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094001

1998 PROJECT REPORT

on the

FIRE & TREE PROPERTY

YUKON TERRITORY
NTS 105F/9
61°38'N 132°26'W

ATNA RESOURCES LTD.
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December 8, 1998

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of $ 16,800.00 .

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

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SUMMARY

The Tree/Fire property is located in the south-central Yukon Territory and covers 70 contiguous claims located on the Coultier Creek map sheet (NTS 105F/9). The claim block is underlain by Mississippian aged mafic to felsic volcanic rocks and derived sediments of the Pelly Mountains Volcanic Belt. The volcanic rocks of this belt host zinc-lead-silver bearing volcanogenic massive sulphide deposits elsewhere in the Pelly Mountains district. The area covered by the Tree/Fire claim block has been explored by a number of operators since 1976. The current claim block consists of the Fire, Char and Tree claims. The Fire and Char claims were staked on behalf of Eagle Plains Resources and Miner River Resources and the Tree claims were staked by Atna Resources in 1996. Atna subsequently optioned the Fire/Char claim block in 1997.

The 1998 field program, operated by Atna, consisted of geological mapping, geochemical sampling, and geophysical surveying. This program has defined the location of a possible mineralized horizon. This mineralized horizon is based on the presence of a distinctive Yellow Trachyte unit and the correlation between sericite alteration and pyrite mineralization within and adjacent to the Yellow Trachyte as well as barite occurrences, soil geochemical and geophysical anomalies. These geological, geochemical and geophysical anomalies are similar to the surface expression of the Wolf deposit, situated at the southern end of the Pelly Mountains Volcanic Belt.

Drilling is recommended to test down dip of areas where the soil and rock geochemistry, favourable geology, and geophysical conductors occur together. Although no outcropping significant mineralization was located, there are a number of areas where data suggest that a pregnant VMS horizon exists and there is sufficient room down-dip for a large deposit to occur.

1 INTRODUCTION

This report describes the exploration work completed on the Fire and Tree properties during 1998. The Tree claims are owned by Atna Resources Ltd. and the adjacent Fire and Char claims were under option to Atna from Eagle Plains and Miner River Resources, consequently the property was explored as a single property. Specific references to the Fire property should be taken to mean the area encompassed by the Fire and Char claims.

1.1 LOCATION AND ACCESS

The Fire and Tree claim groups consist of 70 claims located in map sheet NTS 105F/9, Cloutier Creek map sheet, centered at approximately 61°38'N 132°26'W (UTM 6836000 N, 636000 E) as displayed on Figure 1.1. During the 1998 field season, access to the claim group was gained by helicopter based in Ross River, located approximately 40 km to the north, or from the Ketza River mine site located approximately 15 km to the southeast.

The claims cover sub-alpine to alpine terrain within the St Cyr range of the Pelly Mountains. Elevations on the claim group range from 1,200 to 2,100 meters. The area has moderately rugged topography. A majority of the claim area is covered with a thin veneer of talus or colluvium. Outcrop exposure is approximately 15%. In general, the stratigraphy dips gently to moderately to the south and exposure is poor on the south facing dip slopes. Steep to near-vertical cliff faces in north facing cirques, ridge tops and some drainages provide good exposure.

1.2 CLAIMS

The Tree property consists of 28 contiguous mineral claims covering approximately 580 hectares. The property is owned 100% by Atna Resources Ltd. The Fire claim group is comprised of the Fire and Char claims and covers approximately 620 hectares (figure 1.2). The Fire claim group is owned equally by Eagle Plains Resources Ltd. and Miner River Resources Ltd.; Atna has an option to earn a 60% interest in this claim block. The claims are recorded in the Watson Lake Mining District as follows:

Table 1: Claim Data

Name	Grant number	Expiry date
Tree 1-16	YB70076-YB70091	October 11, 2005
Tree 17	YB88907	December 23, 2002
Tree 18FR	YB88908	December 23, 2002
Tree 19-28	YB88909-YB88918	December 23, 2002
Fire 1-12	YB74411-YB74422	February 2, 2002
Char 1-30	YB84517-YB84546	June 20, 2000

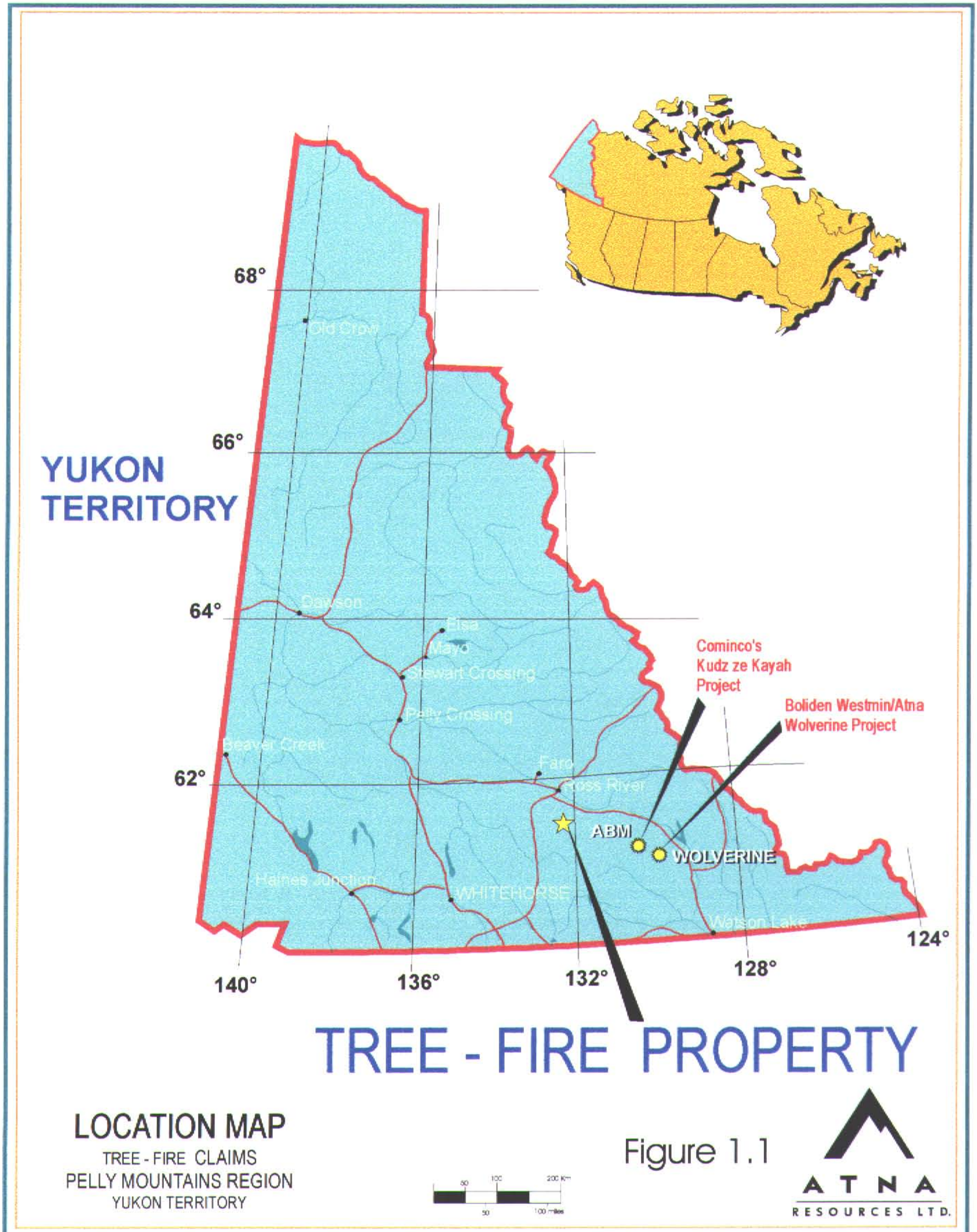
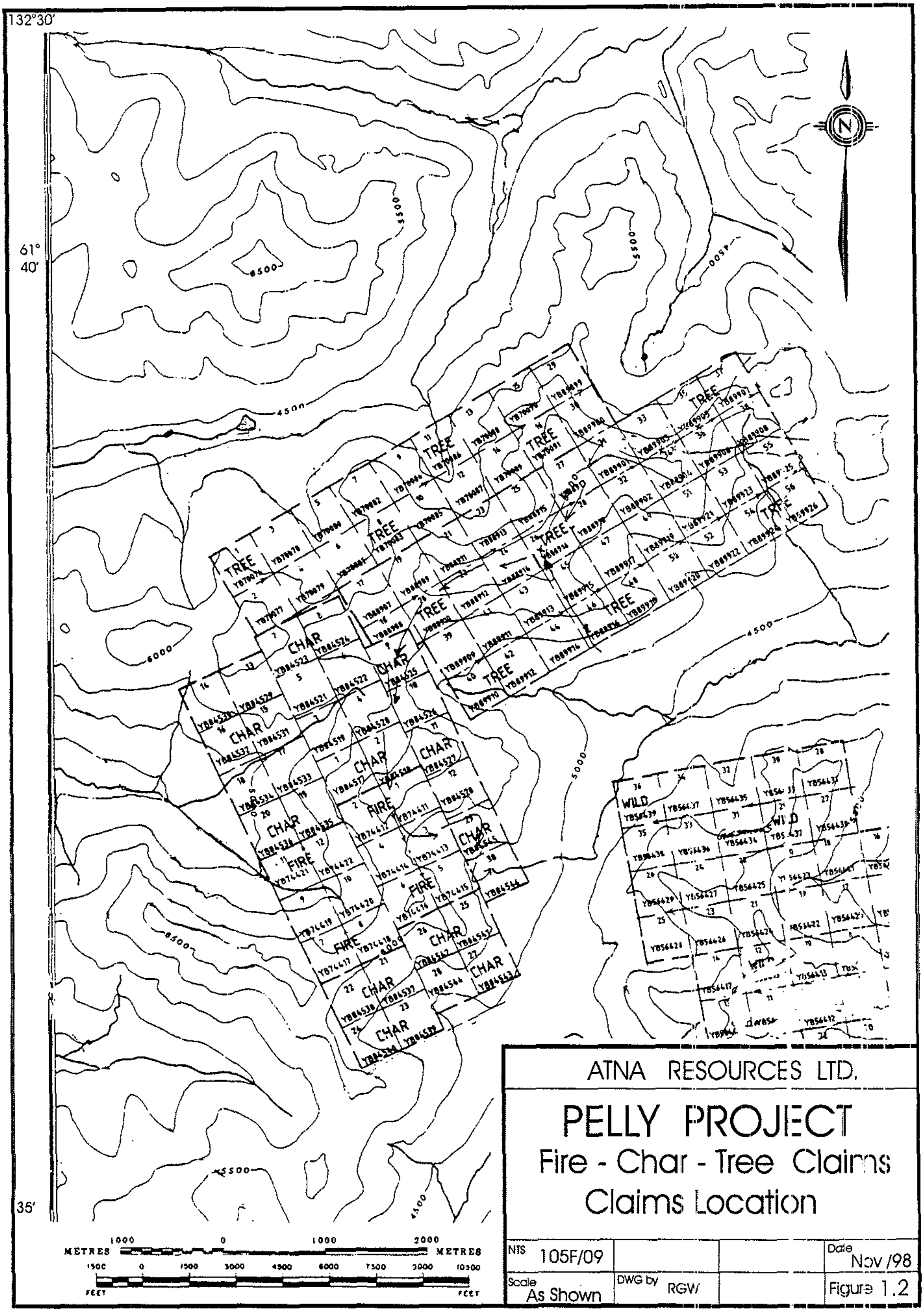

YUKON
TERRITORY
68°
66°
64°
62°
140°
136°
132°
128°
124°
Old Crow
Dawson
Elsa
Mayo
Stewart Crossing
Pelly Crossing
Beaver Creek
Faro
Ross River
Haines Junction
WHITEHORSE
Watson Lake
ABM
WOLVERINE
Cominco's
Kudz ze Kayah
Project
Boliden Westmin/Atna
Wolverine Project
TREE - FIRE PROPERTY
LOCATION MAP
TREE - FIRE CLAIMS
PELLY MOUNTAINS REGION
YUKON TERRITORY
ATNA
RESOURCES LTD.

Figure 1.1



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PELLY PROJECT

Fire - Char - Tree Claims
Claims Location

NTS 105F/09			Date Nov /98
Scale As Shown	DWG by RGW		Figure 1.2

1.3 HISTORY

The first recorded exploration on ground now covered by the Tree claim group took place in 1976 following the discovery of the MM deposit 23 km to the southwest. From 1976 through to 1978 Utah Mines Ltd. conducted regional stream geochemical surveys, followed by staking, prospecting, chip and soil sampling, mapping and geophysical surveys on ground also known as the Tree claim (Wilson and Westerman, 1978; Norman and Vyselaar, 1979). Results included the discovery of sphalerite and galena mineralization hosted in barite, quartz veins, mineralized structures and as disseminations in felsic volcanics. Soil geochemical anomalies detected were interpreted as being related to the known mineralization described above. Reconnaissance shootback EM was run in selected areas and detected a weak conductor over a known pyrite showing.

Ground, now covered by the Fire Claim group was first worked by Cyprus Anvil Corporation as the Chzerpnough claims during the period 1976-77. A program similar to that being conducted by Utah Mines on the Tree claims was undertaken on the Chzerpnough claims (Dean, 1977). Results included the discovery of a "large" Zn-Pb soil anomaly, the detection of disseminated base metals in massive barite and the outlining of a shootback EM anomaly spatially associated with favourable felsic stratigraphy.

The east side of the Fire claim block was restaked as the Eve claims in 1986 by Mountain Province Mining Inc., which performed mapping and geochemical sampling in 1987.

Atna Resources Ltd. staked the Tree claim block in October 1996 following research that demonstrated that the belt was a favorable host for VMS style deposits. The 1996 field program consisted of grid establishment and collection of 221 soil samples. A number of lead, zinc and barite soil anomalies were outlined (Schmidt, 1997).

The current Fire property was staked on behalf of Eagle Plains Resources and Miner River Resources Ltd. in 1996. A limited program of rock and soil geochemical sampling and geological mapping was conducted that year (Dickie, 1996). The Fire and Char claims were optioned by Atna Resources in October of 1997 following the discovery of the Wolf deposit 56 km to the southeast.

A 1997 program on the Tree claims consisted of grid soil sampling on the southern half of the property, infill sampling on the 1996 grid and limited mapping. Additional claims were added to the block in late 1997 making it contiguous with the Fire claim group. In November 1997, an airborne electromagnetic, magnetic and VLF-EM survey covering the entire Fire/Tree claim block was flown by Aerodat Inc. (McGill and Lo, 1998).

1.4 1998 EXPLORATION PROGRAM

During the 1998 field season, geological mapping, chip sampling, gridding, 22.8 km of geophysical surveys and 42.5 km of soil sampling was carried out on the Tree/Fire claim block. In addition, ground follow-up on geophysical anomalies detected by the airborne survey was conducted and compilation of previous work on both the Fire and Tree claim blocks was undertaken.

Following geological mapping, geochemical and geophysical surveys were carried out over a 5.9 km^2 area on three grids covering the most prospective stratigraphy on the Tree/Fire claim block. The base lines for the grids were hard chained and slope corrected and wing lines were hip-chained with no slope correction. The Tree #1 grid consisted of a base line and 2 tie lines run at 355°, and 11 wing lines at 150 meters spacing. The Tree #2 grid consisted of a base line run at 55° and 8 wing lines at 100 to 200 meters spacing. The Tree #3 grid consisted of a base line run at 165° and six 150 meter spaced wing lines. The grids were positioned to avoid the most severe topography while covering the areas deemed to have the best chance for hosting a volcanogenic massive sulphide deposit.

2 GEOLOGY

2.1 REGIONAL GEOLOGY

The volcano-sedimentary rocks which host the Wolf and MM deposits as well as the Fire/Tree claims form a narrow arcuate belt that extends 80 kilometres along a northwesterly trend within the Pelly Mountains of the southern Yukon (Figure 2). These rocks have been termed the Pelly Mountains Volcanic Belt (PMVB) by Hunt (1999) and are characterized by high potassium content and, locally, bedded barite and volcanogenic massive sulphide deposits and showings. The PMVB is early to middle Paleozoic in age and occurs within the Pelly-Cassiar Platform, considered a part of ancestral North America (Templeman-Kluit, 1977). The tectonic framework for the Pelly Mountains area is described by Gabrielse and Yorath (1991), Templeman-Kluit and Blusson, (1977) and Gordey (1977) and is summarized below.

The miogeoclinal sequence and related rocks that underlie much of the Pelly Mountains area are part of a large area about 70 km wide and 600 km long that is referred to as the Pelly-Cassiar Platform (PCP). The PCP formed slightly outboard of, but parallel to the craton edge and consisted of a thick accumulation of volcanic rocks and related sediments upon which shallow water sedimentation, predominantly carbonate, took place until late Devonian time. To the northeast of the PCP during late Proterozoic through to Silurian time, a sequence of shallow water carbonates, tuffaceous shales and andesitic rocks were deposited on the western edge of ancestral North America in the Selwyn Basin and, to the south, in the Kechika Trough.

During Late Devonian to Mississippian time, shale, greywacke, and chert pebble conglomerate was deposited over much of the PCP and Selwyn Basin. These rocks were derived from a westerly source, or from locally uplifted parts of the PCP. Felsic igneous activity, including intrusion and volcanism, occurred locally within the PCP, possibly within rifts or graben-like structures created by variable uplift and block faulting within the platformal rocks. Sedimentation resumed within PCP sub-basins during the Upper Triassic.

Deformation of the Paleozoic rocks took place post-Late Triassic and consisted of compression and/or transpression along a northeasterly axis which resulted in northwesterly trending and northeasterly verging folds and southwesterly dipping thrust faults. The Anvil-Campbell Allocthon, part of the Omineca Crystalline belt, was emplaced during this event as a large thrust-sheet and is now preserved as local klippen on mountain ridges. An anastomozing system of steeply dipping, strike-slip faults related to movement along the northwesterly trending Tintina Fault cuts the folds and thrust faults and extends for up to 20 kilometres southwest of the Tintina Trench. Late normal faults cross-cut earlier structures and divide the region into a number of panels which commonly represent different structural levels. Cretaceous intrusions develop thermal and structural aureoles in the western part of the Pelly Mountains. Metamorphism and degree of deformation varies from block to block but generally increases in a westerly direction and varies from lower to upper greenschist facies.

The Pelly Mountains Volcanic Belt is composed of localized volcanic centers separated by basins in-filled with sediments and volcaniclastic rocks. Associated with these volcanic rocks are at least two VMS deposits (the Wolf and the MM) and a number of historical showings, including the Chzerpnough (Fire/Tree claims), and the Bnob (Ice claims).

The volcanic rocks are predominantly felsic, but in some areas, significant accumulations of andesite to basalt occur. The most common features of the belt are flows, epi-zonal sills, and small plugs of trachyte. The trachyte flows and/or sills are laterally very extensive, probably due to low magmatic viscosity caused in part by high alkali element content. Typically, the trachyte contains significant amounts of pyrite which gives rise to extensive gossans. The trachytes are commonly cream coloured, with very fine to medium grained phenocrysts of feldspar and rare quartz and are locally massive, amygdaloidal or brecciated. Syenite intrusions have been noted at a number of locations within the PMVB (Mortensen, 1981; Morin, 1977) and are thought to be rounded plugs that represent volcanic feeders. Although they may still represent volcanic feeders, drill data from the Wolf and Ice properties indicates that the syenite intrusions are sills.

The structural and stratigraphic relationships of the Pelly Mountains Volcanic Belt with other parts of the Pelly-Cassiar Platform are not always clear. In the southern part in the belt near the Wolf and Fox claims (Figure 2.2), the PMVB rocks are separated from platformal carbonates and associated sediments by thrust, and possibly, steeply dipping normal faults. In the northeasternmost part of the belt, immediately northeast of the Ketza River Mine site, the volcanic sequence is very thin (+/- 100m) and is overlain by chert and chert pebble conglomerate and underlain by shale. Both contacts appear to be conformable but are not well exposed.

The shale and conglomerate are considered age equivalent with the volcanic rocks that have been mapped in conformable relationships by Gordey (1977). On the Fire (Chzerpnough) and Tree claim area, the PMVB appears to conformably overlie, and in places be intercalated with, a relatively thick sequence of shales and minor greywacke. Similarly, on the Mamu property adjacent to the McConnel River, volcanic rocks conformably overlie an extensive shale-greywacke sequence. On the Ice (BNOB) property, between the Tree-Fire and Mamu properties, the volcanic rocks are surrounded by an argillite-limestone sequence that appears to be continuous with the shales-sequence of the Fire property. Gordey (1977) describes a Siluro-Devonian assemblage of shallow water dolomite and platy siltstone that represents a stable marine carbonate bank environment, and are supposed basement for the PMVB. The Siluro-Devonian siltstones, however, are quartz bearing and tan weathering and do not seem to be a good match with the shales attached to the Pelly Mountain Volcanic rocks. Similarly, the younger Triassic sedimentary package has not been observed in contact with PMVB. Consequently, there is little or no contact information that gives a clear indication of the tectono-stratigraphic environment in which the PMVB was deposited other than the nature of the rocks within the belt itself.

The platformal setting on the continental margin, the high potassium geochemistry of the volcanic rocks, and the presence of bedded barite and volcanogenic massive sulphide deposits indicate that the Pelly Mountain Volcanic Belt was likely deposited in a continental rift-type environment (Mortensen and Godwin, 1982). The coarse volcanic debris flows that overlie the Wolf deposit indicate a high energy environment consistent with a graben type structure.

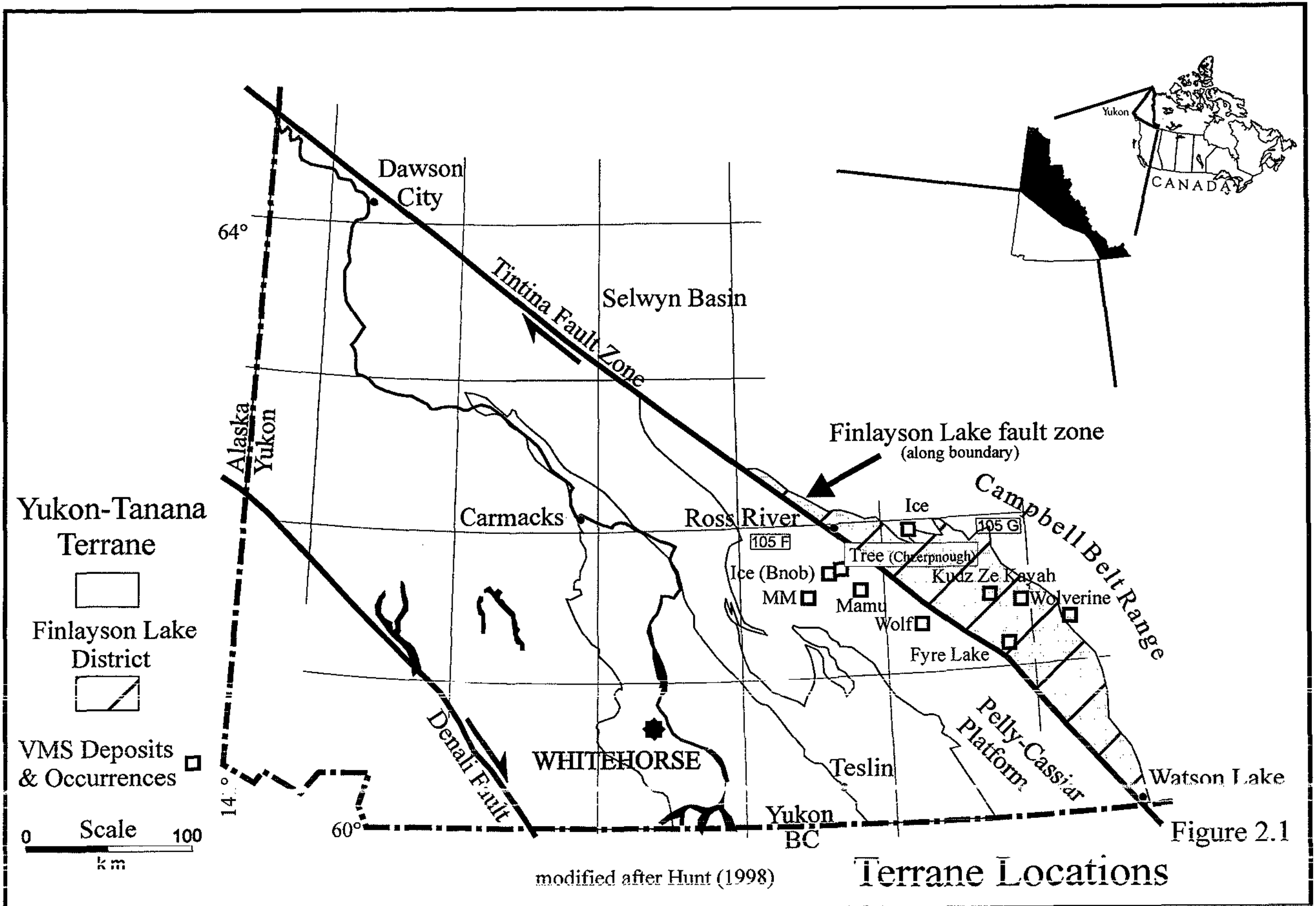
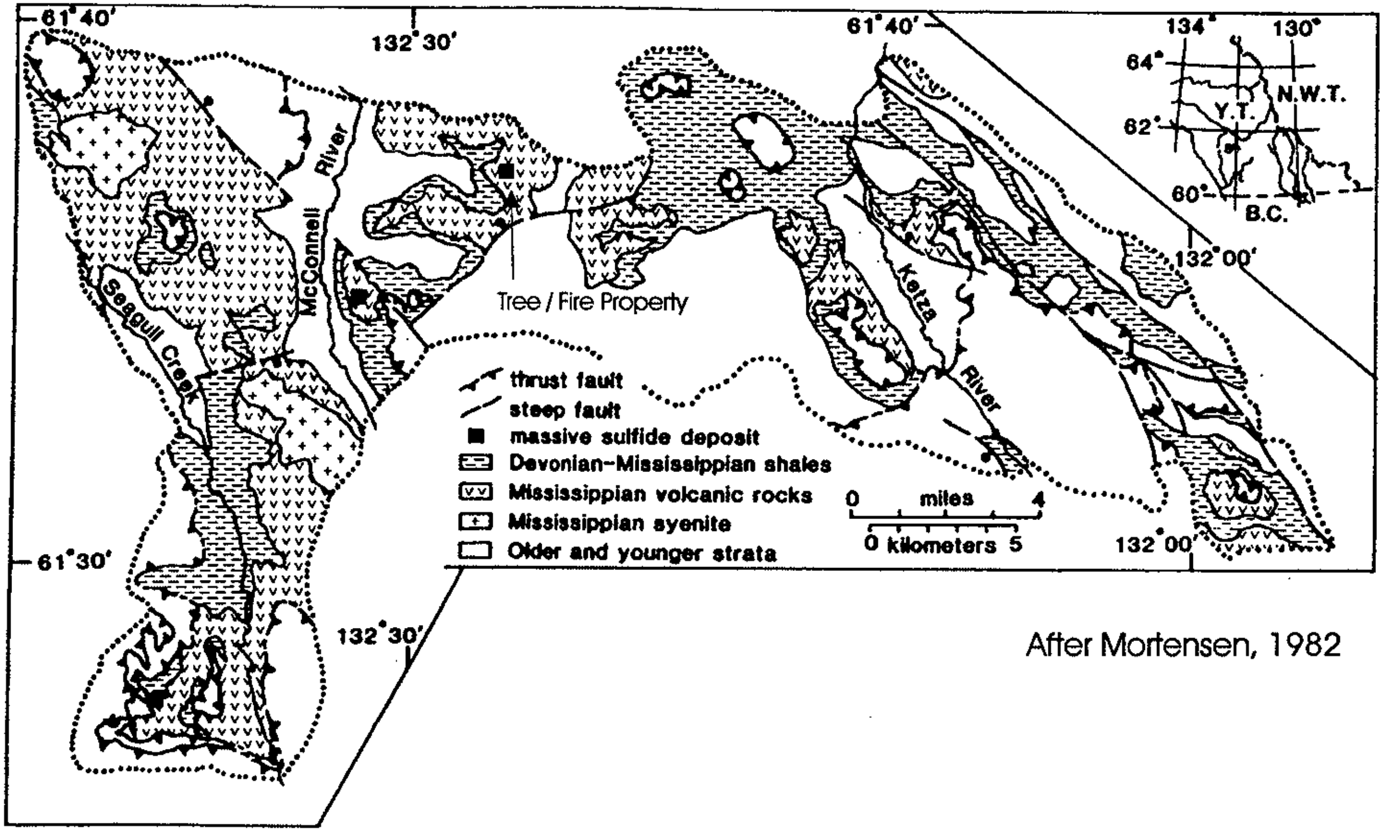


Figure 2.1

Terrane Locations



After Mortensen, 1982

FIG. Distribution of Upper Devonian and Mississippian strata in the study area in the central Pelly Mountains, Yukon Territory.

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PELLY PROJECT

TREE / FIRE PROPERTY

Regional Geology

NTS 105F & 105G			Date Dec /98
Scale As Shown	DWG by RGW		Figure 2.2

2.2 PROPERTY GEOLOGY

Mapping during the 1998 field season attempted to define lithological packages, property scale facies changes, and structures that would have a direct bearing on the formation and position of an economic ore body (Figures 2.3A&B). Stratigraphy on the property appears to form a gentle south dipping monocline, however, some minor isoclinal folds were observed and it is quite possible that the stratigraphic sequence has been folded. No clear fold repetition of rock units was observed. Contacts between rock units vary from sharp to gradational and it seems that some units are interdigitated in a facies relationship. Thickness of pyroclastic units and fragment size suggests that the volcanic center is located near the boundary of the Fire and Tree claims. Weathering of the volcanic rocks is quite variable and commonly makes lithological determinations difficult. Geological mapping attempted to define litho-stratigraphic units (lithologically distinct units representing volcanic stratigraphy) but was only partly successful. Highly variable volcanic textures, poor continuity, possible structural complications, and lack of outcrop prevented a good distinction of time stratigraphic units within the volcanic and volcaniclastic rocks.

Four volcanic or volcaniclastic units were defined during the mapping program. Rocks interpreted to be primary volcanic flows were lumped into two units consisting of unmineralized trachyte and undifferentiated volcanic flows. Most of the volcaniclastic rocks were lumped into a single unit named the Volcaniclastic unit. The exception to this is a distinctive, purple weathering, volcaniclastic unit located at the north end of the Tree claims. The map patterns of these units show the spatial distribution of volcanic textures but do not appear to be stratigraphic units (*sensu-stricto*) and this must be borne in mind when viewing Figures 2.3A&B.

The remaining four map units are probably viable stratigraphic units and give a sense of the structure and stratigraphy within the property area. Sediments comprise three of these map units including a thin-bedded limestone (plus or minus intercalated argillite), a trachyte-chip conglomerate, and the basal, locally graphitic argillite. The remaining unit is the Yellow Trachyte, which consists of yellow weathering, locally altered and mineralized, trachyte flow(s), sericitic lapilli tuff and minor to significant massive to laminated barite of probable exhalative origin. Based on comparisons with the Wolf deposit stratigraphy the yellow trachyte unit is the most economically prospective unit underlying the Tree/Fire claim block. This unit appears to occur at more than one stratigraphic position over much of the Fire/Tree claim block and may be structurally repeated or, less likely, represent two volcanic cycles.

Detailed descriptions of these eight units are as follows. The geographic names referred to in this text are located on Figures 3.5A&B.

2.2.1 LITHOLOGIES

Yellow Trachyte:

The Yellow Trachyte unit consists of a five to fifty meter thick interval of yellow weathering, feldspar-phyric, locally pyritic, trachyte flow, commonly overlain or underlain by sericite altered lapilli tuff and massive to laminated barite.

In hand sample, the trachyte often displays ghosts of <2mm feldspar and/or monolithic or heterolithic fragments and/or a breccia texture defined by silica ± sericite veinlets. Less commonly, 2mm white feldspar phenocrysts are abundant. The trachyte usually consists of massive, hard, gray, microcrystalline feldspar but locally can be sericite altered, to a soft, yellowish-green rock. Less intensely altered and mineralized trachytes have a chalky, more brittle "porcelaineous" character and are interpreted to occur in the less altered and mineralized "distal" portions of the mineralized horizon. Locally, sections of the Yellow Trachyte are mineralized with fine-grained disseminated pyrite and a trace to 1% green (barium?) mica. Locally, and usually internal to the horizon, the pyrite mineralization intensifies to massive disseminations and/or irregularly oriented, ptigmatically folded veins and veinlets. The massive to laminated, and rarely, vein barite occurrences contain minor galena and sphalerite mineralization.

Although there appears to be one main mineralized horizon that occurs relatively low in the volcanic section, yellow trachyte and accompanying mineralized rocks do occur at other levels in the stratagraphic column. Relatively small but well altered and mineralized accumulations of yellow trachyte were mapped high in the section, particularly in the Big Cirque and Northeast Cirque areas.

Pajama Limestone unit:

The Pajama Limestone unit is characterized by a brown to buff weathering, fine-grained, gray, tuffaceous limestone, commonly interbedded, on a centimeter to decimeter scale with dark gray to black argillite and locally may be intercalated with lapilli tuff. On the western portions of the property this unit is thin, (less than 20 meters), and forms a readily recognizable marker unit that is stratigraphically positioned directly over the Yellow Trachyte.

On the eastern portions of the claim block stratigraphy is much more variable. Significant accumulations of limestone intercalated with argillite were mapped, but a close spatial relationship between these units and the Yellow Trachyte was not observed.

Trachyte Chip conglomerate:

The Trachyte Chip conglomerate unit is a distinctive, 2 to 6 meter thick, well sorted and graded, trachyte and mud chip conglomerate, locally gradational into lapilli tuff. This unit appears to directly overlie the Yellow Trachyte in the Big Cirque and Bear Valley sections. At one location on the eastern side of Big Cirque, an isolated outcrop of this lithology occurs at an uncertain stratigraphic position. The presence of this unit indicates a locally high energy sedimentary environment and supports a flow origin for the underlying yellow trachyte.

Undifferentiated volcanic rocks:

Rocks on the property that are interpreted to be primary volcanic flows, crystal tuffs, or synvolcanic intrusions include augite bearing mafic through to aphyric felsic rocks. These lithologies include monolithic or near monolithic lapilli tuffs, crystal or ash matrix supported heterolithic lapilli tuffs and lapilli tuffs with large, generally angular, (10cm to greater than 40cm) blocks or bombs. Also included in this unit are lapilli tuffs bearing evidence for deposition in hot volcanic flows (alteration rims on clasts or fragments or partially reabsorbed clasts or fragments), and quartz-sericite-pyrite (QSP) altered and mineralized rocks of uncertain protolith. The QSP alteration of these rocks is assumed to be hydrothermal and syngenetic, suggesting a facies proximal to a volcanic center. The occurrence of occasional accidental sedimentary fragments was noted in all the above rock types. While this unit is primarily volcanic, it also includes minor interflow deposits such as layered tuffs and argillites.

Trachyte (Unmineralized):

Unmineralized trachyte occurs at various intervals throughout the volcanic stratigraphy on the Tree and Fire claims. Mappable accumulations occur in the saddle between Julie's Camp valley and Uwe's Camp valley. A second significant accumulation underlies the peak of Hill 2118.5 on the Fire claims. The trachyte is commonly massive, aphyric to finely porphyry tic, and has a brown to purple hue when weathered. The textures and contact relationships are strongly suggestive of subvolcanic intrusive rocks.

Volcaniclastic rocks:

This unit is composed of an assemblage volcaniclastic rocks with minor argillaceous intervals. Primary lithologies include intermediate to felsic debris flows and crystal ash tuffs with evidence of sedimentary layering (reworking). Also included is a heterolithic lapilli tuff or agglomerate with a large percentage of sedimentary fragments. Where present, clasts are usually less than 10cm in size. Less commonly observed in this unit were volcanic flows and/or sills. Also included in this unit is a rare occurrence of monolithic lapilli tuff with rounded siliceous clasts.

Purple Tuff:

A distinctive purple weathering, flaggy, fine-grained, feldspathic, lithic tuff was mapped at the northeast end of the property. In addition to felsic fragments, minor black argillaceous fragments were also observed. This unit is up to 60 meters thick and 400 meters long and is intercalated with other volcaniclastic rocks in this area.

Argillite:

Two argillite units were mapped on the property: an upper volcanic hosted unit and a lower basal unit. The upper argillite is fine-grained, gray/black to rare rusty weathering, and generally foliated, commonly laminated or bedded (varved). This upper argillite occurs as thick (10-75 meter) "sub basins" overlying the Yellow Trachyte, and as thin (less than 10 meter) inter-flow sediments throughout the volcanic stratigraphy.

In the Big Cirque, a black argillite unit appears to be the facies equivalent of the limestone-argillite marker unit that underlies a large portion of the claim block to the west.

The lower argillite package consists of a thick, (base not exposed), argillite that underlies all of the volcanic stratigraphy on the property. This package is locally, highly graphitic and is thought to be the source of many of the airborne EM conductors detected below the volcanic stratigraphy. Similar to the upper argillite units, the basal argillite is occasionally intercalated with limestone, volcanic tuffs or more rarely, thick-bedded volcanic flows, particularly near the contact with the overlying volcanic stratigraphy.

2.2.2 STRUCTURE

Stratigraphy on the Tree/Fire claim block appears to form a gently south dipping monoclinal sequence. Most of the rocks on the property display a weak to strong foliation and minor, tight to isoclinal folds were seen in a number of areas on the claim block. Without better stratigraphic control it is difficult to define large scale isoclinal folds on the property although the repetition of certain units suggests the possibility of nappe structures. Mortensen (1983) has mapped a flat lying, open syncline, the axis of which strikes NNE through the center of the claim block, which is superimposed upon the earlier structures. The amount of flexure about this late fold axis is relatively minor.

Numerous cross faults are present within the property area with displacements that vary from a few to several tens of metres. Low angle, near bedding parallel faults are postulated in two locations and appear to have significant displacement, possible of a few hundred metres.

2.2.3 WHOLE ROCK GEOCHEMISTRY

Eight rock samples were collected for whole rock analysis during the 1998 field season. Five of these samples were taken to determine the barium content and the protolith of rocks in the mineralized (yellow trachyte) horizon. The other three samples were taken to confirm suspected mafic composition of rocks encountered during the mapping program. The five samples collected from the mineralized horizon are sericitized, silicified and weakly mineralized with pyrite. Analyses of these rocks indicated trachyte compositions as defined on a revised Winchester-Floyd diagram. All of these rocks are anomalous in barite (± 1%).

Analytical results from the second group of three samples confirm the suspected mafic compositions. These rocks plotted in the alkaline-basalt field of the revised Winchester-

Floyd diagram. The alkaline nature of the rocks on the Tree/Fire claim block is similar to rocks hosting the Wolf deposit, however mafic rocks are not present on the Wolf property, although they do occur elsewhere in the Pelly Mountain Volcanic Belt.

2.2.4 Mineralization and Alteration

Nine massive barite occurrences have been discovered on the Tree/Fire property. Massive barite has been found as stratabound occurrences, as veins that clearly cross-cut compositional layering, and as cobbles in talus and scree. Five of the barite occurrences are located on the Tree claims and four occurrences are located on the Fire claims. All of the barite occurrences are spatially associated with the Yellow Trachyte unit.

On the Tree claims, two of the massive barite showings occur in the Northeast Cirque (Figure 2.3). Two additional occurrences of barite cobbles in scree were discovered by Atna personal in the vicinity of the Big Cirque during the 1997/98 field seasons. The fifth barite occurrence on the Tree property is a vein, situated in Bear Valley.

Four barite showings are located on the Fire claim group. Two of these occurrences (Minfile #: 105F 071) consist of banded barite and are located near the ridge crest close to the center of the Fire claims. The final two showings were discovered during the 1998 mapping program. One showing consists of a vein and the other is an occurrence in subcrop. This latter occurrence, known as Bart's Bluff barite showing, is likely stratabound and is located in the surface projection of an EM anomaly at Bart's Bluff (Figure 2.3). Most of the massive barite occurrences sampled in 1998 are highly anomalous in mercury (±1,000 ppb).

Stratabound, heavily disseminated pyrite and cross-cutting massive pyrite veins occur locally in the Yellow Trachyte unit throughout the Fire/Tree claim block. All the samples analyzed which contained heavily disseminated to massive pyrite returned mercury values from 610 to 7,865 ppb.

Structurally controlled, disseminated copper-lead-zinc mineralization located in the "Saddle Zone" on the Fire claims is spatially associated with an undeformed(?) mafic dyke that cuts the volcanic stratigraphy in this area. Whether this mineralization was remobilized from depth during the dyke emplacement is unknown. Rare occurrences of disseminated galena were also observed in the mineralized Yellow Trachyte unit.

2.3 DISCUSSION

The geology of the Tree and Fire claims is dominated by felsic to mafic volcanic and volcaniclastic packages that appear to conformably overlie black, locally graphitic, basal argillites. The volcanic stratigraphy reflects two volcanic cycles. The lower volcanic cycle consists of a coarsening upward sequence of intermediate to felsic volcanic and volcaniclastic rocks. The thickest and most coarse-grained sections of the lower volcanic sequence indicate a vent proximal facies centered on the Fire claims. This lower cycle culminates in a 5 to 30 metre thick trachyte flow that is locally altered and mineralized. Mineralization is primarily pyrite but can also consist of massive barite with rare disseminated galena and sphalerite. The barite overlies the trachyte flow and is interpreted to be exhalative in origin. Intensely sericite altered lapilli to felsic ash tuffs are also associated with the yellow trachyte and are similar to the lithologies immediately adjacent to the Wolf deposit. The general lack of alteration in any of the rocks immediately overlying the mineralized horizon supports a syngenetic origin for the alteration and mineralization.

The map pattern of the Yellow Trachyte unit suggests a near continuous unit over much of the property area with possible local structural repetition. Some isolated occurrences of yellow trachyte are likely intrusive or dyke-like bodies of similar material. Trachyte flows that are adjacent to massive sulfide mineralization of the Wolf deposit display anomalous lithogeochemistry when compared to similar trachytic units that are not spatially associated with mineralization. Gold, arsenic, mercury and molybdenum concentrations within the trachyte appear to be good geochemical indicators of proximity to massive sulphide mineralization. Yellow trachyte with similar geochemical anomalies to those of the Wolf property has been defined on the Tree and Fire claims (Section 3.2).

Overlying the yellow trachyte is a sedimentary unit that can be up to 75 metres thick. The sedimentary unit consists of a thin bedded limestone/argillite unit, a thin trachyte clast bearing conglomerate, or a thick, locally carbonaceous, argillite. Presence of the argillite should be checked for in the follow-up of any EM conductors that are spatially associated with the Yellow Trachyte unit.

The second, or upper, volcanic cycle is developed above the Yellow Trachyte (plus or minus limestone/argillite) unit. This upper volcanic cycle differs from the lower cycle in that it is much thicker (>600m), and it contains basaltic flows. Thick accumulations of heterolithic volcaniclastic rocks can also occur in this cycle, making the distinction between the two cycles difficult in some areas of the property.

Minor isoclinal folds were observed and indicate that large-scale folds may be present in the property area. The lack of numerous marker beds and difficulty in defining stratigraphy in the volcanic rocks due to facies changes and similar fragmental lithologies, as well as complications due to normal and low-angle thrust faults prevents the definition of large fold structures.

3 GEOCHEMISTRY

3.1 SOIL GEOCHEMISTRY

A total of 744 soil samples were collected from two grids (Tree #1 and Tree #3) on the Tree and Fire properties (Figure 3.1). Samples were collected from shovel or mattock dug holes, which averaged 30 cm in depth. The samples were collected from "B" horizon soils or from talus fines on scree slopes and were placed in kraft bags for air drying prior to shipment. All samples were analyzed by Acme Laboratories of Vancouver, B.C. using an aqua-regia (partial) digestion followed by 30 element ICP analysis. Appendix I contains certificates of analysis from Acme Laboratories. The area of the Tree #2 grid was soil sampled during the 1996 and 1997 field seasons, the results of which are contained within Kemp (1996) and Schmidt (1997).

The soil grids were designed to trace the extents of the mineralized horizon in areas of colluvium or scree cover and detect subcroping base metal and barite occurrences within the mineralized horizon. Only the results of the barite, lead, and zinc analysis are discussed. Similar patterns are seen in the results from the analysis of other elements associated with VMS mineralization.

The results for barium ranged from <1 to 1,920 ppm (Figure 3.2). On the Fire claims, soils containing strongly elevated barium (500-766 ppm) are spatially associated with the Yellow Trachyte unit and surface projection of a Max-Min HLEM anomaly. Very strong barium anomalies (up to 1,390 ppm) occur in Bear Valley spatially associated with the projection of the Yellow Trachyte unit in this region. The strongest, most extensive barium anomalies are associated with the argillite unit that outcrops below the volcanic stratigraphy on the west side of the Fire claims. These anomalies may be the result of barite being concentrated at the break in slope below the Yellow Trachyte unit on the Fire Claims.

The pattern of anomalous lead values in soils more closely follows the trace of the Yellow Trachyte unit (Figure 3.3). Values of 431 to 1,168 ppm occur at the surface projection of the Max-Min HLEM anomaly on the Fire claims. The strongest lead anomalies (values to 1,403 ppm) occur overlying the yellow trachyte horizon on Bear Ridge. Weak, discontinuous lead anomalies occur in Bear valley.

Patterns exhibited by zinc are much more diffuse than those of lead or barite. The strongest anomalies (up to 8,835 ppm) are spatially associated with the Yellow Trachyte unit that outcrops near the ridge tops on the Fire claims. Weak to moderate anomalies occur over broad areas of the soil grid on both the Tree and Fire claims. These anomalies appear spatially associated with the Yellow Trachyte unit as well as the basal argillite underlying the volcanic stratigraphy. A single anomalous area occurs within volcanic units high in the stratigraphy on the Tree claims.

3.2 LITHOGEOCHEMICAL SAMPLING

In order to determine where alteration was the most intense within the Yellow Trachyte unit and theoretically most proximal to VMS mineralization, continuous chip samples across the mineralized Yellow Trachyte horizon were taken in several locations. Thirteen areas or vertical sections were chip-sampled (Figures 3.5A&B). All of the sections had intervals containing anomalous mercury (100-1,620 ppb). One section, in Uwe's Camp creek also returned anomalous molybdenum (11-20 ppm over 16m), manganese (1,292 ppm) and anomalous gold (14 ppb over 12 meters). These values are similar to those seen within trachyte proximal to the massive sulphide intersections in the Wolf deposit. The Uwe's Camp Creek section is also spatially associated with a priority ground Max-Min HLEM anomaly.

In general, the best values in the VMS geochemical indicator elements within the Yellow Trachyte unit occur in the same areas as the best soil geochemical anomalies. This suggests that the area bounded by Uwe's Camp Creek, Julie's Camp Creek and Bear Creek drainages is the most prospective area within the property and that based on geochemistry, the Yellow Trachyte unit should be considered "pregnant" within this area.

4 GEOPHYSICS

4.1 AIRBORNE GEOPHYSICAL SURVEY

An airborne EM, magnetic and VLF survey of the Tree/Fire claim block was flown by Aerodat Inc. on November 11, 1997. The survey data was processed and interpreted by GCT Consulting Services under contract for High Sense Geophysics Ltd., after the purchase of Areodat by High Sense. A separate report detailing the results of this survey (McGill, 1998) was filed as assessment with the Yukon government in 1998.

The magnetic variation measured over the property was subdued and there appears to be a correlation between magnetic intensity and topography. Much more variability is exhibited by the apparent resistivity data. The overall pattern is, however, similar to the magnetics, with low resistivities at lower elevations, and high resistivities underlying the ridges and peaks. The resistivity lows are interpreted to be conductive, recessive weathering sediments that outcrop in the valley bottoms of the claim block. The resistivity highs correlate with the volcanic stratigraphy that forms the topographic highs on the claim block. The VLF data also reflects topography with the maximums correlating to the topographic highs.

Most of the airborne EM anomalies are probably related to conductive sediments that surround and underlie the volcanic stratigraphy on the claim block. Ground Max-Min HLEM coverage was targeted to test the airborne EM anomalies that occur in volcanic stratigraphy.

4.2 GROUND MAX-MIN HLEM SURVEY

A Max-Min HLEM survey was conducted by Delta Geoscience over the Tree #1 and Tree #3 grids. An interpretation report written by Grant Hendrickson of Delta Geoscience is included within this report as Appendix II. HLEM profile drawings, with interpretations, are presented as figures 4.1 to 4.12.

Two anomalies have been interpreted by Delta Geoscience as possibly being related to sulphide conductors. The first anomaly is a xx meter long, xx strength conductor located on the Tree #1 grid. The molybdenum-gold lithogeochemical anomaly hosted in a mineralized Yellow Trachyte is spatially associated with this Max-Min HLEM anomaly. The second Max-Min HLEM anomaly is located down dip of the Bart's Bluff showing on the Fire claims.

