Klondike earns a 100% interest in the property, Cash will be granted a 2% net smelter return royalty, half of which (1%) can be purchased for \$350,000.

In 2004 personnel and field supplies were flown to the Ruby Range property by a Bell 206B helicopter operated by Trans North Helicopters. Flights originated from the helicopter base at Haines Junction or a gravel pit located along the Alaska Highway, 27 km west-northwest of Haines Junction and 30 km south of the property. There is no direct road access to the property but a 19 km long excavator trail extends southwesterly from the claims to the Cultus Creek road, which connects to the Alaska Highway some 48 km further to the south.

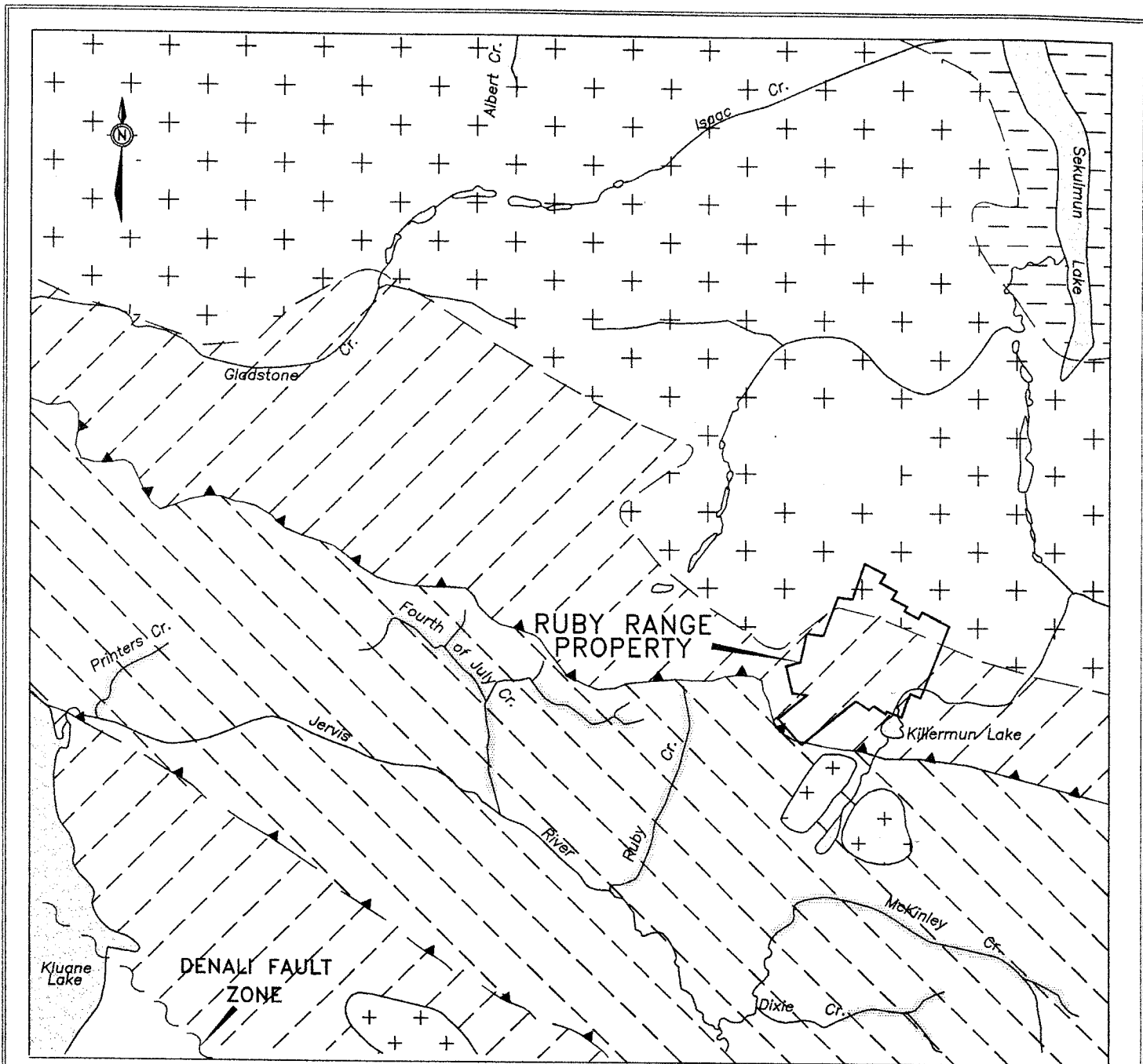
Haines Junction is located 150 km by road from Whitehorse and 265 km from a deep-sea port at Haines, Alaska. The Aishihik hydroelectric dam is located 29 km due east of the Ruby Range property.







HISTORY

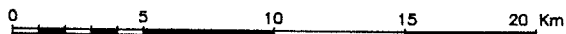
Placer gold occurrences are documented on several creeks located south and west of the Ruby Range property (Figure 3). These creeks have been explored intermittently since the early 1900s. Complete production figures are not available; however, more than 371 kg (10,208 oz) of crude gold have been mined from one of the creeks (Fourth of July) since 1978 (LeBarge and Morison, 1990, Placer Mining Section 1995, Mining Inspection Division, 1998).

Hard rock exploration began after a Geological Survey of Canada (GSC) stream sediment survey of the Aishihik map sheet (Hornbrook and Friske, 1985) reported anomalous gold and arsenic values from several drainages in the Ruby Range. Immediately following the geochemical release Silverquest Resources Ltd. (which later changed its name to Cash Resources Ltd. and subsequently to Cash Minerals Ltd.) staked the Shut, Kil, Kin and Live claim blocks to cover four anomalous drainages while United Keno Hill Mines Limited staked four blocks of Ruby claims nearby. The Spruce, Cliff and Wall claim blocks were staked by independent prospector J. Peter Ross. Follow up reconnaissance contour geochemical sampling and prospecting in 1986 by Cash located numerous gold and arsenic anomalies in the vicinity of the Shut claims but did not substantiate the GSC anomalies on the Kil, Kin and Live properties.

The first lode gold discovery in the area was made during summer 1987 by the DalBianco Exploration Syndicate on the Lib claims, one of two claim blocks it staked that year in the Ruby Range project area. Four hand trenches were dug and exposed an arsenopyrite rich quartz-carbonate vein system (the DalBianco Zone) for a strike length of 40 m. Selected specimens returned up to 89 g/t gold. The Lib claims were located approximately 3 km southeast of the Shut claims in what is now the southeastern corner of the Ruby Range property.



-  Thrust fault, known and inferred
-  Placer creek
-  Kluane Assemblage, biotite schist
-  Kluane Assemblage, muscovite schist
-  Aishihik Assemblage, schist and gneiss
-  Ruby Range Plutonic Suite, granodiorite



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FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**REGIONAL GEOLOGY
RUBY RANGE PROPERTY**

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DATE: NOVEMBER 2004

In 1987 Cash added 16 claims to the Shut claim block to cover soil geochemical anomalies outlined by the previous year's work and continued reconnaissance contour geochemical sampling and prospecting on and peripheral to the property. As a result of this work a specimen of arsenopyrite bearing quartz-carbonate float that assayed 122 g/t gold was discovered on lower Shut Creek. That same year United Keno Hill performed soil sampling and prospecting which outlined significant gold and arsenic anomalies on its Ruby 7-12 claims immediately south of the Shut claim block. Ross also staked a large block of Arc claims 3 km to the northeast.

The DalBianco Exploration Syndicate optioned its Lib and Beth claims in March 1988 to Cash which in turn optioned them and its Shut claims to Pezgold Resource Corp. in June. Exploration that summer consisted of grid soil geochemical surveys and prospecting on the Lib and Shut claims. That work outlined coincident north trending gold and arsenic anomalies on both properties and located additional arsenopyrite rich veins at the DalBianco Zone on the Lib claims. In mid-summer Pezgold staked the Angus and Topgun claims to provide additional coverage around the anomalies on the Shut and Lib claim blocks, respectively.

In 1988 Ross added more Cliff claims on the east side of Killermun Lake and staked the Stroker claims adjoining his Arc claim block. His prospecting on the Arc claims discovered quartz-carbonate vein float, a specimen of which assayed 86 g/t gold. In summer 1989 the Arc and Stroker claims were briefly optioned to Noranda Exploration Co. Ltd. which performed geological mapping, soil sampling and geophysical surveys. Although that exploration outlined widespread arsenic anomalies with sporadic gold values associated with recessive topographic linears, no significant mineral occurrences were identified and the option was dropped.

Between 1991 and 1993 Ross restaked the Ruby 7-12 and Beth claims as the Malou claims, and the Lib claims as the Delor claims. In late summer 1993, Cash optioned the Malou and Delor claims amalgamating them with its 100% owned Shut and Angus claim blocks to create the Ruby Range property. Exploration during summer 1994 included grid soil sampling, geophysical surveys, mapping and prospecting plus hand and excavator trenching.

In fall 1994 the Arc and Stroker claims were added to the Ruby Range property to create the Ruby Range project. In spring 1995 NDU Resources Ltd. optioned the Ruby Range project from Cash. Work in summer 1995 was funded by NDU and consisted of claim staking, geological mapping, 934 m excavator trenching, 31.6 line km of grid Max-Min surveys and 1874 m of diamond drilling in 14 holes. Both companies later relinquished their options, leaving Ross with the Delor, Malou, Arc and Stroker claims and Cash with the Shut and Angus claims.

In spring 2002 Cash reoptioned the Malou and Delor claims from Ross and again combined them with its Shut and Angus claims to form the current Ruby Range property. Exploration that summer consisted of additional prospecting and hand trenching.

GEOMORPHOLOGY

The property is situated in the Ruby Range Mountains about 25 km northeast of the Shakwak Valley. The area lies in the rain shadow of the much higher St. Elias Mountains to the southwest. Average annual precipitation is less than 50 cm. Creeks draining the property are

tributaries of the Aishihik River which flows into the Alsek River and eventually the Pacific Ocean.

Topography in much of the area is strongly influenced by Pleistocene to Recent valley and alpine glaciation (St. Elias ice sheet). The result is gently undulating uplands cut by broad, north trending U-shaped valleys flanked by hanging valleys ending in cirques. Valley bottoms in the vicinity of Killermun Lake, southeast of the claim block, are slightly below tree line at an elevation of about 1000 m. Lower slopes typically are covered by scattered buckbrush and moss while alpine grasses and open talus slopes predominate at higher elevations.

Bedrock exposures are rare on the valley floors due to a blanket of glaciofluvial outwash and till. Lower slopes are generally covered by lateral moraines up to about 1500 m and bedrock is only seen where creeks have made deep incisions through this material. Relief between 1500 and 1800 m is moderate to steep and outcrops are common where slopes exceed 30°. Ridge crests and upland plateaus above 1800 m appear to have escaped glaciation and are capped with slabby felsenmeer boulder fields. Although outcrop is locally abundant, it comprises less than 5% of the property as a whole. Soil development is poor in all geomorphological zones.

REGIONAL GEOLOGY

The Ruby Range project area lies within the Kluane Assemblage which is part of the Taku Terrane. This package of metamorphic rocks is bounded on the southwest by the Denali Fault Zone and on the northeast by a batholith related to the Ruby Range Plutonic Suite (Figure 3). Northeast of the Ruby Range Plutonic Suite are metamorphic rocks of the Aishihik Assemblage which belongs to the Yukon-Tanana Terrane. Southwest of the Denali Fault Zone are Paleozoic sedimentary and volcanic rocks of the Alexander and Wrangellia Terranes.

The regional geology was mapped at 1:250,000 scale by the GSC in the early 1970s (Tempelman-Kluit, 1974). More recent studies in the area have focussed on the metamorphic and intrusive history of the Taku Terrane. Two main lithological packages have been outlined in the vicinity of the property, the Kluane Assemblage and the Ruby Range Plutonic Suite as described below.

Kluane Assemblage comprises two relatively homogeneous units (biotite schist and muscovite-chlorite schist) separated by thrust faults. Both are graphitic, exhibit coarse schistosity and contain abundant blue-grey, sieve textured porphyroblasts of graphite filled andesine (Erdmer, 1991). Protoliths for the units are believed to be Mesozoic flysch derived from a westerly source (Erdmer and Mortensen, 1993). Biotite schist is the dominant unit on the property. It is typically brown weathering with a purple hue and contains garnet and staurolite with lesser tourmaline. Locally lenses of marble, less than 100 m in length, occur within the schist. These lenses often exhibit silicification and occasionally garnet-diopside skarnification. Two regional scale, east-west trending, north dipping thrust faults have been identified within the Kluane Assemblage, one of which is located along the southern edge of the property. The trace of this fault is intermittently marked by a series of elongate lenses of olivine-serpentine schist (Mezger, pers. comm., 1993). Sillimanite grade thermal overprinting observed in the schists is believed to be related to the emplacement of the Ruby Range Batholith.

Ruby Range Plutonic Suite includes the Ruby Range Batholith along the northeast side of the Kluane Assemblage and smaller satellite intrusions within it. The plutonic suite primarily consists of grey to light brown, medium to coarse grained, non-foliated biotite-hornblende granodiorite. The batholith appears to have been emplaced as a northeast dipping sheet paralleling the orientation of the regional metamorphic fabric. It is believed to be analogous to the Great Tonnalite Sill situated 400 km to the south in the Alaska Panhandle. Age constraints of crystallization are reportedly between 50 and 57 Ma, which suggest the batholith was a synmetamorphic pluton intruded during the latter stage of the terminal high grade metamorphic event in the region (Mortensen and Erdmer, 1992).

PROPERTY GEOLOGY

Systematic geological mapping on the property is frustrated by the relative lack of bedrock exposures. In most areas contacts are inferred from distribution of lithologies in talus and felsenmeer. Figure 4 shows the main outcrops and general property geology. Observations made during mapping are summarized below.

Lithology

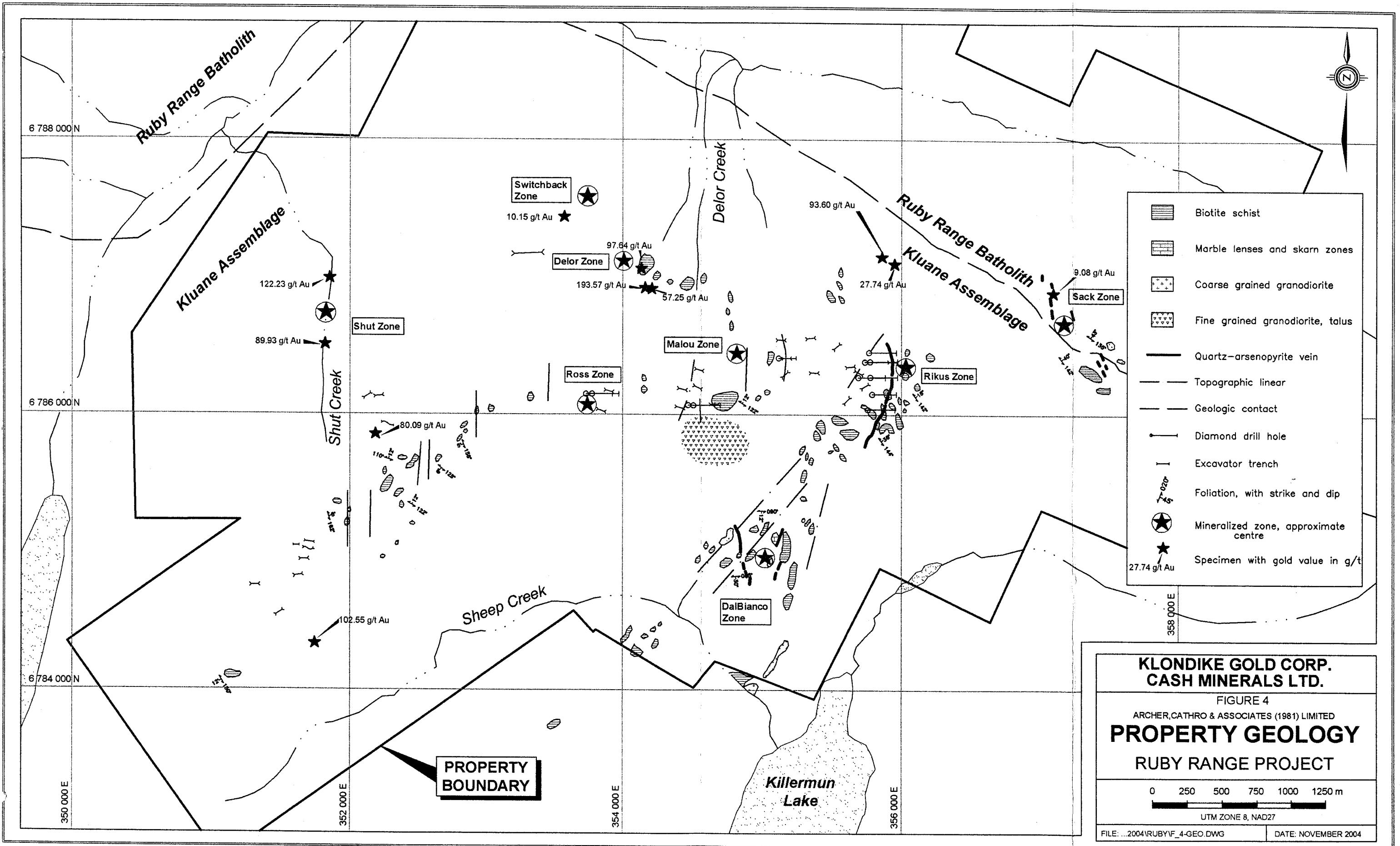
The rock type underlying most of the property is a relatively homogeneous, coarse grained, graphitic quartz-biotite schist of the Kluane Assemblage. This unit is blocky weathering and often rusty brown on fracture surfaces. Common accessory minerals include garnet and staurolite with lesser tourmaline. Foliations normally strike 90 to 145° and dip from 15 to 35° NE occasionally rolling to 30° SW. The main exception occurs south of Shut Creek in the western part of the property, where strikes are about 160° and dips subhorizontal.

Marble lenses and occasional skarn zones are found within the schist on the east facing slope above Killermun Lake. Exposures of marble are typically white to pale green on both weathered and fresh surfaces, display weak silicification and range up to 7 m thick and 100 m long. Skarns consist of medium to coarse grained garnet and diopside. They are often rusty weathering making them difficult to distinguish from schist until the rock is broken.

Coarse grained granodiorite of the Ruby Range Batholith underlies the northern part of the property. The intrusive contact is on the floor of a broad valley and is mostly obscured by glacial till and glaciofluvial outwash. Where observed, the contact is sharp and the border phase granodiorite exhibits well developed foliation that parallels the contact and metamorphic textures in the schists. The foliation in the granodiorite gradually diminishes away from the contact and at a distance of approximately 1.5 km the rocks are non-foliated.

A few undeformed granodiorite outcrops have also been observed northeast near Killermun Lake and are believed to be part of a small plug. About 1600 m to the north near the centre of the claim block is a 400 m diameter area of foliated fine grained granodiorite talus that is believed to have been derived from another small plug.

Two sets of narrow (up to 1 m wide) unfoliated dykes have been noted in several areas within the schist. They are best distinguished by grain size. The finer grained dykes are andesitic, tan to



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FIGURE 4
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY GEOLOGY

RUBY RANGE PROJECT

0 250 500 750 1000 1250 m

UTM ZONE 8, NAD27

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medium grey and microcrystalline. They strike 160 to 190°, dip 60 to 70° W and occasionally follow north trending shear zones. The other dyke set is fine to medium grained and dioritic in composition. These dykes are pale green-grey, strike 080 to 100° and dip steeply to the south or north.

The age relationship between the various intrusive phases is uncertain because no crosscutting contacts have been observed.

Structure

The largest scale structure crossing the property is a northeast dipping thrust fault that has been traced approximately 65 km from an area southeast of the property to Granite Bay on Kluane Lake, as illustrated in Figure 3. This fault is paralleled by a second thrust 15 km to the southwest. A number of strong northeast trending high angle faults can be inferred from irregular indentations along the contact of the Ruby Range Batholith but these structures do not appear to affect the thrust faults. If this observation is correct, the high angle faults would have to be older than the thrusts. The inferred high angle faults often coincide with large, linear creek valleys.

Airphoto analysis and ground mapping have recognized numerous small, north and northeast trending recessive topographic linears cutting across the claims. Where exposed in outcrop or trenches, the linears contain one or more gouge zones surrounded by a few metres of weakly altered wallrock exhibiting moderate to strong fracturing paralleling the trend of the linear. Quartz veins or andesitic dykes have been emplaced along several of the linears.

Three sets of veins are found on the property. Two sets are nearly conformable with foliation in the schists and appear to have been deposited from relatively high temperature metamorphic fluids. The third set, which is often gold bearing, is discordant and is believed to be derived from younger mesothermal solutions. These age relationships and temperature assumptions are based primarily on crosscutting relationships and mineralogical observations.

The most common type of conformable veins contains a single assemblage of quartz-carbonate. They usually strike 110 to 125°, dip 40 to 80° northeast and range up to 1.5 m in width. The other conformable vein set exhibits a more complex assemblage including quartz, andalusite, amphibolite, garnet and/or tourmaline. They range up to 0.7 m in width and sometimes cut foliation at a shallow angle. Most of the quartz in both of these sets forms glassy granular masses. Vein selvages often contain andalusite, muscovite and chlorite.

The discordant set of gold bearing veins are described in detail in the following section. They consist of quartz with lesser carbonate and minor muscovite. The quartz is typically milky white, granular to massive and weakly to strongly fractured parallel to the vein walls. The carbonate mineral is tan to cream coloured where fresh and is often leached from surface samples leaving a white powdery residue in cavities. These veins cut foliation at a high angle, striking northerly and dipping moderately to steeply westward. In a few locations these veins cut the andesitic dyke set.

A few unmineralized faults appear to cut and slightly offset all three of the vein sets. The best exposed of these late faults crosses one of the gold bearing zones (the Rikus Zone) in the eastern part of the property. That fault strikes northwesterly, dips steeply and has produced about 25 m of dextral offset.

MINERALIZATION AND GEOCHEMISTRY

General

Although effective prospecting is often inhibited by extensive till and felsenmeer cover, numerous auriferous arsenopyrite bearing quartz-carbonate veins and float occurrences have been discovered within a 5500 by 3500 m area in the central part of the property (Figure 5). For descriptive purposes, the veins and float occurrences have been grouped into eight zones.

The mineralized quartz-carbonate veins are usually associated with north trending recessive topographic linears. The vein material is usually well fractured and tends to weather into small fragments, rarely exceeding 10 cm in diameter. The host structures strike northerly (between 330 and 020°) and dip vertically to 40° west. Individual quartz veins range up to 0.85 m in width while sheeted veins and veinlets form swarms up to 9.5 m across. Many of the veins include narrow gouge zones. The veins are usually surrounded by a few metres of fractured wallrock exhibiting weak chlorite and carbonate alteration with disseminated arsenopyrite.

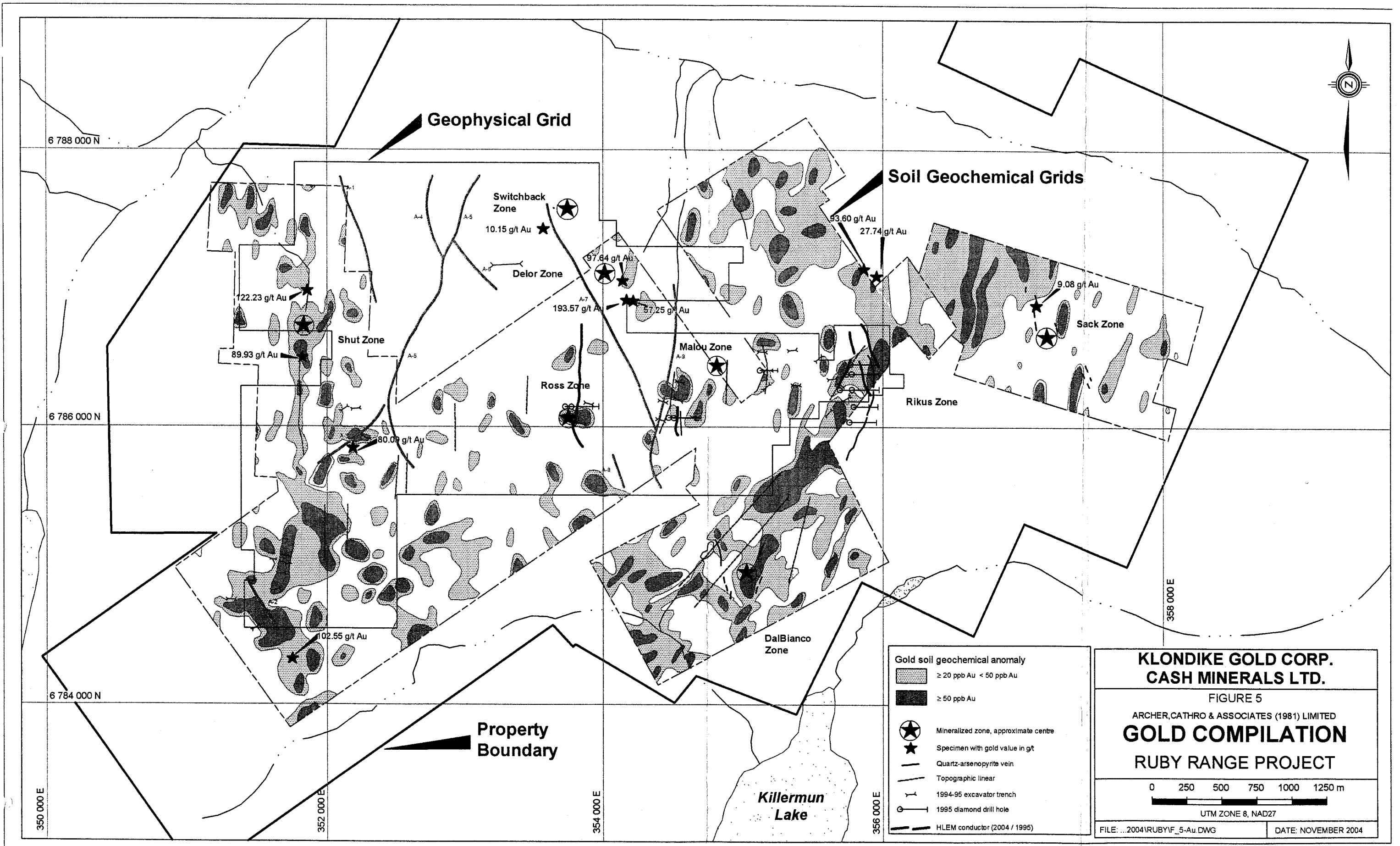
Arsenopyrite is the only sulphide present in most veins but minor galena, chalcopyrite and pyrite have been noted in a few locales. Sulphide grains range from 1 to 4 mm in diameter and occur as disseminations or semi-massive to massive bands paralleling the vein walls. Specimens from the DalBianco Zone, Sack Zone and parts of the Malou Zone are generally coarser grained and contain more arsenopyrite than the other zones. Gold to arsenic ratios from individual samples are highly variable and some of the highest gold assays have come from specimens containing less than 2% arsenopyrite. Oxidized veins usually exhibit yellow-green scorodite stains. Native gold grains up to 1 mm in diameter have been observed in oxidized and unoxidized veins.

Mineralized veins typically assay between 3 and 80 g/t gold. The highest assay came from an oxidized float specimen collected in the Delor Zone, which returned 193.57 g/t gold. Samples of arsenopyrite bearing wallrock taken adjacent to veins normally yield between 0.2 and 1.0 g/t gold.