5 CONCLUSIONS AND RECOMMENDATIONS

Geological mapping of the Tree/Fire claim block during the 1998 field season defined eight lithologic units including two volcanic units, two volcaniclastic units, three sediment dominated packages, and yellow weathering trachyte that is locally associated with mineralization of probable volcanic exhalative origin. The defined units are interpreted to represent two distinct volcanic cycles separated by the trachyte flow, plus or minus exhalative mineralization, that overly a basal argillite.

An interpreted volcanic vent proximal facies is centred on the Fire claim block. More distal volcanic facies are located on the northeast side of the Tree claim block and west of the Fire claims. The area on the northeast side of the Tree claim block includes Yellow Trachyte unit lithologies that have limited strike length, and seem to occur at different stratagraphic levels. Rare occurrences of barite veins in outcrop or barite cobbles in scree are spatially associated with some of these Yellow Trachyte horizons.

Whole rock analyses demonstrates that rocks taken from the Yellow Trachyte horizon are trachytic in composition and are geochemically similar to the rocks hosting the Wolf deposit, 50 km to the south. Whole rock analysis also indicates that significant accumulations of mafic volcanic rocks occur in structural hanging wall to the Yellow Trachyte horizon. Mafic rocks are not seen in the immediate stratigraphy hosting the Wolf deposit.

Soil geochemical anomaly patterns for lead, zinc and barium are spatially associated with the Yellow Trachyte horizon. Additional zinc and barium soil anomalies occur over argillite that underlies the volcanic stratigraphy on the Fire claims. Zinc soil anomalies also occurs in some volcanic and volcaniclastic stratigraphy overlying the Yellow Trachyte Horizon.

Lithogeochemical sampling was completed across thirteen sections of Yellow Trachyte that included mineralization. All of these sections contained intervals with anomalous mercury. In addition, one sampled section in the Bart's Bluff area with a co-incident ground Max-Min HELM target (Bart's Bluff) is anomalous in molybdenum and gold, similar in concentration to lithogeochemical anomalies proximal to the Wolf deposit.

Ground Max-Min HLEM has defined two anomalies that are interpreted to be sulphide conductors. Both conductors are located down dip of lead-zinc-barite soil geochemical anomalies. In addition, the conductors are spatially associated with either a massive barite occurrence or a molybdenum-gold rock geochemical anomaly.
In summary:

1) Geological mapping has defined the location of a possible mineralized horizon largely based on the location of a distinctive Yellow Trachyte.
2) There is a correlation between the Yellow Trachyte and barite occurrences.
3) The surface expression of sulphide mineralization on the Wolf property is Yellow Trachyte, altered lapilli tuff, barite and anomalous geochemistry.
4) The presence of soil and rock geochemical anomalies associated with the Yellow Trachyte and altered, sericitic lapilli tuff suggests a locally "pregnant" mineralized horizon
5) Exposure of the Yellow Trachyte horizon is limited, but other than some massive pyrite boulders in a creek, no VMS mineralization has been observed in outcrop; however, outcropping mineralization is extremely rare in the belt and is not directly correlatable to massive sulfide deposits.
6) Approximately 10% of the Yellow Trachyte exposed, it is a reasonable proposition that significant mineralization might occur somewhere along this horizon without being exposed. Total area of the Yellow Trachyte underground is approximately 10 square kilometres. The areas of Yellow Trachyte on the southern Fire property are sufficiently close to the ridge tops that there is little probability of a significant sized massive sulphide deposit going undetected. However, on the northeastern Fire and western Tree claims there is ample room for a 5-10 million tonne deposit. It is possible for a deposit of this size to exist with mineralization never coming closer than 400 metres to the intersection of the Yellow Trachyte horizon and surface.

It is suggested that drilling test areas where:
1. There is room for a large deposit
2. Geochemistry and geology is the "hottest"
3. The distance to the target is not too great
4. A geophysical anomaly is present.

Ground Max-Min HLEM has defined two targets that are possible sulphide bodies. The surface projection of both of these targets is coincidental with outcrops of mineralized Yellow Trachyte and with soil geochemical anomalies. One of these targets is close to a molybdenum and gold lithogeochemical anomaly that is similar to that seen proximal to the massive sulfides in the Wolf Deposit. The other anomaly is down dip of Bart's Bluff barite occurrence.

These two coincidental geological, geochemical and geophysical targets are recommended for drilling. The first proposed drill hole is located on the Fire claims and targets the Yellow Trachyte horizon down dip from Bart's Bluff (Table 5.1). A second drill hole is recommended to test the target in the vicinity of Uwe's Camp Creek and the molybdenum and gold lithogeochemical anomaly. A short program of infill mapping is also recommended to determine the potential of the Rat ferricrete showing.

Table 5.1 Recommended Drill Holes

Hole ID.	Azimuth	Inclination	Depth	Northing	Easting	Elevation
1	0	-90	160	6834950	635600	1865
3	0	-90	150	6836100	636200	178.5
2	0	-90	160	6837750	635250	163.5

Examination of alteration and mineralization in these drill holes, together with lithogeochemical investigations would determine if potentially economic mineralization is present on the Tree/Fire property.

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Yukon MINFILE: 105F 071; Chzerpnough occurrence, (1988)

APPENDIX I

GEOCHEMICAL CERTIFICATES

OF ANALYSIS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT FIRE-TREE File # 9802853 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 70502	7	13	185	14	.6	6	2	13	3.92	15	<8	<2	3	9	.5	<3	3	<1	.06	.003	20	4	.02	32	<.01	<3	.25	.01	.21	<2	2	10
A 70503	2	429	64	157	.6	40	10	230	17.45	55	<8	<2	2	6	<.2	<3	3	45	.16	.085	9	64	2.11	37	.01	<3	2.94	.07	.07	<2	2	15
A 70504	18	68	845	9	5.1	26	7	489	31.52	179	<8	<2	2	8	.7	21	3	<1	.77	.005	<1	4	.29	9	<.01	<3	.10	.01	.09	2	1	2160
A 70505	21	476	1471	161	54.5	66	40	14	25.61	62	<8	<2	2	23	<.2	35	4	1	.01	.038	1	5	.01	7	<.01	<3	.10	.01	.07	<2	<1	7685
A 70506	7	54	1091	9	7.1	19	5	32	33.63	94	<8	<2	2	14	<.2	15	<3	<1	.19	.001	1	6	.01	7	<.01	3	.04	.01	.04	4	<1	1430
A 70507	23	94	1219	159	4.0	61	15	6	32.94	75	<8	<2	3	10	<.2	12	5	1	.07	.002	5	6	.01	9	<.01	<3	.12	.01	.09	<2	1	5230
A 70508	2	5	42	3	<.3	8	11	10	.51	8	<8	<2	10	5	<.2	<3	<3	2	.08	.068	62	4	.01	69	<.01	6	.30	<.01	.20	<2	<1	65
A 70509	2	4	26	12	<.3	6	3	201	.65	3	<8	<2	13	136	.3	<3	<3	1	2.36	.058	92	4	.01	322	<.01	9	.36	.01	.23	<2	<1	170
A 70510	3	19	10	3	<.3	17	16	7	1.10	3	<8	<2	6	50	<.2	<3	<3	8	.59	.341	41	4	.02	211	.01	8	.54	.01	.36	<2	<1	220
A 70511	3	5	24	3	.4	4	1	16	.88	6	<8	<2	5	9	<.2	<3	<3	1	.01	.025	28	5	.01	579	<.01	4	.19	<.01	.18	<2	<1	65
A 70512	2	2	3	24	<.3	2	<1	1582	3.28	3	<8	<2	13	40	.3	<3	<3	<1	1.71	.023	83	3	.17	244	<.01	<3	.26	.01	.26	<2	<1	<10
A 70513	5	4	6	9	<.3	8	1	227	1.23	<2	<8	<2	12	12	.2	<3	<3	<1	.25	.035	77	6	.03	247	<.01	<3	.20	.01	.22	<2	<1	70
A 70514	1	1	3	19	<.3	2	<1	1180	2.34	<2	<8	<2	8	82	.2	<3	<3	<1	2.10	.016	60	4	.50	598	<.01	<3	.19	.02	.18	<2	<1	10
A 70515	<1	<1	9	<1	.4	1	1	5	.03	<2	<8	<2	<2	68	<.2	<3	<3	<1	.01	.001	2	1	<.01	2089	<.01	<3	.01	<.01	.01	<2	<1	880
A 70516	3	1	42	1	.6	2	1	16	.15	<2	<8	<2	3	17	<.2	<3	<3	2	.02	.004	33	8	.02	1294	<.01	4	.26	<.01	.21	<2	<1	115
RE A 70516	2	1	40	2	.5	2	1	12	.14	<2	<8	<2	3	16	<.2	<3	<3	2	.01	.004	31	8	.02	1254	<.01	4	.26	<.01	.20	<2	<1	110
A 70517	4	8	9	4	<.3	11	14	12	.76	3	<8	<2	8	50	.2	<3	<3	7	.64	.376	58	5	.02	250	<.01	8	.58	.01	.35	<2	<1	115
A 70518	1	5	16	2	<.3	5	3	7	.74	2	<8	<2	4	19	<.2	<3	<3	3	.17	.107	23	7	.01	254	<.01	6	.34	<.01	.26	<2	<1	60
A 70519	2	6	6	5	<.3	7	9	1082	1.30	<2	<8	<2	5	129	<.2	<3	<3	10	2.36	.321	37	4	.24	303	.01	5	.53	.01	.38	<2	<1	80
A 70520	1	4	9	3	<.3	3	3	22	.54	2	<8	<2	7	59	<.2	<3	<3	8	.56	.268	35	6	.03	407	.01	9	.61	.01	.35	<2	<1	20
A 70521	2	4	5	159	<.3	18	17	1036	5.92	<2	<8	<2	2	168	.4	3	<3	48	3.31	.262	30	26	1.83	288	.20	<3	1.91	.04	1.54	<2	<1	25
A 70522	2	5	64	3	.4	5	5	17	.52	3	<8	<2	4	31	<.2	<3	<3	4	.33	.180	36	5	.02	610	<.01	6	.38	.01	.29	<2	<1	70
A 70523	1	2	3	5	<.3	3	2	10	.29	<2	<8	<2	8	30	<.2	<3	<3	5	.45	.260	28	6	.03	465	.01	6	.56	<.01	.34	<2	<1	30
A 70524	1	2	<3	50	<.3	3	1	1467	3.06	3	<8	<2	4	142	.5	<3	<3	<1	2.94	.007	31	4	.65	321	<.01	<3	.15	.02	.13	<2	<1	15
A 70525	5	10	88	2	.7	15	4	14	4.28	7	<8	<2	2	5	<.2	<3	<3	<1	.01	.007	12	9	<.01	44	<.01	<3	.13	<.01	.15	<2	<1	105
A 70526	2	5	33	4	<.3	6	2	25	1.27	4	<8	<2	3	8	<.2	<3	<3	<1	.02	.009	20	12	.01	158	<.01	<3	.11	<.01	.13	4	4	95
A 70527	3	6	13	20	<.3	12	2	263	1.19	5	<8	<2	3	31	.5	<3	<3	1	.57	.020	22	11	.21	343	<.01	<3	.15	.01	.18	<2	2	40
A 70528	3	2	6	25	<.3	2	1	815	1.72	<2	<8	<2	14	63	.2	<3	<3	<1	1.59	.016	92	6	.37	265	<.01	<3	.15	.03	.13	<2	2	10
A 70529	3	14	27	48	<.3	21	8	204	1.97	7	<8	<2	3	17	.3	3	<3	2	.94	.071	27	4	.10	131	<.01	4	.31	<.01	.21	<2	3	15
A 70530	11	9	3	19	<.3	1	1	1469	3.99	2	<8	<2	20	24	.2	<3	<3	<1	1.35	.018	128	4	.28	109	.01	<3	.42	.01	.36	<2	2	40
A 70531	20	20	44	41	1.1	5	1	1116	7.01	79	<8	<2	3	54	.4	3	<3	<1	2.89	.011	18	4	.99	80	<.01	<3	.20	.01	.20	<2	18	1240
A 70532	13	20	39	62	.4	2	1	435	5.17	51	<8	<2	20	20	.6	<3	<3	<1	.74	.021	125	4	.22	105	<.01	3	.51	<.01	.38	<2	10	45
A 70533	8	29	98	51	1.0	6	<1	310	12.51	258	<8	<2	12	20	<.2	5	<3	<1	.85	.015	73	5	.17	43	<.01	5	.55	<.01	.39	<2	27	55
A 70534	8	24	14	234	<.3	2	1	514	4.19	23	<8	<2	18	36	2.3	<3	<3	<1	.63	.016	95	4	.20	239	<.01	<3	.28	.01	.26	<2	3	90
A 70535	11	24	98	107	<.3	3	1	932	2.25	4	<8	<2	10	91	.8	3	<3	<1	4.39	.025	69	3	1.02	101	<.01	4	.30	.01	.24	<2	2	80
STANDARD C3/AU-R	25	64	35	163	5.5	37	12	777	3.34	54	21	3	22	29	23.9	14	23	82	.56	.091	17	178	.61	153	.09	18	1.95	.04	.17	15	440	925
STANDARD G-2	1	3	<3	42	<.3	8	4	541	2.02	<2	<8	<2	4	81	<.2	<3	<3	41	.64	.099	7	79	.60	247	.14	<3	1.09	.10	.51	2	<1	<10

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMTED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM) HG ANALYSIS BY FLAMELESS AA.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 14 1998 DATE REPORT MAILED: July 22/98 SIGNED BY.......... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

 Data___ FA ____

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 70536	6	12	21	30	.4	2	1	2406	3.69	11	<8	<2	2	19	.6	5	<3	1	4.28	.019	12	2	1.23	45	<.01	<3	.26	.01	.21	<2	2	70
A 70537	10	18	48	245	.6	3	3	630	2.54	11	<8	<2	5	38	1.8	3	<3	1	1.30	.061	45	3	.33	105	<.01	3	.35	.01	.25	<2	1	90
A 70538	7	4	26	152	<.3	4	1	128	1.42	10	<8	<2	11	12	.4	4	<3	<1	.41	.029	82	4	.08	54	<.01	3	.35	<.01	.29	<2	<1	235
A 70539	7	3	<3	19	<.3	1	3	1258	3.66	2	<8	<2	10	22	.2	<3	<3	<1	1.09	.061	67	3	.23	97	<.01	<3	.55	.01	.31	<2	<1	35
A 70540	4	4	7	12	<.3	2	2	1046	3.11	3	<8	<2	14	25	.2	<3	<3	<1	.96	.061	98	3	.18	93	<.01	<3	.45	.01	.30	<2	1	55
A 70541	9	7	105	<1	2.7	2	<1	13	9.71	13	<8	<2	5	3	<.2	3	<3	<1	.01	.004	28	4	.01	43	<.01	3	.24	<.01	.21	<2	<1	610
A 70542	4	3	10	7	<.3	3	1	675	1.70	2	<8	<2	9	18	<.2	<3	<3	<1	2.46	.013	63	3	.57	53	<.01	<3	.28	.01	.25	<2	<1	20
A 70542B	1	9	49	5	.3	6	8	84	1.15	6	<8	<2	3	25	<.2	<3	<3	5	.48	.211	19	3	.06	218	<.01	4	.34	.01	.35	<2	<1	120
A 70543	3	25	32	36	.3	16	19	576	3.24	6	<8	<2	10	67	.2	<3	<3	10	1.92	.192	40	4	.08	327	.01	<3	.56	.02	.30	<2	<1	105
A 70544	4	31	48	80	<.3	29	25	1587	6.67	7	<8	<2	17	84	.6	<3	<3	14	4.24	.084	62	10	.58	236	.01	<3	.68	.03	.18	<2	<1	100
A 70545	<1	10	4	47	<.3	6	2	157	2.56	<2	<8	<2	16	77	.3	<3	<3	5	.96	.054	122	3	.04	1314	.02	6	.70	<.01	.54	<2	<1	10
A 70546	1	10	51	7	<.3	10	7	507	1.19	3	<8	<2	8	171	.3	<3	<3	4	7.92	.111	65	4	.03	107	<.01	5	.37	.01	.29	<2	<1	15
A 70547	2	4	75	2	.4	2	<1	13	1.02	<2	<8	<2	8	14	<.2	<3	<3	1	.10	.016	27	2	.01	99	<.01	6	.41	.01	.33	<2	<1	155
A 70548	2	6	28	4	<.3	5	2	41	.83	5	<8	<2	16	27	<.2	<3	<3	3	.58	.078	69	5	.01	76	<.01	10	.67	.01	.35	<2	<1	70
A 70549	1	8	6	7	<.3	9	4	299	1.20	2	<8	<2	15	41	.2	<3	<3	2	3.79	.095	119	3	.05	207	<.01	7	.88	.01	.47	<2	<1	20
A 70550	<1	131	3	9	<.3	61	84	785	.78	36	<8	<2	2	59	.3	<3	<3	19	4.59	.273	30	44	.18	181	.01	7	.69	.01	.42	<2	<1	30
A 72501	1	16	12	6	<.3	19	14	1070	1.97	5	<8	<2	3	158	.3	<3	<3	19	6.49	.253	35	5	.85	224	.01	5	.57	.01	.39	<2	3	60
A 72502	3	3	11	13	<.3	3	1	263	.71	2	<8	<2	10	9	<.2	<3	<3	2	.48	.023	52	7	.01	640	<.01	<3	.17	.04	.14	<2	<1	<10
A 72503	<1	2	24	4	<.3	1	<1	18	.23	5	<8	<2	22	6	<.2	3	<3	1	.02	.016	148	2	.02	254	<.01	4	.36	.01	.31	<2	2	70
A 72504	1	9	10	2	<.3	8	4	9	.66	3	<8	<2	13	24	<.2	<3	<3	4	.27	.156	72	4	.01	192	<.01	11	.41	<.01	.25	<2	1	65
A 72505	1	4	12	1	<.3	5	6	7	.51	2	<8	<2	9	59	<.2	<3	<3	8	.60	.308	45	7	.02	197	.01	10	.63	.01	.37	<2	1	40
RE A 72505	1	3	11	1	<.3	5	6	7	.50	3	<8	<2	9	58	<.2	<3	<3	8	.60	.306	45	6	.02	193	<.01	9	.63	<.01	.37	<2	1	25
A 72506	3	3	313	7	1.1	2	<1	5	3.90	<2	<8	<2	<2	4	<.2	<3	<3	<1	.01	.008	2	3	<.01	80	<.01	<3	.21	<.01	.19	<2	3	8180
A 72507	2	2	118	2	.4	1	<1	7	1.07	<2	<8	<2	3	11	<.2	<3	<3	<1	.02	.015	11	3	.01	820	<.01	4	.25	<.01	.21	<2	<1	150
A 72508	1	2	7	2	<.3	1	2	16	.25	<2	<8	<2	10	31	<.2	<3	<3	<1	.45	.243	87	1	.01	288	<.01	8	.52	<.01	.34	<2	<1	15
A 72509	1	4	9	28	<.3	3	1	317	1.14	<2	<8	<2	16	12	.3	<3	<3	<1	.57	.024	111	3	.06	241	<.01	<3	.22	.01	.16	<2	<1	30
A 72510	121	101	193	<1	3.7	60	43	20	17.93	42	<8	<2	3	2	<.2	<3	<3	3	.01	.005	7	5	.01	14	<.01	3	.21	.01	.19	<2	1	610
A 72511	4	14	2850	84	3.4	57	17	12	24.18	70	<8	<2	<2	5	<.2	12	<3	1	.01	<.001	14	8	.01	7	<.01	<3	.05	<.01	.03	3	3	4925
A 72512	4	4	13	2	<.3	4	4	9	.46	2	<8	<2	3	23	<.2	<3	<3	3	.34	.157	21	5	.02	426	<.01	8	.46	.01	.28	<2	2	30
R8-PHI3	3	6	59	6	1.8	4	<1	17	1.33	42	<8	<2	2	23	<.2	4	<3	<1	.02	.007	14	10	.01	73	<.01	<3	.15	<.01	.20	3	4	65
STANDARD C3/AU-R	25	63	35	162	5.4	38	12	771	3.40	55	20	<2	20	28	23.4	17	19	80	.55	.090	17	172	.60	162	.08	17	1.88	.04	.17	17	430	885
STANDARD G-2	1	2	3	40	<.3	8	4	509	1.88	2	<8	<2	4	70	<.2	<3	<3	39	.60	.095	7	73	.57	203	.12	<3	.96	.08	.47	3	1	10

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

Data / FA ____

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT FIRE-TREE File # 9802854

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm	Au+ ppb
TREE-SUM-01	3.5	13.7	170.8	274.6	857	35	65	2662	11.41	9.6	<5	8	26	2.19	3.0	<.2	6	.19	.099	52	1	.05	311	<.01	10	.87	.01	.21	<2	.9	485	<.3	<.2	1.1	2
TREE-SUM-02	2.0	16.0	61.3	380.0	449	39	86	2690	24.12	5.7	<5	7	18	2.22	.9	<.2	5	.26	.102	42	<1	.04	179	<.01	<3	1.78	.01	.07	<2	.6	94	<.3	<.2	1.0	1
8S-FIRE-01	7.9	22.4	43.8	149.8	355	16	10	651	4.50	25.4	7	9	21	.77	3.8	.3	9	.40	.082	65	5	.20	158	<.01	<3	.56	.01	.08	<2	<.2	49	1.5	<.2	2.0	3
RE 8S-FIRE-01	7.6	19.0	43.1	153.7	340	18	10	653	4.54	24.4	5	9	22	.72	3.9	.4	9	.41	.082	67	6	.21	157	<.01	<3	.59	.01	.08	<2	.2	51	1.5	<.2	2.0	13

ICP - 15 GRAM SAMPLE IS DIGESTED WITH 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 300 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%.
- SAMPLE TYPE: SILT AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 14 1998 **DATE REPORT MAILED:** July 22/98 **SIGNED BY** .... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ___ FA ___

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT FIRE-TREE File # 9802952 Page 1
1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 72513	3	3	50	4	<.3	4	1	4	.83	8	<8	<2	6	6	<.2	<3	<3	9	.04	.112	30	5	.01	122	<.01	4	.29	.01	.39	<2	1	15
A 72514	2	4	103	3	<.3	1	1	10	.47	7	<8	<2	8	5	<.2	<3	<3	3	<.01	.066	56	7	.01	178	<.01	4	.28	<.01	.25	2	<1	40
A 72515	3	6	61	2	.6	8	2	13	.60	7	<8	<2	4	8	<.2	<3	<3	2	.01	.033	25	8	.01	198	<.01	4	.27	<.01	.25	<2	1	55
A 72516	2	6	84	3	.8	5	3	8	.36	4	<8	<2	7	7	<.2	3	<3	1	.03	.018	57	5	<.01	205	<.01	5	.25	<.01	.22	<2	<1	55
A 72517	2	4	39	3	<.3	7	1	15	.31	2	<8	<2	8	7	<.2	<3	<3	<1	.02	.053	58	8	<.01	258	<.01	<3	.24	<.01	.25	<2	<1	75
A 72518	6	14	8	198	<.3	8	2	765	2.77	7	<8	<2	5	20	6.1	3	<3	<1	1.71	.038	47	4	.62	137	<.01	<3	.38	<.01	.27	<2	1	20
A 72519	5	16	8	227	<.3	12	3	2232	5.40	9	<8	<2	<2	58	5.0	5	<3	2	6.26	.031	13	4	1.90	96	<.01	<3	.28	.01	.22	<2	1	25
A 72520	4	34	166	564	<.3	11	6	539	3.63	13	<8	<2	2	45	5.5	3	<3	1	1.47	.086	11	9	.39	151	<.01	<3	.44	<.01	.32	<2	2	75
A 72521	12	36	61	8	.5	5	1	12	3.07	8	<8	<2	7	6	<.2	<3	<3	<1	.05	.006	55	3	.03	55	<.01	<3	.34	<.01	.25	<2	1	35
A 72522	4	37	469	496	3.0	18	4	13	4.27	22	<8	<2	5	10	3.4	12	<3	1	.01	.005	36	10	.02	29	<.01	<3	.32	<.01	.25	2	3	85
A 72523	7	53	356	70	4.4	90	18	23	8.58	31	<8	<2	<2	9	<.2	10	<3	4	.01	.005	7	17	.02	21	<.01	5	.31	<.01	.23	<2	13	115
A 72524	22	30	31	878	.4	13	3	1512	3.62	4	<8	<2	4	95	6.3	5	<3	1	3.80	.015	21	8	1.53	146	<.01	<3	.29	.01	.24	<2	4	50
A 72525	3	6	12	8	<.3	5	1	138	1.00	4	<8	<2	10	12	.2	<3	<3	<1	.22	.026	62	5	.02	310	<.01	3	.21	.01	.21	<2	1	45
A 72526	1	3	4	5	<.3	3	3	386	.98	<2	<8	<2	7	64	<.2	<3	<3	3	2.11	.050	58	4	.19	733	<.01	4	.40	.01	.34	<2	1	20
A 72527	4	4	39	2	<.3	5	1	131	.87	6	<8	<2	10	29	<.2	<3	<3	<1	.36	.022	61	6	.08	608	<.01	4	.26	.02	.26	<2	2	40
A 72528	2	8	201	14	.7	8	2	661	2.20	11	<8	<2	3	122	.5	9	<3	6	4.88	.023	19	3	2.33	261	<.01	3	.22	.01	.18	2	<1	75
A 72529	6	7	38	7	.4	10	2	1452	2.52	9	<8	<2	3	111	.2	3	<3	4	3.36	.039	28	5	1.05	204	<.01	<3	.19	.02	.25	<2	<1	125
A 72530	2	12	19	8	<.3	11	12	713	2.12	4	<8	<2	4	84	.2	4	<3	9	3.84	.131	34	4	.99	209	<.01	5	.41	.01	.31	<2	1	45
A 72531	2	8	8	3	<.3	7	6	396	1.29	4	<8	<2	9	42	.3	<3	<3	2	2.99	.040	68	3	.36	174	<.01	5	.34	<.01	.27	<2	3	25
A 72532	1	8	11	8	<.3	7	5	665	1.82	4	<8	<2	5	41	<.2	3	<3	4	5.02	.049	54	3	1.24	101	<.01	5	.37	.01	.27	<2	3	15
A 72533	12	7	80	2	<.3	4	5	72	.77	3	<8	<2	5	49	<.2	<3	<3	8	.72	.338	46	4	.05	1100	<.01	9	.55	.01	.38	<2	1	30
A 72534	1	15	11	2	<.3	13	17	187	.61	5	<8	<2	5	87	.2	<3	<3	5	1.92	.225	40	6	.12	1103	<.01	8	.55	.01	.36	<2	1	30
RE A 72534	1	14	10	2	<.3	12	16	181	.58	5	<8	<2	5	84	.2	<3	<3	5	1.84	.214	40	6	.11	1169	<.01	8	.52	.01	.35	<2	1	30
A 72535	2	23	129	10	<.3	20	18	901	2.07	6	<8	<2	3	122	.4	3	<3	13	3.24	.178	28	6	.65	306	<.01	7	.43	.01	.35	<2	4	60
A 72536	4	26	42	13	<.3	26	15	1690	3.38	12	<8	<2	<2	60	.6	5	<3	18	4.21	.140	13	15	1.20	135	<.01	6	.44	.01	.30	<2	2	140
A 72537	1	7	16	8	<.3	6	2	20	.45	4	<8	<2	9	15	<.2	<3	<3	3	.22	.073	56	6	.02	121	<.01	11	.54	<.01	.32	<2	1	50
A 72538	2	4	25	7	<.3	2	1	8	.34	2	<8	<2	7	8	<.2	3	<3	2	.14	.051	23	5	.01	267	<.01	11	.49	<.01	.31	<2	<1	240
A 72539	3	8	38	2	<.3	10	3	8	.88	3	<8	<2	8	9	<.2	<3	<3	1	.02	.016	36	6	.01	197	<.01	6	.31	.01	.26	<2	<1	150
A 72540	6	11	222	4	.7	10	3	16	2.34	7	<8	<2	4	12	<.2	3	<3	2	.06	.015	13	9	.01	99	<.01	9	.35	.01	.34	4	2	565
A 72541	1	3	13	<1	<.3	2	<1	5	.36	<2	<8	<2	16	4	<.2	<3	<3	<1	.01	.017	82	2	.01	82	<.01	6	.33	<.01	.29	<2	<1	30
A 72542	2	3	66	2	<.3	1	<1	10	.56	<2	<8	<2	12	8	<.2	<3	<3	<1	.02	.017	70	3	.01	202	<.01	7	.31	.01	.28	<2	5	40
A 72543	<1	4	4	2	<.3	3	2	33	.18	<2	<8	<2	14	38	<.2	<3	<3	<1	.73	.022	128	2	.03	182	<.01	17	.80	.01	.45	<2	<1	<10
A 72543B	1	8	10	2	<.3	10	11	635	.89	<2	<8	<2	7	95	<.2	<3	<3	10	2.82	.155	77	3	.09	395	.01	8	.62	.01	.40	<2	<1	25
A 72544	1	8	45	4	.4	6	3	2516	4.74	9	<8	<2	2	40	.5	4	<3	11	4.45	.090	12	5	1.20	157	<.01	3	.29	.01	.20	<2	<1	70
A 72545	2	6	675	10	1.7	8	2	30	4.43	25	<8	<2	<2	5	.2	4	<3	1	.05	.001	2	15	.01	47	<.01	<3	.06	<.01	.04	6	<1	780
STANDARD C3/AU-R	27	68	39	173	5.7	39	13	821	3.51	58	22	2	22	31	25.4	17	22	87	.60	.095	17	189	.66	162	.09	20	2.02	.04	.18	16	460	915
STANDARD G-2	1	4	3	42	<.3	8	4	536	2.00	<2	<8	<2	4	78	<.2	<3	<3	42	.62	.096	5	81	.60	238	.12	<3	1.04	.09	.50	2	<1	<10

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMTED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM) HG ANALYSIS BY FLAMELESS AA.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 20 1998 **DATE REPORT MAILED:** July 27/98 **SIGNED BY** .... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

 Data ___ FA ___

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 72546	2	6	13	7	<.3	6	5	917	1.00	3	<8	<2	13	113	.2	<3	<3	2	9.66	.085	96	3	.11	286	<.01	8	.49	.01	.26	<2	<1	40
A 72547	2	9	169	1	1.0	6	1	30	5.84	7	<8	<2	<2	3	.5	3	<3	1	.13	.002	2	13	.01	23	<.01	<3	.09	<.01	.06	5	1	265
A 72548	1	8	19	11	<.3	8	7	431	1.16	4	<8	<2	14	31	<.2	<3	<3	3	3.35	.094	81	5	.03	349	<.01	13	.86	.01	.41	<2	<1	45
A 72549	2	4	139	1	1.0	3	<1	29	1.04	3	<8	<2	<2	3	<.2	3	<3	1	.08	.002	1	12	.01	156	<.01	4	.19	<.01	.12	4	1	280
A 72550	5	17	305	29	1.2	21	5	3206	8.07	28	<8	<2	3	47	1.5	7	<3	12	5.07	.040	39	7	1.42	73	<.01	<3	.17	.01	.10	<2	<1	340
A 72551	2	4	73	11	.8	3	1	39	1.05	2	<8	<2	<2	6	<.2	<3	<3	1	.05	.001	1	16	.01	73	<.01	<3	.07	<.01	.04	5	<1	1620
A 72552	2	8	20	59	<.3	8	5	846	1.02	4	<8	<2	11	100	.6	<3	<3	2	10.57	.101	62	4	.04	431	<.01	8	.55	.01	.31	<2	1	45
A 72553	3	5	458	2	1.0	5	<1	36	1.24	<2	<8	<2	<2	5	<.2	<3	<3	1	.06	.001	4	19	<.01	56	<.01	<3	.07	<.01	.04	8	1	320
A 72554	2	39	146	11	2.3	33	20	1379	4.92	9	<8	<2	5	168	1.3	<3	<3	11	9.81	.197	43	4	.26	57	<.01	6	.56	.01	.32	<2	<1	260
A 72555	1	9	12	3	<.3	7	8	1450	1.40	3	<8	<2	6	129	<.2	<3	<3	12	12.58	.234	57	7	.08	552	<.01	6	.48	.01	.30	<2	<1	20
A 72556	6	6	66	467	<.3	4	1	218	1.17	7	<8	<2	30	12	1.9	<3	<3	<1	.38	.009	115	5	.07	107	<.01	<3	.46	.01	.18	<2	<1	165
A 72557	6	8	22	78	<.3	5	1	52	2.21	6	<8	<2	18	4	<.2	<3	<3	2	.02	.022	79	6	.01	120	<.01	<3	.31	.02	.16	<2	1	40
A 72558	3	9	21	353	<.3	8	3	53	1.76	6	<8	<2	7	9	1.2	<3	<3	2	.16	.069	26	5	.03	106	<.01	<3	.31	.03	.16	<2	<1	315
A 72559	3	7	18	144	<.3	10	7	387	2.92	9	<8	<2	4	49	.7	<3	<3	6	1.28	.097	18	6	.20	111	<.01	<3	.77	.03	.19	<2	1	80
A 72560	5	5	7	60	<.3	7	3	158	2.45	4	<8	<2	5	30	.2	<3	<3	5	.67	.147	31	4	.23	128	<.01	<3	.83	.02	.18	<2	<1	20
A 72561	4	2	37	8	.4	1	<1	17	.77	3	<8	<2	4	26	<.2	<3	<3	2	.06	.019	44	3	.01	136	<.01	<3	.27	.07	.18	<2	3	175
A 72562	2	11	7	308	<.3	17	10	831	4.32	4	<8	<2	3	71	2.5	<3	<3	7	1.74	.139	20	6	.52	104	<.01	<3	1.83	.02	.18	<2	1	80
A 72563	4	31	5	489	<.3	28	14	1854	4.84	2	<8	<2	2	52	5.3	<3	<3	11	2.30	.078	25	13	.98	123	<.01	<3	1.33	.02	.22	<2	1	95
A 72564	3	2	8	7	<.3	2	<1	14	.39	2	<8	<2	7	9	<.2	<3	<3	2	.13	.006	51	3	.01	171	<.01	<3	.25	.03	.19	<2	2	20
RE A 72564	3	2	10	7	<.3	2	<1	14	.40	<2	<8	<2	7	9	<.2	<3	<3	2	.13	.006	53	3	.01	177	<.01	<3	.26	.03	.20	<2	1	20
A 72565	7	5	7	56	<.3	3	1	1125	6.76	<2	<8	<2	3	50	1.0	<3	<3	2	1.50	.022	17	5	.59	127	<.01	<3	1.93	.01	.21	2	1	20
A 72566	1	113	71	121	<.3	39	33	1840	20.37	18	<8	<2	3	38	2.2	<3	<3	11	2.77	.110	30	5	.42	47	<.01	<3	.56	.01	.12	<2	<1	175
A 72567	4	8	16	65	<.3	3	1	607	2.74	11	<8	<2	39	13	.8	<3	<3	<1	.72	.009	183	4	.29	67	<.01	<3	.64	.01	.18	<2	1	<10
A 72568	2	5	12	54	<.3	5	1	505	2.04	2	<8	<2	42	20	<.2	<3	<3	1	.81	.008	168	4	.24	71	<.01	<3	.87	.01	.19	<2	<1	<10
A 72569	8	11	10	116	<.3	8	2	409	3.22	2	<8	<2	32	8	.5	<3	<3	2	.31	.021	70	6	.21	62	<.01	<3	.81	.01	.16	<2	<1	<10
A 72570	3	7	6	25	<.3	6	2	61	2.25	4	<8	<2	6	11	<.2	<3	<3	4	.25	.118	24	4	.12	89	<.01	<3	.61	.02	.18	<2	<1	<10
A 72571	3	17	21	95	<.3	16	7	181	3.49	6	<8	<2	5	10	.6	<3	3	4	.30	.078	36	6	.14	71	<.01	<3	.58	.02	.18	<2	4	25
A 72572	4	5	4	48	<.3	8	1	696	3.22	2	<8	<2	7	12	.6	<3	<3	5	.74	.055	125	5	.44	77	<.01	<3	1.29	.03	.13	<2	1	10
STANDARD C3/AU-R	24	62	34	158	5.1	36	12	763	3.26	54	21	<2	20	28	23.6	14	22	78	.53	.088	17	168	.59	147	.08	17	1.89	.03	.16	15	506	945
STANDARD G-2	1	3	<3	38	<.3	7	4	530	1.95	<2	<8	<2	4	70	<.2	<3	<3	39	.62	.094	6	75	.58	222	.12	<3	.96	.07	.46	<2	1	<10

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

Data ___ FA ___

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Peter Holbek

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L65+00N 50+00E	12	59	40	124	<.3	26	23	1665	5.27	9	<8	<2	5	39	.5	<3	<3	49	.52	.127	37	26	.60	231	.03	<3	1.21	.02	.19	<2
L65+00N 50+50E	14	51	70	240	<.3	10	9	570	6.05	7	<8	<2	9	43	.2	<3	<3	7	.13	.043	54	6	.18	230	<.01	<3	.99	.01	.22	<2
L65+00N 51+00E	12	44	46	134	<.3	18	13	933	4.24	8	<8	<2	12	61	.4	<3	<3	14	.44	.094	80	9	.17	166	<.01	<3	.89	.01	.15	<2
L65+00N 51+50E	5	14	30	117	<.3	7	8	568	3.98	4	<8	<2	5	28	.3	<3	<3	10	.44	.131	54	5	.08	149	<.01	<3	.49	<.01	.14	<2
L65+00N 52+00E	6	14	29	76	<.3	6	7	348	3.63	5	<8	<2	5	32	<.2	<3	<3	15	.34	.124	74	5	.09	207	<.01	<3	.61	.01	.13	<2
L65+00N 52+50E	8	23	40	117	<.3	15	16	828	5.40	5	<8	<2	7	51	.3	<3	<3	12	.33	.165	63	5	.09	205	<.01	<3	.65	.01	.26	<2
L65+00N 53+00E	6	30	26	312	<.3	15	16	1001	5.11	7	<8	<2	2	33	.6	<3	<3	25	.92	.143	40	9	.13	160	<.01	<3	.48	.01	.15	<2
L65+00N 53+50E	5	46	23	355	<.3	17	19	1220	5.02	8	<8	<2	<2	29	.5	3	<3	38	1.28	.135	30	13	.15	139	<.01	3	.51	.01	.15	<2
RE L65+00N 53+50E	5	46	23	354	.4	18	19	1236	4.94	8	<8	<2	<2	29	.7	<3	<3	38	1.26	.134	30	13	.15	138	<.01	3	.51	.01	.16	<2
L65+00N 54+00E	4	34	20	835	<.3	17	22	1690	5.53	8	<8	<2	4	24	1.1	<3	<3	23	.68	.136	50	7	.11	128	<.01	<3	.43	.01	.15	<2
L65+00N 54+50E	5	42	34	778	<.3	22	35	2104	7.62	12	<8	<2	3	48	1.9	<3	<3	40	1.05	.182	27	9	.17	275	<.01	<3	.53	.02	.16	<2
L65+00N 55+00E	4	31	19	334	<.3	20	23	1848	5.98	8	<8	<2	2	29	1.7	<3	<3	27	.85	.140	44	9	.17	146	<.01	<3	.50	.01	.12	<2
L65+00N 55+50E	3	34	19	119	<.3	18	23	2488	7.09	9	<8	<2	<2	36	.6	<3	<3	52	1.27	.134	28	13	.21	215	<.01	<3	.51	.01	.11	<2
L65+00N 56+00E	9	34	48	190	.8	27	27	2109	6.17	22	<8	<2	3	56	1.4	3	<3	15	1.06	.161	42	5	.14	306	<.01	<3	.50	.01	.22	<2
L65+00N 57+50E	7	38	61	157	.4	27	22	1369	5.22	15	<8	<2	5	30	1.2	<3	<3	18	.57	.117	44	6	.13	372	<.01	<3	.53	.01	.24	<2
L65+00N 58+50E	8	41	138	408	1.2	22	13	1950	7.19	24	<8	<2	6	14	2.4	<3	<3	18	.18	.073	64	12	.19	537	.01	<3	.92	.01	.20	<2
L65+00N 59+50E	10	48	241	279	1.8	20	11	1386	8.21	32	<8	<2	6	16	1.1	3	<3	14	.05	.072	67	8	.13	484	.01	<3	1.04	.02	.31	<2
L63+50N 40+00E	12	19	33	224	<.3	10	7	1124	5.88	10	<8	<2	4	10	.2	<3	<3	14	.22	.099	47	5	.08	91	<.01	<3	.51	.01	.07	<2
L63+50N 40+50E	3	19	16	211	<.3	17	13	986	3.34	4	<8	<2	4	12	.9	<3	<3	4	.83	.150	12	2	.16	44	<.01	<3	.32	.01	.03	<2
L63+50N 41+00E	15	31	49	88	<.3	14	10	1107	5.30	15	<8	<2	6	6	<.2	<3	<3	4	.15	.087	89	4	.04	100	<.01	<3	.42	.01	.08	<2
L63+50N 41+50E	10	33	42	107	<.3	23	14	2058	5.87	14	<8	<2	5	3	.2	<3	<3	3	.08	.102	153	4	.04	93	<.01	<3	.56	<.01	.07	<2
L63+50N 42+00E	17	25	42	102	<.3	13	8	1369	4.93	15	<8	<2	8	3	<.2	<3	<3	3	.02	.076	119	4	.03	114	<.01	<3	.51	<.01	.07	<2
L63+50N 42+50E	60	24	53	179	<.3	9	5	1755	5.47	18	<8	<2	6	9	.4	<3	<3	2	.27	.053	97	3	.05	190	<.01	<3	.34	.01	.11	2
L63+50N 43+00E	50	27	74	297	.4	9	4	2253	6.28	19	<8	<2	8	10	.7	<3	<3	2	.17	.056	156	3	.05	218	<.01	<3	.50	<.01	.12	<2
L63+50N 43+50E	11	22	42	106	<.3	23	12	1176	5.66	15	<8	<2	7	9	.2	<3	<3	8	.21	.073	65	7	.09	321	<.01	<3	.69	<.01	.06	<2
L63+50N 44+00E	15	8	33	232	<.3	3	3	1563	3.95	9	<8	<2	11	4	.5	<3	<3	<1	.03	.046	150	1	.02	95	<.01	<3	.28	<.01	.11	<2
L63+50N 44+50E	8	13	26	127	<.3	11	5	1158	3.46	7	<8	<2	8	13	.4	<3	3	5	.31	.069	66	4	.08	199	<.01	<3	.46	<.01	.07	<2
L63+50N 45+00E	10	10	20	72	<.3	3	6	990	3.52	6	<8	<2	6	20	.2	<3	4	4	.51	.094	65	2	.11	74	<.01	<3	.43	.01	.09	<2
L63+50N 45+50E	8	15	25	70	<.3	4	14	1768	5.28	11	<8	<2	5	45	.2	<3	<3	3	.76	.166	93	2	.13	87	<.01	<3	.35	.01	.12	<2
L63+50N 46+00E	13	18	34	121	<.3	4	4	2266	4.61	11	<8	<2	13	17	.3	5	<3	2	.28	.043	197	3	.06	84	<.01	<3	.29	<.01	.09	<2
L63+50N 46+50E	40	25	47	186	<.3	3	6	1962	4.73	14	<8	<2	12	38	.5	<3	<3	4	.42	.057	148	3	.09	113	<.01	<3	.38	.01	.13	<2
L63+50N 47+00E	8	19	25	101	<.3	5	5	1335	3.99	10	<8	<2	13	21	<.2	<3	3	8	.27	.071	152	5	.11	107	<.01	<3	.42	.01	.11	<2
L63+50N 47+50E	7	32	43	49	<.3	18	18	650	7.72	10	<8	<2	6	148	<.2	<3	3	16	.34	.226	18	8	.14	167	<.01	<3	.78	.02	.22	<2
L63+50N 48+00E	12	35	36	89	<.3	21	15	1310	5.42	12	<8	<2	7	27	.2	<3	<3	16	.45	.088	64	17	.18	150	<.01	<3	.95	.01	.11	<2
L63+50N 48+50E	5	92	32	323	<.3	53	37	3264	8.71	6	<8	<2	8	26	2.5	<3	4	44	.59	.119	136	21	.32	205	<.01	<3	1.28	.01	.06	<2
STANDARD C3	25	65	35	161	5.6	37	12	787	3.34	59	17	2	21	29	24.4	16	24	81	.56	.093	17	175	.62	153	.09	18	1.96	.04	.16	15
STANDARD G-2	2	3	3	41	<.3	8	4	546	2.04	2	<8	<2	5	75	<.2	<3	<3	43	.64	.100	6	79	.61	234	.13	<3	1.02	.08	.49	3

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: SOIL Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 27 1998 DATE REPORT MAILED: SIGNED BY. D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L63+50N 49+00E	8	39	45	211	<.3	19	16	993	5.46	15	<8	<2	7	46	.5	3	<3	22	.45	.124	78	10	.17	113	<.01	<3	.68	.01	.15	<2
L63+50N 49+50E	6	42	49	409	.8	33	22	1165	6.24	16	<8	<2	12	58	4.4	3	3	30	.42	.125	62	18	.18	105	<.01	<3	.88	.01	.20	<2
L63+50N 50+00E	5	47	23	505	.4	41	24	1399	6.26	9	<8	<2	6	33	3.4	<3	<3	38	.85	.151	50	22	.27	89	<.01	<3	1.07	.01	.07	<2
L63+50N 50+50E	4	44	19	275	.5	39	20	1024	4.65	9	<8	<2	6	20	3.1	<3	<3	29	.48	.127	54	19	.19	121	<.01	<3	.95	<.01	.05	<2
L63+50N 51+00E	8	30	36	112	<.3	18	11	539	3.85	8	<8	<2	6	34	.4	<3	4	27	.63	.114	42	13	.26	151	<.01	<3	.85	.01	.09	<2
L63+50N 51+50E	7	31	35	76	<.3	18	10	652	3.48	5	<8	<2	6	30	.3	<3	<3	18	.42	.107	61	12	.20	149	<.01	<3	.80	.01	.08	<2
L63+50N 52+00E	4	17	26	68	<.3	11	10	814	3.88	4	<8	<2	5	35	.2	<3	<3	14	.41	.152	56	7	.11	199	<.01	<3	.68	.01	.13	<2
L63+50N 52+50E	4	30	30	61	<.3	21	25	1604	6.55	4	<8	<2	5	26	<.2	<3	<3	26	.39	.187	60	6	.10	169	<.01	<3	.56	.01	.14	<2
L63+50N 53+00E	3	20	36	46	.3	22	43	1173	6.79	4	<8	<2	6	22	<.2	<3	<3	34	.55	.229	57	3	.24	110	.02	3	.92	.01	.39	<2
L63+50N 53+50E	7	25	43	38	<.3	18	23	550	5.34	11	<8	<2	3	39	<.2	<3	<3	19	.41	.196	52	3	.08	188	<.01	<3	.63	.01	.18	<2
L63+50N 54+00E	3	17	22	252	.3	12	19	537	4.87	4	<8	<2	2	30	.5	<3	<3	32	1.29	.183	34	5	.28	170	.01	5	.85	.01	.23	<2
L63+50N 54+50E	3	18	17	310	.3	9	19	1147	5.98	2	<8	<2	3	26	.4	<3	<3	32	.84	.143	26	5	.17	132	<.01	<3	.62	.01	.15	<2
L63+50N 55+00E	3	14	20	733	<.3	12	39	1258	6.00	4	<8	<2	3	35	1.3	<3	<3	30	1.47	.163	33	4	.29	328	<.01	4	.67	<.01	.21	<2
L63+50N 55+50E	2	10	19	278	<.3	7	22	2270	8.19	5	<8	<2	3	17	<.2	<3	<3	30	.61	.175	34	3	.17	152	.01	<3	.70	.01	.13	<2
L63+50N 56+00E	9	22	64	145	.9	20	18	987	6.16	14	<8	<2	4	51	.4	<3	<3	24	.71	.110	36	4	.14	258	<.01	<3	.68	.04	.21	<2
L63+50N 56+50E	12	19	66	200	1.0	23	10	653	4.62	23	<8	<2	4	51	.9	<3	3	12	.27	.089	59	3	.06	227	<.01	<3	.46	.04	.19	<2
L63+50N 57+00E	4	25	32	121	.6	11	9	2421	6.22	10	<8	<2	5	21	.6	<3	<3	11	.37	.096	65	3	.13	158	<.01	<3	.57	.02	.16	<2
L63+50N 57+50E	6	18	30	241	.9	21	7	661	3.88	15	<8	<2	5	34	.8	<3	<3	20	.71	.082	40	5	.11	213	<.01	<3	.69	.01	.15	<2
L63+50N 58+00E	8	24	50	99	.4	15	13	677	4.50	14	<8	<2	11	74	.5	<3	<3	14	.31	.107	54	5	.08	306	<.01	<3	.51	.01	.25	<2
L63+50N 58+50E	53	31	98	78	.6	15	11	611	6.58	20	<8	<2	24	122	<.2	<3	<3	4	.07	.075	64	2	.03	164	<.01	<3	.31	.03	.53	<2
L63+50N 59+00E	12	37	82	89	.7	22	19	1024	6.53	19	<8	<2	19	39	<.2	3	<3	5	.08	.093	31	2	.03	265	<.01	<3	.25	.01	.25	<2
L63+50N 59+50E	13	39	68	99	.6	25	17	923	5.62	15	8	<2	17	26	.2	<3	<3	9	.19	.098	60	4	.05	248	.01	<3	.46	.01	.16	<2
L63+50N 60+00E	8	26	232	146	.8	22	17	1220	6.66	15	<8	<2	4	53	2.9	<3	<3	15	.25	.153	60	5	.05	304	.01	<3	.56	.02	.32	<2
L62+00N 50+00E	11	31	52	118	.3	12	10	827	5.23	12	<8	<2	7	34	<.2	<3	<3	15	.34	.103	78	5	.10	141	<.01	<3	.71	.01	.10	<2
RE L62+00N 50+00E	11	31	54	119	.3	12	10	831	5.24	14	<8	<2	6	35	.2	<3	<3	15	.34	.103	80	5	.10	143	<.01	<3	.71	.01	.11	<2
L62+00N 50+50E	8	31	53	250	.5	25	14	863	5.07	13	<8	<2	8	42	1.7	<3	<3	21	.35	.115	75	8	.11	95	<.01	<3	.71	.01	.10	<2
L62+00N 51+00E	4	23	20	130	.3	21	12	808	3.58	8	<8	<2	8	19	1.0	<3	<3	21	.35	.103	72	13	.18	147	.01	<3	.84	.01	.10	<2
L62+00N 51+50E	4	34	24	215	.4	31	19	1767	4.11	7	<8	<2	7	28	2.8	<3	<3	27	.47	.156	62	15	.18	150	<.01	<3	.87	.01	.11	<2
L62+00N 52+00E	6	22	25	97	<.3	19	15	856	4.11	6	<8	<2	5	31	.4	<3	<3	26	.56	.154	57	14	.22	143	.01	<3	.78	<.01	.11	<2
L62+00N 52+50E	5	18	28	52	<.3	12	10	629	3.92	5	<8	<2	4	36	.2	<3	<3	17	.49	.132	56	10	.14	221	<.01	<3	.91	.01	.10	<2
L62+00N 53+00E	4	14	29	55	<.3	11	12	833	3.68	7	<8	<2	4	28	.2	<3	<3	15	.37	.146	55	6	.09	213	<.01	<3	.74	<.01	.14	<2
L62+00N 54+00E	2	12	17	36	<.3	6	6	550	3.05	5	<8	<2	3	15	<.2	<3	<3	14	.33	.093	29	3	.11	138	.01	<3	.98	.03	.15	<2
L62+00N 54+50E	4	14	22	120	<.3	7	10	380	3.41	5	<8	<2	2	31	<.2	<3	<3	30	.30	.118	35	4	.10	161	.01	<3	.67	.02	.16	<2
L62+00N 55+00E	3	12	18	133	<.3	6	11	535	3.01	6	<8	<2	<2	19	.3	<3	<3	26	.18	.138	35	4	.14	200	.01	3	1.06	.02	.15	<2
L62+00N 55+50E	2	7	7	29	<.3	3	2	108	.84	6	<8	<2	<2	14	<.2	<3	<3	7	.15	.083	17	1	.04	188	<.01	<3	.71	.04	.07	<2
STANDARD C3	26	64	36	163	5.5	38	12	774	3.36	55	18	<2	23	29	24.8	16	23	81	.55	.091	17	174	.62	150	.09	18	1.95	.04	.15	15
STANDARD G-2	1	3	<3	41	<.3	8	4	530	2.01	<2	<8	<2	5	74	<.2	<3	<3	41	.63	.100	7	80	.60	232	.16	<3	1.01	.08	.47	2

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L62+00N 56+00N	1	22	9	34	<.3	7	9	717	3.31	8	<8	<2	<2	24	.3	<3	3	10	.56	.231	24	3	.10	241	<.01	<3	1.07	.03	.08	<2
L62+00N 56+50N	4	18	17	115	<.3	13	9	548	3.32	12	<8	<2	<2	22	.2	<3	<3	20	.52	.139	34	4	.08	294	<.01	<3	.76	.01	.10	<2
L62+00N 57+00N	2	22	13	98	.7	11	8	763	3.13	7	<8	<2	<2	37	.7	<3	<3	16	.74	.125	34	4	.16	261	<.01	<3	.89	.03	.17	<2
L62+00N 57+50N	10	28	47	52	.3	21	11	730	4.71	14	<8	<2	39	89	.2	<3	<3	4	.14	.052	66	3	.04	172	<.01	<3	.21	.03	.24	<2
L62+00N 58+00N	9	26	37	91	.4	15	11	881	4.88	14	<8	<2	8	37	.5	<3	<3	11	.18	.104	75	5	.08	153	<.01	<3	.48	.01	.14	<2
L62+00N 58+50N	10	40	85	112	.5	25	22	999	5.99	27	<8	<2	36	82	.6	<3	4	29	.22	.102	78	6	.07	231	<.01	<3	.37	.01	.29	<2
L62+00N 59+00N	19	30	52	92	<.3	18	11	880	5.53	17	<8	<2	18	43	.3	<3	<3	4	.08	.066	60	3	.03	197	<.01	<3	.26	.01	.23	<2
L62+00N 59+50N	11	34	51	94	.3	21	17	742	5.40	14	8	<2	19	28	.6	<3	4	10	.21	.096	80	4	.06	244	<.01	<3	.43	.01	.12	<2
L62+00N 60+00N	9	28	281	94	.3	17	12	807	5.21	14	<8	<2	2	28	.8	<3	<3	15	.21	.116	47	7	.09	324	.01	<3	.73	.02	.18	<2
L60+50N 50+50E	3	34	19	51	<.3	21	18	1014	3.79	9	<8	<2	<2	36	.4	<3	<3	14	1.75	.168	32	8	.21	182	<.01	<3	.51	.01	.11	<2
L60+50N 51+00E	3	31	24	39	<.3	20	20	1082	3.68	7	<8	<2	3	22	.2	<3	<3	18	.76	.161	40	11	.13	176	<.01	<3	.67	.01	.14	<2
RE L60+50N 51+00E	3	33	24	41	<.3	22	21	1128	3.76	9	<8	<2	3	23	.3	<3	<3	18	.77	.165	43	12	.14	180	.01	<3	.69	<.01	.15	<2
L60+50N 51+50E	10	24	37	75	<.3	12	7	478	4.36	14	<8	<2	6	27	<.2	<3	<3	12	.14	.082	69	4	.06	232	<.01	<3	.49	.01	.10	<2
L60+50N 52+00E	5	22	24	147	<.3	20	12	635	3.72	7	<8	<2	7	22	1.0	<3	<3	20	.31	.118	84	12	.15	112	<.01	<3	.73	<.01	.07	<2
L60+50N 52+50E	4	26	17	185	.3	20	12	984	3.68	8	<8	<2	3	33	1.1	<3	<3	21	.71	.167	44	12	.16	184	.01	<3	.85	.01	.10	<2
L60+50N 53+00E	4	20	20	116	<.3	18	11	635	3.57	3	<8	<2	3	39	.4	<3	<3	21	.74	.143	33	11	.17	165	<.01	<3	.78	<.01	.11	<2
L60+50N 53+50E	4	18	20	67	<.3	15	9	553	3.24	7	<8	<2	<2	34	.2	<3	<3	18	.55	.125	39	8	.16	147	.01	<3	.75	.01	.13	<2
L60+50N 54+00E	5	17	31	89	<.3	16	10	544	4.28	13	<8	<2	2	31	.4	<3	<3	16	.29	.166	49	8	.12	160	.01	<3	.72	.01	.15	<2
L60+50N 54+50E	5	15	28	73	<.3	11	9	562	4.15	8	<8	<2	3	26	.4	<3	<3	15	.29	.154	63	8	.09	264	<.01	<3	.91	.01	.10	<2
L60+50N 55+00E	2	13	15	99	<.3	7	9	830	2.61	6	<8	<2	<2	25	.4	<3	<3	16	.83	.127	25	3	.13	157	<.01	3	.70	.02	.11	<2
L60+50N 55+50E	5	22	28	295	<.3	16	27	1222	5.20	8	<8	<2	5	32	.7	<3	<3	28	.48	.193	56	6	.27	209	.01	<3	.82	.01	.28	<2
L60+50N 56+00E	4	52	25	85	<.3	45	30	1294	5.13	11	<8	<2	3	17	<.2	<3	<3	14	.48	.151	47	8	.09	297	<.01	<3	.59	.01	.11	<2
L60+50N 56+50E	5	36	27	85	<.3	35	19	956	4.81	11	<8	<2	2	9	.2	<3	3	9	.23	.163	49	7	.06	381	<.01	<3	.77	.01	.11	<2
L60+50N 57+00E	2	34	14	68	<.3	18	14	1145	3.93	3	<8	<2	2	28	.2	<3	<3	9	1.55	.121	30	6	.12	693	<.01	<3	.65	.01	.13	<2
L60+50N 57+50E	4	44	24	87	<.3	33	19	930	4.84	6	<8	<2	7	15	.4	<3	<3	12	.48	.127	69	11	.15	599	<.01	<3	.83	.01	.17	<2
L60+50N 58+00E	5	26	27	196	<.3	34	19	1207	3.87	10	<8	<2	6	13	.6	<3	<3	13	.24	.124	61	11	.15	260	<.01	<3	.80	.01	.16	<2
L60+50N 58+50E	5	27	52	221	<.3	26	19	1550	3.67	12	<8	<2	2	13	1.5	<3	<3	9	.21	.189	54	11	.08	224	.01	<3	.72	.01	.18	<2
L60+50N 59+00E	3	20	33	121	<.3	16	11	1109	3.94	6	<8	<2	3	8	.5	<3	<3	12	.13	.137	63	10	.07	320	<.01	<3	1.12	.01	.12	<2
L60+50N 59+50E	7	27	41	156	.3	23	15	928	4.55	13	<8	<2	8	33	.5	<3	<3	16	.38	.097	54	9	.12	324	<.01	<3	.68	.01	.16	<2
L60+50N 60+00E	4	22	27	93	<.3	18	15	1259	3.83	6	<8	<2	<2	20	.2	<3	<3	18	.41	.177	48	15	.14	411	<.01	<3	.84	.01	.17	<2
L57+50N 40+00E	9	20	38	309	.4	10	5	821	3.87	11	<8	<2	5	20	2.2	<3	<3	9	.42	.089	49	5	.09	179	<.01	<3	.54	.01	.07	<2
L57+50N 40+50E	8	19	36	155	<.3	13	7	788	4.06	8	<8	<2	7	12	.8	<3	<3	10	.26	.089	69	6	.11	319	<.01	<3	.68	<.01	.08	<2
L57+50N 41+00E	9	32	48	172	.3	23	12	1116	5.26	13	<8	<2	7	12	.5	4	<3	9	.23	.104	85	7	.12	349	<.01	<3	.59	<.01	.09	<2
L57+50N 41+50E	9	14	31	135	<.3	9	6	589	4.27	10	<8	<2	5	5	.2	<3	<3	9	.06	.081	54	6	.07	284	<.01	<3	.71	<.01	.06	<2
L57+50N 42+00E	7	25	35	118	<.3	16	10	922	4.58	11	<8	<2	4	10	.2	3	3	17	.09	.099	73	12	.16	640	.01	<3	1.11	.01	.09	<2
STANDARD C3	26	67	38	168	5.7	39	12	796	3.48	57	11	2	22	30	24.5	12	24	85	.57	.093	17	181	.64	154	.09	16	2.00	.04	.17	15
STANDARD G-2	1	3	<3	45	<.3	8	4	549	2.17	<2	<8	<2	4	75	<.2	<3	<3	44	.65	.102	8	83	.63	239	.13	<3	1.04	.08	.49	2

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

Data FA

ACME ANALYTICAL

Atna Resources Ltd. PROJECT FIRE/TREE FILE # 9803087

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L57+50N 42+50E	5	16	28	107	<.3	10	6	535	3.15	7	<8	<2	<2	13	<.2	<3	<3	16	.26	.099	47	9	.15	613	<.01	<3	.78	.01	.09	<2
L57+50N 43+00E	6	18	37	108	<.3	14	9	845	3.99	9	<8	<2	3	14	.2	<3	<3	18	.24	.091	59	12	.15	722	<.01	<3	.93	.01	.09	<2
L57+50N 43+50E	7	21	34	111	<.3	12	7	863	3.88	7	<8	<2	<2	16	.2	<3	<3	16	.26	.165	47	8	.10	742	<.01	<3	.79	.01	.08	<2
L57+50N 44+00E	5	15	27	81	<.3	9	4	485	2.88	6	<8	<2	<2	12	<.2	<3	<3	14	.21	.123	56	7	.09	762	<.01	<3	.81	.01	.07	<2
L57+50N 44+50E	11	19	57	342	<.3	42	6	694	4.26	11	<8	<2	6	20	.7	<3	<3	8	.34	.079	71	6	.14	199	<.01	<3	.62	.01	.11	<2
L57+50N 45+00E	6	38	48	100	.4	16	12	1086	4.84	13	<8	<2	7	14	.2	3	<3	13	.25	.093	75	8	.10	374	.01	<3	.70	.01	.12	<2
L57+50N 45+50E	6	43	53	104	.4	17	14	1085	5.01	12	<8	<2	6	21	.3	<3	<3	14	.41	.114	66	9	.11	494	<.01	<3	.73	.01	.12	<2
L57+50N 46+00E	6	44	59	107	.6	17	12	831	5.13	13	<8	<2	8	18	<.2	<3	<3	14	.30	.114	79	9	.11	562	<.01	<3	.72	.01	.11	<2
L57+50N 46+50E	7	44	55	83	<.3	22	21	2102	5.40	12	<8	<2	10	18	.2	<3	<3	11	.22	.108	92	7	.12	329	<.01	<3	.43	.01	.12	<2
L57+50N 47+00E	8	39	41	179	<.3	16	19	1100	5.78	9	<8	<2	3	27	<.2	<3	<3	16	.68	.123	49	7	.15	262	<.01	<3	.87	.01	.12	<2
L57+50N 47+50E	15	21	34	203	<.3	6	5	1451	4.13	8	<8	<2	7	6	1.0	<3	<3	4	.06	.087	122	4	.07	83	<.01	<3	.73	.01	.04	<2
L57+50N 48+00E	4	40	21	88	<.3	24	16	1426	3.96	5	<8	<2	8	17	.2	<3	<3	29	.37	.090	54	27	.72	173	.04	<3	1.12	.01	.11	<2
L57+50N 48+50E	4	54	24	84	<.3	25	17	1330	4.63	7	<8	<2	6	21	.2	<3	<3	36	.45	.080	46	39	.86	261	.05	<3	1.46	.01	.13	<2
L57+50N 49+00E	8	51	14	121	<.3	27	21	2167	5.06	3	<8	<2	3	21	<.2	<3	<3	20	.58	.085	37	27	.53	125	<.01	<3	1.34	.01	.09	<2
L57+50N 49+50E	2	49	14	139	<.3	37	26	4894	6.16	2	<8	<2	3	28	.3	<3	<3	42	.65	.111	52	58	.84	245	<.01	<3	2.36	.01	.08	<2
L57+50N 50+00E	2	50	11	103	<.3	41	32	2343	6.18	4	<8	<2	3	14	.2	7	<3	44	.28	.066	37	63	1.13	173	<.01	<3	2.49	.01	.07	<2
L57+50N 50+50E	3	51	25	109	<.3	30	25	2462	5.36	4	<8	<2	4	23	.4	<3	<3	35	.41	.126	48	41	.66	223	.01	<3	1.81	.01	.11	<2
L57+50N 51+50E	4	64	17	41	<.3	31	43	2199	4.44	11	<8	<2	4	10	<.2	<3	<3	23	.33	.122	35	21	.38	220	.01	<3	1.02	.01	.21	<2
L57+50N 52+50E	6	52	23	75	<.3	29	26	1561	4.60	10	9	<2	9	16	.2	<3	<3	23	.31	.095	58	24	.47	176	.01	<3	1.05	.01	.14	<2
L57+50N 53+00E	5	46	18	61	<.3	28	26	1315	3.93	9	<8	<2	8	13	.2	<3	<3	18	.29	.105	53	20	.38	146	.01	<3	.87	.01	.14	<2
RE L57+50N 53+00E	5	47	18	59	<.3	27	25	1265	3.79	8	<8	<2	8	13	.2	<3	<3	18	.28	.102	50	19	.36	142	.01	<3	.85	.01	.15	<2
L57+50N 53+50E	9	51	38	126	.4	43	27	1819	5.34	20	<8	<2	14	13	.6	3	<3	14	.22	.089	63	9	.17	231	.01	<3	.56	.01	.11	<2
L57+50N 54+00E	9	22	58	157	.6	23	10	1012	5.03	16	<8	<2	8	17	.5	4	<3	4	.16	.070	55	5	.09	196	<.01	<3	.50	.02	.14	<2
L57+50N 54+50E	8	27	46	148	.5	18	12	850	4.53	11	<8	<2	7	19	.7	3	3	14	.30	.106	65	8	.13	233	<.01	<3	.69	.01	.10	<2
L57+50N 55+00E	12	23	169	75	.7	7	4	551	8.85	25	8	<2	3	11	<.2	<3	<3	20	.10	.123	36	8	.06	742	.01	<3	.90	.01	.11	<2
L57+50N 55+50E	4	18	40	121	<.3	12	14	763	3.92	7	<8	<2	4	26	.4	<3	<3	14	.49	.151	53	5	.13	390	<.01	<3	.70	.01	.15	<2
L57+50N 56+00E	3	17	32	61	<.3	11	11	1612	3.35	8	<8	<2	<2	12	.2	<3	<3	31	.10	.067	36	12	.15	797	.01	<3	1.15	.01	.07	<2
L57+50N 56+50E	6	54	137	94	.8	17	23	2701	10.08	16	<8	<2	5	13	<.2	3	<3	19	.14	.145	43	10	.09	1390	.01	<3	1.10	.01	.17	<2
L57+50N 57+00E	4	22	41	88	.3	18	10	686	3.71	9	<8	<2	6	12	.4	<3	<3	22	.20	.069	51	16	.25	816	.01	<3	.93	.01	.08	<2
L57+50N 57+50E	8	18	33	90	.3	9	7	678	3.47	9	<8	<2	<2	5	.4	<3	<3	17	.03	.088	34	9	.08	299	<.01	<3	.79	.01	.07	<2
L57+50N 58+00E	5	20	83	62	.6	6	5	328	4.86	9	9	<2	2	10	<.2	<3	3	18	.02	.109	34	7	.04	568	<.01	<3	.94	.01	.14	<2
L57+50N 58+50E	7	30	98	104	.5	16	7	354	5.79	20	8	<2	5	16	.4	<3	<3	21	.09	.052	35	15	.19	758	.01	<3	.93	.01	.14	<2
L57+50N 59+00E	3	22	26	108	<.3	17	10	561	3.57	8	<8	<2	7	9	.2	<3	<3	24	.16	.043	50	17	.30	533	.01	<3	1.43	.01	.09	<2
L57+50N 59+50E	9	15	90	182	.9	7	3	120	4.59	14	8	<2	2	12	.7	<3	3	14	.26	.106	42	8	.10	490	<.01	<3	1.02	.01	.06	<2
L57+50N 60+00E	3	19	35	47	<.3	20	13	431	5.26	10	10	<2	3	23	<.2	<3	<3	11	.52	.117	33	7	.09	1222	<.01	<3	.96	.01	.11	<2
STANDARD C3	25	64	37	161	5.5	38	11	793	3.36	59	17	<2	21	28	24.3	17	22	80	.55	.092	19	174	.62	149	.09	17	1.93	.04	.17	14
STANDARD G-2	1	4	3	39	<.3	8	4	521	1.96	<2	<8	<2	5	70	<.2	<3	<3	39	.60	.095	6	74	.58	225	.12	<3	.97	.07	.46	2

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L56+00N 40+00E	5	15	21	89	<.3	8	6	556	3.25	8	<8	<2	2	14	.4	<3	<3	23	.21	.108	39	8	.12	398	<.01	<3	.95	.01	.08	<2
L56+00N 40+50E	8	15	29	164	<.3	10	6	881	3.71	9	<8	<2	6	13	.9	<3	<3	8	.39	.107	34	4	.09	170	<.01	<3	.48	.01	.08	<2
L56+00N 41+00E	7	35	40	128	<.3	28	17	1400	5.11	11	<8	<2	7	11	.5	<3	<3	12	.19	.105	73	10	.16	244	<.01	<3	.56	.01	.11	<2
L56+00N 41+50E	6	25	34	146	<.3	20	11	1354	4.23	10	<8	<2	<2	22	.9	<3	<3	12	.33	.154	54	8	.11	766	<.01	<3	.67	.01	.10	<2
L56+00N 42+00E	7	46	37	109	<.3	40	17	845	5.33	12	<8	<2	6	13	.5	3	<3	11	.43	.077	62	11	.19	324	<.01	<3	.63	.01	.11	<2
L56+00N 42+50E	9	20	44	105	.3	9	6	784	4.06	9	<8	<2	5	16	.3	<3	<3	10	.16	.070	86	5	.08	488	<.01	<3	.44	.01	.10	<2
L56+00N 43+00E	8	28	369	105	1.4	14	19	1043	4.54	23	<8	<2	2	60	.6	4	<3	10	.82	.292	28	4	.04	202	<.01	<3	.56	.02	.45	<2
L56+00N 43+50E	8	54	276	92	1.2	32	25	728	5.00	33	<8	<2	5	42	.5	7	<3	8	.20	.155	39	3	.02	202	<.01	<3	.75	.02	.46	<2
L56+00N 44+00E	10	39	219	60	1.4	25	23	750	4.43	24	<8	<2	5	40	.3	5	3	8	.25	.157	56	3	.02	152	<.01	<3	.68	.01	.44	<2
L56+00N 44+50E	11	24	105	90	.5	6	8	824	5.14	18	<8	<2	14	35	.3	<3	<3	7	.06	.179	57	3	.04	306	<.01	<3	.26	.01	.23	<2
L56+00N 45+00E	6	46	46	93	<.3	28	18	1228	3.95	15	<8	<2	5	22	.6	<3	<3	8	.37	.119	65	5	.09	248	<.01	<3	.34	.01	.12	<2
L56+00N 45+50E	9	26	40	171	<.3	15	9	771	4.15	12	<8	<2	10	9	.2	3	<3	3	.16	.061	90	3	.05	179	<.01	<3	.20	<.01	.08	<2
L56+00N 46+00E	7	24	42	68	<.3	12	10	1422	3.92	15	<8	<2	9	15	.4	<3	<3	9	.21	.068	84	6	.09	274	<.01	<3	.38	.01	.11	<2
L56+00N 46+50E	4	44	36	90	<.3	21	18	1069	4.34	9	<8	<2	6	21	.4	3	<3	32	.31	.107	64	23	.54	301	.03	<3	1.04	.01	.18	<2
L56+00N 47+00E	4	47	36	90	<.3	17	15	1005	4.15	11	<8	<2	6	23	.4	3	<3	24	.34	.108	67	16	.32	268	.02	<3	.67	.01	.17	<2
L56+00N 47+50E	4	82	44	99	.3	23	20	1441	6.37	10	<8	<2	6	25	.4	<3	3	34	.44	.137	66	24	.53	264	.02	<3	1.31	.01	.22	<2
L56+00N 48+00E	3	53	20	59	<.3	17	18	1414	4.03	6	<8	<2	6	13	.2	<3	<3	26	.28	.101	53	13	.36	151	.02	<3	.81	.01	.14	<2
L56+00N 48+50E	12	20	26	89	<.3	13	6	1409	4.01	5	<8	<2	9	6	.2	<3	<3	3	.09	.046	28	3	.18	87	<.01	<3	.62	.01	.07	<2
L56+00N 49+00E	16	26	31	131	<.3	21	8	934	5.10	15	<8	<2	15	14	.8	<3	<3	5	.09	.047	21	6	.08	445	<.01	<3	.48	.05	.08	<2
L56+00N 49+50E	12	28	26	108	<.3	41	14	1221	6.28	11	<8	<2	9	12	.2	<3	<3	6	.15	.071	24	16	.10	567	<.01	<3	.57	.03	.07	<2
RE L56+00N 49+50E	12	27	24	106	<.3	40	14	1157	6.12	10	<8	<2	9	12	<.2	<3	<3	6	.14	.069	23	15	.10	545	<.01	<3	.55	.03	.07	<2
L56+00N 50+00E	23	20	28	62	.3	8	3	237	6.54	9	<8	<2	7	4	<.2	3	<3	1	.06	.042	21	4	.04	98	<.01	<3	.32	.01	.04	<2
L56+00N 50+50E	24	31	50	129	1.0	14	5	358	7.80	10	<8	<2	12	6	<.2	<3	<3	4	.03	.074	29	6	.06	315	<.01	<3	.47	.01	.06	<2
L56+00N 51+00E	10	39	43	180	.5	72	26	1506	5.25	21	<8	<2	9	25	.7	3	<3	6	.26	.088	50	12	.13	701	<.01	<3	.85	.02	.08	<2
L56+00N 51+50E	7	51	177	776	1.5	71	32	2143	5.81	22	<8	<2	11	25	4.4	<3	<3	6	.27	.094	48	14	.11	375	<.01	<3	.60	.04	.12	<2
L56+00N 52+00E	7	48	51	158	.4	40	20	2096	4.43	11	<8	<2	14	10	.7	<3	<3	5	.16	.062	71	7	.10	284	<.01	<3	.52	.01	.11	<2
L56+00N 52+50E	7	43	60	285	1.0	63	27	2064	5.22	18	<8	<2	10	16	1.8	<3	<3	7	.27	.097	56	15	.16	214	<.01	<3	.66	.02	.10	<2
L56+00N 53+00E	11	23	60	173	.7	31	12	1290	5.49	20	<8	<2	8	27	.7	3	<3	3	.15	.073	56	5	.10	247	<.01	<3	.51	.03	.16	<2
L56+00N 53+50E	8	24	37	94	.5	15	14	2142	5.64	15	<8	<2	7	18	.2	<3	<3	8	.23	.097	57	3	.10	316	<.01	<3	.45	.02	.17	<2
L56+00N 54+50E	7	21	20	122	.3	12	14	2449	5.78	13	<8	<2	7	14	.4	<3	<3	8	.33	.115	58	3	.13	296	<.01	<3	.41	.01	.13	<2
L56+00N 55+00E	7	22	20	139	.4	13	15	2839	6.23	14	<8	<2	6	18	.5	<3	<3	14	.39	.139	55	4	.24	337	<.01	<3	.58	.01	.15	<2
L56+00N 55+50E	4	25	18	73	.5	15	22	2896	6.30	11	<8	<2	6	26	.4	4	<3	14	.73	.215	48	4	.24	333	<.01	<3	.47	.01	.17	<2
L56+00N 56+00E	3	16	29	47	.3	13	18	1715	4.22	8	<8	<2	6	30	.3	<3	<3	10	.65	.217	36	3	.20	488	<.01	<3	.54	.01	.17	<2
L56+00N 57+00E	5	19	127	77	.5	12	11	1330	4.96	12	<8	<2	7	43	.4	<3	<3	6	.48	.154	49	2	.14	372	<.01	<3	.49	.01	.29	<2
L56+00N 58+00E	5	37	138	878	1.0	35	22	2020	7.07	15	<8	<2	6	21	8.1	<3	<3	11	.16	.118	61	6	.08	673	<.01	<3	1.08	.01	.26	<2
STANDARD C3	27	67	35	164	6.0	38	12	807	3.44	57	26	2	22	30	25.3	18	23	83	.56	.095	18	176	.62	158	.09	18	1.96	.04	.17	18
STANDARD G-2	1	4	<3	40	<.3	7	4	528	1.98	<2	<8	<2	4	73	<.2	<3	<3	41	.61	.098	8	78	.59	231	.12	<3	.98	.07	.48	3

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L56+00N 59+00E	7	56	132	398	.6	21	23	1274	9.64	15	<8	<2	8	21	1.8	<3	<3	13	.18	.210	69	5	.08	280	<.01	<3	.95	.01	.20	<2
L56+00N 59+50E	9	41	94	291	.3	23	19	2806	6.92	17	<8	<2	6	22	1.5	<3	<3	19	.23	.159	70	6	.15	473	<.01	<3	1.00	.01	.16	<2
L56+00N 60+00E	13	32	117	323	.4	20	25	2356	7.52	11	<8	<2	4	16	.7	<3	<3	18	.22	.148	44	4	.10	1215	<.01	<3	.73	.01	.08	<2
L54+50N 40+00E	14	8	26	181	<.3	3	3	1941	3.98	10	<8	<2	12	9	.7	<3	<3	<1	.10	.040	121	2	.04	209	<.01	<3	.31	.01	.06	<2
RE L54+50N 40+00E	13	8	28	169	<.3	3	3	1817	3.81	9	<8	<2	10	9	.7	<3	<3	1	.10	.038	108	2	.04	194	<.01	<3	.30	.01	.06	<2
L54+50N 40+50E	16	12	42	234	.3	5	4	1793	3.87	28	<8	<2	18	23	1.0	3	<3	2	.18	.044	148	2	.04	263	<.01	<3	.30	.01	.18	<2
L54+50N 41+00E	15	23	58	246	.4	14	9	2037	4.40	25	<8	<2	15	27	1.2	<3	<3	3	.17	.069	141	3	.04	321	<.01	<3	.34	.02	.16	<2
L54+50N 41+50E	4	31	224	59	1.4	17	21	837	4.60	16	<8	<2	2	49	.2	<3	<3	14	.22	.288	40	4	.04	322	<.01	<3	.74	.02	.35	<2
L54+50N 42+00E	5	8	215	34	1.0	3	3	172	3.70	11	<8	<2	<2	63	<.2	<3	<3	8	.03	.362	24	2	.02	371	<.01	<3	.38	.02	.41	<2
L54+50N 42+50E	10	15	561	15	2.1	4	3	215	11.76	26	<8	<2	5	145	<.2	7	<3	8	.02	.647	27	3	.02	56	<.01	3	.23	.03	1.48	<2
L54+50N 43+00E	8	19	312	10	1.7	4	8	405	7.56	23	<8	<2	2	87	<.2	<3	4	8	.03	.616	35	3	.02	77	<.01	<3	.27	.02	.87	<2
L54+50N 43+50E	12	11	859	11	3.8	4	3	188	8.75	31	<8	<2	6	141	<.2	6	<3	8	.04	.901	37	3	.03	78	.01	<3	.17	.02	.94	<2
L54+50N 44+00E	7	14	275	4	1.5	2	3	142	11.17	23	<8	<2	3	267	<.2	5	<3	9	.04	.703	42	3	.02	47	<.01	<3	.18	.05	1.42	<2
L54+50N 44+50E	6	7	1168	7	3.9	2	2	47	6.21	14	<8	<2	9	197	<.2	6	<3	7	.17	.441	42	2	.01	61	<.01	<3	.23	.02	1.06	<2
L54+50N 45+00E	4	46	123	64	.4	15	11	849	5.85	11	<8	<2	6	25	.3	<3	<3	18	.53	.150	56	10	.08	1009	<.01	<3	.61	.01	.11	<2
L54+50N 45+50E	4	47	95	94	.9	17	13	907	5.90	13	<8	<2	3	29	.3	<3	<3	19	.31	.167	53	8	.11	661	.01	<3	.68	.03	.21	<2
L54+50N 46+00E	15	21	62	28	<.3	7	6	458	4.18	21	<8	<2	14	9	<.2	<3	<3	4	.11	.056	136	3	.04	364	<.01	<3	.25	<.01	.07	<2
L54+50N 46+50E	7	58	41	64	.4	19	18	1651	5.38	17	<8	<2	11	26	.2	<3	<3	20	.57	.088	91	17	.32	219	<.01	<3	.77	.01	.21	<2
L54+50N 47+00E	3	60	38	52	<.3	17	39	2531	4.91	17	<8	<2	3	52	<.2	3	<3	33	2.06	.130	51	23	.70	229	<.01	<3	.92	.01	.23	<2
L54+50N 47+50E	3	25	23	54	<.3	13	19	2331	5.38	12	<8	<2	3	26	<.2	<3	5	33	.85	.130	56	17	.27	287	<.01	<3	.90	.01	.14	<2
L54+50N 48+00E	3	31	24	76	<.3	15	17	1986	4.51	9	<8	<2	5	22	<.2	<3	<3	25	.35	.104	52	18	.29	340	<.01	<3	1.24	.01	.17	<2
L54+50N 48+50E	3	38	20	93	<.3	26	20	1365	5.14	6	<8	<2	6	17	.4	3	<3	65	.36	.115	61	52	1.34	260	.10	<3	1.87	.01	.20	<2
L54+50N 49+00E	8	17	20	65	<.3	6	8	961	4.40	6	<8	<2	6	19	.3	<3	3	6	.45	.087	34	2	.15	125	<.01	<3	.53	.01	.17	<2
L54+50N 49+50E	11	31	25	106	.4	18	14	2453	6.00	8	<8	<2	9	21	<.2	<3	3	16	.39	.118	39	5	.46	213	.04	<3	1.14	.02	.35	<2
L54+50N 50+00E	21	33	50	108	<.3	22	9	2291	5.90	10	<8	<2	12	13	<.2	<3	<3	3	.05	.061	33	4	.18	124	<.01	<3	.80	.01	.10	<2
L53+00N 40+00E	10	10	50	115	<.3	6	6	761	3.52	12	<8	<2	3	24	<.2	<3	<3	5	.23	.134	92	2	.05	489	<.01	<3	.58	.01	.09	<2
L53+00N 40+50E	25	11	71	123	<.3	6	5	1064	4.18	11	<8	<2	11	35	.5	<3	<3	1	.10	.143	97	2	.02	292	<.01	<3	.21	.01	.16	<2
L53+00N 41+00E	17	7	35	143	<.3	2	3	1425	3.66	7	<8	<2	13	12	.3	<3	<3	<1	.10	.041	105	1	.04	169	<.01	<3	.32	.01	.06	<2
L53+00N 41+50E	15	10	44	196	.3	3	3	1831	4.71	15	<8	<2	12	22	.5	<3	<3	1	.10	.048	115	2	.04	254	<.01	<3	.42	.03	.15	<2
L53+00N 42+00E	19	11	49	286	<.3	3	3	1898	4.05	32	<8	<2	18	21	1.1	3	<3	4	.10	.048	159	2	.03	313	.01	<3	.30	.02	.13	<2
L53+00N 42+50E	6	41	282	59	1.3	21	42	989	5.24	20	<8	<2	3	62	<.2	<3	<3	9	.10	.312	84	4	.03	178	<.01	<3	.75	.02	.56	<2
L53+00N 43+00E	2	20	81	152	.3	6	10	408	2.39	6	<8	<2	<2	27	.2	<3	<3	9	.83	.201	21	5	.07	627	<.01	<3	.30	.01	.19	<2
L53+00N 43+50E	6	5	431	16	2.0	2	1	60	4.61	18	<8	<2	4	45	<.2	3	<3	7	.03	.489	28	2	.01	105	<.01	<3	.18	.02	.64	<2
L53+00N 44+00E	5	32	156	142	1.1	23	32	4281	10.77	25	<8	<2	3	74	.2	<3	<3	5	1.10	.226	35	3	.13	245	<.01	<3	.54	.02	.30	<2
L53+00N 44+50E	3	18	262	57	1.5	6	7	234	4.04	26	<8	<2	4	39	<.2	3	<3	6	.22	.099	39	3	.02	103	<.01	4	.20	.01	.55	<2
STANDARD C3	27	68	36	169	5.7	39	12	802	3.43	59	19	<2	22	31	25.4	14	23	85	.57	.095	18	180	.63	160	.09	19	2.01	.04	.17	14
STANDARD G-2	1	4	3	42	<.3	8	4	524	2.02	2	<8	<2	4	74	<.2	<3	<3	42	.62	.099	7	79	.60	231	.13	<3	.99	.08	.48	2

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

Data ___ FA ___

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L53+00N 45+00E	3	36	74	66	.5	12	12	741	4.09	12	<8	<2	<2	26	.4	<3	3	12	.80	.150	44	7	.07	871	<.01	<3	.42	.01	.17	<2
L53+00N 45+50E	3	82	77	77	.3	23	25	1805	7.46	16	<8	<2	4	20	.5	<3	<3	31	.48	.190	56	14	.12	494	.01	<3	.47	.01	.12	<2
L53+00N 46+00E	13	11	45	171	<.3	6	4	2900	3.76	15	<8	<2	16	13	1.1	4	<3	4	.13	.043	141	2	.04	148	<.01	<3	.20	.01	.06	<2
L53+00N 46+50E	2	9	13	42	.3	3	2	431	1.32	3	<8	<2	<2	10	<.2	<3	<3	9	.15	.054	25	2	.03	135	.01	<3	.45	.03	.04	<2
L53+00N 47+00E	11	19	24	91	<.3	6	6	1321	4.01	8	<8	<2	13	12	.4	<3	<3	7	.07	.048	68	2	.03	628	<.01	<3	.21	.01	.06	<2
L53+00N 47+50E	5	24	18	129	<.3	11	14	2247	6.30	7	<8	<2	3	21	.6	<3	<3	16	.45	.117	35	4	.25	173	.01	<3	.73	.01	.22	<2
L53+00N 48+00E	4	24	14	74	<.3	11	14	2249	6.63	6	<8	<2	2	25	.5	<3	<3	20	.58	.125	40	5	.26	159	.01	<3	.75	.01	.22	<2
L53+00N 48+50E	10	33	26	130	<.3	11	12	2132	6.52	6	<8	<2	7	13	.8	<3	<3	9	.22	.078	24	4	.27	185	.01	<3	.89	.01	.13	<2
L53+00N 49+00E	4	27	16	91	<.3	14	20	2409	6.15	10	<8	<2	4	24	.9	3	<3	24	.54	.189	45	6	.33	175	.03	4	.72	.01	.33	<2
L53+00N 49+50E	3	28	10	56	<.3	12	17	2589	6.84	5	<8	<2	4	21	.5	<3	<3	25	.47	.147	39	5	.40	133	.05	<3	.84	.01	.32	<2
L53+00N 50+00E	5	36	14	73	<.3	16	21	3789	9.37	9	<8	<2	6	24	.4	<3	<3	34	.69	.189	46	7	.63	196	.07	4	1.09	.01	.47	<2
L51+50N 40+00E	9	15	42	255	.3	4	5	3714	4.79	17	<8	<2	10	20	1.2	3	3	8	.24	.059	87	2	.07	214	.01	<3	.39	.02	.09	<2
L51+50N 40+50E	22	11	58	278	1.0	3	3	1569	4.81	48	<8	<2	19	29	1.2	7	<3	1	.13	.041	144	2	.03	174	<.01	<3	.35	.01	.29	<2
RE L51+50N 40+50E	22	11	57	278	1.1	2	2	1569	4.82	48	<8	<2	19	28	1.2	4	<3	1	.14	.042	144	2	.03	153	<.01	<3	.35	.01	.29	<2
L51+50N 41+00E	13	11	52	163	1.3	2	3	2267	6.09	23	<8	<2	7	28	.5	7	<3	1	.11	.066	97	2	.03	88	<.01	<3	.42	.02	.54	<2
L51+50N 41+50E	18	8	56	81	.3	1	2	577	5.48	19	<8	<2	10	31	<.2	5	<3	<1	.09	.037	39	1	.04	88	<.01	<3	.23	.01	.12	<2
L51+50N 42+00E	12	9	38	252	<.3	2	3	1498	4.78	12	<8	<2	12	22	.7	<3	4	1	.17	.049	146	2	.05	226	<.01	<3	.46	.04	.11	<2
L51+50N 42+50E	16	15	57	204	.7	3	3	1772	6.49	22	<8	<2	9	61	.7	5	4	2	.09	.058	78	2	.04	102	<.01	<3	.74	.11	.37	<2
L51+50N 43+50E	4	51	175	30	.9	17	16	434	4.75	19	<8	<2	4	91	.4	<3	3	8	.85	.289	45	3	.05	103	<.01	<3	.25	.01	.44	<2
L51+50N 44+00E	9	22	360	16	1.5	7	4	190	6.11	26	<8	<2	5	48	<.2	5	<3	7	.04	.683	28	2	.02	72	<.01	<3	.14	.01	.66	<2
L51+50N 44+50E	10	8	330	1	1.5	2	<1	49	11.76	36	<8	<2	8	115	<.2	10	4	7	.03	1.725	34	2	.01	34	.01	<3	.12	.06	1.28	<2
L51+50N 45+00E	3	302	102	72	.3	114	83	1885	7.04	45	<8	<2	3	56	.6	8	6	34	1.19	.346	30	22	.17	394	<.01	<3	.55	.01	.16	<2
L51+50N 45+50E	5	128	56	81	<.3	109	59	2027	8.81	44	<8	<2	6	26	.2	4	<3	24	.74	.131	80	14	.15	295	<.01	<3	.58	.01	.08	<2
L51+50N 46+00E	25	22	95	229	<.3	14	6	1716	4.52	18	<8	<2	10	34	.9	3	3	2	.31	.053	124	3	.04	181	<.01	<3	.29	.05	.11	<2
L51+50N 46+50E	12	12	46	136	<.3	8	5	2915	3.92	13	<8	<2	18	18	.8	4	4	2	.12	.050	152	2	.03	174	<.01	<3	.20	.02	.08	<2
L51+50N 47+00E	13	10	39	150	<.3	6	4	2472	3.65	12	<8	<2	19	13	.8	3	<3	1	.11	.045	169	2	.03	143	<.01	<3	.19	.01	.06	<2
L51+50N 47+50E	10	18	30	149	<.3	4	4	1856	4.34	10	<8	<2	16	10	.5	3	<3	2	.03	.025	57	2	.02	453	<.01	<3	.21	.01	.05	<2
L51+50N 48+00E	10	17	21	84	<.3	4	4	1132	3.89	7	<8	<2	9	13	<.2	3	3	5	.04	.031	35	2	.04	836	<.01	<3	.20	.01	.06	<2
L51+50N 48+50E	15	23	49	116	<.3	8	6	1712	3.97	13	<8	<2	13	7	.6	4	<3	11	.04	.067	101	4	.07	149	.01	<3	.43	.01	.07	<2
L51+50N 49+00E	9	18	12	61	<.3	5	4	1383	3.72	5	<8	<2	13	14	<.2	<3	3	2	.08	.029	41	1	.04	545	<.01	<3	.18	.01	.07	<2
L51+50N 49+50E	9	21	26	43	<.3	7	5	935	3.78	8	<8	<2	18	24	<.2	<3	3	2	.11	.057	108	1	.04	205	<.01	<3	.20	.03	.12	<2
L51+50N 50+00E	8	30	31	126	<.3	16	15	1284	5.58	10	<8	<2	10	25	.8	3	5	13	.44	.123	85	5	.19	311	.01	<3	.43	.01	.17	<2
STANDARD C3	26	66	37	164	5.7	38	12	776	3.40	57	23	2	21	30	25.1	15	25	83	.57	.093	19	176	.61	153	.09	17	1.94	.04	.17	14
STANDARD G-2	1	4	4	40	<.3	9	4	512	1.97	<2	9	<2	5	72	<.2	<3	<3	41	.63	.097	9	77	.59	223	.13	<3	.97	.07	.46	2

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

Data FA ____

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. File # 9803258

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: P. Holbek

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm
A 72572	1	1	20	6	.7	<1	1	17	.11	<2	<8	<2	<2	144
A 72573	1	5	4621	195	26.9	1	<1	19	.08	6	<8	<2	<2	133
A 72574	<1	1	10	2	<.3	<1	1	8	.04	<2	<8	<2	<2	119
~~A 72575~~	~~<1~~	~~<1~~	~~15~~	~~52~~	~~.6~~	~~26~~	~~18~~	~~698~~	~~28.33~~	~~9~~	~~<8~~	~~<2~~	~~<2~~	~~56~~
~~A 72576~~	~~<1~~	~~96~~	~~48~~	~~358~~	~~.8~~	~~48~~	~~43~~	~~1838~~	~~13.98~~	~~23~~	~~<8~~	~~<2~~	~~<2~~	~~94~~
A 72577	21	17	83	8	2.3	11	7	34	28.11	30	<8	<2	14	4
A 72578	2	14	127	8	.8	8	6	35	3.56	19	<8	<2	<2	4
A 72579	5	9	125	5	.8	8	4	17	1.27	12	<8	<2	<2	3
A 72580	7	16	8	83	.3	16	13	36	.71	2	<8	<2	6	43
A 72581	8	16	103	4	.9	16	7	30	4.53	16	<8	<2	9	4
~~A 72582~~	~~1~~	~~99~~	~~2743~~	~~19~~	~~.8~~	~~2~~	~~1~~	~~118~~	~~.20~~	~~3~~	~~<8~~	~~<2~~	~~<2~~	~~239~~
A 72583	2	16	231	6	<.3	11	11	139	2.98	3	<8	<2	4	49
A 72584	2	4	13	6	<.3	2	4	29	.70	2	<8	<2	5	46
A 72585	<1	5	13	2	<.3	4	3	15	.25	2	<8	<2	<2	262
A 72586	2	6	9	8	<.3	4	7	36	.55	3	<8	<2	7	45
A 72587	3	27	3	88	.5	20	20	1114	5.82	2	<8	<2	3	167
~~A 72588~~	~~3~~	~~3~~	~~3~~	~~3~~	~~<.3~~	~~2~~	~~6~~	~~32~~	~~4.20~~	~~15~~	~~<8~~	~~<2~~	~~4~~	~~5~~
~~A 72589~~	~~11~~	~~14~~	~~57~~	~~27~~	~~1.1~~	~~3~~	~~3~~	~~36~~	~~2.58~~	~~88~~	~~<8~~	~~<2~~	~~4~~	~~4~~
RE A 72589	11	15	61	28	1.1	3	3	36	2.59	87	<8	<2	3	4
STANDARD C3/AU-R	25	61	32	158	5.2	35	12	761	3.33	54	16	<2	22	28
STANDARD G-2	2	2	<3	40	<.3	8	5	547	2.19	<2	<8	<2	5	80

SAMPLE#	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 72572	<.2	<3	<3	<1	<.01	.001	4	1	<.01	2528	<.01	<3	.02	.01	.02	2	<1	485
A 72573	2.9	37	<3	1	<.01	<.001	1	<1	<.01	202	<.01	3	.01	.01	.01	<2	<1	1030
A 72574	<.2	<3	<3	<1	<.01	<.001	<1	<1	<.01	3283	<.01	<3	<.01	<.01	<.01	<2	<1	110
~~A 72575~~	~~<.2~~	~~3~~	~~<3~~	~~20~~	~~3.24~~	~~.001~~	~~1~~	~~5~~	~~3.04~~	~~3013~~	~~.01~~	~~5~~	~~.62~~	~~.01~~	~~.01~~	~~<2~~	~~2~~	~~95~~
~~A 72576~~	~~.8~~	~~8~~	~~<3~~	~~8~~	~~8.56~~	~~.003~~	~~3~~	~~4~~	~~3.83~~	~~210~~	~~<.01~~	~~<3~~	~~.28~~	~~.01~~	~~.01~~	~~<2~~	~~14~~	~~45~~
A 72577	<.2	<3	<3	<1	.04	.006	9	2	.03	9	<.01	8	.27	.01	.17	<2	<1	1125
A 72578	<.2	<3	<3	2	.06	.006	2	5	.03	37	<.01	<3	.10	<.01	.06	4	1	180
A 72579	<.2	<3	<3	1	.01	.009	6	8	.01	145	<.01	<3	.15	<.01	.11	3	<1	130
A 72580	.3	<3	<3	11	.76	.382	45	4	.04	365	.02	8	.72	.03	.52	<2	1	1020
A 72581	.2	3	<3	2	.02	.038	22	8	.01	39	<.01	6	.26	<.01	.17	2	1	225
~~A 72582~~	~~<.2~~	~~57~~	~~<3~~	~~<1~~	~~.35~~	~~.001~~	~~1~~	~~<1~~	~~.15~~	~~1677~~	~~<.01~~	~~<3~~	~~.01~~	~~<.01~~	~~<.01~~	~~<2~~	~~<1~~	~~155~~
A 72583	<.2	<3	<3	7	.92	.183	22	17	.03	172	.01	6	.44	.01	.28	<2	<1	190
A 72584	<.2	<3	<3	7	.46	.339	49	3	.03	909	.01	<3	.52	.01	.43	<2	<1	190
A 72585	<.2	<3	<3	<1	.05	.007	1	<1	<.01	1197	<.01	<3	.01	<.01	.03	<2	2	85
A 72586	<.2	<3	<3	8	.60	.381	55	6	.04	881	.01	<3	.61	.01	.41	<2	1	45
A 72587	<.2	<3	<3	58	2.55	.216	27	23	1.66	2103	.30	3	2.16	.06	1.91	<2	1	25
~~A 72588~~	~~.2~~	~~<3~~	~~<3~~	~~1~~	~~.02~~	~~.009~~	~~14~~	~~4~~	~~.02~~	~~49~~	~~<.01~~	~~<3~~	~~.22~~	~~.07~~	~~.12~~	~~2~~	~~2~~	~~10~~
~~A 72589~~	~~<.2~~	~~<3~~	~~<3~~	~~<1~~	~~.02~~	~~.004~~	~~8~~	~~12~~	~~.01~~	~~87~~	~~<.01~~	~~<3~~	~~.14~~	~~.01~~	~~.20~~	~~4~~	~~11~~	~~35~~
RE A 72589	<.2	3	<3	1	.02	.004	8	7	.01	84	<.01	<3	.14	.01	.20	3	10	35
STANDARD C3/AU-R	22.5	16	19	76	.52	.086	17	160	.57	145	.08	18	1.83	.04	.17	16	483	885
STANDARD G-2	<.2	<3	<3	39	.63	.090	8	75	.57	247	.12	<3	1.07	.12	.52	2	1	20