The individual zones and their associated soil geochemical signatures are described later in this section. Those descriptions are based on work done in 2002 plus results of previous exploration (Eaton, 1987; Main, 1988; Eaton, 1993; Eaton and Wengzynowski, 1994; Wengzynowski, 1995; Becker, 1996; Eaton, 2003).

Sampling Procedures and Analytical Techniques

Sampling procedures and analytical techniques for soil, rock and core samples were described in earlier reports. No samples were collected in 2004. Most of the soils were taken at 50 m intervals on east-west lines spaced 100 m apart. In some areas (notably the northeast corner of



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FIGURE 5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GOLD COMPILATION

RUBY RANGE PROJECT

0 250 500 750 1000 1250 m

UTM ZONE 8, NAD27

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the property) the line spacing was increased to 200 m. All analyses were performed at ALS Chemex in North Vancouver.

Soil Geochemical Results

Grid soil geochemical results are available for about 50% of the property. Anomalous areas are best defined by gold and arsenic, which are closely correlated (Figures 5 and 6).

The largest, strongest and most continuous anomalies occur in two main trends located about 3500 m apart. Both trends are elongated along their north-south axis, parallel to the orientation of the veins.

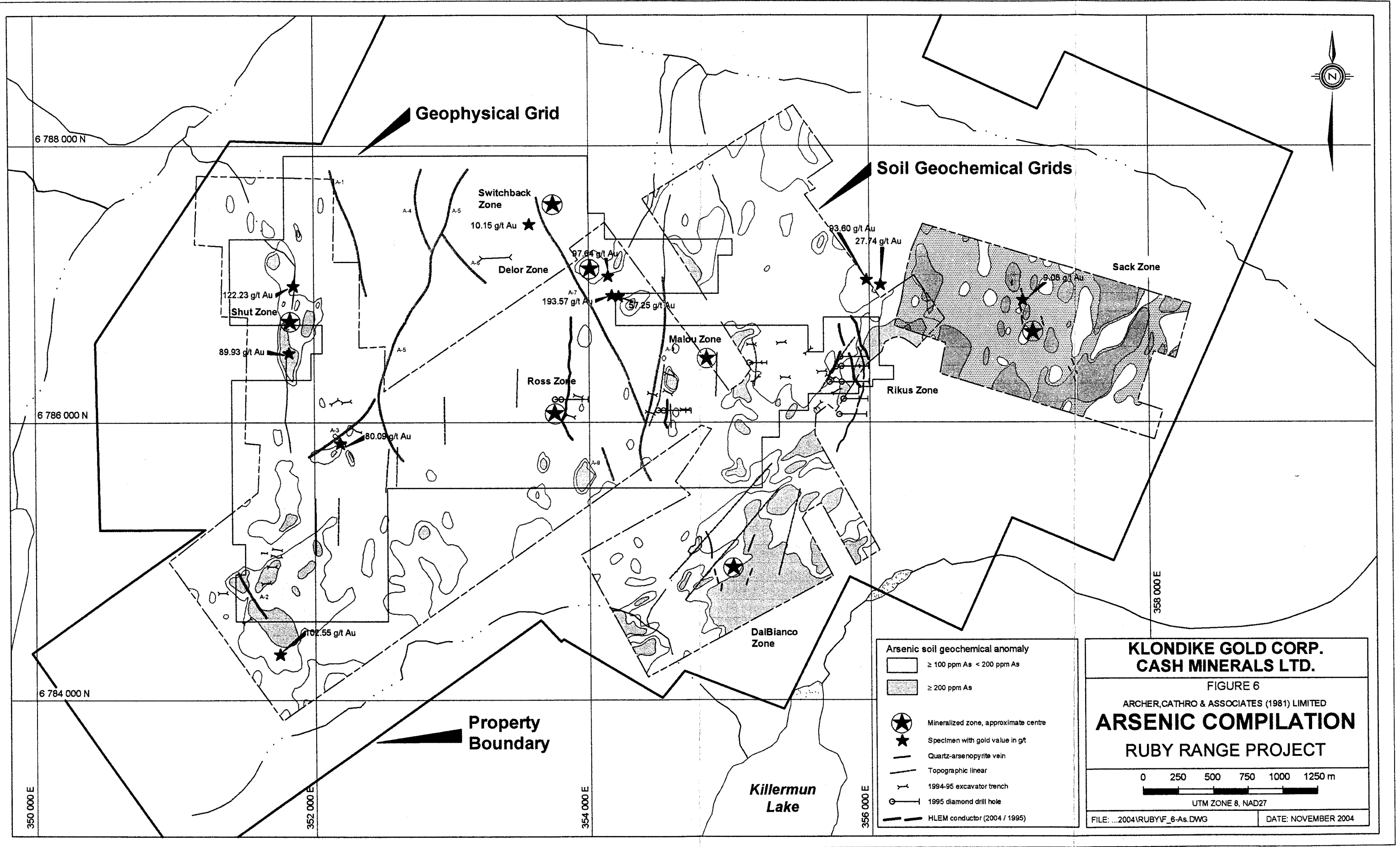
The easterly trend encompasses the DalBianco and Rikus Zones while the westerly one includes the Shut Zone. Most of the other zones are marked by weaker, more discontinuous anomalies. Surprisingly the Delor, Ross and Switchback Zones have very little geochemical expression. In some areas, notably the Delor and Switchback Zones, the weak geochemical response is likely caused by poor sample quality related to frozen, organic rich soil. In other areas the size, shape and intensity of the anomalies is undoubtedly influenced by downhill soil creep. Geochemical response in the vicinity of the Sack Zone differs somewhat from that elsewhere on the property. There, nearly all samples are moderately to strongly anomalous for arsenic and there is little correlation between arsenic and gold. The strongest gold anomalies on this grid are located about midway between the best mineralized of the Sack veins and those at the Rikus Zone.

Mineralized Zones

Eight mineralized zones have been identified on the property. All were found by prospecting with each discovery originally consisting of small fragments of mineralized quartz float surrounded by coarser talus, felsenmeer or glacial material. Only two of the zones (Rikus and DalBianco) contain mineralized outcrops. Attempts to trace mineralized float to bedrock have been hampered by several factors. Hand trenching, except on steep south or east facing slopes, has been ineffective because downslope dispersion has made it difficult to identify a specific source area and size of the area that can be tested has been limited by the depth of overburden and/or frost in the soil. Excavator trenching suffered from the same problems and was further limited by steep terrain which prevented access to many promising areas. Diamond drilling has been the most effective technique for locating veins in bedrock, but it is relatively expensive and core recovery was often poor within the vein intervals, making grade determination somewhat unreliable. Larger diameter core and a better mud program should handle the core recovery problem.

The following paragraphs contain descriptions of each of the main zones.

The **Rikus Zone** is the best exposed, most intensively explored vein system on the property. The zone has been traced in outcrops and trenches over a 700 m strike length and is open to further extension in both directions. A cluster of gold rich float fragments discovered 500 m north lie along the projected surface trace of the vein system. In 1995 eight diamond drill holes were completed on five section lines spaced 100 m apart in the north-central part of the zone. The



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FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ARSENIC COMPILATION

RUBY RANGE PROJECT

0 250 500 750 1000 1250 m

UTM ZONE 8, NAD27

FILE: ...2004\RUBY\F_6-As.DWG DATE: NOVEMBER 2004

zone consists of two subparallel veins located about 50 m apart, plus smaller veins and veinlets in the adjacent wallrocks. Mapping in 2002 coupled with re-evaluation of earlier drill results indicates that the main veins dip moderately to the west. The thickest, best mineralized vein intervals occur adjacent to an unmineralized cross fault. On the south side of the cross fault, the easterly vein widens to 75 cm of massive quartz, a chip sample across which assayed 22.40 g/t gold. On the north side of the fault the vein bifurcates into a swarm of subparallel, 0.5 to 2 cm veinlets. A chip sample across the vein swarm returned 7.37 g/t gold over 9.5 m.

The two main veins typically host massive milky white quartz bands that are often fractured parallel to strike. The quartz bands range from 0.08 to 0.75 m in width. They contain trace to 20% fine grained arsenopyrite with minor pyrite and occasional native gold grains. Although the quartz bands are often narrow, they are generally high grade; for example, the seven bands cored in drill holes returned a weighted average of 28.13 g/t gold over 0.15 m.

Lower grade alteration halos up to 2 m wide are developed around the well mineralized quartz bands. In drill core the altered rocks are bleached and chloritized, typically exhibiting minor, finely disseminated arsenopyrite and calcite. At surface they are highly fractured and clay altered with a rusty brown, pale green or yellow colour. Intensity of alteration is directly proportional to the degree of fracturing and abundance of quartz. Fourteen samples of altered drill core taken on either side of the seven quartz bands described in the previous paragraph returned a weighted average of 0.93 g/t gold over 1.35 m.

All eight of the holes drilled in the Rikus Zone intersected one or more mineralized intervals as tabulated below. The widest intersection was in Hole 95-3 which returned 2.83 g/t gold over 6.80 m, including a 0.10 m wide quartz band plus 1 m of altered footwall and 5.70 m of altered hanging wall.

SIGNIFICANT DRILL INTERSECTIONS
RIKUS ZONE

Hole Number	Coordinates		Length (m)	Azimuth (°)	Dip (°)	From (m)	To (m)	Width (m)	Uncut Grade Gold (g/t)
	N	E							
95-1	10+000	10+000	162.76	090	-50	36.45	37.45	1.00	4.20
						45.94	49.99	4.05	2.92
						46.94	47.07	0.13	80.00
						54.56	56.08	1.52	1.19
						79.44	80.44	1.00	1.89
including						84.17	93.43	9.26	1.03
						92.15	93.43	1.28	4.79
95-2	9+900	10+023	141.43	090	-50	32.07	34.75	2.68	1.32
						39.32	40.23	0.91	4.49
						64.55	68.88	4.33	2.11
						81.99	82.99	1.00	1.50

95-3	9+900	10+022	170.08	090	-75	32.92	35.96	3.04	1.05
						46.63	48.62	1.99	2.49
						68.27	75.07	6.80	2.83
including						71.32	74.07	2.75	5.32
& including						73.97	74.07	0.10	54.00
95-4	10+105	9+984	148.44	090	-50	31.78	35.58	3.80	2.29
						61.87	65.19	3.32	2.72
including						65.11	65.19	0.08	48.60
95-5	10+192	9+982	134.72	090	-50	48.46	50.44	1.98	1.69
95-12	9+785	9+976	145.39	090	-50	32.38	33.57	1.19	4.56
including						32.38	32.57	0.19	29.19
						68.05	69.15	1.10	1.49
including						69.05	69.15	0.10	10.60
						71.69	72.89	1.20	1.87
including						71.69	71.89	0.20	9.26
95-13	10+001	9+900	224.64	090	-50	99.27	100.44	1.17	2.01
						150.47	154.54	4.07	1.95
including						150.47	151.47	1.00	4.69
95-14	10+105	9+939	156.36	090	-60	72.11	74.25	2.14	1.63
						142.64	144.12	1.48	3.06

The **DalBianco Zone** lies about 1000 m southwest of the Rikus Zone. It was tested with hand trenches between 1987 and 2000 but has not been drilled. Three subparallel veins, about 100 m apart have been traced by trenches and float for up to 350 m along strike. Mineralized veins typically consist of 5 to 35 cm of semi-massive to massive, coarse grained arsenopyrite within barren or weakly mineralized quartz-carbonate gangue surrounded by 1 to 3 m wide alteration halos containing minor amounts of fine grained arsenopyrite. The alteration halos are rusty weathering and weakly to moderately silicified. Gold assays from the halos are typically between 0.20 and 1.00 g/t but have returned up to 2.26 g/t. Chip samples of arsenopyrite rich quartz assayed as high as 41.07 g/t gold across 0.15 m but most returned less than 9 g/t. Samples from seven trenches cut across the most westerly vein over a 63 m strike length returned a weighted average of 2.03 g/t gold across 3.37 m. Gold to arsenic ratios in this zone and the Sack Zone are the lowest on the property.

The **Ross Zone** is located 2100 m west of the Rikus Zone. It was explored with three diamond drill holes and two excavator trenches in 1995. Surprisingly, no mineralized float has been discovered near this zone and it is only marked by a small soil geochemical anomaly. Where exposed the mineralized structure consists of approximately 1 m wide, light grey to dark brown clay gouge bands containing small (<1 cm diameter) angular wallrock and quartz clasts. Only

two excavator trenches targeted this zone. The first trench returned 19.06 g/t gold over 1 m. The other trench, 100 m to the south, failed to intercept significant mineralization. It is not known whether that trench was off the trend of the vein or the vein lacks lateral continuity.

The three diamond drill holes tested downdip beneath the first trench. The first was abandoned short of the zone so a second was drilled from the same collar at a slightly steeper angle. It intersected a 1.44 m thick section of clay gouge with quartz clasts, which assayed 4.16 g/t gold. Only 27% of the material from this interval was recovered. The third hole was collared 50 m to the west and based on the assumed orientation of the vein should have intersected it about 135 m deeper. Although this hole did intersect weakly veined structures near the top of the hole which correlate with weak structures encountered in the first two holes, it failed to intersect the downdip extension of the main vein.

The **Malou Zone** lies between the Ross and Rikus Zones. In 1995 three diamond drill holes and nine excavator trenches tested three recessive topographic linears and two areas of soil geochemical response which collectively define the zone. The most promising target is a north trending linear exposed in Trench M-6. It consists of a 0.3 m wide band of strongly altered wallrock containing a stockwork of narrow quartz-arsenopyrite veinlets. At surface the altered wallrock is weathered to white clay gouge surrounding 1 to 5 cm wide quartz bands containing up to 15% coarse grained arsenopyrite. The first excavator trench across the zone returned 1.39 g/t gold over 0.3 m but two other trenches 105 m and 250 m north failed to intersect the mineralized structure.