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMTED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM) HG ANALYSIS BY FLAMELESS AA.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 5 1998 DATE REPORT MAILED: Aug 18/98 SIGNED BY C.L........D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ___ FA ___

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT TREE/FIRE File # 9803259 Page 1
1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: P. Holbek

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L62+00N 40+00E	18	14	80	96	.8	4	2	1646	4.38	12	<8	<2	11	26	.9	<3	<3	6	.34	.050	92	2	.09	99	<.01	<3	.35	.01	.14	<2	95
L62+00N 40+50E	13	38	67	267	.8	15	9	2123	6.04	25	<8	<2	9	55	1.5	4	<3	5	1.04	.141	98	2	.14	248	<.01	<3	.47	.01	.14	<2	115
L62+00N 41+00E	4	37	17	26	.3	21	16	536	3.94	13	<8	<2	2	11	<.2	<3	<3	2	.68	.063	18	1	.08	87	<.01	<3	.23	<.01	.09	<2	30
L62+00N 41+50E	9	57	32	74	.5	28	19	854	6.82	17	<8	<2	5	12	<.2	3	<3	5	.53	.104	59	4	.09	155	<.01	<3	.44	.01	.09	<2	135
L62+00N 42+00E	7	22	34	109	<.3	15	12	1448	4.80	10	<8	<2	3	7	.3	<3	<3	13	.21	.140	82	8	.10	214	<.01	<3	.74	.01	.14	<2	125
RE L62+00N 42+00E	7	22	32	108	.4	15	12	1413	4.81	9	<8	<2	3	7	.3	<3	<3	13	.21	.137	80	8	.10	207	<.01	<3	.73	.01	.14	<2	120
L62+00N 42+50E	9	16	32	113	<.3	13	11	1772	5.24	8	<8	<2	6	6	<.2	<3	<3	11	.08	.087	57	6	.08	189	<.01	<3	.73	.01	.13	<2	95
L62+00N 43+00E	12	23	47	115	.3	12	5	882	4.72	14	<8	<2	10	11	<.2	3	<3	5	.28	.071	151	4	.06	168	<.01	<3	.52	.01	.10	<2	250
L62+00N 43+50E	13	33	65	222	.6	32	14	2017	6.09	18	<8	<2	12	11	1.5	3	<3	5	.22	.074	87	5	.08	254	<.01	<3	.42	.01	.11	<2	745
L62+00N 44+00E	12	19	54	239	.5	12	5	1087	4.52	12	<8	<2	11	15	.4	3	<3	4	.27	.073	130	4	.06	211	<.01	<3	.41	.01	.14	<2	655
L62+00N 44+50E	15	15	60	429	.3	9	5	2377	4.87	13	<8	<2	13	13	1.3	<3	<3	3	.21	.081	166	3	.05	187	<.01	<3	.48	.01	.12	<2	500
L62+00N 45+00E	19	16	56	242	.3	5	6	1800	5.18	18	<8	<2	8	18	.8	3	<3	3	.61	.057	104	1	.14	67	<.01	<3	.24	.01	.08	<2	600
L62+00N 45+50E	13	21	41	146	.3	5	10	1435	4.97	13	<8	<2	7	44	.3	3	<3	5	.98	.102	109	1	.14	92	<.01	<3	.38	.01	.15	<2	380
L62+00N 46+00E	10	32	27	95	<.3	8	16	1998	5.25	16	<8	<2	8	46	.4	<3	<3	10	1.25	.115	92	3	.21	122	<.01	<3	.46	.01	.18	<2	220
L62+00N 46+50E	24	39	38	145	.3	4	7	2922	4.60	14	<8	<2	26	22	.5	<3	<3	1	2.36	.061	243	2	.06	90	<.01	<3	.24	.01	.12	<2	690
L62+00N 47+00E	11	33	172	340	<.3	3	4	3464	6.03	15	<8	<2	19	32	1.2	<3	<3	2	.45	.079	232	2	.08	104	<.01	<3	.34	.01	.17	<2	230
L62+00N 47+50E	13	38	83	474	<.3	2	5	3328	5.29	20	<8	<2	34	28	1.6	<3	<3	1	.35	.048	226	2	.07	92	<.01	<3	.30	.01	.15	<2	1845
L62+00N 48+00E	11	28	38	93	<.3	5	8	1093	4.00	12	<8	<2	13	42	<.2	<3	<3	5	.47	.070	135	2	.06	100	<.01	<3	.39	.01	.13	<2	220
L62+00N 48+50E	8	25	40	73	<.3	10	6	517	4.00	8	<8	<2	8	39	.2	<3	<3	15	.39	.081	79	5	.13	96	<.01	<3	.77	.01	.08	<2	200
L62+00N 49+00E	10	28	45	85	<.3	10	7	762	6.14	11	<8	<2	6	10	<.2	<3	<3	9	.11	.081	60	4	.04	115	<.01	<3	.59	<.01	.08	<2	45
L62+00N 49+50E	13	30	40	97	<.3	11	8	975	4.65	12	<8	<2	12	18	<.2	<3	<3	13	.10	.085	114	4	.07	131	.01	<3	.56	.01	.13	<2	80
L62+00N 50+00E	10	26	59	108	.4	11	8	641	4.76	14	<8	<2	9	39	.2	<3	<3	16	.18	.079	55	4	.09	112	<.01	<3	.64	.01	.13	<2	270
L60+50N 40+00E	19	20	55	157	.5	7	3	906	5.41	19	<8	<2	18	8	.6	3	<3	9	.07	.025	46	2	.05	65	<.01	<3	.35	.01	.07	<2	150
L60+50N 40+50E	6	54	21	48	.3	29	23	873	6.03	14	<8	<2	5	7	<.2	<3	<3	4	.39	.079	41	3	.06	120	<.01	<3	.29	<.01	.08	<2	65
L60+50N 41+00E	27	37	341	344	.7	27	19	4767	8.77	12	<8	<2	4	49	1.2	<3	<3	6	.94	.126	59	3	.16	275	<.01	<3	.52	.01	.13	<2	95
L60+50N 41+50E	7	33	31	139	<.3	22	17	1745	5.36	11	<8	<2	9	7	.2	<3	<3	11	.18	.098	89	9	.08	250	<.01	<3	.72	.01	.11	<2	90
L60+50N 42+00E	9	20	34	125	.3	19	12	2008	4.97	9	<8	<2	8	17	.4	<3	<3	11	.35	.118	91	8	.11	289	<.01	<3	.74	.01	.16	<2	85
L60+50N 42+50E	11	23	51	203	.3	13	10	5000	6.61	9	<8	<2	9	18	.9	<3	<3	13	.35	.109	128	8	.19	310	.01	<3	1.10	.01	.22	<2	180
L60+50N 43+00E	11	16	48	141	.3	9	5	726	3.90	11	<8	<2	9	9	.5	<3	<3	3	.23	.058	93	3	.05	123	<.01	<3	.35	.01	.11	<2	225
L60+50N 43+50E	11	21	46	178	.5	15	7	1199	4.51	10	<8	<2	10	16	.9	<3	<3	5	.47	.097	108	4	.09	254	<.01	<3	.45	.01	.18	<2	245
L60+50N 44+00E	15	27	95	341	.9	7	5	1373	4.72	23	<8	<2	20	9	1.6	3	<3	2	.21	.049	132	2	.06	135	<.01	<3	.31	.01	.13	<2	530
L60+50N 44+50E	15	20	213	507	.6	4	3	1405	4.74	35	<8	<2	15	11	3.7	3	3	2	.19	.058	149	2	.05	81	<.01	<3	.31	.01	.09	<2	505
L60+50N 45+00E	13	17	48	231	.3	3	6	1639	4.52	14	<8	<2	13	17	.7	3	<3	3	.49	.094	130	1	.09	66	<.01	<3	.36	.01	.11	<2	205
L60+50N 45+50E	13	14	42	207	<.3	3	5	1751	4.23	17	<8	<2	19	19	.8	<3	3	1	.48	.078	191	1	.09	52	<.01	<3	.28	.01	.09	<2	280
L60+50N 46+00E	18	20	50	288	.3	2	5	2612	5.91	27	<8	<2	26	13	1.1	4	<3	1	.34	.016	58	1	.12	113	<.01	<3	.70	.01	.15	<2	780
STANDARD C3	27	66	38	168	5.9	38	12	806	3.46	57	26	2	23	30	25.1	17	24	84	.58	.093	18	181	.63	155	.09	18	2.02	.04	.18	15	930
STANDARD G-2	1	3	3	39	<.3	7	4	506	1.91	<2	<8	<2	4	73	<.2	<3	<3	39	.61	.092	7	74	.57	222	.12	<3	.98	.08	.46	2	15

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: SOIL HG ANALYSIS BY FLAMELESS AA. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 5 1998 DATE REPORT MAILED: Aug 12/98 SIGNED BY.............D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data FA ____

ACME ANALYTICAL

Atna Resources Ltd. PROJECT TREE/FIRE FILE # 9803259

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	HG ppb
L60+50N 46+50E	22	35	63	139	.5	9	18	2641	6.76	27	<8	<2	16	50	<.2	5	<3	4	.58	.122	112	1	.17	135	<.01	<3	.33	.01	.26	<2	440
L60+50N 47+00E	23	47	57	62	<.3	2	8	2369	6.49	14	<8	<2	16	72	<.2	<3	<3	1	.12	.071	86	1	.05	268	<.01	<3	1.76	.03	.45	<2	225
L60+50N 47+50E	11	18	60	41	.3	6	4	607	4.67	15	<8	<2	10	57	<.2	5	<3	4	.22	.060	68	2	.04	155	<.01	<3	.37	.01	.34	<2	170
L60+50N 48+00E	9	61	65	39	3.0	40	21	815	7.43	70	<8	<2	9	164	<.2	8	<3	7	.33	.093	29	5	.11	160	<.01	3	.33	.02	.67	<2	190
L60+50N 48+50E	13	65	136	212	1.2	44	58	2106	8.80	32	<8	<2	6	145	.8	5	<3	9	2.09	.193	34	3	.20	201	<.01	4	.42	.02	.39	<2	1005
L60+50N 49+00E	7	36	42	200	.5	39	55	4076	8.68	17	<8	<2	5	221	.4	<3	<3	9	3.99	.189	54	3	.24	330	<.01	<3	.74	.01	.20	<2	160
L60+50N 49+50E	5	70	36	86	.3	61	41	2041	7.35	15	<8	<2	5	27	.2	4	<3	25	.40	.169	56	11	.15	227	<.01	<3	.74	.01	.17	<2	200
L60+50N 50+00E	4	42	22	76	.3	32	29	1452	5.21	10	<8	<2	3	25	<.2	<3	3	18	.88	.159	42	9	.17	188	<.01	<3	.74	.01	.15	<2	85
L59+00N 40+00E	11	17	31	162	.4	9	5	715	4.42	12	<8	<2	10	11	.3	3	<3	11	.20	.088	63	4	.08	248	<.01	<3	.61	.01	.10	<2	200
L59+00N 40+50E	15	14	42	164	.6	6	3	654	4.17	14	<8	<2	12	6	.9	3	<3	9	.08	.034	37	2	.05	81	<.01	<3	.41	.01	.07	<2	155
L59+00N 41+00E	5	11	116	46	.8	5	4	378	4.82	9	<8	<2	4	80	<.2	4	<3	7	.08	.089	44	2	.03	155	<.01	<3	.26	.02	.39	<2	195
L59+00N 41+50E	6	33	56	109	.6	18	12	1351	5.10	16	<8	<2	7	21	<.2	4	<3	8	.31	.092	76	5	.06	500	<.01	<3	.58	.01	.13	<2	220
L59+00N 42+00E	7	23	139	129	.7	11	8	593	5.11	21	<8	<2	2	40	<.2	5	<3	11	.21	.145	43	5	.07	555	.01	<3	.61	.02	.25	<2	155
L59+00N 42+50E	7	36	55	187	.5	23	15	1117	5.63	15	<8	<2	7	13	.5	3	<3	13	.27	.098	70	9	.13	620	<.01	<3	.75	.01	.12	<2	180
L59+00N 43+00E	7	24	39	124	.3	15	8	718	4.21	11	<8	<2	7	8	<.2	<3	<3	15	.08	.078	82	10	.13	546	<.01	<3	.92	.01	.09	<2	240
L59+00N 43+50E	6	36	42	139	.6	23	13	933	4.46	11	<8	<2	6	14	.2	3	<3	23	.19	.103	72	8	.12	678	.02	<3	.72	.02	.10	<2	570
L59+00N 44+00E	13	14	57	263	.4	5	4	1120	4.17	12	<8	<2	11	8	.9	<3	<3	3	.15	.070	136	2	.05	127	<.01	<3	.33	.01	.11	<2	380
L59+00N 44+50E	11	12	38	169	<.3	3	3	463	3.61	11	<8	<2	6	10	.2	<3	<3	6	.23	.076	105	2	.04	88	<.01	<3	.47	.01	.06	<2	325
L59+00N 45+00E	13	14	64	168	.3	2	3	697	3.73	15	<8	<2	8	18	.3	4	3	1	.61	.047	60	1	.08	65	<.01	<3	.41	.01	.09	<2	510
L59+00N 45+50E	14	16	57	97	<.3	1	2	515	4.57	13	<8	<2	8	45	<.2	3	<3	2	.46	.074	74	<1	.05	157	<.01	<3	.44	.01	.22	<2	290
L59+00N 46+00E	12	36	61	69	1.3	21	15	1241	6.12	26	<8	<2	9	54	<.2	4	<3	9	.32	.082	68	5	.09	183	<.01	<3	.49	.01	.22	<2	300
L59+00N 47+00E	3	88	24	94	.4	26	41	3729	9.54	8	<8	<2	3	31	<.2	<3	<3	31	1.23	.216	44	12	.40	200	.01	7	.69	.01	.24	<2	100
L59+00N 47+50E	3	42	25	48	.4	24	26	1528	5.86	10	<8	<2	5	20	<.2	<3	<3	26	.42	.180	48	9	.21	126	.01	6	.75	.02	.29	<2	80
RE L59+00N 47+50E	3	43	25	49	.4	24	26	1513	5.76	9	<8	<2	4	20	.2	<3	<3	25	.42	.178	47	9	.20	124	.01	5	.73	.02	.28	<2	85
L59+00N 48+00E	7	48	25	82	.5	24	42	2963	8.46	8	<8	<2	4	20	.2	<3	<3	53	.63	.172	47	10	.24	270	<.01	4	.69	.01	.19	<2	110
L59+00N 48+50E	5	31	28	79	.4	19	18	2580	11.03	6	<8	<2	5	19	<.2	<3	<3	51	.43	.137	40	11	.69	224	.06	8	1.44	.02	.42	<2	65
L59+00N 49+00E	4	32	18	109	<.3	18	19	972	3.86	6	<8	<2	4	14	.4	<3	<3	18	.27	.103	28	3	.15	388	.02	4	.60	.03	.15	<2	555
L59+00N 49+50E	6	44	19	62	<.3	22	35	2082	7.34	7	<8	<2	2	35	.4	3	<3	47	1.30	.174	38	12	.87	474	.05	18	1.66	.01	.76	<2	85
L59+00N 50+00E	3	39	19	73	.4	23	39	1191	5.89	3	<8	<2	4	27	<.2	<3	<3	39	1.52	.180	44	13	.82	294	.03	11	1.57	.01	.57	<2	80
L59+00N 50+50E	4	32	16	52	<.3	16	24	1432	5.87	6	<8	<2	2	34	.3	<3	<3	35	1.86	.189	39	10	.75	244	.04	11	1.30	.01	.63	<2	70
L59+00N 51+00E	4	28	15	57	.3	15	25	1345	4.82	6	<8	<2	4	27	.4	<3	<3	29	1.10	.213	46	8	.39	206	.02	8	.92	.01	.38	<2	70
L59+00N 51+50E	3	57	27	59	.4	27	23	2574	8.94	5	<8	<2	4	16	<.2	<3	<3	51	.38	.142	43	16	.78	330	.05	14	1.67	.01	.67	<2	75
L59+00N 52+50E	5	36	26	79	.3	15	14	773	4.35	8	<8	<2	4	19	.2	<3	<3	21	.56	.129	50	9	.14	270	<.01	<3	.92	.01	.13	<2	125
L59+00N 53+00E	5	18	26	97	<.3	13	10	987	3.79	5	<8	<2	7	21	.2	<3	<3	14	.46	.118	69	7	.11	266	<.01	<3	.70	.01	.16	<2	100
STANDARD C3	26	67	37	167	5.5	39	12	807	3.48	54	22	3	22	30	24.0	17	23	84	.58	.092	19	183	.62	154	.09	17	1.99	.04	.18	15	925
STANDARD G-2	1	3	<3	39	<.3	7	4	528	2.01	<2	<8	<2	5	73	<.2	<3	<3	41	.63	.094	6	76	.59	221	.13	<3	.99	.08	.47	3	<10

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

Data ___ FA ___

ACME ANALYTICAL

Atna Resources Ltd. PROJECT TREE/FIRE FILE # 9803259

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L59+00N 53+50E	4	26	20	86	<.3	14	12	903	3.91	6	<8	<2	4	22	.6	<3	<3	13	.96	.136	49	8	.16	296	<.01	<3	.64	.01	.15	<2	65
L59+00N 54+00E	5	22	18	87	<.3	12	9	1325	4.11	6	<8	<2	7	20	.4	3	<3	9	.51	.107	67	5	.13	228	<.01	<3	.68	.01	.19	<2	85
L59+00N 54+50E	3	41	12	74	<.3	16	16	1588	5.29	8	<8	<2	3	16	.3	4	<3	11	.32	.182	50	9	.10	1381	<.01	<3	.80	.01	.11	<2	25
L59+00N 55+00E	4	16	25	69	<.3	12	10	700	3.90	9	<8	<2	5	30	.2	3	<3	15	.36	.138	59	6	.09	207	<.01	<3	.68	.01	.11	<2	35
L59+00N 55+50E	6	27	59	193	<.3	14	7	436	5.37	18	<8	<2	5	20	.2	3	<3	12	.15	.118	45	7	.07	564	<.01	<3	.63	.01	.11	<2	80
L59+00N 56+00E	7	30	116	64	.5	12	8	960	6.55	18	<8	<2	3	7	<.2	<3	<3	13	.05	.108	34	5	.04	306	.01	<3	.85	.01	.10	<2	80
L59+00N 56+50E	4	15	61	75	<.3	6	5	1267	3.78	10	<8	<2	<2	11	<.2	<3	<3	17	.10	.147	20	7	.05	313	.01	<3	.99	.02	.06	<2	75
L59+00N 57+00E	5	15	72	79	<.3	7	3	272	8.19	33	<8	<2	4	19	<.2	4	<3	14	.06	.106	42	7	.05	603	.01	<3	.78	.02	.24	<2	75
RE L59+00N 57+00E	5	15	71	76	<.3	7	3	267	8.07	33	<8	<2	4	18	<.2	3	<3	14	.04	.103	41	6	.05	573	.01	<3	.75	.02	.24	<2	80
L59+00N 57+50E	3	18	41	118	<.3	13	7	744	4.20	12	<8	<2	<2	9	.4	<3	<3	20	.10	.081	37	12	.13	385	.01	<3	1.02	.01	.07	<2	165
L59+00N 58+00E	6	20	411	200	2.5	10	6	415	6.79	17	<8	<2	2	46	.6	5	<3	10	.22	.154	38	6	.06	421	.01	<3	.68	.03	.31	<2	2310
L59+00N 58+50E	5	20	93	69	.5	10	7	301	5.04	14	<8	<2	2	31	<.2	<3	<3	20	.04	.130	40	11	.10	611	.01	<3	.99	.02	.18	<2	165
L59+00N 59+00E	4	14	40	77	<.3	7	6	509	3.20	10	<8	<2	<2	13	.2	<3	<3	22	.13	.107	32	8	.07	329	.01	<3	.84	.01	.05	<2	20
L59+00N 59+50E	4	20	34	165	<.3	23	10	447	3.55	12	<8	<2	5	19	.5	<3	<3	15	.30	.128	54	10	.12	396	<.01	<3	.89	.01	.13	<2	130
L59+00N 60+00E	8	34	116	171	.6	17	14	509	6.35	21	<8	<2	4	24	.6	6	<3	16	.39	.129	47	12	.16	628	.01	3	.82	.01	.16	<2	360
8 ICE-01	7	39	51	285	.3	64	20	648	2.53	17	<8	<2	4	31	1.6	6	<3	23	1.48	.092	22	9	.91	293	.01	<3	.68	.01	.04	<2	40
8 FIRE 02	16	107	162	429	1.2	10	5	910	5.08	29	<8	<2	15	15	2.5	8	<3	9	.18	.051	47	2	.07	102	<.01	<3	.36	.01	.09	<2	355
STANDARD C3/AU-S	25	64	33	162	5.4	38	11	776	3.35	58	19	<2	21	29	24.2	19	23	80	.55	.092	17	171	.62	153	.09	22	1.94	.04	.16	17	930
STANDARD G-2	1	3	<3	41	<.3	8	4	536	1.98	2	<8	<2	4	74	<.2	<3	<3	41	.63	.097	8	77	.60	235	.13	4	1.02	.08	.48	3	<10

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

Data FA ____

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. File # 9803361
1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
A 72590	27	26	972	32	2.6	33	7	6	9.03	25	<8	<2	5	7	<.2	5	<3	1	<.01	.002	23	3	.01	20	<.01	10	.28	.01	.21	2	2	1100
A 72591	2	15	190	26	10.7	2	3	26	23.50	134	<8	<2	3	5	<.2	19	<3	<1	.20	<.001	19	10	.01	25	<.01	<3	.18	.01	.20	3	2	1740
A 72592	12	30	95	2651	1.2	6	4	2309	5.04	12	<8	<2	4	12	19.9	4	<3	1	.14	.066	47	6	.04	530	<.01	<3	.38	.05	.27	<2	2	75
A 72593	2	5	23	24	.5	2	1	23	.42	3	8	<2	3	4	.2	<3	<3	2	<.01	.005	4	8	.01	152	<.01	9	.24	<.01	.22	2	1	45
A 72594	1	29	184	84	.5	8	6	11	6.30	5	<8	<2	2	6	.3	3	<3	<1	<.01	.001	13	1	.03	25	<.01	6	.37	.01	.43	<2	2	115
A 72595	1	5	59	15	.4	2	1	13	.34	<2	<8	<2	3	3	<.2	3	<3	1	.01	.004	6	4	<.01	143	<.01	7	.24	<.01	.27	<2	<1	25
A 72596	3	5	78	34	1.0	5	1	12	1.09	8	<8	<2	9	4	.3	5	<3	<1	<.01	.006	51	6	.01	654	<.01	5	.19	<.01	.31	<2	<1	205
A 72597	2	5	25	11	.7	2	1	9	.33	7	<8	<2	11	4	<.2	3	<3	1	<.01	.012	67	5	<.01	323	<.01	5	.20	<.01	.25	2	1	25
A 72598	2	4	20	15	.4	3	1	10	.38	6	<8	<2	14	5	<.2	<3	<3	<1	.01	.024	94	4	.01	284	<.01	4	.23	<.01	.25	<2	1	30
A 72599	1	27	7	84	<.3	20	31	1256	7.42	2	<8	<2	<2	473	<.2	<3	<3	122	5.96	.181	22	9	2.04	128	.01	<3	3.27	.03	.24	<2	2	10
A 72600	1	30	<3	96	<.3	122	39	1192	6.07	2	<8	<2	<2	160	<.2	<3	3	122	4.36	.149	18	273	3.60	316	.17	<3	3.21	.03	.08	<2	1	25
RE A 72600	1	30	<3	97	<.3	126	40	1227	6.24	4	<8	<2	<2	164	<.2	<3	3	125	4.49	.150	19	287	3.70	330	.17	<3	3.31	.04	.09	<2	1	20
A 72601	2	8	8	16	<.3	2	12	22	.57	4	<8	<2	4	97	<.2	<3	<3	23	1.49	.793	41	3	.06	475	.01	15	.78	.01	.43	<2	1	50
A 72602	3	8	61	1017	<.3	13	13	2771	3.35	15	<8	<2	2	34	2.9	3	<3	5	4.33	.015	6	5	1.61	184	<.01	4	.18	.01	.13	<2	1	140
A 72603	1	8	13	28	<.3	2	12	756	2.60	4	<8	<2	5	80	.2	<3	<3	48	3.87	.505	43	2	.97	312	.01	11	.63	.01	.53	<2	<1	90
A 72604	<1	2	7	5	<.3	<1	2	12	.04	2	<8	<2	<2	177	<.2	<3	<3	<1	.03	.003	1	1	.01	2464	<.01	<3	.01	<.01	.01	<2	<1	355
STANDARD C3/AU-R	24	64	35	173	5.5	35	12	740	3.21	57	23	3	19	27	22.8	19	24	77	.51	.084	17	159	.58	141	.08	20	1.78	.04	.16	19	461	845
STANDARD G-2	1	3	3	44	<.3	7	4	487	1.90	2	10	<2	5	67	<.2	<3	4	38	.56	.092	7	69	.56	215	.12	<3	.90	.07	.45	2	<1	<10

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM) HG ANALYSIS BY FLAMELESS AA.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 10 1998 DATE REPORT MAILED: Aug 20/98 SIGNED BY.C. Leong........D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

 Data___ FA ____

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT TREE File # 9803364 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Peter Holbek

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L63+50N 35+00E	13	129	57	61	.7	5	4	3419	13.45	18	<8	<2	7	8	.5	5	<3	2	.10	.029	61	1	.10	81	<.01	<3	.20	.01	.06	<2	100
L63+50N 35+50E	2	18	18	112	<.3	4	31	2665	9.73	8	<8	<2	3	78	.6	<3	<3	13	1.49	.416	43	2	.18	184	<.01	<3	.56	.01	.21	<2	80
L63+50N 36+00E	4	39	64	54	1.0	8	43	1837	7.63	23	<8	<2	2	216	.7	4	<3	18	3.78	.530	38	2	.31	149	<.01	<3	.50	.02	.24	<2	170
L63+50N 36+50E	5	22	39	129	<.3	6	26	2112	7.63	14	<8	<2	3	77	1.1	<3	<3	20	1.40	.336	55	3	.22	133	<.01	<3	.59	.01	.17	<2	240
L63+50N 37+00E	19	20	45	165	.4	8	8	1563	5.09	22	<8	<2	13	26	1.8	4	<3	11	.48	.133	161	2	.06	70	<.01	<3	.28	<.01	.10	<2	140
L63+50N 37+50E	17	12	42	138	<.3	5	3	3974	6.08	11	<8	<2	20	8	1.3	<3	<3	4	.16	.044	167	2	.07	108	<.01	<3	.27	<.01	.10	<2	95
L63+50N 38+00E	17	16	74	760	.3	9	8	2880	7.05	34	<8	<2	12	7	5.3	3	<3	25	.07	.047	81	5	.08	159	<.01	<3	.51	.01	.08	<2	310
L63+50N 38+50E	12	15	31	95	.5	6	3	2349	5.85	13	<8	<2	17	9	.6	<3	<3	7	.12	.039	124	2	.09	108	<.01	<3	.51	<.01	.10	<2	510
L63+50N 39+00E	22	31	259	319	.9	10	9	3392	14.61	83	<8	<2	12	49	2.1	5	<3	14	.23	.038	51	2	.12	209	<.01	<3	.48	.01	.42	<2	300
L63+50N 39+50E	32	25	49	331	<.3	20	7	3679	8.34	18	<8	<2	15	48	1.3	<3	<3	12	.45	.061	86	2	.16	170	<.01	<3	.60	.01	.13	<2	140
L62+00N 35+00E	12	27	79	80	.6	13	6	3485	8.91	30	<8	<2	8	16	.9	4	<3	16	.21	.046	52	9	.21	124	.02	<3	.55	.01	.08	<2	140
L62+00N 35+50E	13	15	59	103	.6	9	4	2744	5.87	21	<8	<2	7	17	1.0	3	<3	8	.45	.072	72	4	.11	120	<.01	<3	.45	.01	.13	<2	130
L62+00N 36+00E	10	22	43	179	.3	11	13	2343	6.25	20	<8	<2	4	33	1.2	4	<3	20	.33	.136	61	8	.26	193	.01	<3	.69	.01	.17	<2	240
L62+00N 36+50E	13	18	56	158	<.3	9	14	2461	7.01	21	<8	<2	9	35	1.1	3	<3	9	.71	.278	113	2	.10	156	<.01	<3	.40	.01	.15	<2	100
L62+00N 37+00E	7	23	45	79	.3	8	26	1375	6.81	19	<8	<2	4	71	.7	<3	<3	17	1.39	.464	59	3	.16	95	<.01	<3	.44	.01	.19	<2	135
L62+00N 37+50E	12	12	114	174	1.2	9	6	588	2.94	13	<8	<2	<2	93	1.0	9	<3	45	1.85	.153	21	3	.21	182	<.01	3	.32	.01	.12	<2	745
L62+00N 38+00E	12	12	56	198	.4	5	5	621	3.65	11	<8	<2	9	25	1.1	3	<3	8	.44	.091	95	1	.05	98	<.01	<3	.30	.01	.08	<2	200
L62+00N 38+50E	9	22	33	112	<.3	13	13	1821	5.46	11	<8	<2	7	72	1.0	3	<3	15	1.25	.190	38	3	.23	72	<.01	<3	.35	.01	.10	<2	85
L62+00N 39+00E	21	16	54	255	<.3	5	2	1904	5.47	21	<8	<2	24	8	1.8	4	<3	10	.14	.018	52	2	.06	101	<.01	<3	.38	.01	.08	<2	200
L62+00N 39+50E	21	19	65	243	.3	8	3	2041	6.99	27	<8	<2	28	7	1.4	5	<3	21	.12	.016	64	3	.06	81	<.01	<3	.36	.01	.08	<2	260
L62+00N 40+00E	15	14	47	115	<.3	3	2	916	4.11	12	<8	<2	17	19	.9	4	<3	4	.24	.037	106	1	.06	54	<.01	<3	.31	<.01	.11	<2	60
L60+50N 35+50E	19	23	105	110	1.1	10	9	3482	7.98	32	<8	<2	12	21	.8	5	<3	7	.33	.090	84	3	.15	144	<.01	<3	.38	.01	.17	<2	100
RE L60+50N 35+50E	19	23	103	108	.8	10	8	3447	7.82	30	<8	<2	11	20	.7	5	<3	6	.33	.088	82	3	.14	143	<.01	<3	.37	.01	.17	<2	90
L60+50N 36+00E	18	20	75	242	.5	12	11	2533	6.36	22	<8	<2	11	26	1.0	4	<3	18	.29	.062	70	4	.14	160	<.01	<3	.45	.01	.14	<2	310
L60+50N 36+50E	17	10	266	407	.8	6	2	977	4.45	13	<8	<2	8	17	2.2	3	<3	8	.12	.029	17	1	.04	322	<.01	<3	.44	.02	.11	<2	900
L60+50N 37+00E	19	18	124	272	.6	7	9	2464	6.23	20	<8	<2	10	28	1.3	3	<3	11	.26	.085	92	2	.10	185	<.01	<3	.40	.01	.10	<2	805
L60+50N 37+50E	18	14	90	281	.5	8	3	1293	5.21	13	<8	<2	11	13	4.0	6	<3	44	.10	.019	4	3	.13	142	<.01	<3	.50	.01	.07	<2	290
L60+50N 38+00E	15	19	92	254	.8	5	4	1036	4.17	17	<8	<2	9	17	1.8	6	<3	15	.24	.058	58	1	.06	93	<.01	<3	.27	.01	.08	<2	420
L60+50N 38+50E	9	25	46	465	<.3	18	4	814	4.12	13	<8	<2	10	7	7.9	4	<3	2	.11	.024	30	1	.13	78	<.01	<3	.98	.01	.09	<2	55
L60+50N 39+00E	18	19	49	219	<.3	7	3	1159	5.90	17	<8	<2	17	8	1.0	<3	<3	9	.15	.028	45	3	.07	69	<.01	<3	.44	.01	.09	<2	200
L60+50N 39+50E	18	18	60	145	.3	6	3	1012	5.59	18	<8	<2	16	10	.8	4	<3	8	.16	.022	48	2	.06	80	<.01	<3	.45	.01	.11	<2	240
L59+00N 35+00E	17	8	60	91	.7	3	2	349	2.74	16	<8	<2	9	18	.3	10	<3	14	.23	.044	51	2	.04	89	<.01	<3	.21	.01	.12	<2	125
L59+00N 35+50E	15	15	63	169	.6	6	4	743	4.00	18	<8	<2	9	22	.9	8	<3	17	.20	.066	46	3	.05	97	<.01	<3	.28	.01	.12	<2	170
L59+00N 36+00E	17	21	47	171	.4	9	4	1156	3.77	18	<8	<2	6	14	1.5	6	<3	25	.34	.070	43	2	.05	105	<.01	<3	.32	.01	.10	<2	130
L59+00N 36+50E	15	38	76	260	.4	12	5	1336	6.04	22	<8	<2	9	14	1.7	5	<3	34	.21	.045	62	2	.07	138	<.01	<3	.37	.01	.08	<2	295
STANDARD C3	25	66	35	171	5.6	37	12	778	3.27	57	29	3	23	28	23.4	17	21	82	.54	.089	17	171	.62	150	.09	19	1.91	.04	.18	16	905

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: SOIL HG ANALYSIS BY FLAMELESS AA. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 10 1998 **DATE REPORT MAILED:** Aug 17/98 **SIGNED BY** ....D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L59+00N 37+00E	10	51	46	163	<.3	9	3	551	3.16	16	<8	<2	3	65	1.8	6	<3	30	1.43	.102	16	2	.12	274	<.01	<3	.36	.01	.10	<2	180
L59+00N 37+50E	23	27	78	263	.8	9	3	597	4.09	30	<8	<2	8	20	1.8	7	<3	56	.07	.047	22	4	.04	135	<.01	<3	.30	.01	.12	<2	270
L59+00N 38+00E	19	15	118	258	.7	7	2	682	3.82	20	<8	<2	6	12	1.4	7	<3	56	.08	.038	26	2	.07	109	<.01	<3	.38	.01	.07	<2	510
L59+00N 38+50E	13	28	66	249	.3	5	3	736	3.90	14	<8	<2	11	9	.9	4	<3	9	.10	.036	52	1	.05	70	<.01	<3	.30	<.01	.06	<2	215
L59+00N 39+00E	14	53	55	307	.6	7	4	599	4.41	19	<8	<2	10	17	1.4	3	<3	8	.30	.054	39	2	.07	60	<.01	<3	.34	.01	.06	<2	235
L59+00N 39+50E	16	16	46	167	.4	7	3	819	4.27	11	<8	<2	14	8	.5	<3	<3	9	.10	.038	44	3	.05	112	<.01	<3	.44	.01	.08	<2	250
L59+00N 40+00E	11	18	32	162	<.3	9	5	632	4.27	11	<8	<2	10	11	.4	<3	<3	10	.20	.084	61	4	.08	246	<.01	<3	.61	<.01	.09	<2	210
L57+50N 39+50E	10	19	32	150	<.3	10	5	642	3.89	11	<8	<2	7	13	.4	<3	<3	12	.21	.078	57	6	.10	275	<.01	<3	.64	<.01	.08	<2	210
L56+00N 35+00E	17	17	54	246	.4	9	4	1110	4.50	17	<8	<2	20	32	1.5	8	<3	10	.16	.058	31	3	.04	176	<.01	<3	.43	.01	.09	<2	125
L56+00N 35+50E	5	20	58	64	<.3	10	7	538	3.91	11	<8	<2	4	46	.2	<3	<3	11	.26	.145	48	6	.10	945	<.01	<3	.66	.01	.19	<2	255
L56+00N 36+00E	6	20	74	61	<.3	9	7	275	3.52	16	<8	<2	3	35	.2	<3	<3	11	.06	.263	37	5	.06	321	<.01	<3	.67	.01	.10	<2	95
L56+00N 36+50E	7	17	82	54	<.3	10	10	468	4.95	13	<8	<2	5	74	.2	3	<3	14	.10	.365	61	9	.08	740	<.01	<3	1.02	.01	.20	<2	185
L56+00N 37+00E	5	19	40	49	<.3	8	9	624	3.43	10	<8	<2	2	36	.2	<3	<3	14	.08	.170	42	6	.09	325	<.01	<3	.75	.01	.12	<2	150
L56+00N 37+50E	1	10	13	21	<.3	3	3	80	1.49	3	<8	<2	2	13	<.2	<3	<3	39	.13	.102	12	4	.07	106	.03	<3	.58	.02	.05	<2	70
L56+00N 38+00E	12	25	53	248	.3	6	4	634	3.95	14	<8	<2	7	11	.7	5	<3	13	.14	.060	45	2	.05	90	<.01	<3	.35	.01	.05	<2	210
L56+00N 38+50E	8	29	32	125	<.3	18	14	1305	5.05	9	<8	<2	9	16	.3	<3	<3	9	.28	.148	85	5	.10	544	<.01	<3	.58	.01	.14	<2	395
L56+00N 39+00E	8	25	32	118	<.3	11	9	896	4.71	12	<8	<2	10	7	.2	<3	<3	9	.14	.078	69	5	.08	341	<.01	<3	.58	<.01	.09	<2	175
L56+00N 39+50E	8	40	45	126	<.3	25	19	1801	5.09	14	<8	<2	12	13	.5	3	<3	8	.25	.102	96	6	.12	412	.01	<3	.51	<.01	.12	<2	375
L56+00N 40+00E	5	21	23	68	<.3	13	8	534	3.36	11	<8	<2	2	14	.2	<3	<3	16	.26	.101	43	6	.10	475	<.01	<3	.62	.01	.07	<2	90
L55+50N 35+00E	16	14	197	153	1.0	4	2	355	3.14	23	<8	<2	9	40	.4	8	<3	23	.13	.063	46	3	.04	141	<.01	<3	.37	.01	.12	<2	540
L55+50N 35+50E	14	20	59	209	.5	7	6	608	4.58	18	<8	<2	12	32	.6	7	<3	18	.28	.109	44	3	.06	102	<.01	<3	.37	<.01	.12	<2	155
L55+50N 36+00E	14	12	66	141	.3	5	4	459	3.29	16	<8	<2	12	19	.3	9	<3	14	.20	.071	63	2	.04	86	<.01	<3	.26	<.01	.08	<2	135
L55+50N 36+50E	15	11	56	152	<.3	5	3	651	3.13	16	<8	<2	10	13	.6	6	<3	15	.11	.063	64	2	.03	104	<.01	<3	.27	.01	.09	<2	155
RE L55+50N 36+50E	15	11	58	159	.4	6	3	687	3.25	16	<8	<2	10	13	.8	7	<3	15	.12	.065	65	2	.03	105	<.01	<3	.27	<.01	.08	<2	135
L55+50N 37+00E	15	13	49	180	.3	6	3	596	4.07	16	<8	<2	10	16	.6	5	<3	14	.14	.079	43	2	.03	103	<.01	<3	.29	<.01	.08	<2	130
L55+50N 37+50E	21	19	79	279	.7	8	2	743	4.15	26	<8	<2	4	13	2.0	6	<3	52	.02	.074	25	3	.03	98	<.01	<3	.33	.01	.09	<2	145
L55+50N 38+00E	20	15	99	247	.4	6	2	566	4.03	21	<8	<2	6	10	.8	6	<3	55	.03	.032	28	3	.07	114	<.01	<3	.42	.01	.05	<2	515
L55+50N 38+50E	14	19	96	316	.5	6	3	983	4.03	17	<8	<2	8	13	2.5	5	<3	21	.18	.076	57	2	.06	98	<.01	<3	.32	<.01	.07	<2	205
L55+50N 39+00E	11	21	42	186	<.3	11	6	835	3.78	13	<8	<2	10	13	.9	3	<3	11	.21	.072	61	5	.09	231	<.01	<3	.59	<.01	.08	<2	290
L54+50N 35+00E	7	22	34	87	<.3	16	12	979	4.58	12	<8	<2	10	15	.3	3	<3	10	.18	.085	66	7	.12	1484	<.01	<3	.65	.01	.12	<2	155
L54+50N 35+50E	8	41	60	100	<.3	26	16	1170	5.97	16	<8	<2	9	20	.3	4	<3	8	.27	.104	75	6	.13	797	<.01	<3	.45	<.01	.13	<2	365
L54+50N 36+00E	7	32	82	80	.5	22	21	1423	5.71	14	<8	<2	4	54	.3	3	<3	13	.37	.205	54	8	.14	836	<.01	<3	.66	.01	.25	<2	225
L54+50N 36+50E	7	38	181	86	1.1	27	26	2283	6.18	21	<8	<2	5	43	.5	<3	<3	11	.47	.149	47	6	.14	900	<.01	<3	.65	.01	.27	<2	115
L54+50N 37+00E	7	20	80	69	.7	11	10	951	4.43	13	<8	<2	2	23	.3	<3	<3	9	.27	.123	41	5	.11	752	<.01	<3	.43	.01	.17	<2	90
L54+50N 37+50E	7	27	33	97	<.3	16	10	715	4.49	11	<8	<2	5	12	.2	<3	<3	13	.13	.103	61	7	.14	531	<.01	<3	.67	.01	.12	<2	145
STANDARD C3	25	65	33	168	5.7	36	12	755	3.20	57	24	4	24	28	23.4	20	24	81	.53	.089	16	169	.61	146	.09	20	1.86	.04	.17	16	925
STANDARD G-2	2	3	<3	42	<.3	8	4	509	1.90	2	<8	<2	5	72	<.2	<3	<3	40	.59	.094	7	74	.58	225	.13	3	.99	.08	.46	2	<10

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L54+50N 38+00E	9	36	70	185	<.3	20	15	993	5.77	19	<8	<2	9	13	1.5	5	<3	12	.18	.091	64	6	.12	332	<.01	<3	.47	<.01	.12	<2	190
L54+50N 38+50E	8	39	54	110	.6	21	12	953	5.71	15	<8	<2	7	17	.3	6	<3	12	.26	.085	86	7	.12	766	<.01	<3	.64	.01	.14	<2	415
L54+50N 39+00E	12	9	41	178	<.3	2	4	874	3.88	11	<8	<2	11	16	.8	4	<3	1	.10	.055	128	1	.03	221	<.01	<3	.30	.01	.08	<2	315
L54+50N 39+50E	15	15	51	172	<.3	8	5	1051	3.89	11	<8	<2	11	16	.9	3	<3	2	.10	.054	91	1	.03	149	<.01	<3	.37	.01	.08	<2	335
L53+00N 35+00E	6	17	25	95	<.3	12	8	711	3.75	10	12	<2	<2	13	.6	3	<3	12	.17	.111	49	6	.11	686	<.01	<3	.61	.01	.12	<2	95
L53+00N 35+50E	2	7	12	39	<.3	4	4	947	1.36	4	<8	<2	<2	10	.3	<3	<3	15	.10	.058	14	3	.05	299	.01	<3	.43	.03	.05	<2	55
L53+00N 36+00E	4	15	23	108	<.3	12	8	1308	4.74	8	<8	<2	5	8	.4	3	<3	7	.11	.108	70	5	.09	588	<.01	<3	.59	<.01	.11	<2	55
L53+00N 37+00E	11	15	52	170	<.3	6	6	1241	3.46	15	<8	<2	9	22	.8	3	<3	3	.18	.073	109	1	.03	319	<.01	<3	.26	.01	.12	<2	255
L53+00N 37+50E	13	15	52	227	<.3	6	7	2052	3.92	16	<8	<2	9	20	1.2	4	<3	2	.21	.067	118	2	.04	255	<.01	<3	.33	.01	.10	<2	430
L53+00N 38+00E	12	12	41	219	<.3	5	6	2096	3.57	13	<8	<2	10	15	1.1	5	<3	1	.21	.062	118	1	.04	220	<.01	<3	.25	.01	.08	<2	390
L53+00N 38+50E	4	23	62	57	.6	9	7	348	4.36	12	<8	<2	3	46	.3	4	<3	8	1.04	.154	46	3	.07	416	<.01	<3	.59	.02	.10	<2	160
L53+00N 39+00E	2	32	45	61	<.3	13	9	643	2.10	9	<8	<2	<2	27	.2	<3	<3	14	.67	.092	38	4	.05	279	.01	<3	.43	.03	.08	<2	85
L53+00N 39+50E	11	15	65	157	.8	7	8	1430	4.15	13	<8	<2	8	29	.7	3	<3	2	.31	.080	101	2	.05	253	<.01	<3	.46	.01	.17	<2	295
L51+50N 53+50E	11	27	20	78	.6	15	24	2556	6.69	14	<8	<2	5	22	.4	<3	3	20	.49	.201	47	6	.20	299	<.01	<3	.79	.01	.17	<2	40
L51+50N 54+00E	4	21	20	69	.5	10	18	2538	6.45	10	<8	<2	5	21	.3	6	<3	16	.48	.173	53	4	.16	317	<.01	<3	.67	.01	.16	<2	50
L51+50N 54+50E	3	14	18	57	<.3	5	15	2883	6.18	4	<8	<2	5	22	.2	<3	<3	13	.49	.162	62	2	.19	353	.01	<3	.70	.01	.16	<2	45
L51+50N 55+00E	4	26	12	36	.4	12	22	1762	4.46	9	<8	<2	8	25	.4	<3	<3	16	1.49	.233	46	3	.16	444	<.01	<3	.58	.01	.16	<2	55
L51+50N 55+50E	6	18	72	97	.3	14	15	1660	5.00	18	<8	<2	9	27	1.0	3	<3	6	.26	.143	75	2	.06	435	<.01	<3	.42	.01	.18	<2	110
L51+50N 56+00E	9	13	75	164	.6	10	10	1155	6.48	15	<8	<2	9	34	.8	6	<3	7	.29	.147	59	2	.09	309	<.01	<3	.46	.01	.29	<2	190
L51+50N 56+50E	8	22	60	303	<.3	31	14	1801	4.22	15	<8	<2	9	25	3.1	3	<3	4	.24	.100	79	4	.04	254	<.01	<3	.41	.01	.15	<2	190
RE L51+50N 56+50E	7	21	57	284	.3	30	13	1726	3.99	16	<8	<2	9	24	2.9	<3	<3	4	.22	.096	74	4	.03	241	<.01	<3	.39	.01	.14	<2	200
L51+50N 57+00E	8	49	543	774	2.7	18	30	1307	10.67	42	<8	<2	5	63	4.4	7	<3	28	.13	.267	30	3	.05	119	<.01	3	.66	.02	.84	<2	2995
L51+50N 57+50E	20	27	1403	243	5.9	6	6	200	15.52	103	<8	<2	4	86	<.2	14	<3	43	.01	.464	14	2	.02	89	.01	<3	.26	.02	1.53	<2	5100
L51+50N 58+00E	13	25	974	60	5.2	4	3	83	13.89	69	<8	<2	3	87	<.2	14	<3	21	.01	.430	24	2	.02	89	.01	<3	.24	.08	1.80	<2	875
L51+50N 59+00E	12	82	227	172	1.5	22	20	789	8.21	76	<8	<2	6	113	1.1	6	<3	15	.08	.250	46	3	.04	199	<.01	<3	1.53	.05	.85	<2	345
L51+50N 59+50E	5	42	76	317	.7	19	13	3505	9.31	29	<8	<2	7	72	2.4	8	<3	22	.23	.282	65	8	.21	546	.01	<3	2.78	.01	.23	<2	120
L51+50N 60+00E	8	50	200	137	1.4	13	12	808	7.88	30	<8	<2	5	60	.9	5	<3	15	.10	.209	41	5	.07	168	.01	<3	1.19	.04	.74	<2	245
L51+50N 60+50E	9	45	126	162	1.0	31	34	1961	8.53	19	<8	<2	8	39	.9	8	<3	14	.17	.147	54	6	.11	500	.01	<3	.66	.01	.31	<2	360
L51+50N 61+00E	4	34	57	172	.6	16	22	1582	4.53	9	<8	<2	3	44	.9	<3	<3	20	.68	.153	47	9	.19	324	.01	<3	.72	.01	.14	<2	120
L50+00N 56+00E	6	17	50	196	.3	28	14	975	4.97	15	<8	<2	7	26	.8	3	<3	5	.23	.156	76	6	.06	360	<.01	<3	.34	.01	.14	<2	230
L50+00N 56+50E	5	71	58	34	<.3	51	34	663	2.65	28	<8	<2	12	25	.3	<3	<3	11	.80	.153	108	9	.07	423	.01	4	.96	.01	.21	<2	60
L50+00N 57+00E	7	9	1271	33	8.1	2	1	49	4.78	27	<8	<2	4	9	.5	9	<3	7	.02	.099	28	3	.03	117	.01	<3	.17	.01	.92	<2	2650
L50+00N 57+50E ROCK	4	13	498	162	1.6	6	1	62	4.94	24	<8	<2	4	53	1.4	5	<3	6	.03	.072	31	6	.04	105	.01	<3	.32	.01	.99	<2	4265
L50+00N 58+00E	9	9	1332	47	12.7	1	<1	8	3.05	22	<8	<2	4	4	.7	17	3	2	.01	.030	16	1	.01	171	<.01	<3	.07	.01	.62	<2	57530
L50+00N 59+00E	17	7	1123	17	4.5	1	<1	5	11.47	59	<8	<2	4	44	<.2	8	<3	11	<.01	.639	17	1	.01	60	.01	<3	.10	.06	2.08	<2	865
STANDARD C3/AU-S	26	66	36	172	5.8	37	12	752	3.30	59	20	<2	22	29	24.6	18	25	81	.54	.092	18	171	.61	153	.09	19	1.96	.04	.17	17	885
STANDARD G-2	2	3	3	44	<.3	9	4	520	2.00	2	<8	<2	5	75	<.2	<3	<3	42	.61	.097	8	78	.60	230	.13	<3	1.02	.08	.47	2	<10

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

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ACME ANALYTICAL

Atna Resources Ltd. PROJECT TREE FILE # 9803364

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
L50+00N 59+50E	9	28	527	100	2.1	6	6	165	5.47	28	<8	<2	3	47	.3	<3	<3	19	.10	.214	41	6	.06	169	.01	<3	.56	.03	.77	<2	990
L50+00N 60+00E	6	22	355	95	.3	8	17	650	4.59	20	<8	<2	3	39	.3	<3	<3	17	.13	.149	33	1	.07	431	.01	<3	.66	.03	.52	<2	205
L50+00N 60+50E	6	21	279	68	<.3	8	17	789	4.43	20	<8	<2	<2	36	.2	<3	<3	20	.26	.187	41	5	.09	590	.01	<3	.78	.02	.34	<2	115
RE L50+00N 60+50E	5	21	278	66	.5	8	17	775	4.35	20	<8	<2	<2	35	.2	<3	<3	20	.25	.184	40	5	.09	567	.01	<3	.78	.02	.33	<2	90

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

Data FA

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT FIRE/TREE File # 9803516 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: P. Holbek

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L48+50N 36+25E	19	49	36	127	<.3	47	9	198	3.25	45	<8	<2	<2	48	.8	6	<3	30	.15	.093	17	10	.06	587	.01	<3	.48	.01	.07	<2	90
TREE 3 L48+50N 36+75E	11	41	44	123	.6	45	6	130	2.71	43	<8	<2	<2	29	.4	9	<3	18	.23	.101	20	4	.03	527	<.01	<3	.39	.01	.06	<2	175
TREE 3 L48+50N 37+25E	12	16	61	265	.5	13	8	1232	4.05	12	<8	<2	6	17	1.7	<3	<3	5	.23	.072	82	8	.06	1367	<.01	<3	.61	.01	.09	<2	315
TREE 3 L48+50N 37+75E	12	27	89	198	.7	22	13	1224	4.08	16	<8	<2	5	38	1.2	<3	<3	5	.26	.114	66	7	.05	773	<.01	<3	.39	.02	.17	<2	225
RE TREE 3 L48+50N 37+75E	12	26	91	195	.5	22	13	1201	4.00	16	<8	<2	4	36	1.1	<3	<3	5	.25	.111	64	5	.05	666	<.01	<3	.39	.02	.16	<2	295
TREE 3 L48+50N 38+25E	9	26	88	178	.5	19	12	810	3.70	14	<8	<2	3	47	1.0	<3	<3	3	.55	.121	50	2	.05	678	<.01	<3	.38	.02	.17	<2	225
TREE 3 L48+50N 39+25E	9	74	128	210	1.5	28	26	1908	7.87	15	<8	<2	3	32	1.0	<3	<3	5	.31	.124	47	6	.06	577	<.01	<3	.73	.02	.25	<2	285
TREE 3 L48+50N 39+75E	9	36	87	237	.9	22	14	849	5.31	17	<8	<2	4	55	1.3	<3	<3	6	.38	.112	54	7	.05	584	<.01	<3	.49	.02	.27	<2	325
TREE 3 L48+50N 40+25E	8	38	100	210	1.1	34	23	1271	5.05	21	<8	<2	7	74	1.6	<3	<3	6	.38	.142	58	4	.05	648	<.01	<3	.39	.02	.21	<2	490
TREE 3 L48+50N 40+75E	10	38	104	465	3.7	28	14	1931	7.17	34	<8	<2	5	43	2.7	3	<3	6	.45	.116	80	7	.07	660	<.01	<3	.70	.03	.30	<2	630
TREE 3 L48+50N 41+25E	23	20	128	318	3.0	7	6	2132	6.95	74	<8	<2	16	24	2.0	4	<3	4	.02	.062	137	6	.05	376	.01	<3	.56	.01	.44	<2	265
TREE 3 L48+50N 41+75E	24	12	86	237	1.7	3	4	2098	4.77	79	<8	<2	16	19	1.6	3	<3	3	.05	.042	132	4	.03	487	<.01	<3	.34	.01	.27	<2	455
TREE 3 L48+50N 42+25E	42	19	207	236	5.3	2	4	599	10.02	85	<8	<2	12	39	.4	7	<3	5	.01	.083	68	3	.04	149	.01	<3	.67	.02	.98	<2	330
TREE 3 L48+50N 42+75E	27	16	111	148	5.4	2	3	408	8.66	90	<8	<2	16	27	.3	7	<3	11	.06	.080	65	7	.04	322	.02	<3	.55	.03	.50	<2	190
TREE 3 L48+50N 43+25E	30	12	92	101	6.3	1	3	146	9.38	105	<8	<2	18	18	.2	7	<3	9	.02	.075	62	3	.03	167	.02	<3	.33	.02	.46	<2	165
TREE 3 L48+50N 43+75E	44	8	103	93	10.4	1	2	143	11.04	110	<8	<2	19	10	.2	14	<3	6	.01	.066	77	5	.02	278	.01	<3	.28	.01	.29	<2	280
TREE 3 L48+50N 44+25E	31	12	68	245	.7	2	4	2403	4.05	82	<8	<2	21	21	1.6	<3	<3	1	.15	.033	134	4	.04	345	<.01	4	.32	.01	.19	<2	550
TREE 3 L48+50N 44+75E	61	14	62	213	.3	3	5	4191	4.74	100	<8	<2	24	16	1.6	<3	<3	1	.48	.045	164	7	.07	348	.01	7	.67	.01	.29	<2	920
TREE 3 L48+50N 45+25E	13	24	85	163	.4	2	5	2711	5.16	225	<8	<2	44	34	1.2	5	5	1	2.95	.036	264	7	.07	295	<.01	6	.57	.01	.30	<2	1100
TREE 3 L48+50N 45+75E	16	15	45	377	<.3	2	4	3323	3.76	90	<8	<2	35	34	3.3	<3	3	1	3.46	.030	212	6	.08	279	<.01	<3	.37	.01	.16	<2	795
TREE 3 L48+50N 46+25E	15	18	48	155	<.3	3	6	2176	3.64	37	<8	<2	29	19	1.2	<3	3	1	2.50	.018	167	3	.08	137	<.01	4	.34	.01	.18	<2	580
TREE 3 L48+50N 46+75E	21	17	116	244	<.3	2	3	1267	5.16	72	<8	<2	22	44	1.2	<3	<3	1	.12	.023	147	4	.04	190	<.01	<3	.31	.12	.28	<2	910
TREE 3 L48+50N 47+25E	29	12	52	50	<.3	4	3	1631	3.63	16	<8	<2	15	64	.6	<3	<3	1	.16	.034	94	4	.04	255	<.01	<3	.47	.02	.30	<2	305
TREE 3 L48+50N 47+75E	4	18	57	37	.7	3	3	888	4.72	10	<8	<2	20	84	.5	<3	<3	1	.06	.086	76	4	.02	166	<.01	<3	.24	.08	.16	<2	170
TREE 3 L48+50N 48+25E	7	10	36	102	.4	2	4	6415	3.27	13	<8	<2	26	40	.8	<3	4	2	5.24	.023	181	7	.10	107	<.01	<3	.28	.01	.12	<2	130
TREE 3 L48+50N 48+75E	7	11	37	234	.4	2	3	4738	3.58	18	<8	<2	32	13	2.1	<3	4	2	.19	.024	261	7	.05	193	<.01	<3	.31	.01	.10	<2	375
TREE 3 L48+50N 49+25E	11	18	51	262	<.3	2	4	1657	5.70	14	<8	<2	31	11	.7	<3	<3	1	.04	.029	104	3	.05	104	.01	<3	.37	.01	.15	<2	910
TREE 3 L48+50N 49+75E	17	24	22	94	<.3	7	9	1369	4.41	5	<8	<2	10	15	.5	<3	<3	3	.06	.041	22	2	.04	1145	<.01	<3	.62	.01	.07	<2	390
TREE 3 L48+50N 50+25E	7	15	16	34	<.3	5	7	857	2.58	9	<8	<2	10	13	.2	<3	3	2	.18	.070	63	4	.06	127	<.01	6	.21	.01	.10	<2	45
TREE 3 L48+50N 50+75E	4	29	21	181	.3	26	27	2148	6.03	13	<8	<2	4	29	1.4	<3	<3	13	.67	.201	47	7	.12	323	<.01	5	.54	.01	.23	<2	85
TREE 3 L48+50N 51+75E	2	24	15	67	.5	9	16	2705	7.02	7	8	<2	2	25	.8	<3	3	10	.78	.163	37	4	.15	547	<.01	8	.52	.01	.24	<2	75
TREE 3 L48+50N 52+25E	5	14	17	74	.4	10	20	1953	5.60	12	<8	<2	3	35	.8	<3	<3	17	.95	.269	42	6	.18	285	.01	5	.44	.01	.13	<2	80
TREE 3 L48+50N 53+25E	7	13	38	254	.5	13	11	2523	7.59	19	<8	<2	4	12	1.9	<3	<3	10	.42	.081	50	2	.17	329	<.01	4	.51	.01	.16	<2	215
TREE 3 L48+50N 53+75E	6	21	101	462	.9	15	18	2387	7.42	15	<8	<2	<2	27	4.9	<3	<3	21	1.05	.148	33	7	.17	329	<.01	5	.42	.01	.14	<2	265
STANDARD C3	25	61	37	160	5.3	35	13	764	3.41	54	20	3	20	28	22.7	13	18	76	.51	.086	17	168	.58	146	.08	19	1.80	.04	.16	15	925
STANDARD G-2	1	1	<3	46	<.3	7	5	526	2.09	<2	<8	<2	3	78	<.2	<3	<3	37	.58	.090	6	75	.55	291	.12	<3	1.03	.12	.51	2	20

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.
- SAMPLE TYPE: SOIL HG ANALYSIS BY FLAMELESS AA. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 17 1998 DATE REPORT MAILED: Aug 21/98 SIGNED BY ....D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ___ FA ___

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L47+00N 36+25E	26	85	81	408	1.6	140	23	542	5.36	50	<8	<2	10	84	2.9	12	<3	95	.89	.197	28	8	.23	742	<.01	3	.42	.01	.11	<2	450
TREE 3 L47+00N 36+75E	15	33	64	251	.8	36	11	447	4.39	36	<8	<2	5	31	.8	4	<3	51	.33	.121	45	8	.08	744	<.01	<3	.59	.01	.06	<2	170
TREE 3 L47+00N 37+25E	15	27	116	263	1.8	16	10	1224	5.29	39	<8	<2	6	24	1.2	4	3	8	.26	.086	92	3	.06	1462	<.01	<3	.63	.01	.12	<2	490
TREE 3 L47+00N 37+75E	18	27	133	317	2.3	17	11	1361	6.34	56	<8	<2	6	36	.9	3	<3	5	.29	.089	81	3	.05	566	<.01	3	.73	.02	.28	<2	555
TREE 3 L47+00N 38+25E	13	29	97	281	1.4	21	12	1173	4.99	42	<8	<2	7	38	1.1	3	<3	6	.23	.097	87	2	.04	616	<.01	<3	.50	.01	.21	<2	350
TREE 3 L47+00N 38+75E	8	57	304	431	1.7	32	20	1329	6.35	29	<8	<2	5	29	2.2	<3	<3	8	.21	.117	79	3	.06	429	<.01	<3	.73	.02	.28	<2	735
TREE 3 L47+00N 39+25E	9	62	361	510	1.7	37	23	1531	7.19	32	<8	<2	5	35	2.9	3	<3	8	.23	.134	77	6	.05	270	<.01	<3	.62	.01	.33	<2	605
TREE 3 L47+00N 39+75E	9	74	265	618	1.7	49	30	1765	7.23	34	<8	<2	6	35	3.6	4	<3	8	.24	.144	82	6	.04	317	<.01	<3	.64	.01	.29	<2	395
TREE 3 L47+00N 40+75E	13	78	343	813	2.2	57	33	2075	7.54	46	<8	<2	8	31	5.7	4	<3	7	.22	.137	100	8	.04	307	<.01	<3	.81	.01	.40	<2	280
TREE 3 L47+00N 41+25E	30	25	464	438	4.0	4	5	665	11.47	73	<8	<2	15	39	.4	3	<3	4	.01	.086	76	4	.03	160	.01	<3	1.05	.02	.92	<2	335
TREE 3 L47+00N 41+75E	37	25	234	302	3.7	1	3	165	13.34	71	<8	<2	17	45	<.2	<3	<3	3	<.01	.093	75	4	.02	128	.01	<3	.72	.02	1.16	<2	185
TREE 3 L47+00N 42+25E	52	27	268	945	4.0	5	7	3063	13.84	77	<8	<2	17	75	5.9	<3	<3	5	.04	.101	216	8	.05	139	.01	<3	1.69	.02	1.50	<2	300
TREE 3 L47+00N 42+75E	37	24	178	998	3.2	5	7	3739	12.85	52	<8	<2	12	66	5.1	4	<3	5	.05	.094	169	8	.06	121	.01	<3	1.13	.02	1.15	<2	185
TREE 3 L47+00N 43+25E	24	23	172	794	3.9	6	7	4771	11.53	51	<8	<2	13	66	5.4	7	<3	6	.09	.096	233	9	.07	131	.01	<3	1.17	.02	1.06	<2	280
TREE 3 L47+00N 43+75E	24	26	178	1034	3.8	9	8	2948	9.63	48	<8	<2	14	50	5.9	7	<3	11	.08	.079	190	11	.11	137	.02	<3	1.19	.01	.93	<2	570
TREE 3 L47+00N 44+25E	30	24	215	259	10.1	1	4	262	16.82	123	<8	<2	40	41	<.2	6	<3	6	.01	.135	161	6	.02	115	.02	<3	.39	.01	1.25	2	325
RE TREE 3 L47+00N 44+25E	29	24	206	251	10.0	2	4	258	16.41	119	<8	<2	40	40	<.2	10	<3	5	<.01	.133	162	6	.02	129	.02	<3	.39	.01	1.22	2	310
TREE 3 L47+00N 44+75E	16	26	322	575	7.2	3	4	1750	12.57	88	<8	<2	34	15	3.8	10	3	5	.04	.084	250	8	.04	277	.01	<3	.64	.01	.63	<2	375
TREE 3 L47+00N 45+25E	67	22	1875	1937	19.8	4	4	3153	10.65	91	<8	<2	23	27	10.1	11	<3	2	.21	.040	276	9	.07	166	<.01	3	.75	.02	.62	<2	1430
TREE 3 L47+00N 45+75E	47	13	125	137	.7	3	4	3949	5.37	36	<8	<2	25	16	.7	<3	3	2	.25	.031	179	8	.08	326	.01	3	.57	.01	.26	<2	315
TREE 3 L47+00N 46+75E	12	16	38	111	<.3	3	4	3144	4.46	9	<8	<2	8	17	.6	<3	3	1	.13	.035	57	2	.07	317	<.01	3	.40	.01	.18	<2	150
TREE 3 L47+00N 47+25E	2	10	36	53	.8	2	3	3511	3.66	6	<8	<2	13	16	.3	<3	3	2	.11	.039	117	6	.06	270	<.01	3	.42	.01	.13	<2	95
TREE 3 L47+00N 47+75E	6	8	17	50	.3	2	3	2925	3.69	7	<8	<2	13	7	<.2	<3	3	4	.08	.046	146	7	.06	288	<.01	<3	.37	<.01	.11	<2	50
TREE 3 L47+00N 48+25E	89	16	336	416	14.7	2	3	876	15.35	227	<8	<2	22	81	<.2	14	<3	1	.01	.124	107	5	.03	153	<.01	<3	.32	.02	.72	<2	1785
TREE 3 L47+00N 48+25E A	19	29	48	136	.5	3	4	302	6.08	9	<8	<2	8	13	<.2	3	<3	<1	.03	.054	59	6	.03	108	<.01	<3	.37	<.01	.13	<2	180
TREE 3 L47+00N 48+75E	23	10	64	81	.8	6	4	544	5.18	16	<8	<2	11	29	<.2	3	<3	<1	.05	.036	51	4	.02	191	<.01	<3	.26	.01	.26	<2	640
TREE 3 L47+00N 49+75E	15	10	28	87	<.3	2	3	596	4.25	7	<8	<2	5	4	.3	<3	<3	<1	.03	.025	15	5	.02	144	<.01	<3	.24	.01	.09	<2	115
TREE 3 L47+00N 50+25E	11	19	18	89	<.3	4	5	1094	3.96	6	<8	<2	9	5	.3	<3	<3	1	.05	.038	16	<1	.06	337	<.01	<3	.43	.01	.06	<2	140
TREE 3 L47+00N 50+75E	9	14	37	176	<.3	10	9	1398	5.43	18	<8	<2	5	17	.4	<3	<3	4	.37	.070	22	6	.15	189	<.01	<3	.61	.02	.10	<2	395
TREE 3 L47+00N 51+25E	8	20	14	101	.4	36	19	3270	4.76	11	9	<2	5	12	<.2	<3	<3	5	.22	.076	30	14	.15	121	<.01	3	.58	.01	.08	<2	85
TREE 3 L47+00N 51+75E	6	9	30	92	.3	7	4	921	4.30	25	<8	<2	2	18	.2	<3	<3	2	.68	.083	44	6	.14	146	<.01	<3	.61	.01	.08	<2	120
TREE 3 L47+00N 52+25E	5	14	30	96	.4	8	8	1812	4.74	17	<8	<2	3	19	.4	<3	<3	7	.32	.079	58	5	.10	216	.01	4	.42	.01	.18	<2	140
TREE 3 L47+00N 52+75E	6	14	14	60	.4	9	10	871	3.95	13	<8	<2	5	22	.2	<3	<3	12	.45	.144	56	10	.11	279	.01	<3	.45	.01	.12	<2	50
TREE 3 L47+00N 53+25E	3	15	11	50	.5	7	8	1239	4.55	8	<8	<2	3	19	.2	<3	<3	11	.54	.094	46	7	.13	307	.01	3	.68	.01	.12	<2	55
TREE 3 L47+00N 53+75E	5	15	79	143	.8	12	10	1595	4.98	11	<8	<2	5	16	1.2	<3	<3	16	.39	.120	52	12	.18	268	.01	<3	.57	.01	.12	<2	115
STANDARD C3	26	64	37	170	5.8	36	13	792	3.52	59	23	3	21	29	24.3	18	17	79	.53	.089	18	172	.61	145	.08	20	1.88	.04	.17	15	870
STANDARD G-2	1	2	<3	42	<.3	8	5	543	2.16	2	<8	<2	4	80	<.2	<3	<3	39	.62	.094	8	79	.58	281	.14	3	1.06	.11	.52	2	<10

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

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L47+00N 54+25E	4	15	23	158	.5	13	16	1718	6.25	10	<8	<2	4	22	.5	<3	<3	19	.59	.205	48	10	.18	204	.01	<3	.62	.01	.14	<2	105
TREE 3 L47+00N 54+75E	3	11	11	47	.3	7	12	1318	4.08	7	<8	<2	3	18	<.2	<3	<3	15	.58	.181	32	4	.13	197	.01	<3	.62	.01	.11	<2	45
TREE 3 L47+00N 55+25E	6	24	22	141	.7	14	14	1548	6.09	14	<8	<2	4	17	.5	<3	<3	11	.69	.146	48	6	.15	369	<.01	<3	.62	.01	.13	<2	145
TREE 3 L47+00N 55+75E	4	17	23	92	.5	14	15	1324	5.86	13	<8	<2	5	22	.3	<3	<3	14	.65	.148	36	4	.16	587	<.01	<3	.77	.01	.12	<2	105
TREE 3 L47+00N 56+25E	3	12	23	68	<.3	11	7	781	2.74	9	<8	<2	<2	11	.4	<3	<3	24	.12	.131	34	14	.14	181	.01	<3	.73	.01	.10	<2	45
TREE 3 L47+00N 56+75E	2	10	14	54	<.3	12	6	443	2.36	7	<8	<2	2	10	.2	<3	<3	26	.09	.058	29	18	.20	81	.02	<3	.84	.01	.06	<2	35
TREE 3 L47+00N 57+25E	5	24	86	199	1.0	17	14	813	4.91	22	<8	<2	3	47	1.3	<3	<3	26	.21	.170	34	13	.18	387	.02	<3	.89	.01	.22	<2	530
TREE 3 L47+00N 57+75E	10	14	382	111	1.9	11	10	553	3.76	23	<8	<2	2	41	.7	<3	<3	24	.10	.133	42	11	.13	389	.01	<3	.64	.01	.38	<2	610
TREE 3 L47+00N 58+25E	7	12	255	72	.9	7	5	313	3.03	17	<8	<2	2	13	.3	<3	<3	20	.04	.158	33	8	.06	664	.01	<3	.56	.01	.25	<2	305
TREE 3 L47+00N 58+75E	8	7	483	29	2.9	4	3	131	2.48	15	<8	<2	<2	8	<.2	5	<3	14	.02	.065	42	9	.05	286	.01	<3	.46	.01	.36	<2	930
TREE 3 L47+00N 59+25E	10	9	117	75	.8	5	2	265	2.45	23	<8	<2	<2	23	.2	<3	<3	16	.01	.075	43	3	.02	273	<.01	<3	.24	<.01	.28	<2	185
RE TREE 3 L47+00N 59+25E	10	9	117	76	.8	5	2	268	2.47	26	<8	<2	<2	23	.2	3	<3	17	.01	.076	44	7	.02	277	.01	<3	.24	<.01	.28	<2	190
TREE 3 L47+00N 59+75E	9	8	906	23	3.2	3	3	69	9.79	33	<8	<2	4	44	<.2	6	<3	12	.02	.180	24	5	.05	85	.02	<3	.26	.01	1.91	<2	665
TREE 3 L47+00N 60+25E	8	30	385	52	.9	9	20	295	4.99	29	<8	<2	2	68	.3	<3	<3	24	.12	.311	55	2	.06	243	.01	<3	.54	.02	.66	<2	155
TREE 3 L47+00N 60+75E	6	44	331	104	.9	16	36	1141	5.18	31	<8	<2	4	46	.6	<3	3	21	.23	.191	39	9	.12	448	.01	<3	.58	.01	.33	<2	175
TREE 3 L47+00N 61+25E	7	42	300	71	1.3	12	26	1285	5.59	29	<8	<2	3	46	.3	<3	<3	21	.31	.249	41	5	.08	533	.01	<3	.89	.02	.37	<2	155
TREE 3 L47+00N 61+75E	5	35	147	85	.6	11	23	2151	5.69	20	<8	<2	6	46	.4	<3	3	15	.33	.192	56	5	.09	572	.01	<3	.79	.01	.26	<2	95
TREE 3 L47+00N 62+25E	5	31	28	79	.3	9	18	2566	5.58	8	<8	<2	11	25	.5	<3	<3	8	.31	.106	76	3	.10	444	.01	3	.77	.01	.18	<2	45
TREE 3 L47+00N 62+75E	4	25	27	70	.3	8	15	2592	5.83	8	<8	<2	10	20	.3	<3	<3	8	.24	.098	72	4	.09	360	<.01	<3	.54	.01	.14	<2	50
TREE 3 L45+50N 36+25E	5	43	57	138	.9	33	12	409	3.65	18	<8	<2	5	101	.7	<3	<3	29	.75	.286	32	9	.06	384	<.01	<3	.53	.01	.08	<2	130
TREE 3 L45+50N 36+75E	3	47	39	128	1.0	39	12	368	3.32	16	<8	<2	4	58	.7	3	<3	28	.92	.175	21	7	.06	346	<.01	<3	.39	.01	.06	<2	120
TREE 3 L45+50N 37+25E	7	61	42	163	1.5	49	14	316	3.52	21	<8	<2	5	80	.7	4	<3	34	1.03	.256	20	7	.15	329	<.01	3	.44	.01	.08	<2	135
TREE 3 L45+50N 37+75E	7	49	31	140	1.0	50	14	252	3.37	18	<8	<2	4	73	.7	5	<3	38	1.23	.137	17	7	.26	302	<.01	<3	.37	.01	.07	<2	120
TREE 3 L45+50N 38+25E	4	36	38	82	.8	42	14	354	3.83	13	9	<2	3	32	.7	<3	<3	23	.99	.046	14	5	.13	276	<.01	<3	.24	.01	.04	<2	110
TREE 3 L45+50N 38+75E	6	40	69	173	1.3	39	12	523	4.03	25	<8	<2	5	35	1.0	3	<3	27	.95	.088	30	3	.07	387	<.01	<3	.38	.01	.07	<2	165
TREE 3 L45+50N 39+25E	6	45	143	354	1.0	17	13	925	4.85	20	<8	<2	5	19	1.4	<3	<3	8	.18	.088	101	2	.04	731	.01	<3	.85	.02	.15	<2	255
TREE 3 L45+50N 39+75E	8	62	103	421	1.3	21	14	957	5.47	27	<8	<2	7	27	1.8	<3	<3	5	.38	.071	105	5	.07	508	<.01	<3	.73	.02	.23	<2	150
TREE 3 L45+50N 40+25E	8	74	77	415	.8	35	23	1377	5.25	30	<8	<2	9	24	2.3	<3	<3	5	.33	.095	88	5	.05	390	<.01	<3	.48	.01	.17	<2	115
TREE 3 L45+50N 40+75E	11	49	87	542	.9	25	17	1759	6.13	34	<8	<2	13	23	3.0	3	<3	4	.16	.063	77	4	.05	525	.01	<3	.52	.03	.27	<2	105
TREE 3 L45+50N 41+25E	8	85	147	518	1.8	39	29	2181	6.21	38	<8	<2	8	26	2.8	5	3	5	.25	.093	78	4	.05	565	<.01	<3	.41	.01	.27	<2	135
TREE 3 L45+50N 41+75E	10	188	184	753	1.7	67	45	2232	8.73	47	<8	<2	8	53	3.9	9	<3	6	.29	.113	86	3	.09	257	<.01	<3	.73	.02	.58	<2	115
TREE 3 L45+50N 42+25E	12	25	257	564	.9	3	5	1193	7.99	42	<8	<2	15	29	2.2	5	<3	1	.03	.044	69	1	.03	194	<.01	<3	.93	.04	.54	<2	110
TREE 3 L45+50N 43+25E	13	68	286	1969	1.7	6	9	2454	10.62	41	<8	<2	32	21	21.8	9	3	7	.07	.059	165	9	.07	422	.01	<3	1.74	.03	.31	<2	70
TREE 3 L45+50N 43+75E	8	55	320	1238	1.5	3	6	1996	10.85	46	<8	<2	21	25	11.9	11	3	4	.03	.060	130	8	.03	315	.01	<3	1.48	.03	.52	<2	70
TREE 3 L45+50N 44+25E	12	60	715	1098	2.9	4	6	2036	12.98	84	<8	<2	32	34	8.1	16	<3	3	.03	.062	180	5	.04	131	.01	<3	1.13	.02	.97	<2	210
STANDARD C3	24	62	34	160	5.6	35	13	767	3.44	55	25	4	22	29	22.9	16	16	76	.52	.087	17	167	.57	149	.08	18	1.81	.04	.16	16	845
STANDARD G-2	1	3	<3	42	<.3	8	5	548	2.24	<2	<8	<2	4	81	<.2	<3	<3	40	.62	.095	7	79	.58	299	.16	<3	1.06	.11	.53	2	20

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

Data__ FA ____

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L45+50N 44+75E	8	45	364	902	1.9	3	5	2559	9.73	49	9	<2	40	27	5.1	8	4	8	.02	.052	116	3	.05	162	.01	<3	.65	.01	.66	<2	170
TREE 3 L45+50N 45+25E	4	40	750	2068	3.8	5	6	4303	8.67	37	<8	<2	26	31	25.9	10	7	7	.09	.045	412	7	.06	190	.01	3	.87	.02	.40	<2	245
TREE 3 L45+50N 45+75E	7	48	2509	662	10.9	<1	2	50	19.76	430	<8	<2	28	34	.8	45	<3	2	<.01	.065	58	<1	.02	118	.01	<3	.40	.01	.65	<2	795
TREE 3 L45+50N 46+75E	8	12	594	108	4.9	2	2	727	2.62	22	<8	<2	13	16	.6	10	<3	4	.01	.033	88	5	.01	379	<.01	<3	.17	.01	.20	<2	855
TREE 3 L45+50N 47+25E	5	14	153	544	.7	2	5	2236	3.86	13	<8	<2	12	11	3.5	<3	<3	1	.12	.031	80	1	.09	377	<.01	<3	.37	<.01	.12	<2	90
TREE 3 L45+50N 47+75E	5	50	2062	5357	3.2	2	7	2779	11.81	37	<8	<2	16	80	45.3	11	<3	1	.17	.047	122	<1	.06	112	<.01	<3	.58	.02	.96	<2	570
TREE 3 L45+50N 48+25E	124	47	1086	4210	5.8	4	11	6338	13.53	42	<8	<2	16	45	29.8	22	<3	2	.22	.059	155	3	.11	135	<.01	4	.64	.02	.46	<2	560
TREE 3 L45+50N 48+75E	11	19	255	1630	1.6	2	6	2448	8.30	32	<8	<2	11	46	8.5	4	<3	2	.08	.052	82	<1	.04	337	<.01	<3	.39	.01	.37	<2	170
TREE 3 L45+50N 49+25E	16	7	54	71	.4	2	2	551	3.56	14	<8	<2	12	20	.6	3	<3	1	.02	.036	72	<1	.01	530	<.01	<3	.16	.01	.13	<2	205
TREE 3 L45+50N 49+75E	8	38	860	2229	5.7	11	8	4216	8.72	52	<8	<2	6	58	20.6	11	4	2	.09	.078	137	5	.05	131	<.01	<3	.97	.04	.46	<2	230
TREE 3 L45+50N 50+25E	10	6	32	73	.4	4	3	1080	4.11	9	<8	<2	5	5	.6	<3	<3	2	.01	.035	22	2	.01	564	<.01	<3	.13	<.01	.04	<2	80
TREE 3 L45+50N 50+75E	8	10	27	89	<.3	9	6	1273	4.34	11	<8	<2	4	8	.7	<3	<3	3	.11	.058	27	<1	.07	298	<.01	<3	.49	.01	.06	<2	105
TREE 3 L45+50N 51+25E	7	14	25	72	.3	19	12	2347	4.77	9	<8	<2	7	6	.7	<3	<3	5	.02	.062	54	4	.06	140	<.01	<3	.45	<.01	.05	<2	95
TREE 3 L45+50N 51+75E	7	17	24	106	<.3	8	7	1623	4.57	12	<8	<2	8	9	.7	<3	<3	5	.29	.066	53	1	.12	292	<.01	<3	.59	.01	.11	<2	155
RE TREE 3 L45+50N 51+75E	8	16	24	105	.3	7	7	1591	4.50	11	<8	<2	8	9	.7	<3	<3	5	.28	.065	52	1	.12	288	<.01	3	.59	.01	.12	<2	145
TREE 3 L45+50N 52+25E	7	21	24	112	<.3	11	11	1681	4.72	13	<8	<2	11	11	.9	<3	<3	7	.21	.088	66	4	.13	196	.01	3	.63	.01	.16	<2	155
TREE 3 L45+50N 52+75E	6	17	22	99	<.3	10	12	1637	4.06	13	<8	<2	5	13	.9	<3	<3	9	.37	.131	58	5	.11	179	.01	<3	.45	.01	.14	<2	95
TREE 3 L45+50N 53+25E	6	15	29	73	.4	10	11	1009	4.46	16	<8	<2	5	18	.7	<3	3	11	.37	.147	58	5	.09	425	<.01	3	.62	.01	.14	<2	75
TREE 3 L45+50N 53+75E	4	18	35	121	<.3	11	8	1205	3.55	11	<8	<2	2	14	.9	<3	<3	18	.28	.118	52	9	.16	617	.01	<3	.88	.01	.11	<2	65
TREE 3 L45+50N 54+25E	5	14	24	108	.4	10	10	1165	4.42	8	<8	<2	5	12	1.0	<3	<3	16	.26	.130	49	11	.15	350	.01	3	.61	.01	.10	<2	55
TREE 3 L45+50N 54+75E	4	16	19	90	.4	11	10	1104	4.46	9	<8	<2	2	18	.8	<3	<3	17	.53	.170	36	10	.17	407	.01	<3	.63	.01	.11	<2	65
TREE 3 L45+50N 55+25E	4	11	20	87	.4	8	8	671	4.12	9	<8	<2	5	11	.6	<3	<3	13	.33	.169	49	8	.11	641	<.01	3	.74	.01	.12	<2	45
TREE 3 L45+50N 55+75E	4	10	35	34	<.3	5	6	870	2.80	17	<8	<2	7	11	.3	<3	<3	5	.24	.073	64	3	.05	659	<.01	<3	.44	<.01	.12	<2	65
TREE 3 L45+50N 56+25E	2	10	26	64	<.3	5	5	811	2.19	12	<8	<2	5	5	.3	<3	<3	8	.07	.059	60	5	.05	330	<.01	<3	.43	<.01	.06	<2	50
TREE 3 L45+50N 56+75E	4	28	85	216	<.3	5	6	1346	3.53	16	<8	<2	<2	7	.8	4	<3	13	.10	.131	47	7	.05	570	<.01	<3	.48	.01	.10	<2	95
TREE 3 L45+50N 57+25E	4	18	50	201	<.3	6	5	1254	3.91	16	<8	<2	2	14	.8	<3	<3	18	.44	.115	35	6	.08	862	.01	<3	.51	.01	.06	<2	70
TREE 3 L45+50N 57+75E	3	13	20	71	<.3	11	8	1890	4.76	21	<8	<2	5	13	.8	<3	<3	21	.22	.088	52	10	.16	344	.01	<3	.70	.01	.07	<2	55
TREE 3 L45+50N 58+25E	3	14	34	78	<.3	14	8	691	2.49	10	<8	<2	6	14	.4	<3	<3	25	.23	.099	50	16	.19	292	.03	<3	.70	.01	.07	<2	50
TREE 3 L45+50N 58+75E	2	11	74	61	.5	12	5	341	1.84	8	<8	<2	<2	12	.3	<3	<3	21	.11	.086	30	14	.17	401	.02	<3	.86	.02	.10	<2	220
TREE 3 L45+50N 59+25E	3	13	37	93	.3	8	10	2138	5.45	8	<8	<2	2	29	.9	<3	<3	15	.70	.135	39	9	.15	672	.01	<3	.59	.01	.13	<2	100
TREE 3 L45+50N 59+75E	3	13	18	42	.5	4	7	2204	5.02	4	9	<2	4	11	.6	<3	<3	5	.52	.075	68	5	.08	190	<.01	5	.33	<.01	.11	<2	70
TREE 3 L45+50N 60+25E	3	18	28	74	.7	6	11	2672	6.48	6	<8	<2	6	19	.8	<3	<3	10	.44	.108	66	5	.12	617	<.01	4	.50	.01	.13	<2	145
TREE 3 L45+50N 60+75E	4	13	20	38	.3	5	9	2173	5.48	4	<8	<2	3	17	.6	<3	<3	6	.77	.086	47	3	.12	192	<.01	3	.34	<.01	.10	<2	85
TREE 3 L45+50N 61+25E	5	30	29	53	.4	13	23	1613	5.50	10	<8	<2	3	23	.7	<3	<3	16	.55	.134	42	6	.15	295	<.01	4	.44	.01	.15	<2	75
TREE 3 L45+50N 61+75E	7	38	54	52	.4	17	26	1133	5.29	10	<8	<2	3	26	.7	<3	<3	18	.48	.137	38	5	.12	288	<.01	<3	.38	.01	.16	<2	190
STANDARD C3	25	62	39	166	5.5	35	12	772	3.41	57	16	3	20	28	23.3	17	19	77	.51	.087	17	165	.58	147	.08	19	1.83	.04	.16	16	880
STANDARD G-2	1	2	3	39	<.3	7	5	520	2.10	<2	<8	<2	4	74	<.2	<3	<3	37	.58	.091	7	74	.55	282	.14	<3	.98	.09	.49	2	<10

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L45+50N 62+25E	6	46	39	74	.4	22	31	1198	5.49	10	<8	<2	3	24	.8	<3	<3	20	.65	.128	37	3	.15	425	<.01	<3	.46	.01	.13	<2	225
TREE 3 L45+50N 62+75E	5	32	37	73	<.3	15	21	1030	4.01	8	<8	<2	2	31	.9	<3	<3	15	1.52	.129	21	6	.19	429	<.01	3	.43	.01	.13	<2	165
TREE 3 L45+50N 63+25E	4	36	23	98	<.3	14	20	1433	5.27	5	<8	<2	2	17	.7	<3	<3	36	.82	.131	30	7	.22	300	<.01	<3	.68	.01	.08	<2	130
TREE 3 L44+00N 36+25E	5	61	25	269	.3	58	17	521	3.80	16	<8	<2	7	20	1.0	3	<3	35	.20	.122	28	9	.28	277	<.01	<3	.83	<.01	.05	<2	105
TREE 3 L44+00N 36+75E	5	57	34	303	<.3	56	15	449	3.03	19	<8	<2	11	25	2.0	5	<3	30	.42	.104	30	10	.22	315	<.01	<3	.64	.01	.15	<2	125
TREE 3 L44+00N 37+25E	4	24	21	118	.3	24	5	188	1.59	9	<8	<2	<2	13	.4	3	<3	17	.09	.079	12	4	.04	85	<.01	<3	.28	.02	.04	<2	45
TREE 3 L44+00N 37+75E	8	33	31	150	<.3	29	6	203	2.47	20	<8	<2	2	16	.5	3	<3	24	.07	.098	16	6	.05	150	.01	<3	.36	.01	.05	<2	50
RE TREE 3 L44+00N 37+75E	8	32	33	150	<.3	29	6	209	2.48	19	<8	<2	2	16	.5	3	<3	25	.07	.097	16	5	.05	149	.01	<3	.36	.01	.05	<2	40
TREE 3 L44+00N 38+75E	2	7	54	243	<.3	15	3	510	1.87	10	<8	<2	<2	32	1.0	3	<3	2	2.03	.065	7	6	1.10	108	<.01	<3	.16	<.01	.03	<2	105
TREE 3 L44+00N 39+25E	3	9	13	64	<.3	7	2	100	1.00	7	<8	<2	2	5	<.2	<3	<3	14	.05	.034	10	5	.03	66	.01	<3	.35	.02	.02	<2	25
TREE 3 L44+00N 39+75E	53	171	195	515	1.1	4	4	479	8.51	125	<8	<2	18	24	2.2	11	<3	3	.03	.040	98	1	.03	275	.01	<3	.64	.03	.51	<2	165
TREE 3 L44+00N 40+25E	10	72	124	715	.8	12	10	831	5.58	33	<8	<2	12	23	3.8	4	<3	4	.18	.065	77	4	.05	346	<.01	<3	.58	.01	.24	<2	170
TREE 3 L44+00N 40+75E	14	57	119	649	.7	6	5	544	4.94	35	<8	<2	9	26	3.4	<3	3	3	.12	.049	76	3	.04	518	<.01	<3	.52	.01	.28	<2	155
TREE 3 L44+00N 41+25E	8	60	131	821	.5	6	6	829	5.46	33	8	<2	13	16	5.8	3	3	3	.06	.042	73	3	.03	374	<.01	<3	.42	.02	.22	<2	125
TREE 3 L44+00N 41+75E	21	73	275	1648	1.4	7	8	1301	10.23	56	<8	<2	13	27	11.6	11	<3	3	.05	.055	100	2	.03	149	<.01	<3	.87	.06	.63	<2	175
TREE 3 L44+00N 42+25E	18	101	361	2236	2.3	5	8	1766	9.51	60	<8	<2	10	28	18.2	12	<3	2	.06	.042	79	4	.04	131	<.01	<3	.92	.06	.54	<2	410
TREE 3 L44+00N 42+75E	21	86	283	1400	1.4	6	8	2128	9.70	69	<8	<2	11	22	14.4	12	<3	4	.14	.091	94	5	.07	324	<.01	<3	.62	.05	.32	<2	95
TREE 3 L44+00N 43+25E	70	159	170	914	1.1	3	8	1830	11.05	74	<8	<2	10	33	9.4	10	<3	1	.12	.049	92	<1	.06	155	<.01	<3	.53	.03	.45	<2	65
TREE 3 L44+00N 43+75E	77	136	216	389	1.8	6	4	547	8.36	227	<8	<2	12	25	2.5	19	<3	2	.01	.033	64	3	.02	152	.01	<3	.40	.02	.68	<2	105
TREE 3 L44+00N 44+25E	90	180	155	311	.7	6	5	529	10.95	306	<8	<2	10	37	2.2	9	<3	2	.05	.048	57	1	.02	112	.01	3	.35	.03	.85	<2	265
TREE 3 L44+00N 44+75E	29	147	201	655	1.6	17	8	1483	8.13	82	<8	<2	15	33	5.9	10	<3	5	.09	.034	123	5	.06	148	.01	<3	.58	.02	.67	<2	85
TREE 3 L44+00N 45+25E	43	180	201	1113	2.1	8	7	1681	12.48	85	<8	<2	60	18	4.2	21	<3	3	.01	.043	140	7	.05	177	<.01	<3	.76	.01	.34	<2	85
TREE 3 L44+00N 45+75E	5	203	116	798	1.7	6	10	1382	12.56	35	<8	<2	39	4	2.5	10	<3	5	.01	.046	54	5	.05	135	<.01	<3	.85	.01	.10	<2	90
TREE 3 L44+00N 46+25E	7	105	1207	4528	4.1	7	7	4026	12.72	53	<8	<2	52	25	35.6	9	6	5	.02	.045	519	19	.05	288	<.01	<3	1.47	.01	.58	<2	530
TREE 3 L44+00N 46+75E	6	217	911	3666	2.8	7	6	1883	11.36	49	<8	<2	56	25	39.4	13	4	4	.03	.046	338	12	.04	295	<.01	<3	1.46	.01	.52	<2	320
TREE 3 L44+00N 47+25E	10	244	1216	1427	3.1	4	7	1906	12.03	103	22	<2	46	15	4.9	27	5	4	.01	.054	163	18	.03	278	<.01	<3	.98	.01	.40	<2	220
TREE 3 L44+00N 47+75E	9	133	582	1491	2.6	9	6	1672	11.43	83	<8	<2	31	20	14.4	21	3	6	.02	.062	187	13	.05	179	.01	<3	1.25	.03	.58	<2	105
TREE 3 L44+00N 48+25E	12	29	264	515	1.7	17	8	1987	4.48	25	<8	<2	13	14	4.5	8	<3	5	.07	.052	115	9	.04	556	<.01	<3	.32	.01	.14	<2	155
TREE 3 L44+00N 48+75E	10	43	273	824	1.5	7	5	1623	6.71	24	<8	<2	12	17	3.2	5	<3	8	.13	.059	105	5	.14	500	.01	<3	.67	.02	.18	<2	85
TREE 3 L44+00N 49+75E	21	9	60	88	.5	4	4	1179	4.46	16	<8	<2	13	22	.6	4	<3	1	.04	.045	75	<1	.02	670	<.01	<3	.31	.01	.18	<2	180
TREE 3 L44+00N 50+25E	21	9	46	102	.5	4	4	1275	4.09	15	<8	<2	13	17	.8	3	<3	1	.04	.042	78	4	.02	755	<.01	<3	.24	.01	.11	<2	110
TREE 3 L44+00N 50+75E	12	11	79	125	.5	4	4	1213	4.68	14	<8	<2	9	7	.8	4	3	2	.01	.041	33	1	.02	786	<.01	<3	.20	<.01	.06	<2	110
TREE 3 L44+00N 51+25E	9	19	376	232	1.1	13	10	2725	5.53	25	<8	<2	6	16	1.3	7	<3	9	.03	.074	54	7	.10	365	.01	<3	.53	.01	.21	<2	220
TREE 3 L44+00N 51+75E	11	14	280	438	1.9	8	6	1284	5.93	50	<8	<2	7	16	2.6	6	<3	6	.10	.076	65	5	.06	568	<.01	<3	.56	.02	.34	<2	395
TREE 3 L44+00N 52+25E	10	20	314	1388	1.8	9	6	6228	7.58	34	<8	<2	11	16	7.9	8	<3	2	.23	.052	83	2	.19	444	<.01	<3	.57	<.01	.13	<2	125
STANDARD C3	25	63	35	167	5.8	35	13	774	3.41	54	20	<2	23	28	23.1	14	17	77	.52	.087	17	171	.58	147	.08	19	1.83	.04	.16	15	845
STANDARD G-2	2	2	<3	41	<.3	7	5	528	2.12	<2	<8	<2	5	71	<.2	<3	<3	38	.57	.091	7	76	.55	283	.13	<3	.95	.09	.49	<2	<10