Two diamond drill holes tested the downdip projection of the vein exposed in Trench M-6. The first returned 2.74 g/t gold over 0.33 m from strongly altered biotite schist exhibiting a stockwork of <1 mm wide quartz-arsenopyrite veinlets. The second hole intersected quartz-arsenopyrite veins and stockwork veinlets within weakly altered wallrock but returned near background gold values.

The second topographic linear at the Malou Zone is centred on Trench M-7 which is located 600 m east of Trench M-6. Bedrock beneath this linear consists of a 1 m wide band of altered and brecciated wallrock containing a stockwork zone of narrow quartz-arsenopyrite veinlets plus a 3 to 5 cm wide quartz-arsenopyrite vein. Although a composite of five vein specimens collected during prospecting in the vicinity of Trench M-7 returned 5.31 g/t gold, a sample containing vein exposed in that trench returned only slightly anomalous gold values. Two other trenches located 100 m north and south of Trench M-7 on the same north trending recessive linear failed to intersect mineralization. One diamond drill hole tested downdip beneath Trench M-7. It intersected altered and brecciated biotite schist containing a 3.5 cm wide quartz-arsenopyrite vein and minor narrow veinlets. The interval containing the veining returned 1.06 g/t gold over 1.13 m.

Trenches dug on the other recessive linear and the soil geochemical anomalies at the Malou Zone failed to intersect significant mineralization and returned low gold assays.

The **Shut Zone** is located 4300 m west of the Rikus Zone. It was explored by a total of six widely spaced excavator trenches in 1995. Four of the trenches were cut on the felsensmeer covered uplands northwest of Sheep Creek within an area of strongly anomalous gold and

arsenic soil geochemical response and vein float. All four trenches encountered permafrost at shallow depths and did not reach bedrock. Samples taken from rock fragments along the bottoms of the trenches did not explain the soil geochemical anomalies.

The other two trenches were cut into a mineralized float train in a north facing cirque at the head of Shut Creek. Vein specimens included scorodite and arsenopyrite bearing quartz-carbonate float which returned values up to 80.1 g/t gold. Although both trenches reached bedrock, neither exposed the source of the float.

Prospecting downstream to the north discovered additional specimens of mineralized float. There are no outcrops in that area and no trenches were cut. Four of 20 mineralized float specimens taken over a length of 2300 m within the area of anomalous soil geochemical response assayed greater than 80 g/t gold and the average for the 20 samples was 21 g/t gold (Wengzynowski, 1995). Vein material is composed of milky white, glassy or grey quartz-carbonate containing 2 to 20% fine grained disseminated arsenopyrite and rare galena.

The **Sack Zone** is the lowest and most easterly of the zones on the property. It is located on a broad hummock separating two glacial valleys, about 1400 m northeast of the Rikus Zone. Mineralized vein float was discovered there in 1995 and additional vein material was found in 2002 along a series of poorly exposed linears. No mineralization has been observed in bedrock. On average, the Sack Zone mineralization is more arsenopyrite rich than other zones. Mineralized specimens are typically less than 15 cm thick and have assayed in the range of 3 to 9 g/t gold.

The **Delor Zone** is situated on a north trending slope about 2000 m west-northwest of the Rikus Zone and 1000 m north along strike from the Ross Zone. Specimens of mineralized vein float collected by various workers within a 300 by 200 m area have returned encouraging gold assays. Two main types of material were sampled. The first type consists of scorodite or arsenopyrite bearing quartz-carbonate vein float, seven samples of which averaged 69.94 g/t gold, including values up to 193.57 g/t. The other type is biotite schist wallrock containing narrow quartz veinlets and 1 to 3% disseminated arsenopyrite. Two samples of the material returned 1.41 and 5.26 g/t gold.

The Delor Zone has not been observed in bedrock. Hand trenching has been frustrated by thick overburden and frozen soil. Steep slopes prevented excavator access. No diamond drilling has been done because the target is not well enough defined by prospecting and mapping.

The **Switchback Zone** was discovered in 2002 on a vegetated north facing slope, about 700 m north of the Delor Zone. There is no outcrop in the area and hand pits bottomed at a shallow depth in frozen soil. Twelve samples of weakly mineralized quartz vein and altered wallrock were collected. The samples returned 0.15 to 10.15 g/t gold, averaging 2.03 g/t.

GEOPHYSICAL SURVEYS

Geophysical surveys were conducted in a narrow band across the centre of the property in 1995 by Aurora Geosciences Ltd. (Becker, 1996). These surveys included horizontal loop electromagnetic (HLEM) and total field magnetics (TFM) done to test their effectiveness for detecting vein structures. The HLEM surveys successfully identified conductors that coincided with known veins. Although the conductors were relatively weak, they generally persisted across multiple lines, implying strike continuity. The TFM surveys did not yield any strong positive response that would indicate a talus covered body containing magnetite or pyrrhotite, such as a skarn or hornfels halo around an intrusion. Nor did they show sharp breaks in general magnetic trends that would indicate a fault offset.

In 2004 a much larger grid was established in the western and central parts of the property and HLEM surveys were conducted across it. A total of 45.6 line km were surveyed by Aurora Geosciences on east-west lines spaced 200 m apart (Appendix II). Most of the survey was conducted with an Apex Parametrics Max Min 1-10 using a 100 m coil separation and measuring 220, 7040, 14080 and 28160 Hz. Following an instrument breakdown, a Max Min II was used to fill in unsurveyed portions of the grid using a 100 m coil separation and measuring 222 and 3555 Hz. A report providing details concerning the survey appears in Appendix II.

The survey identified nine multiline anomalies and three isolated anomalies, all likely caused by weakly conductive, steeply dipping tabular conductors. Figure 5 shows the survey areas, the location of 1995 and 2004 conductors, known veins and gold soil geochemical results. Figure 6 illustrates similar data relative to arsenic geochemistry. Most of the conductors coincide with linear depressions associated with known veins or strong soil geochemical anomalies. Where the 1995 and 2004 grids overlap, the strongest conductors were reproduced almost exactly. Surprisingly, the most extensive systems of conductors were identified in an area with little sample coverage. There are no outcrops in this area. It is mostly located on a well vegetated, frozen north facing slope.

One of the most encouraging aspects of the geophysical results is the number of junctions between conductors that were identified. These junctions likely represent vein intersections or vein-cross fault intersections, both of which are preferred locations for mineralization.

DISCUSSION AND CONCLUSIONS

The 2004 geophysical surveys better define the extent and distribution of potential vein structures on the Ruby Range property. They successfully identified known veins and extended them into overburden covered areas. They identified what appear to be an extensive, previously unknown vein system and a number of structural junctions. These structural junctions are of particular interest because trenching and drilling at the Rikus Zone has shown that the thickest and highest grade mineralization is often located near them.

Future exploration should extend outward from areas of known mineralization to test along the length of the various conductors, particularly near suspected structural junctions, where HLEM response indicates wide (>10m) targets and in areas that produced strongly anomalous soil

geochemical results. The exploration should consist of several widely spaced, relatively shallow diamond drill holes with a small helicopter- or hand-portable drill. The purpose of the program is to confirm the location of vein structures and then identify well mineralized zones for systematic follow-up drilling.

The geological setting and style of mineralization at the Ruby Range property suggests potential to produce numerous small but high grade ore shoots. Some gold mines where this type of structurally controlled mineralization occurs have had long production histories, but identification of ore bodies requires close spaced drilling and detailed understanding of mineralizing controls. Previous drilling at the Ruby Range property has only superficially tested a small percentage of the total area of interest. More drilling is definitely warranted.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



W. Douglas Eaton, B.Sc. Geology

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Placer Mining Section

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APPENDIX I
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in North Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. majoring in Geological Sciences.
2. From 1971 to present, I have been actively engaged in mineral exploration in Yukon Territory, Northwest Territories and northern British Columbia. I am currently a partner and Secretary-Treasurer of Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



W. Douglas Eaton, B.Sc. Geology

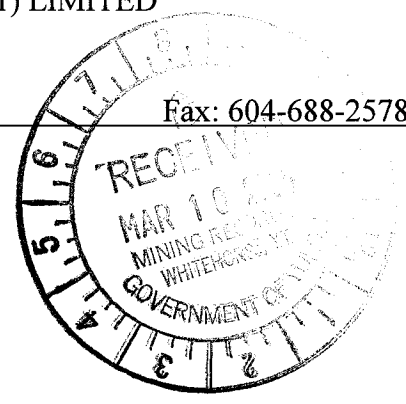
QW2763

095288

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 West Hastings Street
Vancouver, B.C. V6B 1L8

Telephone: 604-688-2568


Fax: 604-688-2578



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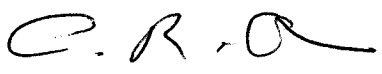
I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the Angus 1-6, Shut 1-4, Delor 1-129 and Malou 1-52 mineral claims on Claim Sheet 115H/4 is accurate.


Joan Mariacher

Sworn before me at Vancouver, B.C.

this 7th day of March 2005


Notary Public, Yukon Territory

Statement of Expenditures
Ruby Range Property
Angus 1-6, Shut 1-4, Delor 1-129 and Malou 1-52 Mineral Claims
January 16, 2005

Labour

D. Eaton – geologist – June to December – 62 hours at \$70/hr	\$ 4,643.80
S. Eaton – field assistant – June to August – 20 days at \$272/day	5,820.80
B. Duncan – field assistant – June to August - 21 days at \$224/day plus bonus	5,290.08
R. Foubister – field assistant – June to August – 6 1/2 days at \$224/day	1,557.92
J. Manley – field assistant – June to August - 14 days at \$224/day	3,355.52
M. Rance – field assistant – June to August - 20 days at \$224/day	4,793.60
J. Mariacher – June to December – 55 3/4 hours at \$58/hr	3,459.85
L. Corbett – June to September – 40 1/4 hours at \$40/hr	<u>1,722.70</u>
	30,644.27

Expenses

Field room and board – 133 1/4 mandays at \$125/day	17,822.19
Amerok Geosciences – geophysical survey and report	21,881.50
Trans North Helicopters – 11.3 hours Bell 206 at \$925/hr plus fuel	<u>11,819.68</u>
	51,523.37
	<u>\$82,167.64</u>

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

In Account With

Project *RUBY RANGE PROJECT*
 Date *JUNE 29 - AUGUST 31, 2004*

LABOUR			
Field	D. EATON - 5 HRS AT 70/HR - 20 HRS AT 70/HR	JUNE AUG	350.00 1400.00
	S. EATON - 20 DAYS AT 272/DAY		5440.00
	B. JUNKAN - 21 DAYS AT 224/DAY - BONUS		4704.00 240.00
	R. FOUBISTER - 6 1/2 DAYS AT 224/DAY		1456.00
	J. MANLEY - 14 DAYS AT 224/DAY		3136.00
	M. RANCE - 20 DAYS AT 224/DAY		4480.00
	EXPEDITING L. CORBETT	29 HRS AT 40/HR	1160.00
Accounting and Expediting	J. Mariacher-	1 1/4 hrs at \$58/hr	72.50
		8 HRS AT 58/HR	464.00
		14	812.00
		JULY AUG	23714.50
OTHER SERVICES			
Room and Board in Whitehorse	20 1/2 days at \$90/day	AUG	1845.00
Field equipment from AC stock	121 DAYS AT 50/DAY		6050.00
Printing	Photocopies 2347 @.15		10.50
Rentals from AC	Loose Coal 12L - 1/3 @ 14.75		4.91
			7910.41
EXPENSES			
Petty Cash	4.40 01		4.40
Telephone			
	MILLS BASICS		8.23
	SIB MCKEOWN		25.00
	L. CORBETT EXPENSES - 5.99 01 + 51.33 01		57.32
	RIVERDALE SUPPLY		1446.62
	SARIELA SAW		13.99
	MALHEEDON RENTALS - 16.36 01 + 314.52		330.88
	HOME HARDWARE		66.96
	MAC'S FIREWEED		47.86
			2001.26
Management	6% on Expenses on Field A/C		170.07
			170.07
			33746.24
GST (R100247667)	7% on 33746.24		2362.24
			36108.48



Whitehorse Office
 108 Gold Road
 Whitehorse, YT Y1A 2W3
 Phone: (867) 668-7672
 Fax: (867) 393-3577

INVOICE

GST No.: RT886365816
 File: ACA-04-003-YT

Invoice #001
 September 29th, 2004

In account with: **Archer Cathro & Associates (1981) Ltd.**
 1016 - 510 West Hastings Street
 Vancouver, B.C.
 V6B 1L8

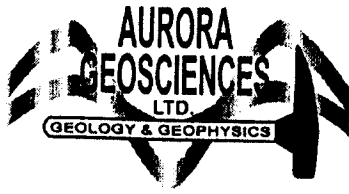
Re: *h*
Ruby Range Max Min

Exploration Services

Mobe/Demobe		
fixed cost as per contract		\$970.00
Max Min Survey		
16 days @ \$970.00/day		\$15,520.00
Standby Days		
2 days @ \$780.00/day		<u>\$1,560.00</u>
	Subtotal	\$18,050.00
	GST on Professional Services & Admin	<u>\$1,263.50</u>
	Total	\$19,313.50 <i>h</i>

*Ord Oct 16, 2004
 # 6346*

Terms: Net 15 days. Interest charged at 2% per month on overdue accounts



Whitehorse Office
108 Gold Road
Whitehorse, YT Y1A 2W3
Phone: (867) 668-7672
Fax: (867) 393-3577

INVOICE

GST No.: RT886365816
File: ACA-04-003-YT

Invoice #002
October 18th, 2004

In account with: **Archer Cathro & Associates (1981) Ltd.**
1016 - 510 West Hastings Street
Vancouver, B.C.
V6B 1L8

Re: ^X **Ruby Range Max Min Survey Report**

Exploration Services

Report		
fixed cost as per contract		<u>\$2,400.00</u>
	Subtotal	\$2,400.00
	GST	<u>\$168.00</u>
	Total	\$2,568.00

Terms: Net 15 days. Interest charged at 2% per month on overdue accounts

ACCOUNT NUMBER: **AKCHATA**
INVOICE NUMBER: **34039**

INVOICE DATE: **22 08 04**
A/C TYPE: **206**

FLIGHT DATE: **17 08 04**
PURCHASE ORDER NO.