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

Data FA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L44+00N 52+75E	6	26	92	262	1.1	12	8	1299	5.79	30	<8	<2	5	28	1.2	3	<3	7	.32	.090	41	5	.07	568	<.01	<3	.60	.01	.38	<2	200
TREE 3 L44+00N 53+25E	7	29	136	210	1.2	10	7	1859	7.01	36	<8	<2	5	43	1.1	3	<3	9	.59	.152	40	8	.14	336	<.01	<3	.81	.02	.39	<2	170
TREE 3 L44+00N 53+75E	12	36	151	251	1.4	12	10	1914	8.16	31	<8	<2	8	27	1.2	4	<3	9	.21	.096	54	7	.12	613	.01	<3	.84	.01	.24	<2	160
TREE 3 L44+00N 54+25E	31	76	88	307	1.3	25	33	2793	7.73	28	<8	<2	7	30	1.6	5	<3	7	.75	.123	84	5	.17	1700	<.01	3	.72	.01	.14	<2	125
TREE 3 L44+00N 54+75E	9	25	70	225	.6	12	9	1915	5.61	21	<8	<2	7	12	1.0	<3	<3	9	.12	.088	67	4	.10	884	.01	<3	.71	.01	.10	<2	90
TREE 3 L44+00N 55+25E	16	40	46	76	.8	10	10	2031	6.96	74	<8	<2	14	20	.3	<3	<3	4	.22	.085	99	5	.12	643	<.01	<3	.63	<.01	.17	<2	55
TREE 3 L44+00N 55+75E	3	28	40	115	.6	14	13	2101	6.02	25	<8	<2	8	27	.5	<3	<3	5	.28	.125	65	5	.11	750	<.01	<3	.79	<.01	.14	<2	45
TREE 3 L44+00N 56+25E	4	30	36	30	.3	16	25	1583	5.00	11	<8	<2	3	29	<.2	4	<3	19	1.19	.176	31	5	.20	1082	<.01	3	.43	<.01	.18	<2	70
TREE 3 L44+00N 56+75E	1	51	10	17	<.3	15	24	1020	3.79	4	<8	<2	3	35	<.2	<3	<3	8	3.73	.191	25	7	.23	321	<.01	<3	.32	<.01	.19	<2	60
TREE 3 L44+00N 57+25E	3	12	23	31	<.3	7	12	1114	3.86	6	<8	<2	2	11	<.2	<3	<3	14	.46	.161	31	3	.07	417	<.01	<3	.46	<.01	.15	<2	45
TREE 3 L44+00N 57+75E	3	12	19	41	<.3	8	10	1611	3.48	3	<8	<2	3	10	<.2	<3	<3	6	.42	.107	48	4	.07	323	<.01	<3	.31	<.01	.13	<2	100
TREE 3 L44+00N 58+25E	5	39	24	44	<.3	15	22	1204	4.43	6	<8	<2	3	17	<.2	<3	<3	11	.73	.135	34	4	.08	188	<.01	<3	.28	<.01	.17	<2	65
TREE 3 L44+00N 58+75E	3	24	18	22	<.3	9	15	713	3.32	6	<8	<2	<2	33	<.2	<3	<3	10	1.58	.096	17	5	.12	311	<.01	<3	.43	.01	.14	<2	95
TREE 3 L44+00N 59+25E	1	33	8	22	<.3	9	15	601	3.42	3	<8	<2	<2	21	<.2	<3	<3	10	1.21	.106	15	3	.13	166	<.01	<3	.44	.01	.14	<2	55
TREE 3 L44+00N 59+75E	1	47	12	39	<.3	13	23	968	5.77	6	8	<2	2	20	<.2	<3	<3	13	.80	.114	18	6	.13	298	<.01	<3	.54	.01	.18	<2	40
RE TREE 3 L44+00N 59+75E	2	46	12	39	<.3	13	23	966	5.80	5	8	<2	<2	20	<.2	<3	<3	13	.80	.115	18	6	.13	301	<.01	3	.55	.01	.18	<2	50
TREE 3 L44+00N 60+25E	1	31	12	29	<.3	9	15	655	4.00	3	<8	<2	<2	24	<.2	<3	<3	12	1.28	.110	16	3	.15	319	<.01	<3	.61	.01	.14	<2	35
TREE 3 L44+00N 60+75E	1	27	18	32	<.3	9	10	399	3.38	4	<8	<2	<2	14	<.2	<3	<3	15	.52	.097	20	5	.08	433	<.01	<3	.61	.01	.03	<2	55
TREE 3 L44+00N 61+25E	2	40	14	43	<.3	14	21	723	4.69	5	<8	<2	2	13	<.2	<3	<3	17	.56	.123	26	4	.08	320	<.01	<3	.45	.01	.11	<2	95
TREE 3 L44+00N 61+75E	4	38	30	47	<.3	15	20	840	4.44	6	<8	<2	2	16	.2	<3	<3	19	.74	.125	23	5	.11	345	<.01	<3	.60	.01	.09	<2	90
TREE 3 L44+00N 62+25E	1	5	5	10	<.3	2	2	195	.71	<2	<8	<2	<2	13	<.2	<3	<3	10	.46	.069	4	1	.05	130	<.01	<3	.45	.03	.03	<2	<10
TREE 3 L44+00N 62+75E	4	38	24	70	<.3	14	19	929	4.11	6	<8	<2	<2	24	.4	<3	<3	21	1.38	.119	18	6	.16	381	<.01	<3	.59	.01	.08	<2	275
TREE 3 L42+50N 36+25E	2	70	29	228	.7	53	21	439	4.26	16	<8	<2	4	24	.8	5	<3	31	.36	.111	17	13	.50	205	<.01	<3	1.19	.01	.04	<2	110
TREE 3 L42+50N 36+75E	2	58	20	178	.5	45	11	306	3.24	12	<8	<2	3	17	.5	3	<3	33	.23	.112	17	26	.41	329	<.01	<3	1.09	.01	.04	<2	85
TREE 3 L42+50N 37+25E	10	158	66	629	1.0	68	17	900	5.16	34	<8	<2	9	21	5.5	7	<3	20	.30	.110	118	10	.20	158	<.01	<3	.64	<.01	.08	<2	140
TREE 3 L42+50N 39+75E	9	142	62	390	1.0	41	11	524	5.21	29	<8	<2	24	14	2.0	5	<3	16	.10	.090	67	10	.09	100	<.01	<3	.79	.01	.08	<2	85
TREE 3 L42+50N 40+25E	28	287	153	603	1.3	10	7	991	7.57	80	<8	<2	20	16	4.4	10	<3	5	.05	.047	106	6	.04	350	<.01	<3	.63	.01	.25	<2	70
TREE 3 L42+50N 40+75E	19	316	122	536	1.5	6	4	691	8.41	67	<8	<2	23	9	1.3	13	<3	3	.01	.045	110	3	.03	364	<.01	<3	.47	<.01	.12	<2	105
TREE 3 L42+50N 41+25E	22	333	106	537	2.2	5	3	214	9.99	101	<8	<2	22	11	.3	21	<3	3	<.01	.047	74	5	.02	400	<.01	<3	.42	<.01	.13	<2	130
TREE 3 L42+50N 41+75E	28	129	216	572	1.1	13	6	980	6.53	51	<8	<2	22	8	3.8	8	<3	3	.03	.030	120	5	.03	361	<.01	<3	.41	.01	.12	<2	110
TREE 3 L42+50N 42+25E	13	241	218	922	1.5	18	7	1338	7.98	49	<8	<2	18	23	8.5	10	<3	4	.07	.037	121	7	.04	379	<.01	<3	.47	.02	.24	<2	125
TREE 3 L42+50N 42+75E	9	510	198	2232	1.9	10	5	3384	10.85	36	<8	<2	16	17	19.7	12	<3	3	.13	.032	159	5	.11	312	<.01	4	.46	.01	.18	<2	130
TREE 3 L42+50N 43+25E	15	75	57	499	<.3	5	5	1901	4.71	27	<8	<2	20	7	3.3	<3	<3	3	.08	.016	124	6	.05	189	<.01	<3	.36	.01	.05	<2	65
TREE 3 L42+50N 43+75E	7	311	105	913	1.5	10	6	1998	6.95	32	<8	<2	13	14	12.7	6	<3	13	.13	.050	157	5	.08	372	.01	<3	.52	.02	.13	<2	55
TREE 3 L42+50N 43+75E A	20	338	77	461	1.4	6	5	378	7.58	46	<8	<2	18	28	.9	7	<3	2	.01	.057	89	5	.02	308	<.01	3	.40	<.01	.18	<2	90
STANDARD C3	22	60	34	154	5.5	34	12	740	3.33	54	16	<2	21	28	21.7	16	18	74	.54	.084	17	163	.55	149	.08	21	1.76	.04	.16	14	930
STANDARD G-2	1	<1	<3	39	<.3	8	5	525	2.15	<2	<8	<2	3	71	<.2	<3	<3	38	.64	.092	6	74	.56	281	.12	<3	.93	.08	.47	2	<10

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

Data ___ FA ____

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L42+50N 44+25E	15	108	126	566	1.8	4	3	424	6.11	50	<8	<2	16	23	3.5	7	<3	1	.05	.025	107	6	.03	288	<.01	<3	.26	.02	.20	<2	135
TREE 3 L42+50N 44+75E	17	81	64	451	.8	3	4	597	9.52	72	<8	<2	18	8	2.7	6	<3	1	.06	.015	102	5	.05	341	<.01	<3	.29	<.01	.07	<2	60
TREE 3 L42+50N 45+25E	6	250	95	857	1.4	7	6	1529	8.92	38	<8	<2	21	46	8.2	7	<3	2	.22	.032	175	5	.11	145	<.01	<3	.55	.03	.35	<2	45
TREE 3 L42+50N 45+75E	3	2936	293	8835	3.3	8	6	2514	12.40	110	<8	2	29	30	117.6	29	<3	4	.06	.048	284	12	.06	228	<.01	3	1.27	.01	.34	<2	105
TREE 3 L42+50N 46+25E	27	235	137	807	3.1	3	4	925	11.30	75	<8	<2	35	67	9.2	34	<3	3	.08	.050	213	9	.03	84	<.01	<3	.50	.08	.86	<2	80
TREE 3 L42+50N 46+75E	24	177	295	1714	2.8	5	5	1580	11.92	67	<8	<2	37	19	14.2	12	<3	3	.05	.022	184	7	.05	290	<.01	<3	.65	.03	.22	<2	210
TREE 3 L42+50N 47+25E	14	203	212	1073	3.6	6	5	1938	10.38	77	<8	<2	21	15	14.3	17	<3	5	.03	.040	198	5	.06	199	<.01	<3	.62	.01	.37	<2	105
TREE 3 L42+50N 47+75E	17	49	195	620	.9	4	3	524	7.84	31	<8	<2	18	13	2.9	8	<3	4	.06	.048	62	6	.05	1139	.01	<3	.54	.02	.10	<2	170
TREE 3 L42+50N 48+25E	8	51	77	623	.7	5	3	1094	4.11	15	<8	<2	6	8	3.0	3	<3	13	.08	.063	123	1	.07	105	.02	<3	.71	.02	.07	<2	45
RE TREE 3 L42+50N 48+25E	8	54	84	657	.8	5	3	1137	4.33	16	<8	<2	6	8	3.3	3	<3	14	.08	.066	132	5	.07	111	.02	<3	.74	.02	.08	<2	45
TREE 3 L42+50N 48+75E	9	119	694	1529	2.3	9	6	1903	8.15	52	<8	<2	30	12	13.1	16	<3	8	.03	.056	255	15	.07	538	.01	<3	1.04	.01	.28	<2	90
TREE 3 L42+50N 49+25E	12	23	317	510	2.3	10	7	1344	4.97	28	<8	<2	11	22	3.0	8	<3	3	.13	.052	87	10	.03	385	<.01	<3	.38	.01	.21	<2	215
TREE 3 L42+50N 49+75E	139	48	503	2265	5.3	6	13	4851	12.29	42	8	<2	11	30	13.0	16	<3	4	.05	.097	174	7	.04	407	<.01	3	1.07	.02	.29	<2	470
TREE 3 L42+50N 50+25E	110	30	151	532	2.7	2	4	1212	16.71	68	<8	<2	33	7	<.2	13	<3	4	.01	.099	76	5	.03	71	<.01	3	.64	<.01	.09	<2	170
TREE 3 L42+50N 50+75E	22	23	71	141	1.2	2	4	817	6.06	22	<8	<2	17	14	.3	6	<3	2	.01	.055	77	4	.02	1009	<.01	<3	.28	.01	.11	<2	160
TREE 3 L42+50N 51+25E	19	21	148	161	1.0	3	5	1569	4.92	18	<8	<2	15	13	.5	5	<3	1	.01	.044	71	2	.01	920	<.01	<3	.24	<.01	.08	<2	130
TREE 3 L42+50N 51+75E	7	23	104	149	1.0	6	4	321	4.14	17	<8	<2	6	11	.3	3	<3	6	.06	.074	88	8	.08	808	<.01	<3	.49	<.01	.10	<2	230
TREE 3 L42+50N 52+25E	10	13	263	927	1.6	8	5	3690	6.60	36	<8	<2	8	20	4.7	7	<3	2	.08	.052	77	4	.05	608	<.01	<3	.33	.01	.24	<2	325
TREE 3 L42+50N 52+75E	5	21	136	393	1.2	7	6	1980	6.72	20	<8	<2	5	20	1.7	<3	<3	7	.47	.098	62	4	.12	1142	<.01	<3	.58	<.01	.11	<2	110
TREE 3 L42+50N 53+25E	7	34	127	411	1.4	13	8	1388	6.56	32	<8	<2	7	22	1.6	4	<3	8	.19	.080	58	7	.11	795	.01	<3	.65	.01	.22	<2	125
TREE 3 L42+50N 53+75E	9	29	52	178	1.0	9	14	3314	8.04	11	<8	<2	3	25	1.3	3	<3	9	.81	.168	57	8	.20	1455	<.01	<3	.62	.01	.12	<2	110
TREE 3 L42+50N 54+25E	15	46	115	206	.9	12	15	1304	5.12	21	<8	<2	3	17	.7	<3	<3	17	.11	.105	54	7	.10	1751	.01	<3	.90	.02	.10	<2	80
TREE 3 L42+50N 54+75E	5	14	42	96	<.3	11	10	1073	4.07	12	<8	<2	4	13	.4	<3	<3	9	.27	.115	63	5	.08	418	<.01	<3	.46	.01	.11	<2	45
TREE 3 L42+50N 55+25E	7	39	35	22	.4	12	20	1071	4.62	21	<8	<2	7	18	<.2	<3	<3	17	.41	.127	61	4	.09	465	<.01	<3	.51	<.01	.15	<2	45
TREE 3 L42+50N 55+75E	1	45	4	13	<.3	11	22	718	3.09	<2	<8	<2	2	53	<.2	<3	<3	8	5.46	.182	19	9	.23	194	<.01	<3	.39	<.01	.28	<2	15
TREE 3 L42+50N 56+25E	1	41	8	8	<.3	17	28	813	3.33	2	<8	<2	3	49	<.2	<3	<3	10	4.41	.180	21	5	.46	298	<.01	<3	.22	<.01	.12	<2	30
TREE 3 L42+50N 56+75E	1	39	5	13	<.3	14	25	920	3.46	3	<8	<2	<2	38	<.2	<3	<3	9	3.50	.142	17	8	.28	157	<.01	<3	.26	<.01	.15	<2	30
TREE 3 L42+50N 57+25E	<1	41	7	32	<.3	13	28	1098	4.88	4	<8	<2	2	50	<.2	<3	<3	10	1.97	.146	16	5	.14	158	<.01	<3	.33	<.01	.19	<2	35
TREE 3 L42+50N 57+75E	1	29	11	47	<.3	10	20	1025	3.93	3	<8	<2	<2	59	<.2	<3	<3	9	1.76	.121	12	4	.18	314	<.01	3	.51	.01	.20	<2	25
TREE 3 L42+50N 58+25E	1	50	9	37	<.3	11	19	728	4.16	4	<8	<2	<2	24	<.2	<3	<3	9	1.20	.105	19	8	.13	285	<.01	<3	.33	<.01	.23	<2	35
TREE 3 L42+50N 58+75E	1	47	9	37	<.3	13	22	982	4.38	4	<8	<2	<2	19	.2	<3	<3	7	1.05	.119	20	5	.10	198	<.01	<3	.28	<.01	.22	<2	20
TREE 3 L42+50N 59+25E	2	49	9	38	<.3	14	22	779	4.20	4	<8	<2	<2	16	<.2	<3	<3	9	.79	.127	22	6	.10	157	<.01	<3	.39	.01	.21	<2	20
TREE 3 L42+50N 59+75E	1	37	10	39	<.3	11	19	612	4.03	3	<8	<2	2	13	<.2	<3	<3	10	.62	.138	20	4	.07	148	<.01	3	.38	.01	.18	<2	25
TREE 3 L42+50N 60+25E	1	44	8	41	<.3	11	16	533	3.94	3	<8	<2	<2	19	<.2	<3	<3	11	1.22	.118	13	2	.11	153	<.01	<3	.45	.01	.17	<2	40
TREE 3 L42+50N 60+75E	<1	16	8	17	<.3	9	8	285	2.38	<2	<8	<2	<2	20	<.2	<3	<3	17	.74	.103	14	6	.10	328	<.01	<3	.74	.02	.06	<2	30
STANDARD C3	25	64	38	168	6.0	36	13	786	3.63	57	15	2	22	29	23.7	20	17	79	.53	.088	17	171	.60	148	.08	16	1.90	.04	.16	15	945
STANDARD G-2	2	1	4	40	<.3	7	5	525	2.16	<2	<8	<2	4	70	<.2	<3	<3	38	.58	.093	6	74	.56	278	.13	<3	.94	.08	.48	3	<10

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

Data ___ FA ___

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L42+50N 61+25E	1	22	10	19	<.3	10	8	280	2.59	<2	<8	<2	<2	21	.2	<3	<3	18	.75	.117	16	5	.11	367	<.01	<3	.83	.02	.06	<2	30
TREE 3 L42+50N 61+75E	2	14	29	50	<.3	10	8	565	2.67	7	<8	<2	<2	15	.3	<3	<3	18	.29	.109	29	7	.13	567	.01	<3	.80	.01	.06	<2	50
TREE 3 L42+50N 62+25E	3	16	34	60	<.3	12	10	852	3.19	7	<8	<2	<2	16	.4	<3	<3	18	.26	.104	37	9	.13	526	.01	<3	.71	.01	.08	<2	70
TREE 3 L42+50N 62+75E	3	69	34	115	<.3	85	39	1090	7.02	15	<8	<2	<2	11	.6	<3	<3	15	.18	.203	36	7	.10	337	<.01	<3	.64	.01	.12	<2	130
TREE 3 L42+50N 63+25E	3	103	24	103	<.3	99	42	1126	8.36	10	<8	<2	<2	26	.7	<3	<3	13	.62	.178	24	8	.10	355	<.01	<3	.46	<.01	.13	<2	220
TREE 3 L41+00N 36+25E	10	41	52	288	<.3	30	12	637	4.18	25	<8	<2	6	19	1.5	3	<3	23	.20	.113	55	3	.12	181	<.01	<3	.50	.01	.08	<2	110
TREE 3 L41+00N 36+75E	4	237	152	570	.9	117	58	1215	6.69	18	<8	<2	4	24	2.5	4	<3	32	.30	.132	31	45	.47	301	<.01	<3	.97	.01	.04	<2	155
TREE 3 L41+00N 37+25E	1	193	78	273	.7	106	53	1029	6.21	21	<8	<2	<2	96	1.6	6	<3	58	3.86	.098	10	106	1.72	374	<.01	<3	2.10	.01	.04	<2	90
RE TREE 3 L41+00N 37+25E	<1	201	80	278	.9	110	55	1050	6.39	22	<8	<2	<2	99	1.6	6	<3	59	4.00	.101	9	107	1.77	384	<.01	<3	2.15	.01	.04	<2	85
TREE 3 L41+00N 37+75E	3	52	30	256	.3	52	14	373	2.95	17	<8	<2	2	16	1.4	5	<3	20	.15	.118	24	11	.25	133	<.01	<3	.60	<.01	.03	<2	85
TREE 3 L41+00N 38+25E	10	27	57	252	.3	15	8	620	3.92	28	<8	<2	4	14	1.3	4	<3	11	.19	.093	79	1	.07	351	<.01	<3	.41	.01	.06	<2	125
TREE 3 L41+00N 38+75E	10	29	71	241	.4	10	5	503	3.03	17	<8	<2	3	9	.7	3	<3	9	.08	.061	67	3	.07	797	<.01	<3	.57	.01	.05	<2	50
TREE 3 L41+00N 39+25E	3	59	24	194	<.3	44	10	195	2.97	12	<8	<2	5	19	.9	<3	<3	18	.14	.101	31	6	.09	198	<.01	<3	.35	<.01	.03	<2	100
TREE 3 L41+00N 39+75E	5	55	60	122	<.3	4	2	193	3.92	21	<8	<2	<2	15	.5	<3	<3	7	.12	.083	35	<1	.04	190	<.01	<3	.59	.05	.07	<2	135
TREE 3 L41+00N 40+25E	8	119	64	442	.3	5	4	306	6.21	35	<8	<2	12	17	2.0	3	<3	1	.04	.081	47	2	.02	134	<.01	<3	.38	.05	.09	<2	320
TREE 3 L41+00N 40+75E	8	137	70	309	.5	6	4	332	7.32	39	<8	<2	17	31	1.7	4	<3	1	.02	.095	57	<1	.01	171	<.01	<3	.35	.09	.13	<2	385
TREE 3 L41+00N 41+25E	6	182	103	473	.7	15	11	1160	9.44	74	<8	<2	13	13	3.3	7	<3	2	.03	.084	61	<1	.06	174	<.01	<3	.50	.02	.10	<2	380
TREE 3 L41+00N 41+75E	10	292	198	1165	1.1	9	6	2456	6.79	27	<8	<2	17	17	6.2	6	<3	8	.19	.050	346	5	.10	1067	.01	<3	.74	.01	.13	<2	90
TREE 3 L41+00N 42+25E	14	1139	233	1527	.9	8	7	1868	6.94	43	<8	<2	18	10	10.8	9	3	3	.05	.037	144	3	.13	1115	<.01	<3	.49	.01	.08	<2	195
TREE 3 L41+00N 42+75E	27	282	335	1450	1.5	23	10	2192	7.27	47	<8	<2	17	15	9.1	10	<3	21	.17	.043	138	22	.32	622	.01	<3	.66	.01	.11	<2	235
TREE 3 L41+00N 43+25E	5	152	320	2081	1.6	27	10	1759	4.95	26	<8	<2	11	17	10.0	9	<3	25	.19	.042	134	37	.50	787	.03	<3	.79	.02	.10	<2	325
TREE 3 L41+00N 43+75E	10	53	90	415	.5	15	7	1545	5.15	25	<8	<2	9	9	1.6	3	<3	17	.10	.068	205	10	.14	748	.01	<3	.66	.01	.08	<2	60
TREE 3 L41+00N 44+25E	6	26	100	588	1.3	13	5	3576	5.44	21	<8	<2	28	13	4.6	3	4	3	.06	.028	364	6	.05	503	<.01	<3	.30	.01	.13	<2	45
TREE 3 L41+00N 44+75E	5	25	258	922	1.4	22	8	4101	6.16	31	9	<2	38	23	9.4	6	3	3	.08	.031	299	9	.05	393	<.01	<3	.42	.01	.24	<2	50
TREE 3 L41+00N 45+25E	9	50	351	1296	.6	31	9	2049	4.69	22	<8	<2	19	11	10.9	<3	3	2	.03	.037	160	5	.05	489	<.01	<3	.50	.01	.11	<2	100
TREE 3 L41+00N 45+75E	9	54	133	700	.7	18	8	2606	5.90	18	<8	<2	15	9	4.0	3	3	5	.13	.042	243	4	.09	577	<.01	<3	.41	.01	.09	<2	50
TREE 3 L41+00N 46+25E	33	216	361	614	1.2	16	7	416	8.97	73	<8	<2	23	6	.9	22	<3	2	.04	.024	121	8	.03	284	<.01	<3	.36	<.01	.10	<2	115
TREE 3 L41+00N 46+75E	42	132	199	626	.5	105	19	941	7.87	78	<8	<2	17	5	3.4	6	<3	6	.05	.048	69	6	.04	163	<.01	<3	.33	.01	.08	<2	95
TREE 3 L41+00N 47+25E	21	136	201	793	.3	78	20	1715	6.32	55	8	<2	19	6	5.2	5	4	5	.15	.049	67	6	.05	319	<.01	<3	.27	<.01	.09	<2	80
TREE 3 L41+00N 47+75E	16	65	44	436	<.3	14	6	1008	5.06	54	<8	<2	20	4	3.5	<3	<3	3	.07	.021	84	3	.04	148	.01	<3	.23	.01	.06	<2	95
TREE 3 L41+00N 48+25E	17	94	63	208	<.3	6	4	806	6.55	68	<8	<2	23	3	1.4	3	<3	4	.02	.026	76	4	.04	142	<.01	<3	.29	<.01	.08	<2	50
TREE 3 L41+00N 48+75E	19	113	221	231	1.4	6	3	215	9.56	70	<8	<2	11	20	.4	13	<3	2	.01	.064	41	3	.01	284	<.01	<3	.14	.01	.24	<2	150
TREE 3 L41+00N 49+25E	30	77	205	247	1.0	9	6	681	12.09	36	<8	<2	9	8	.7	10	<3	2	.02	.102	66	1	.03	358	<.01	<3	.27	<.01	.11	<2	65
TREE 3 L41+00N 49+75E	17	185	344	651	1.3	33	18	1220	12.25	42	8	<2	8	16	2.8	15	<3	3	.11	.097	64	4	.06	856	<.01	<3	.46	.01	.10	<2	210
TREE 3 L41+00N 50+25E	16	112	207	426	.6	11	6	436	10.18	35	<8	<2	8	5	.8	12	<3	7	.04	.079	77	6	.03	401	.01	<3	.46	.01	.06	<2	100
STANDARD C3	25	63	34	162	5.2	36	12	754	3.42	55	16	<2	19	28	22.9	16	17	76	.52	.088	17	165	.59	146	.08	16	1.85	.04	.15	15	955
STANDARD G-2	1	4	4	45	<.3	8	5	582	2.33	<2	<8	<2	4	81	<.2	<3	<3	42	.66	.101	8	84	.63	307	.18	6	1.09	.10	.55	2	<10

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

Data___ FA ____

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 3 L41+00N 50+75E	21	90	327	1466	1.0	31	17	3921	9.13	48	<8	<2	9	21	13.4	8	<3	1	.07	.049	68	2	.06	513	<.01	<3	.67	.01	.24	<2	350
TREE 3 L41+00N 51+25E	19	88	260	756	1.3	17	11	2081	7.44	43	<8	<2	12	15	4.8	7	<3	3	.04	.052	106	5	.04	579	<.01	<3	.47	.01	.17	<2	120
TREE 3 L41+00N 51+75E	18	16	166	179	.6	5	4	1144	5.09	22	<8	<2	5	14	.4	3	<3	2	.05	.053	66	<1	.03	884	<.01	<3	.35	.01	.12	<2	200
TREE 3 L41+00N 52+25E	13	16	164	213	.6	10	6	1571	5.31	20	<8	<2	7	11	.9	3	<3	3	.03	.060	63	2	.04	667	<.01	<3	.35	.01	.11	<2	175
TREE 3 L41+00N 52+75E	16	25	281	194	<.3	4	3	586	6.45	28	<8	<2	5	9	.4	4	<3	3	.02	.067	77	<1	.03	657	<.01	<3	.44	<.01	.08	<2	280
TREE 3 L41+00N 53+25E	5	16	29	163	<.3	6	6	905	4.11	6	<8	<2	<2	10	.3	<3	<3	17	.11	.115	50	4	.05	381	<.01	<3	.65	.01	.05	<2	190
TREE 3 L41+00N 53+75E	3	10	12	59	.3	3	2	314	1.66	5	<8	<2	<2	7	<.2	<3	<3	12	.07	.081	27	3	.03	139	<.01	3	.51	.02	.04	<2	10
TREE 3 L41+00N 54+25E	5	16	39	104	<.3	11	10	1225	4.38	16	<8	<2	3	16	.4	<3	<3	10	.33	.130	63	7	.11	450	<.01	<3	.60	.01	.12	<2	45
TREE 3 L41+00N 54+75E	3	12	21	47	<.3	5	4	401	2.26	6	<8	<2	<2	12	<.2	<3	<3	11	.14	.081	40	1	.06	286	.01	<3	.51	.02	.07	<2	35
TREE 3 L41+00N 55+25E	3	12	27	65	<.3	6	5	571	2.52	7	<8	<2	<2	9	.2	<3	<3	14	.10	.103	49	2	.06	390	<.01	<3	.75	.01	.07	<2	25
TREE 3 L41+00N 55+75E	2	22	8	27	<.3	5	7	353	1.64	<2	<8	<2	<2	23	<.2	<3	<3	9	1.00	.080	10	1	.08	244	.01	4	.44	.02	.07	<2	25
TREE 3 L41+00N 56+25E	1	17	6	19	<.3	5	6	349	1.41	<2	<8	<2	<2	23	<.2	<3	<3	10	1.14	.061	6	1	.10	125	.01	3	.45	.03	.04	<2	25
TREE 3 L41+00N 56+75E	2	23	13	35	<.3	20	21	1127	5.73	5	<8	<2	<2	25	<.2	<3	<3	23	1.43	.117	22	8	.18	287	<.01	<3	.39	<.01	.09	<2	50
TREE 3 L41+00N 57+25E	2	99	12	24	.4	60	71	3590	8.71	9	<8	<2	<2	19	<.2	3	<3	55	.87	.152	39	16	.15	347	<.01	<3	.52	<.01	.08	<2	65
TREE 3 L41+00N 57+75E	2	25	12	59	<.3	9	11	1073	2.89	2	<8	<2	<2	31	<.2	<3	<3	12	1.73	.124	13	5	.19	311	<.01	3	.58	.02	.06	<2	50
TREE 3 L41+00N 58+25E	2	12	7	20	<.3	6	6	381	1.83	2	<8	<2	<2	12	<.2	<3	<3	16	.26	.109	12	2	.06	248	.01	<3	.64	.02	.04	<2	15
TREE 3 L41+00N 58+75E	4	50	20	52	<.3	34	31	1859	6.15	7	<8	<2	2	15	.2	<3	<3	31	.48	.114	38	13	.18	569	<.01	<3	.64	<.01	.09	<2	60
TREE 3 L41+00N 59+25E	6	29	23	58	<.3	20	22	4243	5.38	8	<8	<2	<2	32	.5	<3	<3	45	1.38	.134	28	17	.23	708	.01	<3	.95	.01	.06	<2	105
TREE 3 L41+00N 59+75E	1	15	3	16	<.3	4	3	292	.79	3	<8	<2	<2	18	<.2	<3	<3	6	.66	.063	5	<1	.06	112	.01	<3	.67	.03	.05	<2	25
RE TREE 3 L41+00N 59+75E	1	16	<3	17	<.3	4	3	293	.81	<2	<8	<2	<2	19	<.2	<3	<3	6	.69	.065	5	<1	.06	117	.01	<3	.68	.03	.05	<2	20
TREE 3 L41+00N 60+25E	<1	17	3	45	<.3	6	3	394	.72	<2	<8	<2	<2	33	<.2	<3	<3	4	1.79	.104	6	<1	.13	195	.01	5	.47	.02	.04	<2	30
TREE 3 L41+00N 60+75E	2	34	11	68	<.3	19	19	996	5.16	5	<8	<2	<2	21	.3	<3	<3	17	.94	.127	21	10	.16	430	<.01	<3	.68	.01	.08	<2	35
TREE 3 L41+00N 61+25E	2	30	12	62	<.3	18	20	624	3.98	5	<8	<2	<2	27	<.2	<3	<3	11	1.16	.158	16	7	.12	386	<.01	4	.80	.01	.12	<2	50
TREE 3 L41+00N 61+75E	6	84	26	155	.5	151	64	2442	7.46	30	<8	<2	8	19	.8	4	<3	11	.43	.158	48	11	.10	442	<.01	7	.37	.01	.15	<2	390
TREE 3 L41+00N 62+25E	3	53	21	131	.3	50	28	691	5.60	10	<8	<2	2	15	.2	<3	<3	11	.56	.128	33	9	.13	378	<.01	5	.68	.01	.12	<2	190
TREE 3 L41+00N 62+75E	2	51	22	156	<.3	75	28	552	5.12	10	<8	<2	<2	19	.3	<3	<3	12	.77	.169	20	9	.11	201	<.01	<3	.66	.01	.10	<2	135
TREE 3 L41+00N 63+25E	4	41	30	103	<.3	46	21	756	4.78	10	<8	<2	<2	9	.4	<3	3	15	.13	.156	34	8	.08	170	<.01	<3	.62	.01	.10	<2	100
TREE 1 L65+00N 60+50E	17	30	93	87	1.1	31	25	1784	7.77	39	<8	<2	3	68	.4	3	<3	25	.18	.139	54	7	.12	560	.01	<3	.83	.01	.40	<2	225
TREE 1 L65+00N 61+00E	15	19	110	39	.6	15	22	1672	7.33	27	<8	<2	2	152	<.2	<3	<3	21	.12	.243	40	2	.05	225	<.01	<3	.50	.04	.66	<2	90
TREE 1 L65+00N 61+50E	14	22	82	43	.5	12	13	1102	7.38	13	<8	<2	6	126	<.2	<3	<3	13	.23	.188	37	3	.06	224	<.01	<3	.56	.03	.55	<2	60
TREE 1 L65+00N 62+00E	16	20	99	193	1.2	18	12	1379	5.40	38	<8	<2	21	68	2.4	4	<3	17	.12	.107	55	4	.04	329	.01	<3	.41	.02	.43	<2	675
TREE 1 L65+00N 62+50E	10	40	67	81	.5	14	6	587	5.45	24	<8	<2	24	18	.6	4	<3	6	.09	.039	61	4	.06	330	.01	5	.64	.01	.24	<2	235
TREE 1 L65+00N 63+00E	31	40	163	1921	2.6	15	7	575	4.48	33	<8	<2	8	30	24.1	4	<3	4	.12	.051	46	1	.05	265	<.01	3	.31	.01	.32	<2	3150
TREE 1 L65+00N 63+50E	12	37	40	189	1.0	10	10	4401	8.22	8	<8	<2	9	17	1.5	3	<3	8	.54	.122	90	7	.14	401	.01	7	.42	.01	.11	<2	120
TREE 1 L65+00N 64+00E	24	25	64	121	1.7	6	5	2208	4.04	14	<8	<2	14	10	1.0	4	4	12	.07	.049	153	10	.09	286	.02	4	.46	.01	.10	<2	65
STANDARD C3	24	61	33	158	5.4	36	12	764	3.37	54	20	3	19	27	22.8	18	17	75	.54	.087	17	160	.57	149	.07	20	1.78	.04	.15	15	940
STANDARD G-2	1	1	<3	42	<.3	8	5	565	2.31	<2	<8	<2	3	77	<.2	<3	<3	41	.67	.101	7	81	.61	311	.13	<3	1.04	.09	.52	2	<10

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

Data___ FA ____

ACME ANALYTICAL

Atna Resources Ltd. PROJECT FIRE/TREE FILE # 9803516

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 1 L63+50N 60+50E	7	11	56	28	<.3	9	8	602	4.74	12	<8	<2	5	45	.5	<3	<3	11	.54	.110	36	3	.08	360	<.01	4	.45	.02	.22	<2	135
TREE 1 L63+50N 61+00E	5	21	36	40	<.3	14	17	1304	4.44	8	<8	<2	3	33	.6	<3	<3	11	.98	.116	38	5	.13	211	<.01	<3	.34	.01	.12	<2	80
TREE 1 L63+50N 61+50E	6	28	31	77	.5	11	14	1127	4.19	10	<8	<2	3	39	.6	<3	<3	8	1.05	.106	40	3	.09	321	<.01	<3	.29	.01	.14	<2	110
TREE 1 L63+50N 62+00E	2	16	19	28	.3	8	12	671	2.35	6	<8	<2	4	26	<.2	<3	<3	7	1.34	.104	69	2	.12	165	<.01	3	.26	.01	.10	<2	60
RE TREE 1 L63+50N 62+00E	3	14	16	25	<.3	7	11	649	2.19	4	<8	<2	4	25	<.2	<3	<3	7	1.34	.098	69	1	.12	154	<.01	<3	.24	<.01	.09	<2	55
TREE 1 L63+50N 62+50E	7	23	43	67	.9	15	23	1126	4.40	15	<8	<2	7	30	.7	<3	3	15	.59	.206	72	1	.05	333	<.01	<3	.35	.01	.11	<2	115
TREE 1 L63+50N 63+00E	12	44	63	254	1.1	19	19	1999	5.77	18	<8	<2	9	30	2.1	3	<3	11	.26	.102	98	2	.08	877	.01	<3	.41	.01	.09	<2	335
TREE 1 L63+50N 63+50E	13	41	75	262	1.7	16	23	1669	6.40	26	<8	<2	8	32	1.8	6	<3	9	.46	.159	106	3	.07	348	<.01	<3	.52	.01	.14	<2	265
TREE 1 L63+50N 64+00E	7	62	40	176	1.0	26	35	1768	5.96	25	<8	<2	6	38	1.1	6	<3	10	1.81	.185	91	2	.12	425	<.01	<3	.46	.01	.12	<2	175
TREE 1 L62+00N 60+50E	6	18	57	62	.5	14	11	592	4.78	12	<8	<2	5	35	.9	<3	<3	11	.47	.114	46	2	.08	328	<.01	<3	.39	.01	.15	<2	100
TREE 1 L62+00N 61+00E	4	16	51	116	.4	13	17	1200	5.42	11	<8	<2	3	35	1.3	<3	<3	13	.84	.155	36	<1	.11	216	<.01	<3	.37	.01	.14	<2	150
TREE 1 L62+00N 61+50E	5	27	107	86	.7	14	19	1411	4.72	12	<8	<2	3	28	1.0	<3	<3	10	.65	.140	55	<1	.11	307	<.01	<3	.31	.01	.13	<2	65
TREE 1 L62+00N 62+00E	4	24	36	47	.7	16	21	1108	3.71	11	<8	<2	3	33	.5	<3	<3	12	2.06	.178	49	1	.14	317	<.01	<3	.31	.01	.10	<2	65
TREE 1 L62+00N 62+50E	4	43	27	84	<.3	37	21	1618	4.20	4	<8	<2	2	41	.7	<3	<3	18	1.79	.134	36	15	.32	675	.01	<3	.57	.01	.13	<2	95
TREE 1 L62+00N 63+00E	8	34	66	255	1.0	18	22	1338	5.15	16	<8	<2	5	26	1.9	3	3	16	.60	.165	74	1	.10	424	<.01	<3	.45	.01	.13	<2	305
TREE 1 L62+00N 63+50E	3	27	57	135	.4	15	20	1052	3.32	12	<8	<2	2	34	1.0	<3	<3	15	1.47	.183	49	3	.14	1115	<.01	<3	.39	.01	.11	<2	140
TREE 1 L62+00N 64+00E	5	29	102	275	.8	24	27	1652	4.04	18	<8	<2	9	39	2.2	<3	<3	12	1.15	.120	77	3	.11	1364	<.01	<3	.42	.01	.14	<2	245
TREE 1 L60+50N 60+50E	5	24	33	105	<.3	22	12	652	3.94	7	<8	<2	<2	14	.8	<3	<3	21	.13	.129	60	26	.23	205	.01	<3	.90	.01	.17	<2	35
TREE 1 L60+50N 61+00E	8	47	41	209	.3	32	13	1193	3.96	16	<8	<2	12	8	.7	<3	3	5	.18	.079	111	5	.05	360	<.01	<3	.33	<.01	.12	<2	265
TREE 1 L60+50N 61+50E	5	26	167	113	.7	11	15	659	4.23	12	<8	<2	3	28	.9	<3	3	10	.79	.138	57	<1	.12	176	<.01	<3	.31	.01	.10	<2	115
TREE 1 L60+50N 62+00E	8	12	21	109	<.3	5	5	365	2.47	8	<8	<2	<2	7	.4	<3	<3	10	.04	.066	52	1	.02	120	<.01	<3	.48	.01	.05	<2	45
TREE 1 L60+50N 62+50E	11	12	23	152	<.3	7	6	582	2.61	11	<8	<2	<2	4	.4	<3	<3	10	.02	.073	67	<1	.02	70	<.01	<3	.25	<.01	.06	<2	55
TREE 1 L60+50N 63+00E	<1	6	5	18	<.3	2	2	79	.82	<2	<8	<2	<2	12	<.2	<3	<3	19	.21	.057	7	<1	.05	55	.03	<3	.56	.03	.02	<2	20
TREE 1 L60+50N 63+50E	3	21	138	155	.4	14	13	537	2.70	10	<8	<2	2	21	1.2	<3	<3	16	.86	.138	50	4	.06	363	<.01	3	.49	.01	.08	<2	175
TREE 1 L60+50N 64+00E	4	32	51	389	.7	15	26	1302	4.38	12	<8	<2	3	27	2.2	<3	<3	15	.86	.227	72	<1	.06	374	<.01	<3	.53	.01	.10	<2	335
TREE 1 L59+00N 60+50E	4	31	23	200	<.3	42	15	465	3.52	11	<8	<2	5	17	.8	<3	<3	7	.50	.123	49	5	.09	305	<.01	<3	.56	.01	.09	<2	170
TREE 1 L59+00N 61+00E	8	23	156	93	<.3	19	13	610	4.20	15	<8	<2	5	30	1.4	<3	<3	12	.33	.133	51	2	.07	239	.01	<3	.40	.01	.14	<2	75
TREE 1 L59+00N 61+50E	<1	4	11	8	<.3	1	2	176	.53	<2	<8	<2	<2	9	<.2	<3	<3	7	.08	.047	7	<1	.03	32	.02	<3	.45	.03	.03	<2	15
TREE 1 L59+00N 62+00E	6	16	33	129	<.3	10	7	401	3.01	10	<8	<2	<2	8	.9	<3	<3	13	.09	.110	50	4	.07	171	<.01	<3	.66	<.01	.08	<2	65
TREE 1 L59+00N 62+50E	3	19	25	98	<.3	10	8	789	2.08	5	<8	<2	<2	9	2.4	<3	<3	10	.11	.151	32	<1	.04	318	<.01	<3	.45	.01	.09	<2	45
TREE 1 L59+00N 63+00E	1	6	10	31	<.3	5	5	1788	.69	<2	<8	<2	<2	7	.7	<3	<3	5	.06	.085	14	<1	.02	206	<.01	<3	.27	.02	.05	<2	70
TREE 1 L59+00N 63+50E	4	10	24	93	<.3	5	5	239	2.10	6	<8	<2	2	13	.3	<3	<3	12	.25	.133	43	<1	.04	176	<.01	<3	.72	.01	.05	<2	40
TREE 1 L59+00N 64+00E	5	24	38	125	<.3	16	12	861	2.94	8	<8	<2	2	11	.6	<3	<3	8	.27	.112	68	<1	.05	195	<.01	<3	.43	<.01	.11	<2	225
TREE 1 L57+50N 60+50E	4	21	29	80	<.3	21	15	1374	4.27	6	<8	<2	6	7	.6	<3	<3	28	.11	.074	48	17	.64	179	.01	<3	1.68	.01	.10	<2	20
TREE 1 L57+50N 61+00E	3	13	43	70	<.3	12	7	500	3.21	8	<8	<2	4	29	.4	<3	<3	12	.73	.099	34	<1	.10	339	.01	<3	.94	.02	.09	<2	85
STANDARD C3	25	63	34	162	5.4	36	13	786	3.46	58	22	<2	21	28	23.9	17	18	76	.55	.089	18	157	.58	149	.08	17	1.82	.04	.16	16	950
STANDARD G-2	1	2	4	42	<.3	8	5	567	2.29	<2	<8	<2	4	76	<.2	<3	<3	40	.65	.099	7	75	.60	305	.13	<3	1.01	.09	.52	2	<10

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

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 1 L57+50N 61+50E	5	23	79	116	<.3	17	12	653	4.11	9	<8	<2	3	21	.9	<3	<3	14	.40	.115	45	5	.23	477	<.01	<3	.94	.01	.08	<2	175
TREE 1 L57+50N 62+00E	3	21	17	52	<.3	16	10	268	2.78	3	<8	<2	<2	15	.2	<3	<3	20	.28	.141	22	10	.65	435	<.01	<3	1.69	.01	.07	<2	20
TREE 1 L57+50N 62+50E	6	13	46	101	<.3	7	6	329	2.70	7	8	<2	<2	18	.4	<3	<3	10	.36	.086	36	3	.09	317	<.01	<3	.62	.01	.06	<2	75
TREE 1 L57+50N 63+00E	<1	4	<3	31	<.3	2	1	28	.33	<2	<8	<2	<2	13	<.2	<3	<3	8	.27	.043	3	<1	.04	59	.03	<3	.54	.04	.02	<2	<10
TREE 1 L57+50N 63+50E	7	21	42	178	.7	12	12	625	3.36	12	<8	<2	4	15	1.4	<3	<3	12	.32	.158	69	<1	.05	162	<.01	<3	.34	.01	.08	<2	135
TREE 1 L57+50N 64+00E	4	16	29	126	<.3	8	7	618	2.39	7	<8	<2	<2	17	.7	<3	<3	10	.42	.101	35	<1	.06	362	.01	<3	.55	.02	.06	<2	175
TREE 1 L56+00N 60+50E	7	24	51	129	.4	14	13	739	4.80	12	<8	<2	5	21	.9	<3	<3	13	.31	.105	55	4	.11	400	<.01	<3	.66	.01	.10	<2	185
TREE 1 L56+00N 61+00E	2	14	13	71	<.3	21	11	396	3.59	4	<8	<2	<2	8	.4	<3	<3	53	.09	.103	27	29	1.37	351	.01	<3	2.21	.01	.11	<2	25
TREE 1 L56+00N 62+00E	3	11	9	31	<.3	6	6	425	1.84	4	<8	<2	<2	11	.2	<3	3	18	.14	.130	21	4	.06	223	.01	<3	.80	.01	.07	<2	25
TREE 1 L56+00N 62+50E	2	15	14	57	<.3	11	9	412	2.54	6	<8	<2	<2	7	.4	<3	<3	21	.08	.105	20	7	.37	177	.01	<3	1.18	.01	.08	<2	20
TREE 1 L56+00N 63+00E	4	25	78	142	.3	15	9	236	3.19	7	<8	<2	2	23	1.7	<3	<3	13	.59	.119	40	7	.28	413	<.01	<3	.93	.01	.08	<2	135
TREE 1 L56+00N 63+50E	5	20	43	105	<.3	13	13	748	4.01	9	<8	<2	3	19	.7	<3	<3	15	.28	.111	52	<1	.17	736	<.01	<3	.67	.01	.10	<2	190
TREE 1 L56+00N 64+00E	<1	2	3	8	<.3	1	1	40	.35	<2	<8	<2	<2	11	<.2	<3	<3	7	.22	.033	2	<1	.05	72	.02	<3	.34	.04	.02	<2	10
TREE 1 L54+50N 61+00E	4	33	31	94	<.3	10	13	884	4.73	6	<8	<2	<2	24	.7	<3	<3	18	.49	.115	28	2	.17	412	.01	<3	.84	.02	.11	<2	75
TREE 1 L54+50N 62+00E	<1	6	6	13	<.3	2	2	96	.75	<2	<8	<2	<2	11	<.2	<3	<3	12	.24	.060	5	<1	.06	95	.02	<3	.49	.03	.03	<2	10
TREE 1 L54+50N 62+50E	6	34	83	126	.7	12	15	1084	5.51	13	<8	<2	2	26	.9	<3	<3	19	.23	.114	33	2	.12	575	.01	<3	1.12	.02	.15	<2	120
TREE 1 L54+50N 63+00E	5	39	41	132	<.3	25	21	1286	6.33	16	<8	<2	<2	19	.8	<3	<3	19	.39	.099	45	5	.19	731	<.01	<3	.64	.01	.08	<2	120
RE TREE 1 L54+50N 63+00E	4	40	39	135	<.3	25	21	1337	6.52	14	<8	<2	<2	20	.8	<3	<3	19	.39	.101	48	5	.19	756	<.01	<3	.65	.01	.09	<2	130
TREE 1 L54+50N 63+50E	4	27	18	47	<.3	17	13	521	3.85	6	<8	<2	<2	11	.4	<3	<3	16	.21	.131	35	8	.10	285	<.01	<3	.69	<.01	.06	<2	20
TREE 1 L54+50N 64+00E	1	18	10	36	<.3	10	9	486	3.50	3	<8	<2	<2	15	.5	<3	<3	16	.46	.112	20	3	.11	396	<.01	<3	.80	.01	.05	<2	30
TREE 1 L53+00N 54+50E	6	22	17	42	.6	13	28	2754	6.20	7	<8	<2	5	34	.4	<3	<3	14	.65	.280	43	1	.17	738	<.01	<3	.61	.01	.12	<2	45
TREE 1 L53+00N 55+00E	5	21	161	56	.5	14	19	1197	5.27	13	<8	<2	6	60	.8	<3	<3	9	.43	.221	35	2	.13	311	<.01	<3	.80	.01	.45	<2	70
TREE 1 L53+00N 55+50E	5	18	131	39	.4	10	11	557	5.88	17	<8	<2	8	72	.8	<3	<3	5	.24	.167	51	2	.09	177	<.01	4	.48	.01	.48	<2	200
TREE 1 L53+00N 56+00E	24	64	134	329	2.0	23	11	3753	17.21	40	<8	<2	16	30	4.4	<3	<3	9	.11	.097	101	4	.12	414	.01	3	2.16	.01	.28	<2	430
TREE 1 L53+00N 56+50E	7	18	52	74	.5	14	13	1973	6.02	13	<8	<2	5	17	1.0	<3	<3	10	.30	.120	46	2	.11	579	<.01	3	.48	.01	.18	<2	200
TREE 1 L53+00N 57+00E	7	29	70	127	.5	20	21	2054	7.43	11	<8	<2	4	19	1.5	<3	<3	13	.35	.163	58	4	.11	629	<.01	<3	.78	.01	.15	<2	130
TREE 1 L53+00N 57+50E	7	47	397	238	1.5	13	23	1180	7.77	23	<8	<2	<2	34	1.0	<3	<3	18	.13	.185	36	1	.09	678	.01	<3	1.39	.02	.36	<2	670
TREE 1 L53+00N 58+00E	<1	3	4	10	<.3	1	1	53	.41	<2	<8	<2	<2	7	<.2	<3	<3	9	.07	.027	2	<1	.03	28	.02	<3	.29	.03	.03	<2	15
TREE 1 L53+00N 58+50E	9	30	279	106	1.1	10	13	968	7.05	28	<8	<2	<2	46	.6	<3	<3	17	.27	.180	32	5	.12	595	.01	<3	1.34	.03	.38	<2	245
TREE 1 L53+00N 59+00E	10	59	161	210	.9	29	34	2465	6.55	31	<8	<2	4	33	2.2	<3	<3	16	.27	.131	56	8	.15	614	.01	<3	1.09	.01	.15	<2	225
TREE 1 L53+00N 59+50E	9	47	74	303	.6	20	21	2009	6.75	39	<8	<2	5	29	2.0	<3	<3	15	.44	.175	53	4	.17	945	<.01	<3	1.83	.01	.15	<2	95
TREE 1 L53+00N 60+00E	9	35	58	218	.4	13	13	1768	5.51	18	<8	<2	8	61	1.8	<3	3	11	.28	.151	64	3	.10	789	<.01	<3	.96	.01	.20	<2	60
TREE 1 L53+00N 60+50E	16	45	110	237	.9	17	18	1722	6.66	26	<8	<2	7	60	2.1	<3	<3	12	.20	.177	51	3	.09	445	<.01	<3	1.01	.02	.39	<2	130
TREE 1 L53+00N 61+00E	5	26	43	139	.3	9	10	1153	4.05	13	<8	<2	<2	26	1.2	<3	3	14	.29	.107	32	3	.10	468	.01	<3	.81	.03	.13	<2	70
TREE 1 L53+00N 63+00E	4	26	19	59	<.3	18	19	904	4.33	8	<8	<2	<2	17	.6	<3	<3	20	.39	.112	29	8	.15	519	<.01	<3	.82	.01	.06	<2	20
STANDARD C3	25	64	35	165	5.3	36	13	780	3.44	56	20	<2	18	27	23.6	15	18	76	.52	.090	17	163	.60	149	.07	18	1.81	.04	.16	16	935
STANDARD G-2	1	2	<3	40	<.3	8	5	547	2.17	<2	<8	<2	3	71	<.2	<3	<3	39	.60	.097	7	75	.58	266	.13	<3	.96	.08	.50	2	<10

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

Data ___ FA ____

ACME ANALYTICAL

Atna Resources Ltd. PROJECT FIRE/TREE FILE # 9803516

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 1 L53+00N 63+50E	4	26	22	49	<.3	23	18	771	4.54	6	<8	<2	<2	11	.6	<3	<3	24	.27	.099	37	7	.10	519	<.01	<3	.71	.01	.08	<2	40
TREE 1 L53+00N 64+00E	4	38	22	60	<.3	30	23	836	5.12	5	<8	<2	3	11	.5	<3	<3	19	.43	.111	47	6	.14	663	<.01	<3	.82	<.01	.09	<2	65
TREE 1 L51+50N 35+00E	4	17	107	345	.9	11	10	1005	3.89	11	<8	<2	5	35	3.4	<3	<3	8	.50	.114	56	<1	.10	1920	<.01	<3	.73	<.01	.07	<2	265
TREE 1 L51+50N 36+50E	6	41	92	107	.5	16	20	3026	7.31	16	<8	<2	5	21	1.2	<3	<3	5	.13	.121	65	1	.07	1292	<.01	<3	.70	.01	.23	<2	195
TREE 1 L51+50N 37+00E	3	19	49	122	.3	13	14	2055	4.70	8	<8	<2	<2	25	1.0	<3	<3	10	.60	.133	32	1	.10	1130	.01	<3	.50	.01	.13	<2	125
TREE 1 L51+50N 37+50E	4	31	64	97	.3	18	20	1282	5.42	12	<8	<2	3	71	.9	<3	<3	7	.68	.178	48	3	.08	1017	<.01	<3	.46	.01	.14	<2	220
TREE 1 L51+50N 38+00E	6	7	172	16	.4	3	4	129	6.68	14	<8	<2	<2	95	.3	<3	<3	6	.03	.634	25	2	.01	92	<.01	<3	.17	.01	.90	<2	165
TREE 1 L51+50N 38+50E	5	20	164	19	.6	7	7	293	3.80	18	<8	<2	5	49	.5	<3	<3	5	.14	.198	50	<1	.01	324	<.01	<3	.16	.01	.41	<2	295
TREE 1 L51+50N 39+00E	11	23	78	221	<.3	14	7	1034	3.57	16	<8	<2	6	22	.9	<3	3	5	.22	.064	94	1	.04	427	<.01	<3	.25	.01	.11	<2	385
TREE 1 L51+50N 39+50E	19	7	39	179	<.3	1	4	2986	3.82	8	<8	<2	11	12	.8	<3	<3	2	.16	.043	123	1	.03	292	<.01	<3	.26	.01	.07	<2	430
TREE 1 L51+50N 61+50E	7	66	292	188	1.2	21	38	1177	8.61	27	<8	<2	4	65	1.9	<3	<3	15	.06	.252	38	1	.03	147	.01	<3	1.79	.02	.62	<2	365
TREE 1 L51+50N 62+50E	7	18	84	134	<.3	11	15	2838	6.22	8	<8	<2	<2	25	1.0	<3	<3	16	.65	.152	37	3	.10	787	<.01	<3	.75	.01	.12	<2	135
TREE 1 L51+50N 63+00E	5	33	52	105	<.3	16	17	1127	4.61	8	<8	<2	4	24	.8	<3	<3	14	.47	.128	52	8	.16	330	.01	<3	.48	.01	.12	<2	75
TREE 1 L51+50N 63+50E	5	43	36	62	<.3	24	26	1244	4.96	6	<8	<2	4	13	.5	<3	<3	17	.31	.128	48	3	.09	326	<.01	<3	.41	<.01	.08	<2	100
TREE 1 L51+50N 64+00E	<1	18	7	40	<.3	10	7	204	1.63	<2	<8	<2	<2	12	<.2	<3	<3	11	.21	.088	18	3	.07	117	.01	<3	.45	.03	.08	<2	30
TREE 1 L50+00N 35+00E	5	16	46	125	<.3	10	7	553	2.78	7	<8	<2	3	34	.8	<3	<3	6	.26	.116	59	<1	.04	677	<.01	<3	.40	<.01	.10	<2	115
TREE 1 L50+00N 35+50E	5	16	52	128	<.3	9	8	632	2.93	8	<8	<2	2	42	.7	<3	<3	6	.37	.119	61	<1	.06	643	<.01	<3	.46	.01	.10	<2	145
TREE 1 L50+00N 36+00E	5	9	44	95	<.3	5	5	425	2.38	6	<8	<2	<2	26	.4	<3	<3	6	.30	.101	62	<1	.04	1054	<.01	<3	.52	.01	.07	<2	95
TREE 1 L50+00N 36+50E	8	11	39	116	<.3	6	4	476	2.71	8	<8	<2	4	16	.4	<3	<3	5	.14	.078	90	<1	.04	1133	<.01	<3	.56	<.01	.07	<2	165
TREE 1 L50+00N 37+00E	6	13	42	106	.5	8	5	568	2.59	7	<8	<2	3	24	.6	<3	<3	5	.37	.092	95	3	.04	1653	<.01	<3	.52	.01	.07	<2	215
TREE 1 L50+00N 37+50E	6	13	42	111	.3	6	4	323	2.57	7	<8	<2	3	17	.4	<3	<3	4	.39	.068	94	<1	.04	836	<.01	<3	.41	<.01	.06	<2	275
RE TREE 1 L50+00N 37+50E	6	14	43	113	<.3	7	4	331	2.65	6	<8	<2	2	18	.3	<3	<3	4	.40	.069	97	<1	.04	821	<.01	<3	.41	<.01	.06	<2	280
TREE 1 L50+00N 38+00E	8	15	60	136	.3	8	6	660	2.96	9	<8	<2	2	17	.7	<3	<3	4	.24	.073	83	<1	.03	808	<.01	<3	.35	.01	.09	<2	305
TREE 1 L50+00N 38+50E	7	13	62	82	<.3	6	5	481	2.69	9	<8	<2	2	21	.3	<3	<3	5	.36	.060	66	<1	.04	632	<.01	<3	.41	.01	.09	<2	210
TREE 1 L50+00N 39+00E	12	6	29	135	<.3	2	4	2838	3.14	8	8	<2	2	13	.6	<3	<3	1	.43	.039	78	<1	.04	318	<.01	<3	.38	.01	.11	<2	220
TREE 1 L50+00N 39+50E	11	6	36	171	.4	3	4	2960	3.45	7	<8	<2	5	11	.8	<3	<3	1	.33	.039	93	<1	.04	327	<.01	<3	.44	.01	.14	<2	275
TREE 1 L50+00N 40+00E	14	6	40	252	.3	3	5	3888	3.80	7	<8	<2	2	17	1.2	<3	<3	1	.72	.052	70	1	.04	417	<.01	<3	.42	.01	.12	<2	290
TREE 1 L50+00N 40+50E	10	7	35	228	.3	3	5	3007	4.36	7	<8	<2	7	20	1.0	<3	<3	1	.44	.042	82	<1	.05	403	<.01	<3	.61	.01	.21	<2	255
TREE 1 L50+00N 41+00E	16	10	48	353	.5	3	6	2641	5.26	11	<8	<2	7	26	1.3	<3	<3	<1	.30	.039	97	<1	.06	515	<.01	<3	1.03	.01	.22	<2	175
TREE 1 L50+00N 41+50E	7	11	101	141	2.2	3	4	2209	9.43	15	<8	<2	3	47	.9	3	<3	2	.11	.063	38	<1	.05	85	<.01	<3	.66	.02	1.06	<2	320
TREE 1 L50+00N 42+00E	4	16	117	126	6.1	2	4	2234	11.85	36	<8	<2	2	90	1.4	8	<3	1	.03	.096	35	<1	.03	86	<.01	<3	1.46	.02	1.24	<2	270
TREE 1 L50+00N 42+50E	15	20	119	157	6.6	7	6	1583	10.32	52	<8	<2	4	73	.9	7	<3	8	.03	.095	44	4	.08	65	.01	<3	.73	.02	1.26	<2	500
TREE 1 L50+00N 43+00E	18	29	356	139	10.1	3	4	522	13.95	61	<8	<2	<2	97	<.2	18	<3	3	.01	.117	30	<1	.03	57	<.01	<3	.60	.02	1.67	2	365
TREE 1 L50+00N 43+50E	25	8	215	60	10.4	2	2	183	10.00	103	<8	<2	2	54	<.2	13	<3	3	.01	.051	27	2	.02	52	.01	<3	.28	.05	1.58	<2	315
TREE 1 L50+00N 44+00E	23	9	41	262	<.3	2	3	1537	3.28	32	<8	<2	19	15	1.1	<3	<3	1	.20	.035	167	1	.03	162	<.01	<3	.29	.01	.16	<2	305
STANDARD C3	25	61	37	157	5.4	34	12	747	3.34	55	17	3	20	27	23.3	15	17	74	.52	.087	17	162	.57	143	.07	18	1.76	.04	.15	16	910
STANDARD G-2	1	1	<3	39	<.3	7	5	540	2.16	<2	<8	<2	2	71	<.2	<3	<3	38	.61	.094	6	73	.57	284	.12	<3	.94	.08	.49	2	<10

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

Data ___ FA ____

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppb
TREE 1 L50+00N 46+00E	17	15	90	145	.8	4	5	2761	5.68	20	<8	<2	20	78	.7	<3	<3	3	.12	.049	191	3	.03	201	<.01	<3	.32	.13	.20	<2	460
TREE 1 L50+00N 46+50E	23	8	61	85	<.3	2	3	1505	4.15	15	<8	<2	14	17	.2	<3	<3	1	.08	.035	114	<1	.03	116	<.01	<3	.23	.01	.11	<2	290
TREE 1 L50+00N 47+00E	13	14	116	181	.9	6	4	1283	4.36	34	<8	<2	16	27	.7	3	<3	3	.07	.046	117	4	.02	133	<.01	<3	.19	.01	.12	<2	1925
TREE 1 L50+00N 47+50E	15	17	64	181	.4	7	5	1343	3.87	27	<8	<2	17	22	1.1	<3	<3	11	.10	.049	124	5	.04	345	.01	<3	.25	.01	.09	<2	565
TREE 1 L50+00N 48+00E	25	10	73	332	<.3	3	3	2100	3.79	31	<8	<2	24	28	2.8	<3	3	1	.09	.032	167	3	.02	463	<.01	<3	.25	.02	.11	<2	860
TREE 1 L50+00N 48+50E	14	14	94	185	<.3	2	3	1853	4.20	19	<8	<2	24	17	1.2	<3	3	3	.07	.037	160	5	.04	113	<.01	<3	.29	.02	.09	<2	400
TREE 1 L50+00N 49+00E	10	16	34	136	<.3	3	4	2066	4.15	7	<8	<2	11	7	.4	<3	<3	1	.05	.017	38	<1	.03	182	<.01	<3	.21	<.01	.06	<2	245
TREE 1 L50+00N 49+50E	12	16	25	70	<.3	2	4	924	5.32	7	<8	<2	9	24	<.2	<3	<3	3	.02	.031	11	1	.01	1301	<.01	<3	.24	.01	.06	<2	470
TREE 1 L50+00N 50+00E	28	28	32	77	<.3	3	6	175	8.15	7	<8	<2	11	25	<.2	5	<3	23	.02	.053	2	<1	.01	769	<.01	3	.26	.01	.08	<2	1160
TREE 1 L50+00N 52+50E	10	12	18	79	<.3	12	6	1925	6.06	11	<8	<2	4	13	.3	<3	<3	16	.29	.063	47	8	.20	362	.02	<3	.53	.01	.10	<2	90
TREE 1 L50+00N 53+00E	8	24	45	686	.8	20	16	1699	5.46	18	<8	<2	<2	25	2.9	<3	<3	20	1.07	.092	27	7	.20	204	.01	5	.37	.01	.11	<2	675
RE TREE 1 L50+00N 53+00E	8	26	49	745	.6	21	18	1835	5.97	20	<8	<2	<2	28	3.2	<3	<3	21	1.17	.100	28	6	.22	267	.01	<3	.40	.01	.11	<2	710
TREE 1 L50+00N 53+50E	4	19	22	54	.5	12	16	2054	5.94	9	<8	<2	<2	25	.2	<3	<3	18	1.41	.140	22	5	.19	198	<.01	4	.41	.01	.12	<2	75
TREE 1 L50+00N 54+00E	4	10	18	46	<.3	9	18	1597	4.60	7	<8	<2	<2	38	.2	<3	<3	17	1.56	.229	27	5	.29	308	.01	3	.56	.01	.16	<2	55
TREE 1 L50+00N 54+50E	3	7	20	44	<.3	6	11	2321	4.12	5	<8	<2	4	15	.2	<3	<3	7	.50	.103	67	5	.10	713	<.01	<3	.51	<.01	.17	<2	50
TREE 1 L50+00N 55+00E	8	27	21	54	<.3	11	16	2448	6.73	12	<8	<2	2	23	.2	<3	<3	12	.72	.122	40	4	.21	332	<.01	<3	.54	.01	.13	<2	80
TREE 1 L50+00N 55+50E	4	20	22	78	<.3	13	22	1618	6.70	10	<8	<2	<2	34	.2	<3	<3	22	.96	.288	28	2	.23	554	<.01	<3	.74	.01	.14	<2	50
STANDARD C3	26	66	35	171	5.7	38	13	802	3.52	57	22	2	21	28	23.7	18	18	80	.54	.090	17	175	.61	145	.08	20	1.86	.04	.16	17	920
STANDARD G-2	2	1	3	45	<.3	8	5	579	2.32	<2	<8	<2	3	73	<.2	<3	<3	42	.64	.100	7	80	.64	289	.13	<3	1.02	.08	.52	2	15

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

Data ___ FA ___

APPENDIX II

WHOLE ROCK GEOCHEMICAL

CERTIFICATES OF ANALYSIS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. PROJECT FIRE-TREE File # 9802853 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	MgO %	CaO %	Na_2O %	K_2O %	TiO_2 %	P_2O_5 %	MnO %	Cr_2O_3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
A 70502	57.84	18.21	6.13	.39	.10	.16	10.67	.53	<.01	<.01	.016	10618	<20	40	802	57	148	<10	4.7	.01	4.83	100.08
A 70508	67.78	19.47	1.23	.44	.15	.10	6.35	1.05	.16	<.01	.029	1329	23	<10	367	35	89	<10	3.2	.01	.37	100.18
A 70516	74.40	12.55	1.11	1.00	.03	.04	4.84	.78	.02	.01	.036	29115	<20	136	215	22	47	11	2.2	.03	.70	100.32
RE A 70516	74.26	12.53	1.07	.99	.03	.04	4.94	.78	.05	<.01	.036	28593	<20	135	213	21	47	11	2.4	.01	.70	100.38
A 70521	46.98	15.44	11.17	3.54	4.71	3.80	4.28	2.05	.67	.14	.014	1127	21	195	201	29	42	14	7.1	1.64	.01	100.08

.200 GRAM SAMPLES ARE FUSED WITH 1.5 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3. OTHER METALS ARE SUM AS OXIDES.
TOTAL C & S BY LECO (NOT INCLUDED IN THE SUM).
- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 14 1998 **DATE REPORT MAILED:** July 22/98 **SIGNED BY**............D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data FA ___

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
A 72504	69.15	17.70	1.71	.35	.39	.06	5.84	1.38	.34	<.01	.027	3070	<20	26	292	37	85	<10	3.0	.02	.51	100.35
A 72505	65.14	19.35	1.53	.49	.86	.05	6.67	2.23	.60	<.01	.031	2037	<20	60	237	36	54	13	3.1	.01	.40	100.34
RE A 72505	64.97	19.36	1.54	.48	.86	.04	6.81	2.24	.63	<.01	.029	2042	<20	60	242	36	53	13	3.2	.01	.38	100.44

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

Data ___ FA ___

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. File # 9803258

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: P. Holbek

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
A 72589	71.69	11.19	4.04	.04	.03	.19	8.82	.38	.01	<.01	.024	7151	<20	17	383	40	66	<10	2.5	.07	2.75	99.78

.200 GRAM SAMPLES ARE FUSED WITH 1.5 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3. OTHER METALS ARE SUM AS OXIDES.
TOTAL C & S BY LECO (NOT INCLUDED IN THE SUM).
- SAMPLE TYPE: ROCK

DATE RECEIVED: AUG 5 1998 DATE REPORT MAILED: Aug 18/98 SIGNED BY. C.L. ..D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ✓ FA ____

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. File # 9803361

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	MgO %	CaO %	Na_2O %	K_2O %	TiO_2 %	P_2O_5 %	MnO %	Cr_2O_3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
A 72599	44.14	14.83	11.34	3.99	8.42	2.09	2.35	2.54	.46	.16	.009	952	29	527	157	24	42	34	9.7	1.84	.04	100.24
A 72600	44.37	12.85	11.05	8.15	8.67	2.84	.56	1.97	.45	.18	.047	587	136	298	107	20	27	47	8.6	1.39	.06	99.88
RE A 72600	44.56	12.86	11.18	8.12	8.65	2.83	.56	1.96	.45	.18	.046	591	126	297	109	19	29	48	8.3	1.35	.04	99.84
A 72603	47.59	15.19	6.33	3.24	5.78	.07	8.75	3.15	1.22	.10	.011	1871	<20	87	236	37	63	24	8.4	1.75	.11	100.10

.200 GRAM SAMPLES ARE FUSED WITH 1.5 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3. OTHER METALS ARE SUM AS OXIDES.
TOTAL C & S BY LECO (NOT INCLUDED IN THE SUM).
- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 10 1998 DATE REPORT MAILED: Aug 20/98 SIGNED BY...C.L..... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

 Data / FA ___

APPENDIX III

HORIZONTAL COPLANAR LOOP EM

(MAX MIN)

GEOPHYSICAL REPORT

TREE/FIRE #1 GRID

YUKON TERRITORY

FOR

ATNA RESOURCES LTD

BY

DELTA GEOSCIENCE LTD

DECEMBER 14, 1998. GRANT A. HENDRICKSON, P.GEO.

DATA PRESENTATION AND EQUIPMENT DESCRIPTION

The horizontal coplanar loop E.M. data is presented as stacked profile plans of the inphase and quadrature components for each frequency. Basic E.M. coverage was carried out at a coil separation of 250 meters and six frequencies: 220Hz, 440Hz, 880Hz, 1760Hz, 3520Hz and 7040Hz.

All survey maps are presented at 1:5000 scale in this report.

Profile data is presented increasing to the top (north) from a base level (value at the line position). The inphase response is plotted as a solid line, whereas the dashed line shows the corresponding quadrature response.

The manufacturer's specifications and capability sheets for the new 1998 I-9 Maxmin system and related software package follow.

APEX MAXMIN I+9 EM SYSTEM

I+ designation, with improved transmitter efficiency and increased dipole moments, 1998

❒ Designed for groundwater and mineral exploration, and for geoengineering applications, continuing and expanding the concepts of the earlier and highly popular MaxMin models.

❒ Frequency span is extended to nine octavely spaced frequencies from 110 to 28160 Hz, with 11 coil separations from 12.5 to 400 or 10 to 320 metres. These and other developments result in greater performance, more applications and enhanced interpretation.

❒ Advanced spheric and powerline interference rejection is still further improved, resulting in faster and more accurate surveys, particularly at the larger coil separations.

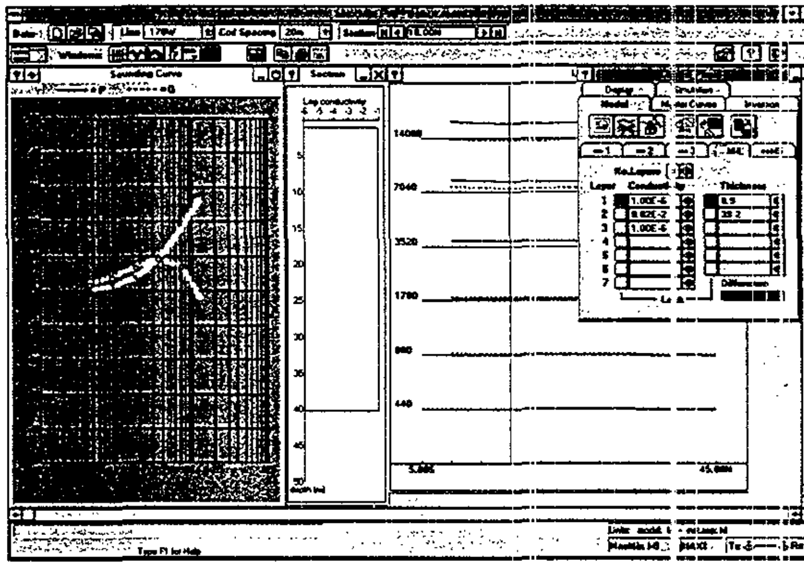
❒ MaxMin Computer or MMC, which is described in a separate data sheet, is offered for digital data processing, display, storage and transfer. The MMC displays and stores the in-phase and quadrature readings, their standard deviations, and the corresponding apparent ground conductivity values. Rough terrain surveys are also simplified with the MMC.

❒ MaxMin Pro data interpretation and presentation software program is available for layered earth parametric soundings and discrete conductor surveys done with MaxMin.

TRANSMITTER

RECEIVER + MMC

Layered earth interpretation:



- Semi-automated curve matching with half-space, 2 and 3 layer models.
- Forward modeling and Inversion.
- Up to 7 layers models.
- Parameter locking or constrained range for inversion.
- Complete inversion statistics output.
- Parametric (frequency), geometric (spacing), or mixed mode sounding.
- Data masking: can reject bad data points or use only quadrature.
- Optional normalization to low frequency in-phase to correct for geometrical errors.

Additional MAXMIN PRO features:

Simplified data input:

- Automatically extracts data and survey information from the .MMD file.
- Graphical entry of plates.

Support for all of the MaxMin maximum coupled modes.

Versatile display and data views:

- In-phase and in-quad vs. frequency sounding.
- Phasor (Argand) diagram.
- Survey map (zoomable).
- Stacked line profile.
- Vertical conductivity section.
- Inversion statistics.
- Persistent display shows several models at once.
- User configurable window placement.

Easy data point selection:

- Tape deck style line and station selectors or
- Selection by mouse click on survey map.

Model data base:

- Automatic creation of a model data base.
- Allows for interpretation in multiple sessions as previous results are saved.

Versatile output capabilities:

- File output, including Geosoft .XYZ format.
- Printed report.
- Windows® clipboard for transfer to other applications.

On-line documentation:

- Full featured Windows® Help hypertext documentation.

Hardware protection:

- Uses a «dongle» rather than software protection.

System requirements: Any xx86 computer running Windows® 3.1 or later, Windows 95®, or Windows NT® 3.5 or later with 2MB of disk space. A mouse or other pointing device is essential. While not absolutely essential, a color monitor of at least SVGA resolution is highly recommended. VGA is the minimum supported resolution. Floating point support is very highly recommended. Printer port is essential for printing and for connecting the hardware protection key.

A DEMONSTRATION PROGRAM IS AVAILABLE ON REQUEST

1998 - 04 - 14

APEX PARAMETRICS LIMITED

Telephone: 1 905 - 852 5875 Fax: 1 905 - 852 9688

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

APEX MAXMIN COMPUTER MMC

❐ The MMC interfaces with MaxMin EM System receivers for digital data processing, display, storage and transfer, enhancing survey productivity and data accuracy.

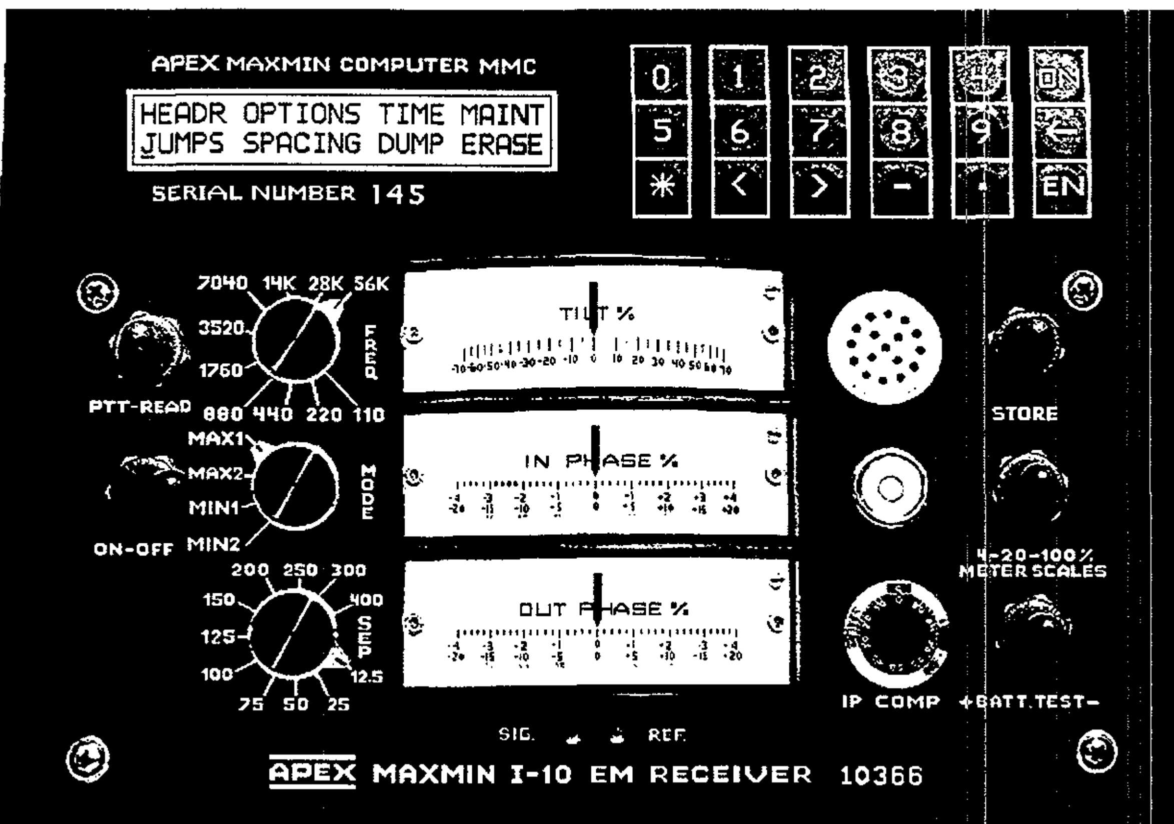
❐ Digital display and logging of in-phase (real) and quadrature (imaginary) readings with standard deviations, the corresponding apparent ground conductivity values, line, station, terrain slope and coil tilt information.

❐ Easy fingertip operation by read and store switches on MaxMin receiver front panel, with digital averaging for improved signal to noise ratio.

❐ Rough terrain surveys are simplified with the use of built-in tilt meter, slope entry and computed coil orientation and separation information.

❐ Data transfer, formatting, correcting and viewing programs are supplied for personal computers. Program for computing multi-frequency best-fit apparent conductivities and fit errors is provided.

❐ MaxMin Pro data interpretation and presentation software program is available for multi-layer parametric or geometric soundings and for discrete conductor surveys done with MaxMin EM and MMC.



MMC INSTALLED WITH MAXMIN I-10 RECEIVER IN THE LEATHER CARRYING CASE

MAXMIN COMPUTER MMC SPECIFICATIONS:

OPERATING SYSTEM:	Menu driven user-friendly hierarchial operating system interfacing with MaxMin EM System receiver and with personal computers.
DISPLAY:	Extended temperature Liquid Crystal Display, with two lines of 24 alphanumeric characters each.
KEYBOARD:	18 tactile pushbutton keys
BEEPER:	To provide audible operator guidance and to speed up operations, especially in very cold weather.
CLOCK CALENDAR:	Date and Time (year, month, day, hour and minute).
COIL TILT:	Tilt display, with built in tilt sensor and measurement, with 0±99% topographic grade range and with 1% resolution.
IN-PHASE & QUADRATURE:	0±199.9% autoranging programmable gain system with 0.1% resolution for displayed data and 0.01% resolution for stored data.
APPARENT CONDUCTIVITY:	0.1 to 3276 milliSiemens (millimho) per metre available conductivity range, with conductivity arrived at using the quadrature, in-phase, frequency and coil separation data.
PROCESSOR:	16 bit low power CMOS CPU and bus at 6 MHz clock rate.
MEMORY:	ROM: 16 Kb, expandable to 64 Kb. RAM: 256 Kb, static CMOS.
PHYSICAL SIZE:	24.2 x 17.3 x 4.3 cm, to fit inside the MaxMin receiver leather case notebook pocket.
CARRYING WEIGHT:	1.0 Kilogram.
BATTERIES:	Two 9V-0.6Ah alkaline batteries. Battery life 28 hours continuous duty, less in cold weather. Optional 1.2 Ah lithium batteries recommended for very cold temperature operation. One lithium 3 Volt memory back-up battery, type 2032.
CONNECTIONS:	19 pin bayonet connector receptacle to connect to MaxMin receiver with the supplied tubular aluminum connectors. One each of DB25S and DB9S data transfer cords supplied for downloading data to personal computer serial ports.
TEMPERATURE RANGE:	Minus 30 to plus 60 degrees Celsius. Temperature sensing, measurement and display built-in.

Specifications are subject to changes without prior notification.

1398-04-01

Telephone: 1 905 852 5875 Facsimile: 1 905 852 9688

APEX PARAMETRICS LIMITED

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

Airport: Toronto International

APEX MAXMIN PRO DATA INTERPRETATION PROGRAM

LAYERED EARTH INTERPRETATION.

THIN PLATE INTERPRETATION.

ACCEPTS APEX .MMD FILES, COMPATIBLE WITH MAXMIN COMPUTER.

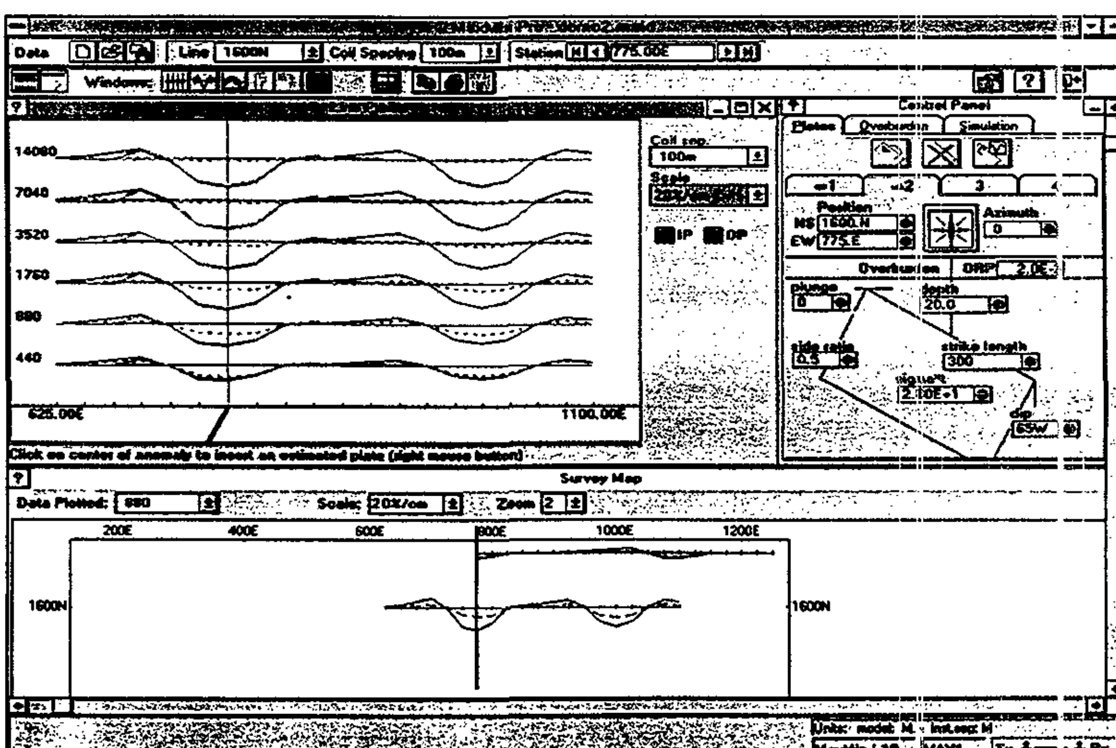
USER-FRIENDLY WINDOWS® BASED OPERATOR INTERFACE.

CLIPBOARD SUPPORT FOR DATA TRANSFER TO OTHER PROGRAMS.

ON-LINE DOCUMENTATION.

PLATE INTERPRETATION:

- Computing engine derived and improved from classical U of Toronto PLATE program.
- Up to 4 plates.
- Graphical insertion of plates.
- Plates positioned in survey grid coordinates.
- Automated curve matching for quick preliminary anomaly interpretation.
- Corrects for overburden conductivity.
- Up to 4 overburden zones.
- Graphical entry of overburden zones.



MAXMIN I+9 ELECTROMAGNETIC SYSTEM SPECIFICATIONS:

FREQUENCIES: 110, 220, 440, 880, 1760, 3520, 7040, 14080 and 28160 Hz.

COIL SEPARATIONS: SET No. 1: 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (the standard set).
SET No. 2: 10, 20, 40, 60, 80, 100, 120, 160, 200, 240 and 320 metres (selected with grid switch inside the receiver).
SET No. 3: 50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 and 1600 feet (selected with grid switch inside the receiver).

TRANSMITTER DIPOLE MOMENTS:

110 Hz:	250 Atm^2	3520 Hz:	120 Atm^2
220 Hz:	245 Atm^2	7040 Hz:	60 Atm^2
440 Hz:	240 Atm^2	14080 Hz:	30 Atm^2
880 Hz:	230 Atm^2	28160 Hz:	15 Atm^2
1760 Hz:	220 Atm^2		

MODES OF OPERATION: MAX 1: Horizontal loop or slingram - transmitter and receiver coil planes horizontal and coplanar.
MAX 2: Vertical coplanar loop mode - transmitter and receiver coil planes vertical and coplanar.
MIN 1: Perpendicular mode 1 - transmitter coil plane horizontal and receiver coil plane vertical.
MIN 2: Perpendicular mode 2 - transmitter coil plane vertical and receiver coil plane horizontal.

PARAMETERS MEASURED: In-phase and quadrature componets of the secondary magnetic field, in % of primary field.

READOUTS: Analog direct edgewise meter readouts for in-phase, quadrature and tilt. Additional digital LCD readouts provided in the optional MMC computer. Interfacing and controls are provided for ready plug-in of the MMC.

RANGES OF READOUTS: Switch activated analog in-phase and quadrature scales: 0 ± 4 %, 0 ± 20 % and 0 ± 100 %, and digital 0 ± 199.9 % autorange with optional MMC. Analog tilt 0 ± 75 % and 0 ± 99 % grade with MMC.

RESOLUTION: Analog in-phase and quadrature 0.1 to 1 % of primary field, depending on scale used, digital 0.01 % with autoranging MMC; tilt 1 % grade.

REPEATABILITY: 0.01 to 1 % of primary field, typical, depending on frequency, coil separation and conditions.

SIGNAL FILTERING: Powerline comb filter, continuous spheric noise clipping, autoadjusting time constant, and more.

WARNING LIGHTS: Receiver signal and reference warning lights to indicate potential error conditions.

SURVEY DEPTH PENETRATION: From surface down to 1.5 times coil separation for large horizontal target and 0.75 times coil separation for large vertical target, values typical.

REFERENCE CABLE: Lightweight unshielded 4/2 conductor teflon cable for maximum operating temperature range and for minimum pulling friction.

INTERCOM: Voice communication link provided for operators via the reference cable.

TEMP. RANGE: Minus 40 to plus 60 degrees Celsius, operating.

RECEIVER BATTERIES: Four standard 9 V - 0.6 Ah alkaline batteries. Life 20 hours continuous duty, less in cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).

TRANSMITTER BATTERIES: Rechargeable gel-type lead-acid 12 V - 14 Ah batteries (4 x 6 V - 7.2 Ah) in nylon belt pack.

TRANSMITTER BATTERY CHARGERS: 14.8 V - 2.5 A nominal output with automatic switching to 13.8 V float mode after battery pack is charged. Operation from 110 - 120 and 220 - 240 VAC, 50/60/400 Hz, and from 10 - 14 VDC supplies.

RECEIVER WEIGHT: 8 Kg carrying weight (including the two ferrite cored receiver coils), 9 Kg with MMC computer.

TRANSMITTER WT: 15 Kg carrying weight.

SHIPPING WEIGHT: 60 Kg plus reference cables at 3 Kg per 100 metre, plus optional items if any. Shipped in two aluminum lined field/shipping cases.

STANDARD SPARES: Spare transmitter battery pack, spare transmitter battery charger, two spare transmitter retractile connecting cords, spare set of receiver batteries.

OPTIONS AND ACCESSORIES, PLEASE SPECIFY:

- MMC, Optional MaxMin Computer
- Data interpretation and presentation programs
- Reference cables, lengths as required
- Reference cable extension adapter
- Handheld inclinometer for rough terrain
- Receiver extended life lithium batteries
- Transmitter ni-cad battery and charger option
- Receiver rechargeable battery & charger option
- Minimal, regular or extended spare parts kit

Specifications are subject to changes without prior notification.

1996 - 01 - 01

Telephone: 1 905 852 5875 Facsimile: 1 905 852 9688

APEX PARAMETRICS LIMITED

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

Airport: Toronto International

SURVEY PROCEDURE

Atna personnel ensured that a grid was established prior to the arrival of the Delta Geoscience crew. Survey lines and stations were established by slope chaining out from tie lines on the east and west sides of the properties. This procedure, while quite rapid, results in some significant mis-ties between lines, particularly when the topography is undulating and locally quite severe. The data was corrected by a software procedure developed by Apex Parametrics for slope chained lines.

The depth of investigation of a horizontal coplanar loop E.M. system (like the Maxmin) is considered to be 1.5 times the coil separation for a large horizontal target and 0.75 times the coil separation for a large vertical target. These figures are for the typical conductivity values seen in Canadian massive sulphide deposits. The depth of investigation for smaller targets and/or poorer conductivity mineralization would of course be proportionally less.

Bear in mind that the response parameter of a horizontal co-planar loop E.M. system is due to the product of the following components: ($\mu_0 \omega l \sigma s$)

where μ_0 = permeability of free space = $4\pi \times 10^{-7}$ henry/m.

ω = $2\pi f$ = rotational frequency.

l = coil separation (meters)

σ = conductivity (Seimens/meter)

s = thickness of conductor (meters)

Note that increases in the coil separation have the same effect as increasing the frequency on the response parameter. With large coil separations the system became more sensitive to deep conductors, although the individual resolution ability for shallow, closely spaced conductors is lessened.

If the response parameter becomes too high, the system becomes unstable (overly sensitive) with large amplitude changes for very minor changes in conductivity. This high frequency problem will occur with large coil separations and weakly conductive host rocks, i.e. argillaceous metasediments. Clearly the conductive host problem limits the ability of any E.M. system to properly evaluate the response of a deep weak conductor. One is obliged to base the interpretation on the lower frequency data. As expected, there was a steady attenuation of the E.M. responses with lower frequencies throughout this survey.

The depth extent of conductors discussed in this report is listed as poor, moderate or good and is relative to the coil separation. Dip resolution is also relative to the coil separation.

The quadrature response of the E.M. system remains largely unaffected by coil separation and orientation errors due to bad grid chaining and does respond to the poorer quality conductors better than the inphase. These two facts have proven useful in the evaluation and outlining of the moderate to weak strength conductivity targets detected in this survey. The inphase response will focus on the better conductivity zones within a conductive zone. Good inphase data does however require good quality grid chaining In mountainous terrain some grid chaining problems are unavoidable. To further eliminate the noise due to chaining errors, the lowest frequency inphase data (220Hz) can be subtracted from the higher frequency in-phase data. This procedure should only be used when the conductors of interest are weak to moderate conductivity, i.e. virtually a zero response on the inphase at 220Hz. This procedure is technically correct since coil separation errors generally have the same amplitude regardless of the frequency. The subtraction process can therefore largely eliminate chaining errors from the more important higher frequency inphase data, without adversely affecting the anomalous bedrock conductor responses. This procedure was necessary on the Tree/Fire #1 Grid data due to obvious coil separation errors.

The conductor technical parameters listed herein and the areal extent of the conductors shown on the accompanying map are largely based on the 880Hz data. Note however that the estimation of the apparent width, depth and conductivity of the individual conductors is very frequency dependent. The 880Hz frequency does limit somewhat the host response, while still maintaining a significant amplitude response from the conductors of interest.

DISCUSSION OF THE DATA

A perusal of the E.M. data indicated there were some problem areas due to grid chaining errors. The full correction procedure outlined in the section on survey procedure was used to remove the errors, i.e. normalise to the lowest frequency inphase response. This step accounts for the 220Hz inphase data being deleted, i.e. only quadrature data shown.

Very few significant strength conductors were detected on this grid. Several very weak one line anomalies were however detected. Depth to the top of these conductors is likely in the 70 meter range. Overall, the rocks underlying this grid appear to be generally quite resistive, i.e. perhaps a higher volcanic component to the underlying geology.

Two conductive zones however are worthy of being discussed further, since they do have significant amplitude and strike length. Conductor #2 is significantly better than #1. The surface trace of all conductive zones is shown on the 880Hz data plan.

CONDUCTOR #1:

- centered at 4450E on L.5450N.
- strike length 400m, narrow conductor.
- depth approx. 70m.
- conductivity thickness product 2 Seimens.
- dip uncertain.

CONDUCTOR #2:

- centered at 4650E, 5200N.
- a narrow moderate strength conductor.

- dip uncertain, but probably moderately steep to the east.
- conductivity thickness 5 Seimens.
- depth to the top 70 meters.
- strike length 300 meters, but open to the south.

CONCLUSIONS AND RECOMMENDATIONS

The weak to moderate conductors outlined by the E.M. survey clearly need to be evaluated with the detail grid geology and geochemistry. At this time, no particular exploration significance can be attached to these conductors, other than to say they are thin bedrock conductors. Conductor #2 is the best E.M. conductor within this grid. The depth to the top of these conductive zones suggests considerable overburden thickness and/or the zones do not subcrop beneath a thin overburden cover.

Grant A. Hendrickson, P.Geo.

REFERENCES

Apex Parametrics, 1998: Technical Manuals on the Maxmin System.

Ketola, M., and Puranan, M., 1967: Type Curves for the Interpretation of Horizontal Loop E.M. Anomalies over tabular bodies. Geological Survey of Finland, Report on Investigations, N:01.

STATEMENT OF QUALIFICATIONS

Grant A. Hendrickson

- B.Science, University of British Columbia, Canada, 1971. Geophysics option.
- For the past 27 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe, Central and South America and Asia.
- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.
- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.
- Active member of the Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and the British Columbia Geophysical Society.

Dated at Delta, British Columbia, Canada, this 14 day of DEC, 1998.

G. Hendrickson

Grant A. Hendrickson, P.Geo.

GEOPHYSICAL REPORT

TREE/FIRE #2 GRID

YUKON TERRITORY

FOR

ATNA RESOURCES LTD

BY

DELTA GEOSCIENCE LTD

DECEMBER 14, 1998.

GRANT A. HENDRICKSON, P.GEO.

TABLE OF CONTENTS

INTRODUCTION

At the request of Atna Resources Ltd., Delta Geoscience Ltd has conducted horizontal co-planar loop electromagnetic surveys over the Tree/Fire #2 Grid.

These claims are located in the centre of the Yukon, close to the dormant Ketza River mine. As this brief report is to be appended to Atna's geological reports, no location, claim maps or geological discussion will be included.

The Maxmin electromagnetic system developed by Apex Parametrics Ltd was used for this survey. The system utilised was the much improved 1-9 model introduced in the spring of 1998.

Access to the grid was by helicopter from the base camp Atna established at the Ketza mine site.

During the period July 23-24, Delta Geoscience conducted six kilometers of multi-frequency horizontal coplanar loop E.M. survey. To ensure a good depth of investigation a large coil separation was employed for all the basic coverage. Productivity was typically 3 km per day.

The topography of the survey area is quite typical of the Yukon, with rugged alpine terrain. Fortunately most of the survey work was conducted above the tree line. The topography itself presented no problems, however there were numerous significant scree slopes.

PERSONNEL

Grant Hendrickson - Senior Geophysicist-Supervisor.

Kristian von Fersen - Senior Technician.

Jan Dobrescu - Junior Geophysicist.

EQUIPMENT

1 - Apex Parametrics 1998 1-9 Electromagnetic System.

1 - NEC Versa Field Computer.

1 - Hewlett Packard 250C Colour Plotter/Printer.

4 - Spare Coil Separation Cables.

DATA PRESENTATION AND EQUIPMENT DESCRIPTION

The horizontal coplanar loop E.M. data is presented as stacked profile plans of the inphase and quadrature components for each frequency. Basic E.M. coverage was carried out at a coil separation of 250 meters and six frequencies: 220Hz, 440Hz, 880Hz, 1760Hz, 3520Hz and 7040Hz.

All survey maps are presented at 1:5000 scale in this report.

Profile data is presented increasing to the top (north) from a base level (value at the line position). The inphase response is plotted as a solid line, whereas the dashed line shows the corresponding quadrature response.

The manufacturer's specifications and capability sheets for the new 1998 1-9 Maxmin system and related software package follow.

APEX MAXMIN I+9 EM SYSTEM

I+ designation, with improved transmitter efficiency and increased dipole moments, 1998

❒ Designed for groundwater and mineral exploration, and for geoengineering applications, continuing and expanding the concepts of the earlier and highly popular MaxMin models.

❒ Frequency span is extended to nine octavely spaced frequencies from 110 to 28160 Hz, with 11 coil separations from 12.5 to 400 or 10 to 320 metres. These and other developments result in greater performance, more applications and enhanced interpretation.

❒ Advanced spheric and powerline interference rejection is still further improved, resulting in faster and more accurate surveys, particularly at the larger coil separations.

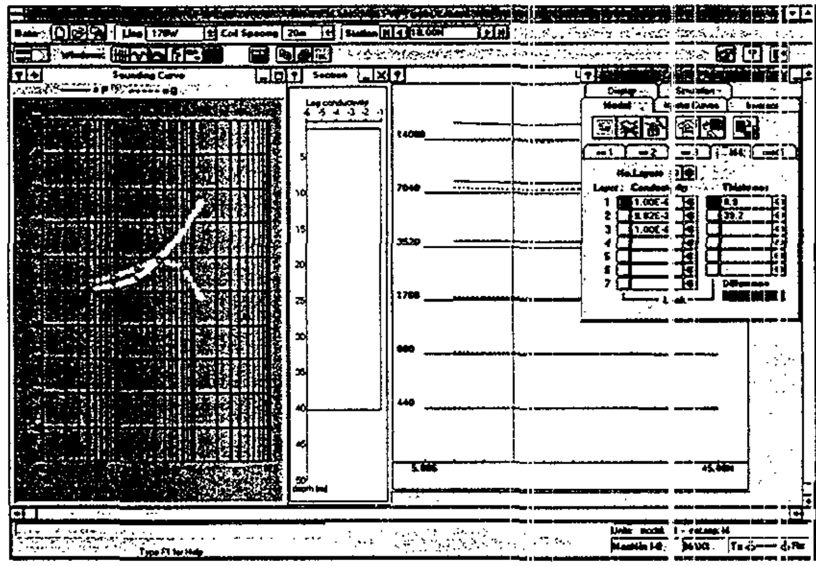
❒ MaxMin Computer or MMC, which is described in a separate data sheet, is offered for digital data processing, display, storage and transfer. The MMC displays and stores the in-phase and quadrature readings, their standard deviations, and the corresponding apparent ground conductivity values. Rough terrain surveys are also simplified with the MMC.

❒ MaxMin Pro data interpretation and presentation software program is available for layered earth parametric soundings and discrete conductor surveys done with MaxMin.

TRANSMITTER

RECEIVER + MMC

Layered earth interpretation:



- Semi-automated curve matching with half-space, 2 and 3 layer models.
- Forward modeling and Inversion.
- Up to 7 layers models.
- Parameter locking or constrained range for inversion.
- Complete inversion statistics output.
- Parametric (frequency), geometric (spacing), or mixed mode sounding.
- Data masking: can reject bad data points or use only quadrature.
- Optional normalization to low frequency in-phase to correct for geometrical errors.

Additional MAXMIN PRO features:

Simplified data input:

- Automatically extracts data and survey information from the .MMD file.
- Graphical entry of plates.

Support for all of the MaxMin maximum coupled modes.

Versatile display and data views:

- In-phase and in-quad vs. frequency sounding.
- Phasor (Argand) diagram.
- Survey map (zoomable).
- Stacked line profile.
- Vertical conductivity section.
- Inversion statistics.
- Persistent display shows several models at once.
- User configurable window placement.

Easy data point selection:

- Tape deck style line and station selectors or
- Selection by mouse click on survey map.

Model data base:

- Automatic creation of a model data base.
- Allows for interpretation in multiple sessions as previous results are saved.

Versatile output capabilities:

- File output, including Geosoft .XYZ format.
- Printed report.
- Windows® clipboard for transfer to other applications.

On-line documentation:

- Full featured Windows® Help hypertext documentation.

Hardware protection:

- Uses a «dongle» rather than software protection.