ACCOUNT NUMBER: **AKCHATA**
INVOICE NUMBER: **34034**

INVOICE DATE: **22 08 04**
A/C TYPE: **206**

FLIGHT DATE: **13 08 04**
PURCHASE ORDER NO.

CHARTERER: **ARCHER CATHERO**

BILLING ADDRESS

FUEL & OIL: TINTA FUEL USED FROM

FROM	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
HJ	1910	1.5	2 x lyfts, 2 pas
FLY CAMP	2038		+ baggage
HJ			

FROM	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
HJ	1355		
STAGING TO	1408	0.2	HJ TO STAGINGS
CAMP TO	1440		
HJ	1815	3.6	① 3 Pass in 1 OUT.
			② SLING LOAD
			③ 2 DAY IN.
			④ SLING LOAD
			⑤ SLING LOAD + TO HJ

Archer Cathero

Archer Cathero

Please Remit To:
Trans North Helicopters
PO Box #8
Whitehorse, Yukon
Y1A 5X9

HOLDING TIME: @ / HR.
FUEL 171 LT @ 1.10 / LITRE 188 10
FUEL @ / LITRE
MEALS & LODGINGS
OTHER
OTHER

TERMS: PAYABLE UPON RECEIPT OF INVOICE.
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FUTURE FLIGHTS WILL BE ON A CASH BASIS.

CHARTERER'S SIGNATURE: _____
CHARTERER'S NAME (PRINTED): _____
INITIALS: **JOM**
PILOT'S SIGNATURE: _____
ENGINEER'S NAME: _____

SUB TOTAL: 1575.60
GOODS & SERVICES TAX: 110.29
REGISTRATION NO. R121483135

TOTAL \$ **1685.89**

Please Remit To:
Trans North Helicopters
PO Box #8
Whitehorse, Yukon
Y1A 5X9

HOLDING TIME: @ / HR.
FUEL @ / LITRE
FUEL @ / LITRE
MEALS & LODGINGS
OTHER
OTHER

TERMS: PAYABLE UPON RECEIPT OF INVOICE.
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FUTURE FLIGHTS WILL BE ON A CASH BASIS.

CHARTERER'S SIGNATURE: _____
CHARTERER'S NAME (PRINTED): _____
INITIALS: **JOM**
PILOT'S SIGNATURE: _____
ENGINEER'S NAME: _____

SUB TOTAL: 3515.00
GOODS & SERVICES TAX: 246.05
REGISTRATION NO. R121483135

TOTAL \$ **3761.05**



REMIT PAYMENT TO:
TRANS NORTH HELICOPTERS
 TRANS NORTH TURBO AIR LTD.

Archer, Cathro & Associates
 CHAR 1016-510 W. Hastings St.
 BILLIN Vancouver, B.C.
 V6B 1L8

ACCOUNT NUMBER	ARCHATA		
INVOICE NUMBER	34056		
INVOICE DATE	31	02	04
A/C TYPE	206-13	GPHH	
AIRCRAFT REGISTRATION C	GPHH		
FLIGHT DATE	24	08	04
PURCHASE ORDER NO.			

FUEL & OIL-X	TNTA FUEL USED	HRS./LITRES	FROM
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FROM	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
TO WHITEHORSE			
CANT MORE		1.0	
"			
KLOO LC			
KILLALMUN			

$1.5 \text{ hr} - 1431.96 + 100.74 = 1532.70$
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ENGINEER'S NAME Amanda Nelson

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ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**HORIZONTAL LOOP ELECTROMAGNETIC
AND TOTAL MAGNETIC FIELD
SURVEY AT THE RUBY PROPERTY,
KLUANE LAKE AREA, YUKON TERRITORY**

Mike Power, M.Sc. P.Geoph.

Location: 61° 11' N 137° 44' W
NTS: 115 H 4
Mining District: Whitehorse
Date: 18 October 2004

SUMMARY

Horizontal loop electromagnetic field (HLEM) surveys were conducted on the Ruby Property for Archer, Cathro & Associates (1981) Limited to locate vein-hosted gold mineralization. A total of 45.6 line-km were surveyed on a single grid centred on an area of elevated soil geochemical response. The survey was conducted with an Apex Parametrics MaxMin I-10 using a 100 m coil separation and measuring 220, 7040, 14080 and 28160 Hz. Following an instrument breakdown, a MaxMin II was used to fill in un-surveyed portions of the grid using a 100 m coil separation and measuring 222 and 3555 Hz. The data was collected over a slope chained (not slope corrected) grid and corrected for coil geometry errors during data processing.

The survey identified 9 multiline anomalies and 3 isolated anomalies, all likely caused by weakly conductive, steeply dipping tabular conductors. These anomalies merit additional investigation along their full extents and particular attention should be paid to several anomaly intersections and regions where the anomalous response indicates a wide (> 10 m) target.

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1.0 INTRODUCTION

This report describes a horizontal loop electromagnetic (HLEM) survey conducted on the Ruby Property for Archer, Cathro & Associates (1981) Limited in the Whitehorse Mining District, Yukon Territory. The surveys were conducted to locate gold mineralization in auriferous quartz-arsenopyrite veins.

2.0 LOCATION AND ACCESS

The Ruby Property is located southwest of Sekulmun Lake at 61° 11' N 137° 44' W on NTS 115 H 4 in the Whitehorse Mining District. The property is accessible by helicopter from Haines Junction, approximately 45 km to the southeast.

3.0 GRID

The location of the survey grid is shown in Figure 1 relative to the boundaries of the property. Survey lines were cut and straight-chained (not slope corrected) with stations placed at 25 m intervals along the survey lines. Stations were marked with half-length, tagged survey lathe. The survey grid was registered to geographic coordinates by the geophysical crew with a non-differential GPS receiver. The geographic coordinates of the ends of lines, base line intersections and several other reference points along the longer lines were recorded in NAD 83 UTM coordinates. The HLEM survey covered a total of 45.625 line-km on this grid.

4.0 PERSONNEL AND EQUIPMENT

The surveys were conducted by a two man HLEM crew consisting of the following personnel:

Casey Adshead, C.E.T.	Crew chief
Greg Young	Technician (Aug 17 - Sept 4)
Ranaan Bodzin, M.Sc.	Technician (Sept 4- Sept 10)

Names and addresses of the crew are included in Appendix B.

They were equipped with the following instruments and equipment:

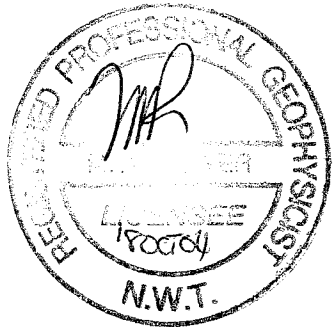
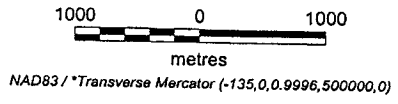
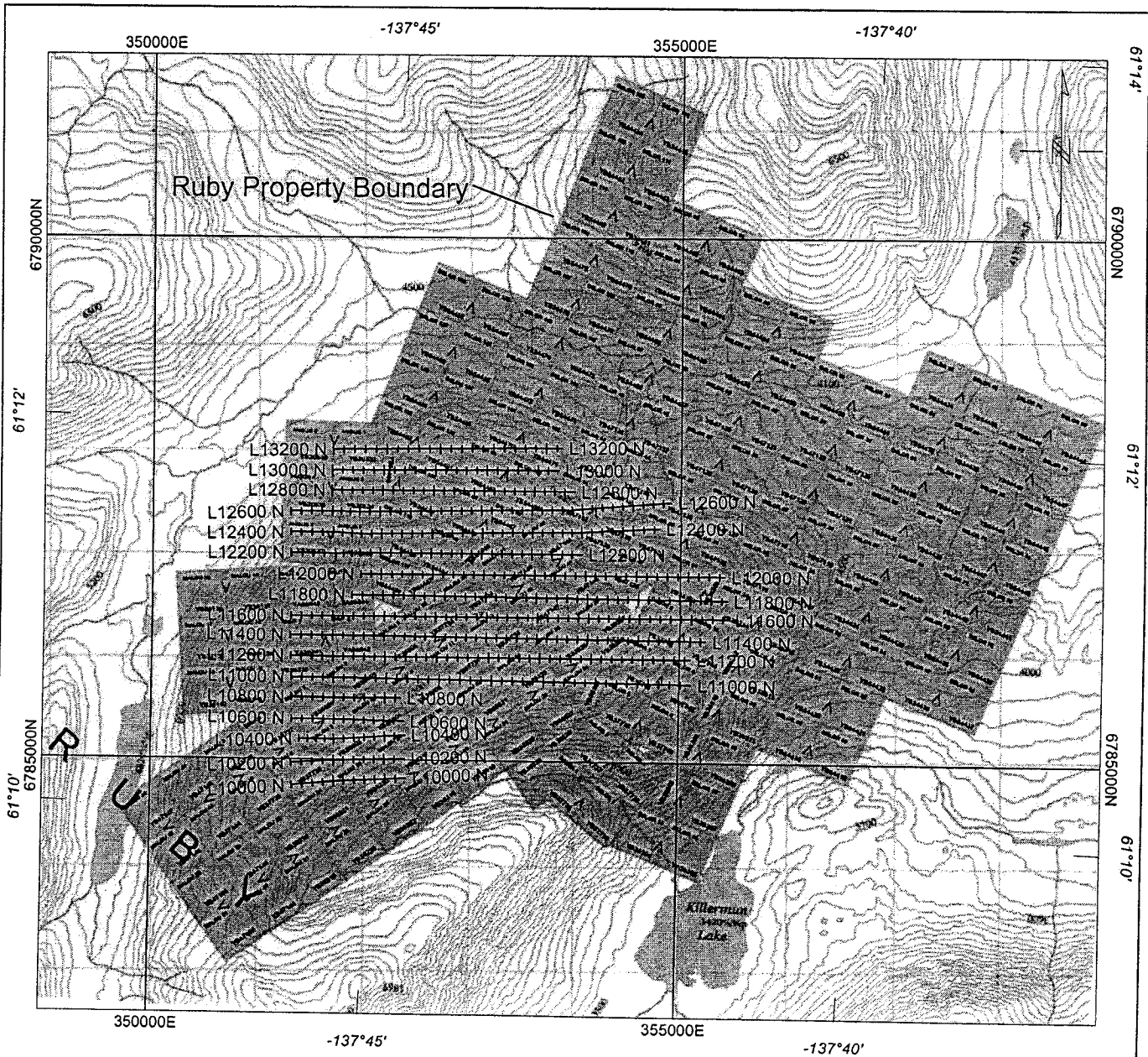


Figure 1. Grid location map

- Instruments:
- 1 - Apex Parametrics MaxMin I-10 with MaxMin Computer (MMC) equipped with 50, 100 and 150 m cables.
 - 1 - Apex Parametrics MaxMin II with MaxMin Computer (MMC) equipped with 50, 100 and 150 m cables.
- Data processing:
- 1 - P-866 laptop
 - 1 - HP340C colour printer.
 - 1 - Garmin GPS72 GPS receiver
- Other equipment:
- 1 - Globalstar Sat phone.

The crew spent a total of 26 days on the property. The survey log is attached as Appendix B. Instrument specifications are included in Appendix C.

5.0 SURVEY SPECIFICATIONS

The HLEM surveys were conducted according to the following specifications:

- Coil spacing: 100 m
- Station spacing: 25 m
- Frequencies: 220, 7040, 14080 and 28160 Hz (MM I-10)
222 and 3555 Hz (MM II)
- Terrain corrections: Slope chain method using oriented coils (ie. tilt corrected in the field). Short coil errors introduced by irregular topography were removed during data processing.

The HLEM method requires that the coils be held a constant distance apart and be coplanar. In steep irregular terrain, the coils will frequently be less than the nominal coil spacing (short coiling) and may not be coplanar. These variations in coil geometry produce strong in-phase errors and must be removed from the data before plotting and interpretation. The method used to mitigate these effects requires a slope chained grid and requires the operator to measure the station to station terrain slope in percent with a clinometer. This is normally done by the receiver operator who was in the lead position on the surveys. The correct slope required to maintain the coils coplanar is the arithmetic average of the station to station slopes in the interval between the two coils. The operators hold the coils coplanar during the surveys by holding their coils at

this orientation which is calculated and displayed for each reading station by the Maxmin MMC. The effect of short coiling created by irregular topography was removed with Apex Parametrics data processing software (MMCFIX1). The numerical method is described in Varre (1990)(pp All-3-4).

6.0 HLEM THEORY AND INTERPRETATION PROCEDURES

The horizontal loop EM method is well described in standard texts such as Telford *et al.* (1990) and Ketola and Puranen (1967). This section summarizes the key features of the HLEM method and describes the interpretation algorithms used in this survey program.

The HLEM method involves the use of a pair of separated horizontal coils (Figure MM1). Most commonly, the surveys are conducted in the frequency domain. In this method, a sine wave of variable frequency is sent through one of the coils to create a time-varying vertical magnetic dipole source. The second coil is a receiver which detects both the primary signal from the transmitting coil and a secondary signal created by magnetic induction in a conductive target in the earth. There are two variants of the method in the frequency domain are the Slingram or conventional HLEM method, and the Genie method.

The Slingram method (normally referred to as HLEM) requires that a sample of the transmitted signal be sent along a wire to the receiver where it is used to synchronize the phase of the receiver with the transmitter. This permits the receiver to remove the effect of the transmitter signal (primary field) and to split the remaining secondary field into two components. One component represents the portion of the secondary field which is synchronized or in-phase with the primary field (in-phase component). The second component is the portion of the secondary field which lags the primary field by one quarter cycle (90°) (quadrature component). The ratio of the in-phase to quadrature components is used to determine the electrical conductance of a target.

HLEM instruments remove the primary field from the signal to leave only the secondary field. By convention, a secondary field in the same direction as the primary field is recorded as positive while a secondary field in the opposite direction to the primary field is recorded as negative. HLEM data is commonly plotted as profiles with the reading plotted at the midpoint between the transmitter and receiver. The reason for this is that the response from a steeply dipping conductor, the most common target of this method, is strongest when the two coils straddle the conductor. Normally, the in-phase response is plotted as a solid line and the quadrature response as a dashed line.

The HLEM response of a flat lying body is shown in Figure MM2(a). Magnetic field lines (flux) are directed primarily into the region beneath the transmitter loop. Lenz's Law dictates that the induced secondary field will oppose the primary field. Consequently, at the receiver, both the primary and secondary field will be in the same direction. As a result, the response from a flat lying conductor consists of a positive response over the target. At the edge of the conductor, there is a negative response which occurs when both coils are straddling the edge of the conductor. When either the transmitter or receiver coil is over the edge of the conductor, there is no secondary field and the response is zero. As the depth to the flat lying conductor increases, the strength of the response is attenuated. The effective depth of investigation of the HLEM method for flat lying conductors is approximately 1.5 times the coil spacing.

The HLEM response of a steeply dipping conductor is shown in Figure MM2(b). Field lines from the transmitter are horizontal at a point midway between the two coils and in this orientation, cut the conductor at right angles creating the best coupling. Lenz's Law dictates that the secondary field will oppose the primary field and at the receiver coil, the secondary field is in the opposite direction to the primary field. As a result, the response when profiling over a steeply dipping conductor consists of a trough with peak negative value occurring when the coils straddle the conductor. The flanking positive peaks result from induction effects as the pair of coils are close to but not straddling the conductor. When either of the coils is directly over the target, the response is zero because the primary field is not well coupled with the target (ie it is perpendicular to the edge of the conductor) and little secondary field is created.

A dipping tabular conductor can be specified by the dip and dip direction, depth to top, target width and electrical conductance (conductivity thickness product or σt). The effect of varying these parameters is shown in Figure MM3 for the case of a response from a single isolated HLEM conductor. Asymmetry in the positive shoulders indicates the dip direction and the ratio of the positive shoulder responses can be used to estimate the dip (Figure MM3(a)). The strength of the response is largely determined by the depth to the top of the conductor. Increasing the depth to the top of the conductor decreases the amplitude of the response but does not otherwise change the shape of the response (Figure MM3(b)). The effective depth of investigation of the HLEM method for steeply dipping targets is approximately one half the coil spacing. If the conductor is wide, the distance between the zero crossovers, normally equal to the coil spacing, will increase. If the width reaches approximately one half the coil spacing, the trough of the response for shallow targets will start to deflect slightly to the positive. If the width of the target approaches that of the coil spacing, the positive return in the trough will be apparent at any depth to target (Figure MM3(c)). As noted above, the electrical conductance controls the ratio of the in-phase to quadrature response. Weak targets show only a quadrature response. As the target conductance increases the strength of the in-phase component will increase. Very high conductance targets are

characterized by strong in-phase responses and weak to very weak quadrature responses (Figure MM3(d)).

Interpretation procedures for HLEM data are dependent upon the model to which the data is to be fitted. In most cases, the characteristic shape of the response will dictate the likely overall geometry of the source and thus the model to which the response should be fitted. Flat lying targets can be directly modelled with computerized calculations of target responses. Dipping tabular body responses on the other hand cannot be numerically modelled and must either be approximated through finite-element models or interpreted using characteristic curves. Characteristic curves for tabular dipping conductors incorporate several key features of the responses described in Figure 3 into simple charts. These responses are derived from model experiments. The ratio of positive shoulders responses and the ratio of in-phase to quadrature peak negative values are the commonly used features of the response. An example of these charts is shown in Figure MM4.

HLEM data is commonly interpreted using characteristic curves developed by Ketola and Puranen (1967). The procedure, normally done by hand, has been automated in proprietary software (MMPLOT) developed by Amerok Geosciences Ltd. The characteristics of each response are entered into a computer program which creates a batch plotting file. The data is plotted directly on a CADD diagram with each of the characteristic curves on a different layer. The operator is able to quickly match the data to the curve which best fits the data by selecting different characteristic curves (ie. by changing layers). Where the data falls between two curves, the conductance and depth to top parameters can be interpolated but the dip cannot be reliably interpolated.

The data collected in this survey contained a large amount of in-phase noise - commonly 4 to 6 %. To mitigate the effect of this noise, the in-phase component of the lowest frequency collected (220 Hz / MM I-10 and 222 Hz / MM II) was subtracted from the in-phase component of each of the higher frequencies. The rationale for this procedure is the fact that geometrically induced in-phase noise is frequency invariant and the 200 Hz frequency range is only responsive to highly conductive features. Consequently, on all but the most conductive structures, subtracting the 220 / 222 Hz response attenuated the geometrically generated in-phase noise.

The correction of the in-phase component for geometric noise using this procedure may alter the in-phase component and thus obviate the use of characteristic curves based on accurate in-phase measurements. The interpretation instead focused on the identification of conductor axes (shown as anomaly traces); the determination of excess width and the examination of the general character of the anomalous response (IP/Q ratios, response amplitude).

7.0 RESULTS

The following figures are appended to this report in a back pocket:

- Figure 2. 7,040 Hz Stacked Profiles
- Figure 3. 14,080 Hz Stacked Profiles
- Figure 4. 28,160 Hz Stacked Profiles

Each diagram shows the survey grid, registered to NAD83 UTM coordinates, together with stacked profiles of the HLEM data. The in-phase component is shown in solid red lines and the quadrature component is shown in dashed red lines. On each profile, the highest MaxMin II frequency (3555 Hz) is shown in blue. Conductors are most apparent in the highest frequency data and are plotted as green lines.

A digital archive is also included with the report. This contains a compilation of the data in ASCII and JPEG images of each of the figures.

The data set is suitable for the identification of conductors and the rough estimation of conductor width. Unfortunately, there is 4 to 6% ambient in-phase noise on all channels which renders accurate estimation of conductance difficult. This noise is attributed to coil control problems, perhaps caused by the cable dragging around large boulders.

The mineralization identified to date on the Ruby Property consists of steeply-dipping, quartz veins with locally heavy concentrations of arsenopyrite and scorodite. Gold reports with the arsenic-bearing minerals and these are erratically distributed along the veins with concentrations noted in areas where the veins intersect, flex or widen. HLEM surveys conducted on the property in the 1990's were successful in locating additional mineralization based on the high frequency response of the veins and vein-faults hosting the mineralization. The anomalous responses consisted of central negative troughs flanked by subsidiary positive peaks. Often the vein responses are only visible in the quadrature channel. Propitious sites for arsenopyrite mineralization are the intersection of anomalies and portions of anomaly axes with indications of excess conductor width. Responses with zero cross-over distances in excess of 100 m (the coil spacing) are associated with conductors which are more than roughly 5 m wide. These responses may be caused by flaring of the veins and their associated mineralization or an intensification of wall rock mineralization.

The HLEM survey identified 9 multi-line conductors of interest using the 28,160 Hz data. All of the anomalies show responses expected from weakly conductive, steeply dipping tabular conductors such as faults or veins. These are described in turn below with reference to their response at 28,160Hz.

Anomaly A-1

Anomaly A-1 extends from L13200N 10325E to L12400N 10600E. The anomalous response consists of a quadrature deflection with no significant in-phase response except a slight deflection at L13200N 10325E. The strongest amplitude response is at L12600N 10575E where there is a strong quadrature deflection. There is no significant excess width in the responses which might be an indication of conductor width.

Anomaly A-2

Anomaly A-2 extends from L10200N 9700E to L10000N 9825E. The anomalous response consists of a quadrature deflection with no in-phase response. At L10000N 9825E, the response shows an excess width of 20 m.

Anomaly A-3

Anomaly A-3 extends from L11600N 10688E to L11200N 10250E. The anomalous response consists of a wide, weak quadrature deflection with no in-phase. The response on L11400N appears to be an interference response with a neighbouring conductor to the east. The oblique strike of the anomaly with respect to the grid lines widens the response and obviates any estimate of conductor excess width. The strongest response is at L11200N 10250E.

Anomaly A-4

Anomaly A-4 extends from L13200N 10975E to 12600N 11138E where it merges with Anomaly A-5. The anomalous response consists of a very weak quadrature deflection with no in-phase. There is no appreciable excess width in the response. The anomalous response is greater on the east than on the west side of the central trough. This suggests that the source conductor may be more conductive on the east side or the conductor may dip to the east; this ambiguity cannot be resolved with a survey at a single coil spacing. The strong positive response at L13000N 11050E appears to be an interference effect caused by responses from both A4 and A5.

Anomaly A-5

Anomaly A-5 extends from L13200N 11313E to L11200N 10775E. The anomalous

response consists of a weak quadrature deflection with weak to absent associated in-phase response. The source conductor is most conductive (ie. in-phase response is present) on L13200N, 12800N, 12200N and L11800N. There is no appreciable excess width in the response. The anomalous response is greater on the east than on the west side of the central trough on L13000N and L13200N. This suggests that the source conductor may be more conductive on the east side or the conductor may dip to the east; this ambiguity cannot be resolved with a survey at a single coil spacing. The anomaly merges with A-4 at L12600N 11138E where the two anomalies produce a response resembling that seen with a single wide conductor. The anomaly terminates in an unusual negative in-phase / positive quadrature deflection sometimes seen over a compact (ie. depth limited) near surface conductor.

Anomaly A-6

Anomaly A-6 extends from L12600N 11313E to L12400N 11525E. The anomalous response consists of a wide, weak quadrature response with no associated in-phase response. The response is asymmetric with the positive peak on the eastern side of greater amplitude than the response on the western side. This suggests that the source conductor may be more conductive on the east side or the conductor may dip to the east; this ambiguity cannot be resolved with a survey at a single coil spacing.

Anomaly A-7

Anomaly A-7 extends from L13000N 11850E to L11400N 12650E. The anomalous response consists of a quadrature deflection with weak to absent in-phase response. The source conductor is most conductive between L12400N and L13000N where there is a negative in-phase deflection associated with the negative quadrature deflection. The anomaly merges with anomaly A-9 in a response with an excess width of 20 m.

Anomaly A-8

Anomaly A-8 extends from L11200N 12288E to L11000N 12325E. The anomalous response consists of a weak quadrature low with no associated in-phase response. The response is most clear at L11200N 12288E.

Anomaly A-9

Anomaly A-9 extends from L12400N 12850E to L11000N 12600E. The anomalous response consists of a quadrature low with an associated negative in-phase deflection on all lines except L11600N. The response is asymmetric with the positive peak on the western side of greater amplitude than the response on the eastern side. This suggests that the source conductor may be more conductive on the west side or the

conductor may dip to the west; this ambiguity cannot be resolved with a survey at a single coil spacing. The source conductor appears to be most conductive (greatest in-phase to quadrature response ratio) at L11000N 12600E and shallowest (strongest amplitude response) at L11200N 12575E. The anomaly shows excess width of 40 m on L11000N and 20 m on L11200N suggesting that the source conductor is 40 and 20 m wide on each line respectively.

There are a number of single line responses at L12400N 9875E, L11800N 10550E, and L11400N 11925E which appear to be caused by steeply dipping bedrock conductors. In addition there are several responses which appear to be caused by isolated, very conductive flat-lying features at L11600N 11700E and L11600N 11125E. These anomalies show strong positive in-phase with weaker negative quadrature. The divergent quadrature and in-phase response suggests that the conductor response may have been driven into saturation and the quadrature has reversed sign as a consequence of phase shift. These anomalies could be caused by a conductive surficial feature (eg. small bog, etc.). There are no field notes associated with these anomalies.

8.0 CONCLUSIONS

The results of the horizontal loop electromagnetic field survey suggest the following conclusions:

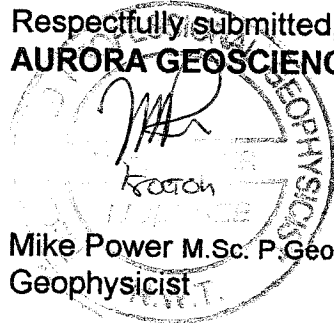
- a. The survey located 9 multiline anomalies, all of which appear to be caused by steeply dipping tabular conductors of generally low electrical conductance.
- b. The survey also located 3 isolated single line anomalies which may be caused by steeply dipping tabular conductors of limited (< 400 m) strike extent.
- c. The survey located two anomalies which may be caused by conductive surficial features.

9.0 RECOMMENDATIONS

The following recommendations are made based on the conclusions of this work:

- a. Additional prospecting and trenching should be focused on the 9 multi-line anomalies with particular attention paid to the intersection of anomalies A-7 and A-9, and the intersection of anomaly A-5 with anomalies A-3, A-4 and A-6.
- b. Additional prospecting and trenching should also be conducted on the wider sections of the multi-line anomalies at L10000N 9800E and L11000N 12600E.
- c. In-fill HLEM survey should be conducted with a 50 m line spacing in areas where mineralization is uncovered or elevated geochemical response recorded in order to accurately define the geometry of the vein systems prior to drilling.

Respectfully submitted,
AURORA GEOSCIENCES LTD.



Mike Power M.Sc. P. Geoph.
Geophysicist

REFERENCES CITED

- Ketola, M. and M. Puranen (1967) Type curves for the interpretation of Slingram (horizontal loop) anomalies over tabular bodies. Geological Survey of Finland Report of Investigations No. 1.
- Telford, W.M., L.P. Geldart and R.E. Sheriff (1990) Applied Geophysics (2nd Edition) New York: Cambridge University Press.
- Varre, T. (1990) Apex Parametrics Maxmin I-9 manual. Uxbridge: Apex Parametrics.

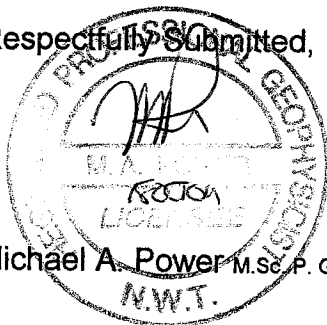
APPENDIX A. CERTIFICATE

I, Michael Allan Power, M.Sc. P.Geo., P.Geoph., with business and residence addresses in Whitehorse, Yukon Territory do hereby certify that:

1. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (registration number 21131) and a professional geophysicist registered by the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (licensee L942).
2. I am a graduate of the University of Alberta with a B.Sc. (Honours) degree in Geology obtained in 1986 and a M.Sc. in Geophysics obtained in 1988.
3. I have been actively involved in mineral exploration the Northern Cordillera since 1988.
4. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in Archer, Cathro & Associates (1981) Limited, Cash Resources Ltd. or Klondike Gold Corporation or any of their properties.

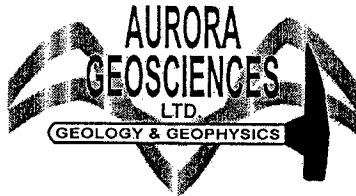
Dated this 18th day of October, 2004 in Whitehorse, Yukon.

Respectfully Submitted,



Michael A. Power M.Sc. P. Geoph.

APPENDIX B. SURVEY LOG



AURORA GEOSCIENCES LTD.

MAX MIN SURVEY LOG

JOB ACA-04-003-YT

ARCHER, CATHRO & ASSOCIATES LTD.

RUBY RANGE MAX MIN

Period: August 17th - September 10th, 2004

Personnel: Casey Adshead Technician
Greg Young Helper
Rannan Bodzin Helper

- 17/08/04 Mobe in to property
- 18/08/04 Survey lines (10000N, 10200N)
- 19/08/04 Survey lines (10400N) Had problems with the receiver.
- 20/08/04 Survey lines (10600N, 10800N)
- 21/08/04 Standby day Casey was sick.
- 22/08/04 Survey lines (11000N)
- 23/08/04 Survey lines (11200N)
- 24/08/04 Standby Begin survey of infill line 10100N, had receiver problems.
- 25/08/04 Standby Receiver operation via satphone to Apex in Toronto, field test.
- 26/08/04 Standby Await for the arrival of MAX MIN I-9. Field test new equipment.
- 27/08/04 Survey lines (12400N, 12200N, 11400N)
- 28/08/04 Standby Transmitter problems/battery.
- 29/08/04 Survey lines (1400N, 11600N) Transmitter will only transmit frequency 28160. Transmitter operation.
- 30/08/04 Survey lines (1800N, 12000N)

- 31/08/04 Survey lines (12200N, 12400N)
- 01/09/04 Survey lines (12600N, 12800N)
- 02/09/04 Survey lines (13200N, 13000N) "Transmitter problems, field operations.
- 03/09/04 Standby Field operations on transmitter.
- 04/09/04 Survey lines (12400N, 12200N) Crew swap. Greg out and Rannan in with the MaxMin II Field test transmitter.
- 05/09/04 Survey lines (12600N, 12400N) Training, receiver problem.
- 06/09/04 Survey lines (13000N)
- 07/09/04 Survey lines (12600N)
- 08/09/04 Survey, grid infill on lines (12600N, 12400N) "Picket'n"
- 09/09/04 Survey lines (12600N, 12400)
- 10/09/04 Demobe from job site and return to Whitehorse

Survey Days: 16 days
Standby Days: 6 days
Mobe/Demobe: 2 days

<u>Person</u>	<u>Position</u>	<u>Address</u>
Casey Adshead	Crew chief	108 Gold Road Whitehorse YT Y1A 5T8
Raanan Bodzin	Technician	108 Gold Road Whitehorse, YT Y1A 5T8
Greg Young	Helper	General delivery Whitehorse YT Y1A 1A0

APPENDIX C. INSTRUMENT SPECIFICATIONS

MAXMIN I-10 SPECIFICATIONS:

Frequencies:	110, 220, 440, 880, 1760, 3520, 7040, 14080, 28160 and 56320 Hz.	Signal filtering:	Powerline comb filter, continuous spherics noise clipping, autoadjusting time constant and other filtering.
Modes:	<p>MAX 1: Horizontal loop mode (Transmitter and receiver coil planes horizontal and coplanar).</p> <p>MAX 2: Vertical coplanar loop mode (Transmitter and receiver coil planes vertical and coplanar).</p> <p>MIN 1: Perpendicular loop mode 1 (Transmitter coil plane horizontal and receiver coil plane vertical).</p> <p>MIN 2: Perpendicular loop mode 2 (Transmitter coil plane vertical and receiver coil plane horizontal).</p>	Warning lights:	Receiver signal and reference warning lights to indicate potential errors.
Coil separations:	<p>12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300, & 400 metres (standard).</p> <p>10, 20, 40, 60, 80, 100, 120, 160, 200, 240 & 320 metres (selected with grid switch inside of receiver).</p> <p>50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 & 1600 feet (selected with grid switch inside of receiver).</p>	Survey depth:	From surface down to 1.5 times coil separation used.
Parameters measured:	In-Phase and quadrature components of the secondary magnetic field, in % of primary (transmitted) field.	Transmitter dipole moments:	<p>110 Hz: 200 Atm² 1760 Hz: 110 Atm²</p> <p>220 Hz: 190 Atm² 3520 Hz: 80 Atm²</p> <p>440 Hz: 170 Atm² 7040 Hz: 40 Atm²</p> <p>880 Hz: 140 Atm² 14080 Hz: 20 Atm²</p> <p>28 KHz: 10 Atm² 56 KHz: 5 Atm²</p>
Readouts:	Analog direct readouts on edgewise panel meters for in-phase, quadrature and tilt, [Additional digital readouts when using the DAC, for which interfacing and controls are provided for plug-in].	Reference cable:	Light weight unshielded 4/2 conductor teflon cable for maximum temperature range and for minimum friction. Please specify cable lengths required.
Ranges of readouts:	Analog in-phase and quadrature scales: 0 ± 4%, 0 ± 20%, 0 ± 100%, switch activated. Analog tilt scale: 0 ± 75% grade. [Digital in-phase and quad. 0 ± 199.9 %].	Intercom:	Voice communication link provided for operators via the reference cable.
Readability:	Analog in-phase and quadrature 0.05% to 0.5%, analog tilt 1% grade. [Digital in-phase and quadrature 0.1%].	Receiver power supply:	Four standard 9V batteries (0.5Ah, alkaline). Life 25 hrs continuous duty, less in cold weather. Rechargeable battery and charger option available.
Repeatability:	±0.05% to ±1% normally, depending on frequency, coil separation & conditions.	Transmitter power supply:	Rechargeable sealed gel type lead acid 6V-26 Ah batteries (4x6V-6 1/2 Ah) in canvas belt. Optional 6V-16 Ah light duty belt pack available.
		Transmitter battery charger:	For 110-120/220-240VAC, 50/60/400 Hz and 12-15VDC supply operation, automatic float charge mode, three charge status indicator lights. Output 7.3V-2.9A nominal.
		Operating temp:	- 30 to + 60 degrees Celsius.
		Receiver weight:	8 kg, including the two integral ferrite core antennas (9 kg with data acq. computer).
		Transmitter weight:	16 kg with standard 6V-26 Ah battery pack. 14 kg with light duty 6V-16 Ah pack.
		Shipping weight:	60 kg plus weight of reference cables at 2.8 kg per 100 metres plus other optional items if any.
		Standard spares:	One spare transmitter battery pack, one spare transmitter battery charger, two spare transmitter retractile connecting cords, one spare set receiver batteries.

Specifications subject to change without notification.

APEX PARAMETRICS LIMITED

P.O. Box 818, Uxbridge
Ontario, Canada L9P 1N2

Telephones: 416-640-6102
416-852-5875

Fax: 416-852-9688

Cables: APEXPARA TORONTO

APEX MAX MIN II

FREQUENCIES:

222, 444, 888, 1777 and 3555 Hz.

MODES OF OPERATION:

- MAX: Transmitter coilplane and receiver coil plane horizontal (Max-coupled ; Horizontal-loop mode). Used with reference cable.
- MIN: Transmitter coilplane horizontal and receiver coilplane vertical (Min-coupled mode). Used with reference cable.
- V.L.: Transmitter coilplane vertical and receiver coilplane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.

COIL SEPARATIONS:

25, 50, 100, 150, 200 and 250 m (MMII) or 100, 200, 300, 400, 600 and 800 ft. (MMIIF).

Coil separations in V.L. mode not restricted to fixed values.

PARAMETERS READ:

- In-Phase and Quadrature components of the secondary field in MAX and MIN modes.
- Tilt-angle of the total field in V.L. mode.

READOUTS:

- Automatic, direct readout on 90 mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.
- Tilt angle and null in 90 mm edgewise meters in V.L. mode.

SCALE RANGES:

- In-Phase: $\pm 20\%$, $\pm 100\%$ by pushbutton switch.
- Quadrature: $\pm 20\%$, $\pm 100\%$ by pushbutton switch.
- Tilt: $\pm 75\%$ slope.
- Null(V.L.): Sensitivity adjustable by separation switch.

APEX MAX MIN II Specifications (Cont'd)

READABILITY:

In-Phase and Quadrature: 0.25% to 0.5% ; Tilt: 1%.

REPEATABILITY:

±0.25% to ±1% normally, depending on conditions, frequencies and coil separation used.

TRANSMITTER OUTPUT:

- 222 Hz: 220 Atm²
- 444 Hz: 200 Atm²
- 888 Hz: 120 Atm²
- 1777 Hz: 60 Atm²
- 3555 Hz: 30 Atm²

RECEIVER BATTERIES:

9 V trans. radio type batteries (4). Life: approximately 35 hours continuous duty (alkaline, 0.5 Ah), less in cold weather.

TRANSMITTER BATTERIES:

12V 6Ah Gel-type rechargeable battery. (Charger supplied).

REFERENCE CABLE:

Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.

VOICE LINK:

Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.

INDICATOR LIGHTS:

Built-in signal and reference warning lights to indicate erroneous readings.

TEMPERATURE RANGE:

- 40°C to +60°C (-40°F to +140°F).

APEX MAX MIN II Specifications (Cont'd)

RECEIVER WEIGHT:

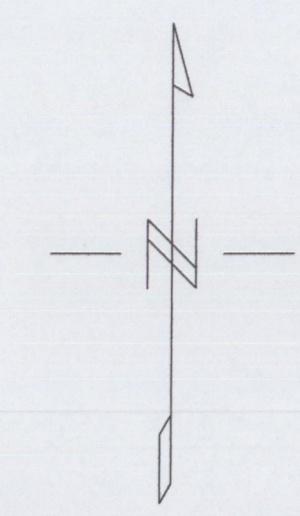
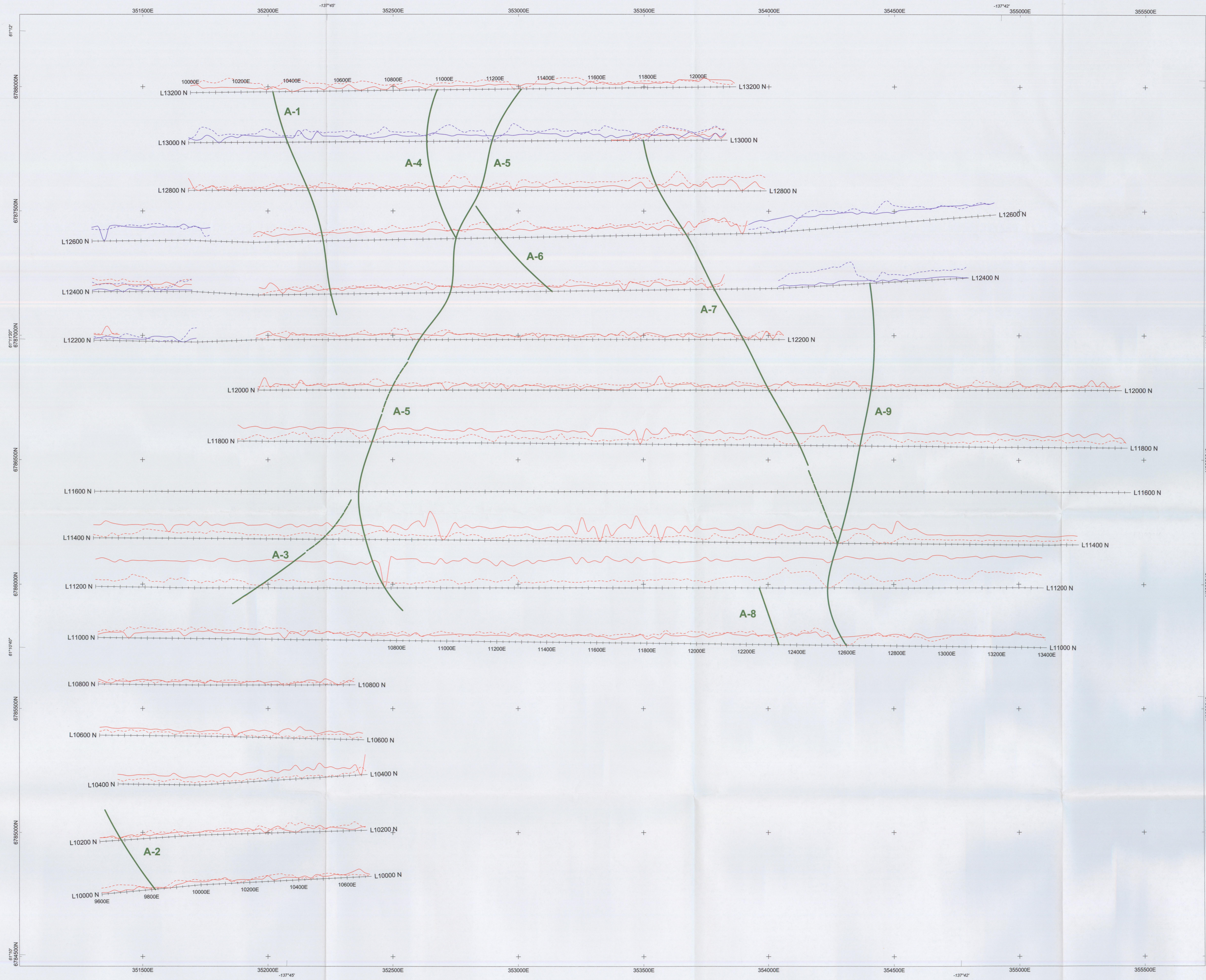
6 Kg (13 lbs.)

TRANSMITTER WEIGHT:

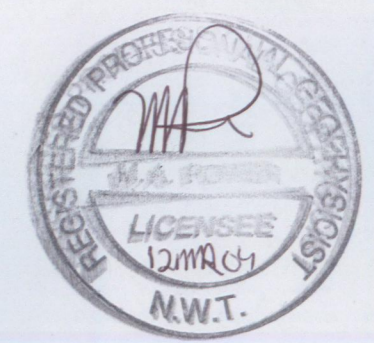
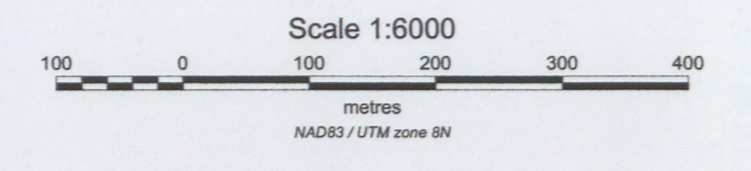
13 Kg (29 lbs.)

Name and Address of Manufacturer:

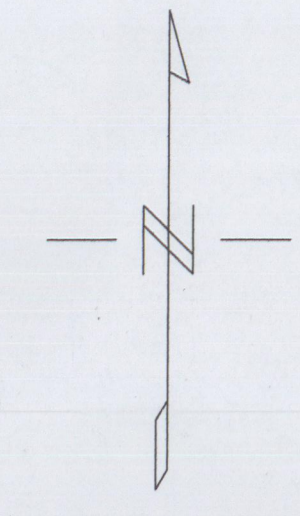
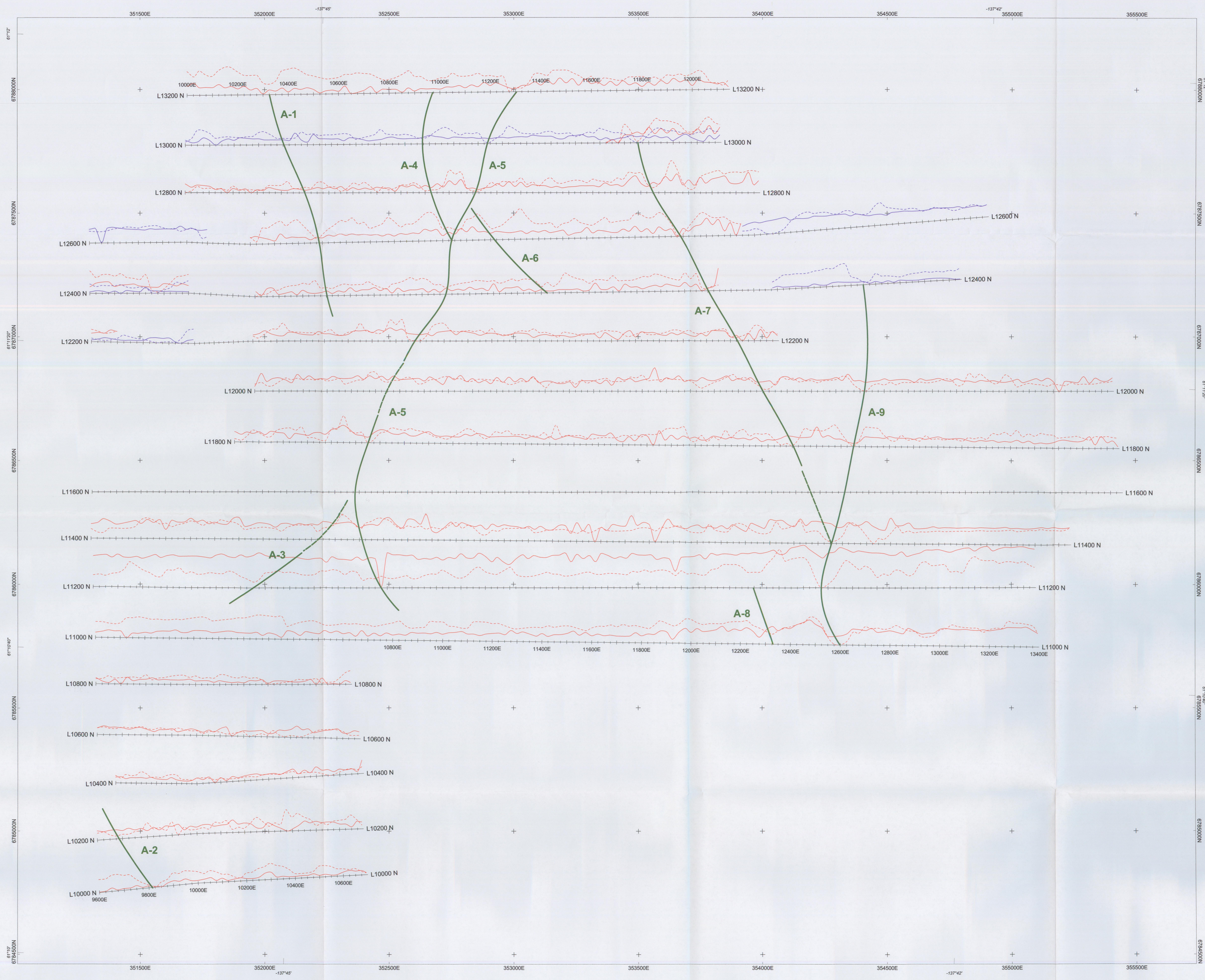
APEX Parametrics Ltd.
200 Steelvase Road E.
Markham, Ontario
L3R 1G2



LEGEND
HORIZONTAL LOOP EM
 FREQUENCY : 800 Hz
 INSTRUMENT : APEX PARAMETRICS MM II / MM10
 PROFILE SCALE : 1 cm = 10%
 IN PHASE :
 QUADRATURE :
 COIL SEPARATION : 100 m
 DATUM :
 RED: 7 KHz (1cm = 10%)
 BLUE: 3555 Hz (1cm = 5%)
 IN-PHASE DATUM : 0%
 QUADRATURE DATUM : 0%
 DATA FILES : MM10 / MM2 / Grid (gdb)
 OPERATORS : C. Adshad, G. Smith, R. Bodzin
 STATION SEPARATION : 25m
 LINE-KM SURVEYED THIS PROJECT : 45.625 km
 A1 CONDUCTOR AXIS

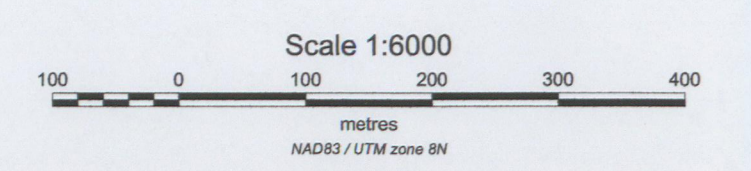
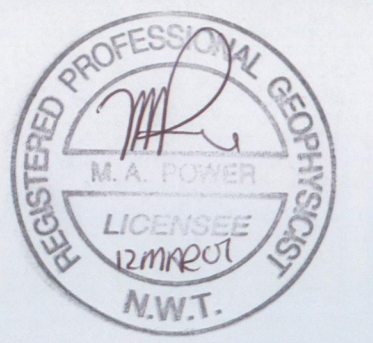


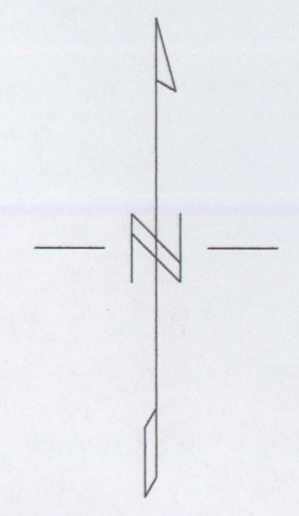
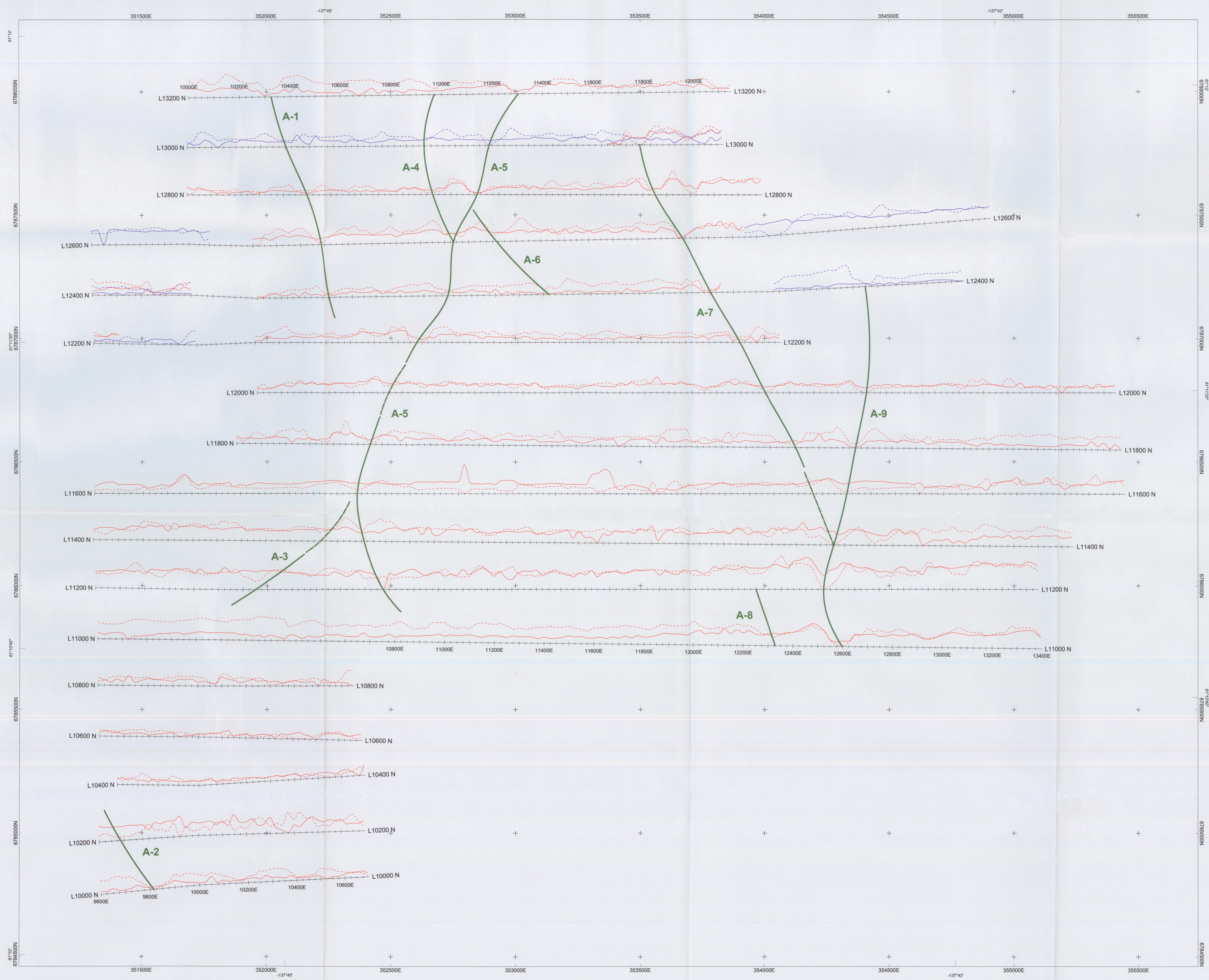
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
 Ruby Property
 Horizontal Loop Electromagnetic Survey
 Figure 2. 7,040 Hz Stacked Profiles
 NTS: 115H04 Datum: NAD83
 Projection: UTM Zone 8 Mining District: Whitehorse Date: 06 Oct 04
 Project: ACA-04-003 YT
AURORA GEOSCIENCES LTD.



LEGEND
HORIZONTAL LOOP EM

FREQUENCY : 880 Hz
 INSTRUMENT : APEX PARAMETRICS MM II / MM10
 PROFILE SCALE : 1 cm = 10%
 IN PHASE :
 QUADRATURE :
 COIL SEPARATION : 100 m
 DATUM :
 RED: 14 KHz (1cm = 10%)
 BLUE: 3555 Hz (1cm = 5%)
 IN-PHASE DATUM : 0%
 QUADRATURE DATUM : 0%
 DATA FILES : MM10 / MM2 / Grid (gdb)
 OPERATORS : C. Adchead, G. Smith, R. Boddin
 STATION SEPARATION : 25m
 LINE-KM SURVEYED THIS PROJECT : 45.625 km
 A1 CONDUCTOR AXIS





LEGEND
HORIZONTAL LOOP EM

FREQUENCY : 880 Hz
 INSTRUMENT : APEX PARAMETRICS MM II / MM10
 PROFILE SCALE : 1 cm = 10%
 IN PHASE : _____
 QUADRATURE : _____
 COIL SEPARATION : 100 m
 DATUM : _____
 NORTH : +10
 SOUTH : -10
 RED: 28 KHz (1cm = 20%)
 BLUE: 3555 Hz (1cm = 5%)
 IN-PHASE DATUM : 0%
 QUADRATURE DATUM : 0%
 DATA FILES : MM10 / MM2 / Grid (gdb)
 OPERATORS : C. Adshhead, G. Smith, R. Bodzin
 STATION SEPARATION : 25m
 LINE-KM SURVEYED THIS PROJECT : 45.625 km
 A1 CONDUCTOR AXIS