System requirements: Any xx86 computer running Windows® 3.1 or later, Windows 95®, or Windows NT® 3.5 or later with 2MB of disk space. A mouse or other pointing device is essential. While not absolutely essential, a color monitor of at least SVGA resolution is highly recommended. VGA is the minimum supported resolution. Floating point support is very highly recommended. Printer port is essential for printing and for connecting the hardware protection key.

A DEMONSTRATION PROGRAM IS AVAILABLE ON REQUEST

1998 - 04 - 14

APEX PARAMETRICS LIMITED

Telephone: 1 905 - 852 5875 Fax: 1 905 - 852 9688

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

APEX MAXMIN COMPUTER MMC

❐ The MMC interfaces with MaxMin EM System receivers for digital data processing, display, storage and transfer, enhancing survey productivity and data accuracy

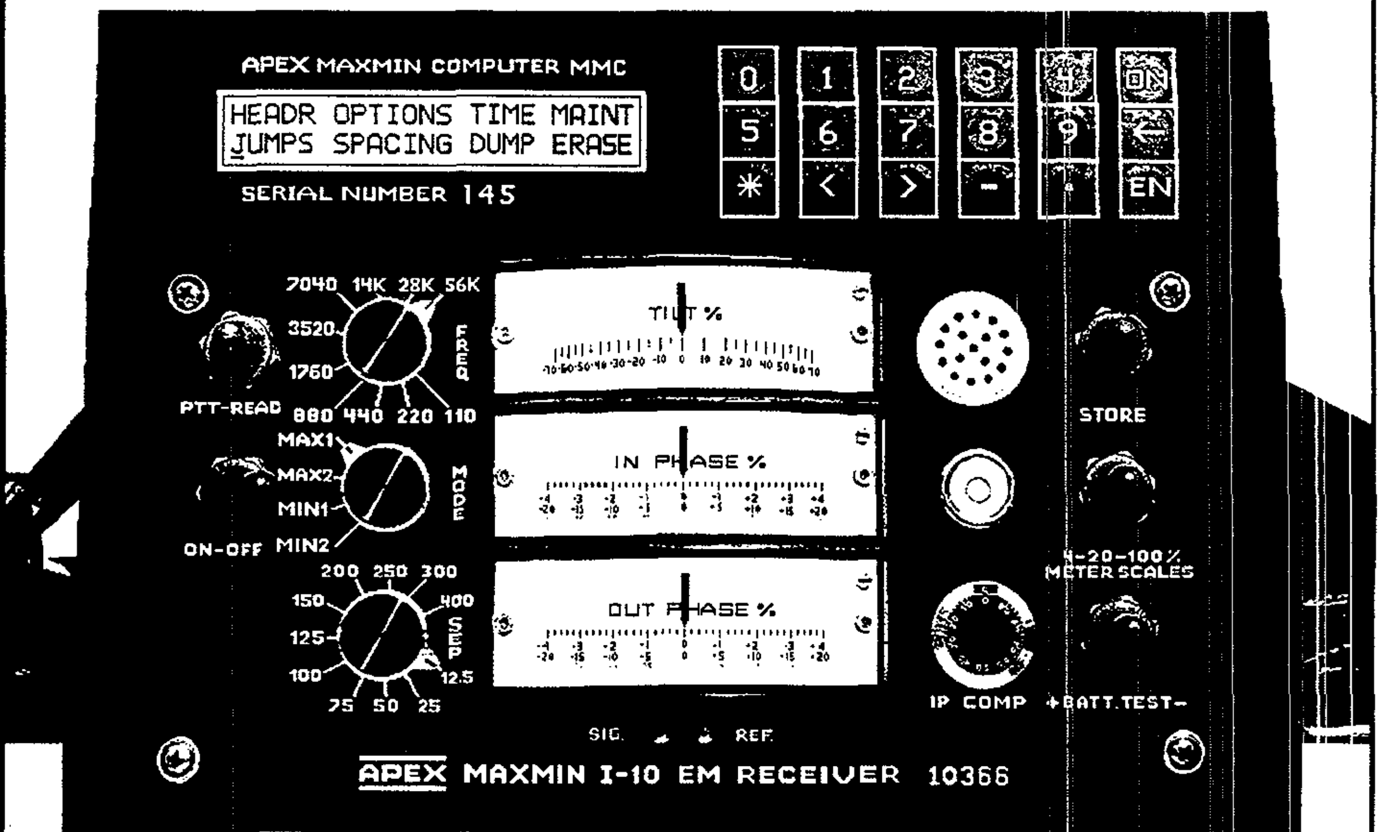
❐ Digital display and logging of in-phase (real) and quadrature (imaginary) readings with standard deviations, the corresponding apparent ground conductivity values, line, station, terrain slope and coil tilt information.

❐ Easy fingertip operation by read and store switches on MaxMin receiver front panel, with digital averaging for improved signal to noise ratio.

❐ Rough terrain surveys are simplified with the use of built-in tilt meter, slope entry and computed coil orientation and separation information.

❐ Data transfer, formatting, correcting and viewing programs are supplied for personal computers. Program for computing multi-frequency best-fit apparent conductivities and fit errors is provided.

❐ MaxMin Pro data interpretation and presentation software program is available for multi-layer parametric or geometric soundings and for discrete conductor surveys done with MaxMin EM and MMC.



MMC INSTALLED WITH MAXMIN I-10 RECEIVER IN THE LEATHER CARRYING CASE

MAXMIN COMPUTER MMC SPECIFICATIONS:

OPERATING SYSTEM:	Menu driven user-friendly hierarchial operating system, interfacing with MaxMin EM System receiver and with personal computers.
DISPLAY:	Extended temperature Liquid Crystal Display, with two lines of 24 alphanumeric characters each.
KEYBOARD:	18 tactile pushbutton keys
BEEPER:	To provide audible operator guidance and to speed up operations, especially in very cold weather.
CLOCK CALENDAR:	Date and Time (year, month, day, hour and minute).
COIL TILT:	Tilt display, with built in tilt sensor and measurement, with 0±99% topographic grade range and with 1% resolution.
IN-PHASE & QUADRATURE:	0±199.9% autoranging programmable gain system with 0.1% resolution for displayed data and 0.01% resolution for stored data.
APPARENT CONDUCTIVITY:	0.1 to 3276 milliSiemens (millimho) per metre available conductivity range, with conductivity arrived at using the quadrature, in-phase, frequency and coil separation data.
PROCESSOR:	16 bit low power CMOS CPU and bus at 6 MHz clock rate.
MEMORY:	ROM: 16 Kb, expandable to 64 Kb. RAM: 256 Kb, static CMOS.
PHYSICAL SIZE:	24.2 x 17.3 x 4.3 cm, to fit inside the MaxMin receiver leather case notebook pocket.
CARRYING WEIGHT:	1.0 Kilogram.
BATTERIES:	Two 9V-0.6Ah alkaline batteries. Battery life 28 hours continuous duty, less in cold weather. Optional 1.2 Ah lithium batteries recommended for very cold temperature operation. One lithium 3 Volt memory back-up battery, type 2032.
CONNECTIONS:	19 pin bayonet connector receptacle to connect to MaxMin receiver with the supplied tubular aluminum connectors. One each of DB25S and DB9S data transfer cords supplied for downloading data to personal computer serial ports.
TEMPERATURE RANGE:	Minus 30 to plus 60 degrees Celsius. Temperature sensing, measurement and display built-in.

Specifications are subject to changes without prior notification.

1998-04-01

Telephone: 1 905 852 5875 Facsimile: 1 905 852 9688 P. O. Box 818, Uxbridge, Ontario, Canada L9P 1N2

APEX PARAMETRICS LIMITED

Airport: Toronto International

APEX MAXMIN PRO DATA INTERPRETATION PROGRAM

LAYERED EARTH INTERPRETATION.

THIN PLATE INTERPRETATION.

ACCEPTS APEX .MMD FILES, COMPATIBLE WITH MAXMIN COMPUTER.

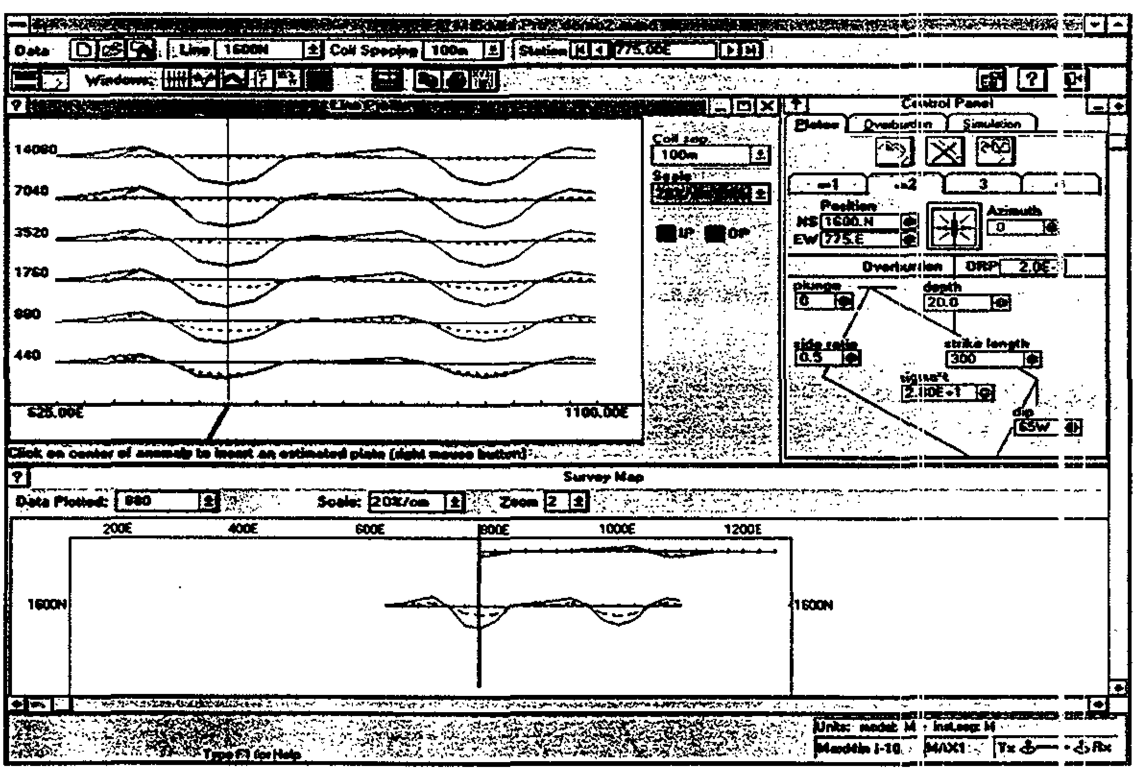
USER-FRIENDLY WINDOWS® BASED OPERATOR INTERFACE.

CLIPBOARD SUPPORT FOR DATA TRANSFER TO OTHER PROGRAMS.

ON-LINE DOCUMENTATION.

PLATE INTERPRETATION:

- Computing engine derived and improved from classical U of Toronto PLATE program.
- Up to 4 plates.
- Graphical insertion of plates.
- Plates positioned in survey grid coordinates.
- Automated curve matching for quick preliminary anomaly interpretation.
- Corrects for overburden conductivity.
- Up to 4 overburden zones.
- Graphical entry of overburden zones.



MAXMIN I+9 ELECTROMAGNETIC SYSTEM SPECIFICATIONS:

FREQUENCIES: 110, 220, 440, 880, 1760, 3520, 7040, 14080 and 28160 Hz.

COIL SEPARATIONS: SET No. 1: 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (the standard set).
SET No. 2: 10, 20, 40, 60, 80, 100, 120, 160, 200, 240 and 320 metres (selected with grid switch inside the receiver).
SET No. 3: 50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 and 1600 feet (selected with grid switch inside the receiver).

TRANSMITTER DIPOLE MOMENTS:

110 Hz:	250 Atm^2	3520 Hz:	120 Atm^2
220 Hz:	245 Atm^2	7040 Hz:	60 Atm^2
440 Hz:	240 Atm^2	14080 Hz:	30 Atm^2
880 Hz:	230 Atm^2	28160 Hz:	15 Atm^2
1760 Hz:	220 Atm^2		

MODES OF OPERATION: MAX 1: Horizontal loop or slingram - transmitter and receiver coil planes horizontal and coplanar.
MAX 2: Vertical coplanar loop mode - transmitter and receiver coil planes vertical and coplanar.
MIN 1: Perpendicular mode 1 - transmitter coil plane horizontal and receiver coil plane vertical.
MIN 2: Perpendicular mode 2 - transmitter coil plane vertical and receiver coil plane horizontal.

PARAMETERS MEASURED: In-phase and quadrature componets of the secondary magnetic field, in % of primary field.

READOUTS: Analog direct edgewise meter readouts for in-phase, quadrature and tilt. Additional digital LCD readouts provided in the optional MMC computer. Interfacing and controls are provided for ready plug-in of the MMC.

RANGES OF READOUTS: Switch activated analog in-phase and quadrature scales: 0±4 %, 0±20 % and 0±100 %, and digital 0±199.9 % autorange with optional MMC. Analog tilt 0±75 % and 0±99 % grade with MMC.

RESOLUTION: Analog in-phase and quadrature 0.1 to 1 % of primary field, depending on scale used, digital 0.01 % with autoranging MMC; tilt 1 % grade.

REPEATABILITY: 0.01 to 1 % of primary field, typical, depending on frequency, coil separation and conditions.

SIGNAL FILTERING: Powerline comb filter, continuous spheric noise clipping, autoadjusting time constant, and more.

WARNING LIGHTS: Receiver signal and reference warning lights to indicate potential error conditions.

SURVEY DEPTH PENETRATION: From surface down to 1.5 times coil separation for large horizontal target and 0.75 times coil separation for large vertical target, values typical.

REFERENCE CABLE: Lightweight unshielded 4/2 conductor teflon cable for maximum operating temperature range and for minimum pulling friction.

INTERCOM: Voice communication link provided for operators via the reference cable.

TEMP. RANGE: Minus 40 to plus 60 degrees Celsius, operating.

RECEIVER BATTERIES: Four standard 9 V - 0.6 Ah alkaline batteries. Life 20 hours continuous duty, less in cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).

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The depth of investigation of a horizontal coplanar loop E.M. system (like the Maxmin) is considered to be 1.5 times the coil separation for a large horizontal target and 0.75 times the coil separation for a large vertical target. These figures are for the typical conductivity values seen in Canadian massive sulphide deposits. The depth of investigation for smaller targets and/or poorer conductivity mineralization would of course be proportionally less.

Bear in mind that the response parameter of a horizontal co-planar loop E.M. system is due to the product of the following components: $(\mu_o \omega l \sigma s)$

where μ_o = permeability of free space = $4\pi \times 10^{-7}$ henry/m.

ω = $2\pi f$ = rotational frequency.

l = coil separation (meters)

σ = conductivity (Seimens/meter)

s = thickness of conductor (meters)

Note that increases in the coil separation have the same effect as increasing the frequency on the response parameter. With large coil separations the system became more sensitive to deep conductors, although the individual resolution ability for shallow, closely spaced conductors is lessened.

If the response parameter becomes too high, the system becomes unstable (overly sensitive) with large amplitude changes for very minor changes in conductivity. This high frequency problem will occur with large coil separations and weakly conductive host rocks, i.e. argillaceous metasediments. Clearly the conductive host problem limits the ability of any E.M. system to properly evaluate the response of a deep weak conductor. One is obliged to base the interpretation on the lower frequency data. As expected, there was a steady attenuation of the E.M. responses with lower frequencies throughout this survey.

The depth extent of conductors discussed in this report is listed as poor, moderate or good and is relative to the coil separation. Dip resolution is also relative to the coil separation.

The quadrature response of the E.M. system is largely unaffected by coil separation and orientation errors due to bad grid chaining and does respond to the poorer quality conductors better than the inphase. These two facts have proven useful in the evaluation and outlining of the moderate to weak strength conductivity targets detected in this survey. The inphase response will focus on the better conductivity zones within a conductive zone. Good inphase data does however require good quality grid chaining In mountainous terrain some grid chaining problems are unavoidable. To further eliminate the noise due to chaining errors, the lowest frequency inphase data (220Hz) can be subtracted from the higher frequency in-phase data. This procedure should only be used when the conductors of interest are weak to moderate conductivity, i.e. virtually a zero response on the inphase at 220Hz. This procedure is technically correct since coil separation errors generally have the same amplitude regardless of the frequency. The subtraction process can therefore largely eliminate chaining errors from the more important higher frequency inphase data, without adversely affecting the anomalous bedrock conductor responses. This procedure was not used, nor necessary on the Tree/Fire #2 data due to the slope correction procedures used by the Maxmin and significant inphase amplitudes at the lowest frequency.

The conductor technical parameters listed herein and the areal extent of the conductors shown on the accompanying map are largely based on the 440Hz data. Note however that the estimation of the apparent width, depth and conductivity of the individual conductors is very frequency dependent. The 440Hz frequency does limit somewhat the host response, while still maintaining a significant amplitude response from the conductors of interest.

DISCUSSION OF THE DATA

The surface trace of the conductor is outlined on the 440Hz data plan. An interesting series of generally northeast striking conductors were outlined by this survey. Line to line, continuity between conductors appears poor, possibly due to cross faults and some errors in the tie lines. It's also possible we are trying to correlate structural (fault conductors) with stratiform conductors, i.e. a grid west dipping fault zone interfering at times with restricted strike length stratiform conductors dipping grid east. This possibility is most evident at 7700N, 5300E and again at 6900N, 5250E.

The relatively short lines are also a hindrance when trying to establish the dip. This is particularly true for large coil separation horizontal co-planar loop surveying.

The four main conductive horizons are described below. Note however that the higher frequency data indicates there is a significant sedimentary component to the underlying geology, i.e. broad zones of very weak conductivity.

CONDUCTOR #1:

- centered at 7700N, 5300E. Apparent short strike length 200m?
- the apparent improvement in the conductivity thickness factor that occurs with depth is of interest, i.e. 3 to 32 Seimens (see 220Hz data).
- depth to the top of this conductor is 25 meters, however the conductivity improvement appears to be at a depth of 100 meters.
- dip appears to be moderately steep (60 deg) to grid east.

CONDUCTOR #2:

- centered at 7300N, 5175E.
- requires longer survey line.

- depth to top 10 meters.
- conductivity thickness product 8 Seimens.
- dip appears to be steep to grid west (60 deg).
- strike length at least 400 meters.

CONDUCTOR #3:

- centered at 6900N, 5250E.
- short strike length 200 meters?
- conductivity thickness product 8 Seimens.
- depth to top 30 meters.
- dip uncertain, but appears to be moderately steep to grid east (50 deg).

CONDUCTOR #4:

- a significant conductor only partially outlined by the survey, located at the west end (4875E) of line 6700N.
- conductivity thickness product 11 Seimens.
- depth to top 10 meters.
- dip and width uncertain.

CONCLUSIONS AND RECOMMENDATIONS

Significant bedrock conductors have been outlined by this survey. Close correlation of these conductors with the geology, geochemistry and structural data will establish the better drill targets.

Conductor #1 in particular requires careful study, since there are indications of good conductivity at depth. The apparent short strike length, while negative, may only be a conductor orientation problem.

PROFESSIONAL
PROVINCE OF
G. A. HENDRICKSON
BRITISH COLUMBIA
GEOSCIENTIST

Grant A. Hendrickson, P.Geo.

REFERENCES

Apex Parametrics, 1998: Technical Manuals on the Maxmin System.

Ketola, M., and Puranan, M., 1967: Type Curves for the Interpretation of Horizontal Loop E.M. Anomalies over tabular bodies. Geological Survey of Finland, Report on Investigations, N:01.

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Grant A. Hendrickson

- B.Science, University of British Columbia, Canada, 1971. Geophysics option.

- For the past 27 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe, Central and South America and Asia.

- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.

- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.

- Active member of the Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and the British Columbia Geophysical Society.

Dated at Delta, British Columbia, Canada, this 14 day of DEC., 1998.

PROFESSIONAL PROVINCE OF G. A. HENDRICKSON BRITISH COLUMBIA GEOSCIENTIST

Grant A. Hendrickson, P.Geo.

APPENDIX IV

STATEMENT OF EXPENDITURES

Statement of Expenditures

Tree & Fire Project 1998

Costs

Geophysical Survey - Horizontal Co-Planar Loop (Grid 1)

5/21 of Mob/Demob @ $7737.00	1842.00
5 Survey Days @ $1325.00/day	6625.00
5 Helicopter round trips @ $435.00	2175.00
Geophysical Report Preparation @ 1/5 of $3066.00	613.00
Additions to Report for Assessment filing	400.00
Gridding 10md @ $185.00/md	1850.00
4 Helicopter round trips for gridding @ $435.00	1740.00
Camp Costs 25md @ $200.00/md	5000.00
	$20,245.00

Geology

Mapping 14md @ $225.00/md	3150.00
Rock Geochemical Analysis 53 @ $17.33	920.00
Helicopter round trips 4 @ $435.00	1740.00
Camp Costs 14md @ $200.00/md	2800.00
Report 5md @ $225.00/md	1125.00
Drafting 14md @ $250.00/md	3500.00
	$13,235.00

Soil Geochemistry

Collection & Grid 28md @ 185.00/md	5180.00
Geochemical Analysis 705 @ 8.78/sample	6190.00
Camp Costs 28md @ $200.00/md	5600.00
	$16,970.00

Total Costs	**$50,450.00**

APPENDIX V

GEOLOGIST'S CERTIFICATES

GEOLOGIST'S CERTIFICATE

I, Peter Daubeny, of 2002-1188 Howe Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am employed by Atna Resources Ltd. of 1550 - 409 Granville St., Vancouver B.C.

2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology.

3. THAT this report is based in part on property work I personally completed and/or directly supervised between June 1 and Sept 1 1998.

DATED at Vancouver, British Columbia, this 8 st day of December, 1998.

Peter H. Daubeny.

GEOLOGIST'S CERTIFICATE

I, Robert G. Wilson, of 3328 West 15th Ave. Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am employed by Atna Resources Ltd. of 1550 - 409 Granville St., Vancouver B.C.

2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology.

3. THAT I am a Professional Geoscientist registered in good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4. THAT this report is based in part on property work I directly supervised between June 1 and September 3, 1998.

DATED at Vancouver, British Columbia, this 8 st day of December, 1998.

Robert G. Wilson, P.Geo.

Certificate of Qualifications

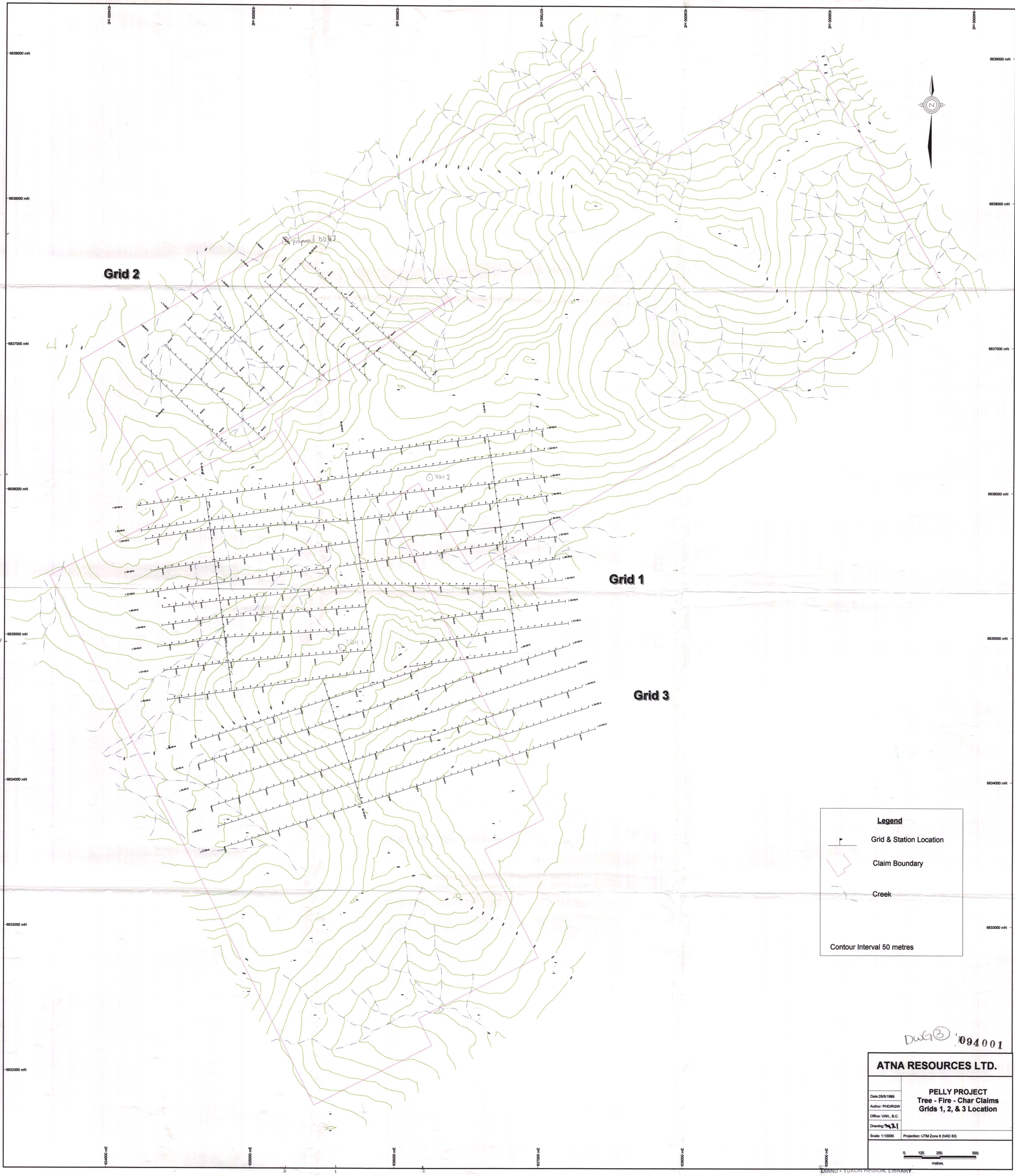
I, Peter M. Holbek with a business address of 1550 - 409 Granville Street, Vancouver, British Columbia, V6C 1T2, do hereby certify that:

1. I am a professional geologist registered under the Professional Engineers and Geoscientists Act of the Province of British Columbia and a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
2. I am a graduate of The University of British Columbia with a B.Sc. in geology 1980 and an M.Sc. in geology, 1988.
3. I have practiced my profession continuously since 1980.
4. I am Vice President of Atna Resources having a business address as given above.
5. I supervised the work program conducted on the Ties & Tease property as described in this report.

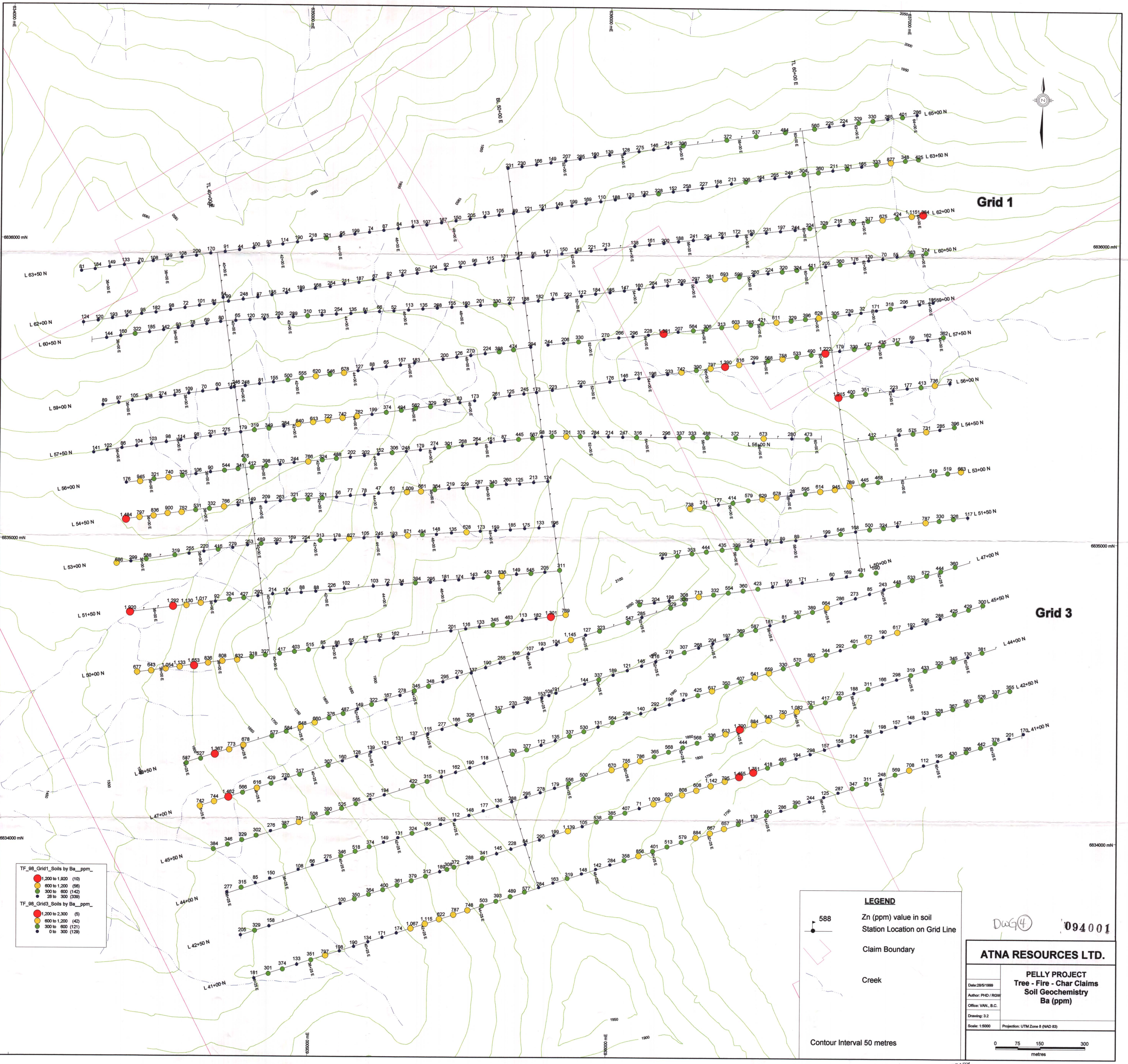
Peter Holbek, M.Sc., P.Geo.

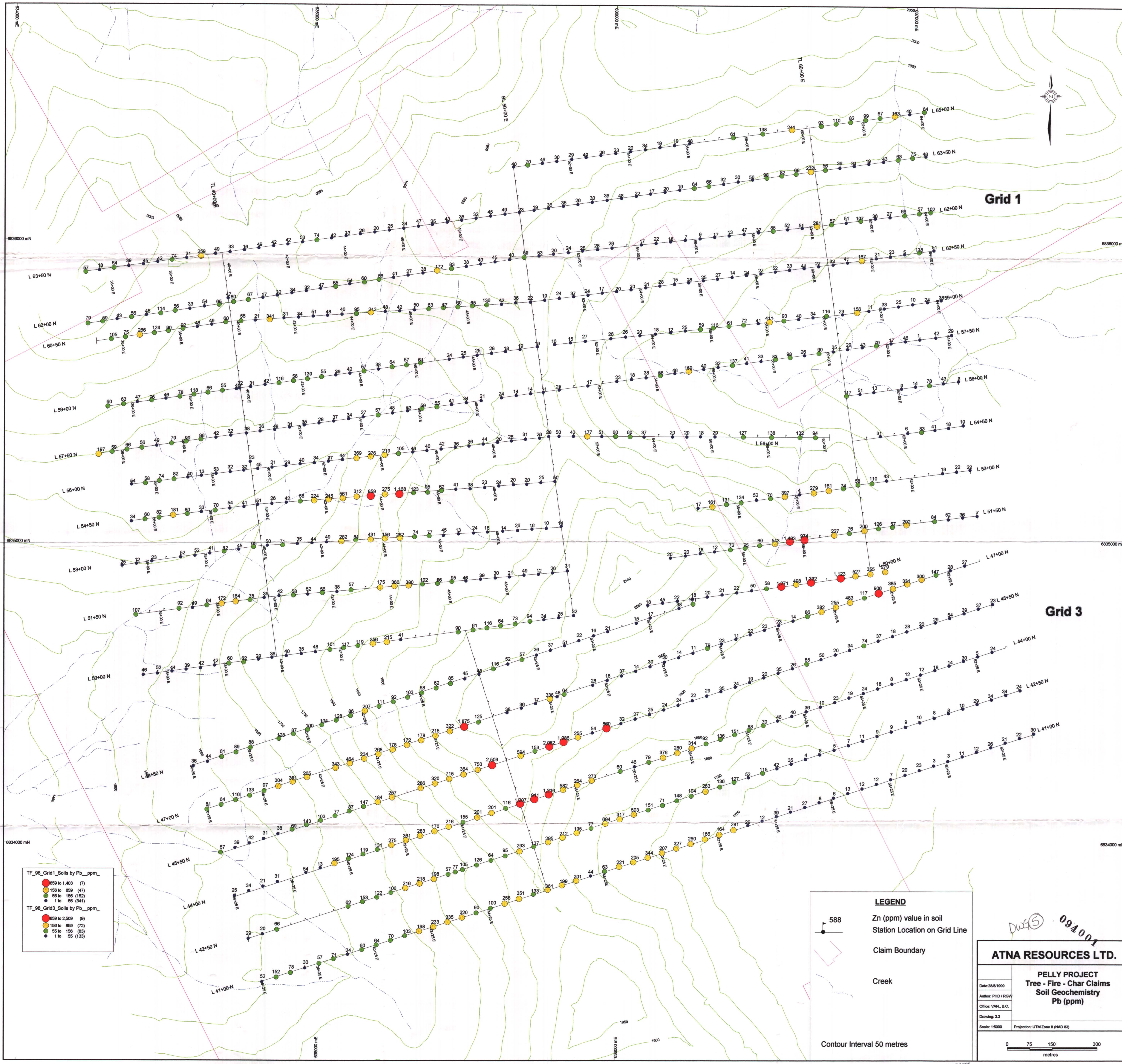

LEGEND
Volcanic rocks - undifferented
Volcaniclastic Rocks
Yellow Trachyte
Trachyte Chip Conglomerate
Pajama Limestone
Trachyte (unmineralized)
Argillite
45 Bedding (strike & dip)
33 Foliation (strike & dip)
Limit of Mapping
Overburden covered area
6836000 mN
6837000 mN
6838000 mN
6839000 mN
094001
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
North Sheet
Property Geology
Date: 20/5/1999
Author: PHD/RGW
Office: VAN., B.C.
Drawing: 2.3A
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres


LEGEND
Volcanic rocks - undifferented
Volcaniclastic Rocks
Yellow Trachyte
Trachyte Chip Conglomerate
Pajama Limestone
Trachyte (unmineralized)
Argillite
45 Bedding (strike & dip)
33 Foliation (strike & dip)
Limit of Mapping
Overburden covered area
6836000 mN
6835000 mN
6834000 mN
6833000 mN
6832000 mN
094001
DWG 2
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
South Sheet
Property Geology
Date: 20/5/1999
Author: PHD/RGW
Office: VAN., B.C.
Drawing: 2.3B
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres

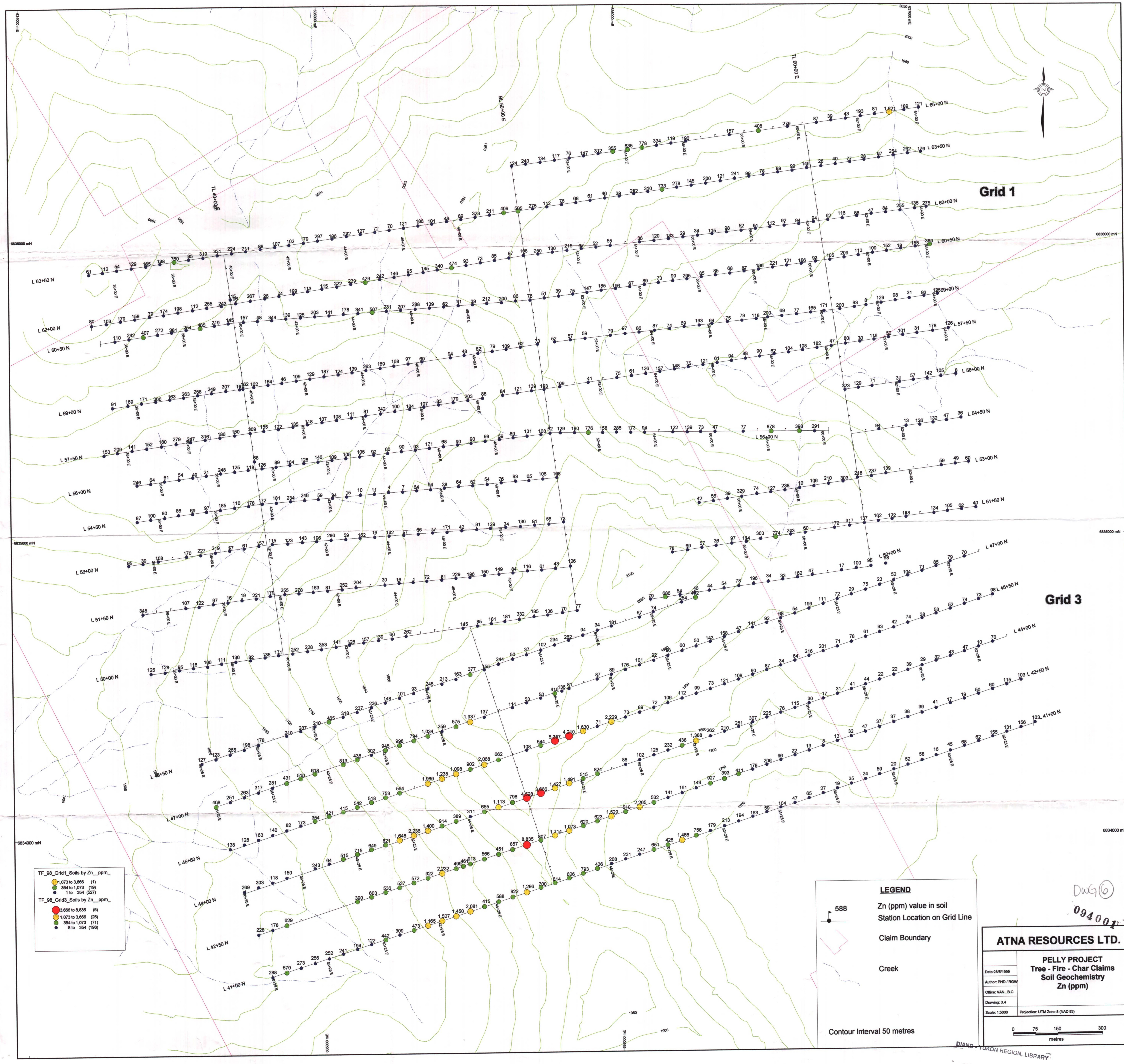


Grid 2
Grid 1
Grid 3
proposed DDH3
DDH 2
DDH 1
6839000 mN
6838000 mN
6837000 mN
6836000 mN
6835000 mN
6834000 mN
6833000 mN
6832000 mN
634000 mE
635000 mE
636000 mE
637000 mE
638000 mE
639000 mE
640000 mE
N
Legend
Grid & Station Location
Claim Boundary
Creek
Contour Interval 50 metres
DWG 3
094001
ATNA RESOURCES LTD.
Date:28/5/1999
Author: PHD/RGW
Office: VAN., B.C.
Drawing: 3.1
Scale: 1:10000
PELLY PROJECT
Tree - Fire - Char Claims
Grids 1, 2, & 3 Location
Projection: UTM Zone 8 (NAD 83)
0 125 250 500
metres


Grid 1
Grid 3
L 65+00 N
L 63+50 N
L 62+00 N
L 60+50 N
L 59+00 N
L 57+50 N
L 56+00 N
L 54+50 N
L 53+00 N
L 51+50 N
L 50+00 N
L 47+00 N
L 45+50 N
L 44+00 N
L 42+50 N
L 41+00 N
BL 50+00 E
TL 40+00 E
TL 60+00 E
6836000 mN
6835000 mN
6834000 mN
TF_98_Grid1_Soils by Ba__ppm_
1,200 to 1,920 (10)
600 to 1,200 (56)
300 to 600 (142)
28 to 300 (339)
TF_98_Grid3_Soils by Ba__ppm_
1,200 to 2,300 (5)
600 to 1,200 (42)
300 to 600 (121)
0 to 300 (129)
LEGEND
588
Zn (ppm) value in soil
Station Location on Grid Line
Claim Boundary
Creek
Contour Interval 50 metres
DWG 4
094001
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
Soil Geochemistry
Ba (ppm)
Date:28/5/1999
Author: PHD / RGW
Office: VAN., B.C.
Drawing: 3.2
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres



Grid 1
Grid 3
TF_98_Grid1_Soils by Pb__ppm_
859 to 1,403 (7)
156 to 859 (47)
55 to 156 (152)
1 to 55 (341)
TF_98_Grid3_Soils by Pb__ppm_
859 to 2,509 (9)
156 to 859 (72)
55 to 156 (83)
1 to 55 (133)
LEGEND
588 Zn (ppm) value in soil
Station Location on Grid Line
Claim Boundary
Creek
Contour Interval 50 metres
DWG 5
094001
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
Soil Geochemistry
Pb (ppm)
Date:28/5/1999
Author: PHD / RGW
Office: VAN., B.C.
Drawing: 3.3
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres



Grid 1
Grid 3
TF_98_Grid1_Soils by Zn__ppm_
1,073 to 3,666 (1)
354 to 1,073 (19)
1 to 354 (527)
TF_98_Grid3_Soils by Zn__ppm_
3,666 to 8,835 (5)
1,073 to 3,666 (25)
354 to 1,073 (71)
8 to 354 (196)
LEGEND
588
Zn (ppm) value in soil
Station Location on Grid Line
Claim Boundary
Creek
Contour Interval 50 metres
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
Soil Geochemistry
Zn (ppm)
Date:28/5/1999
Author: PHD / RGW
Office: VAN., B.C.
Drawing: 3.4
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres
DWG 6
094001
DIAND - YUKON REGION, LIBRARY

LEGEND
Rock Sample Location
72523: 356, 70, 20, 115
Sample Number: Pb (ppm), Zn (ppm), Ba (ppm), Hg (ppb)
Claim Boundary
Creek
Contour Interval 50metres
ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
North Sheet
Rock Geochemistry
Sample No: Pb, Zn, Ba, Hg
Date:20/5/1999
Author: RGW
Office: VAN., B.C.
Drawing: 3.5
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres
Dwg (7)
094001


ATNA RESOURCES LTD.
PELLY PROJECT
Tree - Fire - Char Claims
South Sheet
Rock Geochemistry
Sample No.: Pb, Zn, Ba, Hg
Date:20/5/1999
Author: RGW
Office: VAN., B.C.
Drawing: 3.6
Scale: 1:5000
Projection: UTM Zone 8 (NAD 83)
0 75 150 300
metres
LEGEND
Rock Sample Location
72523: 356, 70, 20, 115
Sample Number: Pb (ppm), Zn (ppm), Ba (ppm), Hg (ppb)
Claim Boundary
Creek
Contour Interval 50metres
6836000 mN
6835000 mN
6834000 mN
6833000 mN
6832000 mN
634000 mE
635000 mE
636000 mE
637000 mE
72599 : 7,84,128,10
70542 : 10,7,53,20
70541 : 105,1,43,610
70540 : 7,12,93,55
70539 : 1,19,97,35
70533 : 98,51,43,55
70534 : 14,234,239,90
70532 : 39,62,108,45
70531 : 44,41,80,1240
70530 : 3,19,109,40
70538 : 26,152,54,235
70537 : 48,245,105,90
70536 : 21,30,45,70
70535 : 98,107,101,80
70529 : 27,48,131,15
72600 : 1,96,316,25
72502 : 11,13,640,10
72503 : 24,4,254,70
72504 : 10,2,192,65
72505 : 12,1,197,40
72506 : 313,7,80,8180
72507 : 118,2,820,150
72508 : 7,2,288,15
72509 : 9,28,241,30
70510 : 10,3,211,220
70509 : 26,12,322,170
70511 : 24,3,579,65
70512 : 3,24,244,10
70513 : 6,9,247,70
70514 : 3,19,596,10
70515 : 9,1,2089,880
70518 : 16,2,254,60
70519 : 6,5,303,80
70520 : 9,3,407,20
72578 : 127,8,37,180
72580 : 8,83,365,1020
72579 : 125,5,145,130
72581 : 103,4,39,225
70523 : 3,5,465,30
70522 : 64,3,610,70
70521 : 5,159,288,25
72587 : 3,88,2103,25
72586 : 9,8,881,45
72585 : 13,2,1197,65
72584 : 13,6,909,190
72583 : 231,6,172,190
72582 : 2743,19,1677,155
70524 : 1,50,321,15
70525 : 88,2,44,105
70526 : 33,4,158,95
70527 : 13,20,343,40
70528 : 6,25,265,10
72510 : 193,1,14,610
72513 : 50,4,122,15
72514 : 103,3,178,40
72515 : 61,2,198,55
72516 : 84,3,205,55
72517 : 39,3,258,75
72572 : 20,6,2528,485
72591 : 190,26,25,1740
72573 : 4621,195,202,1030
72518 : 8,198,137,20
72519 : 8,227,96,25
72520 : 166,564,151,75
72521 : 61,8,55,35
72522 : 469,496,29,85
72523 : 356,70,21,115
70503 : 64,157,37,15
70502 : 185,14,32,10
72524 : 31,678,146,50
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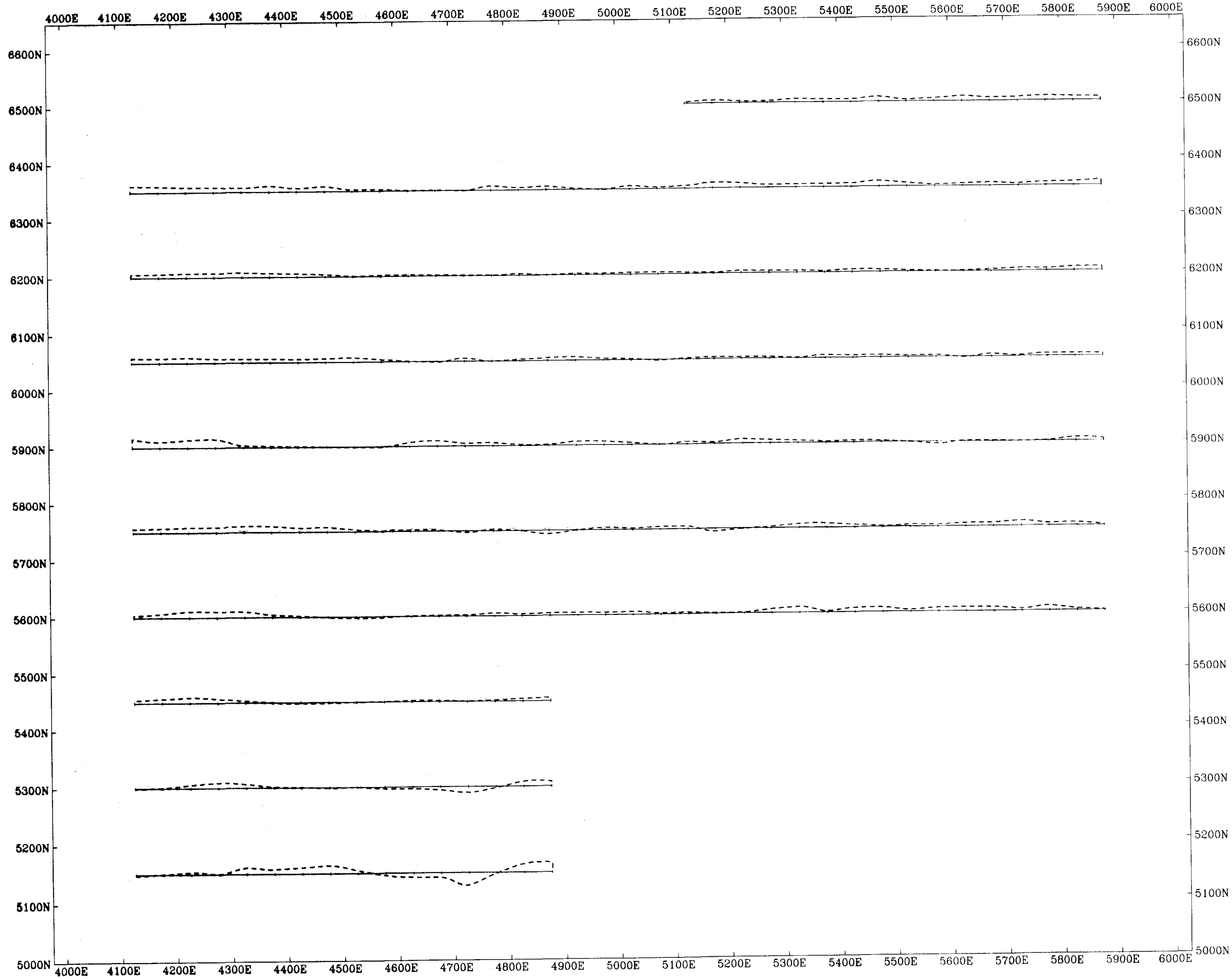
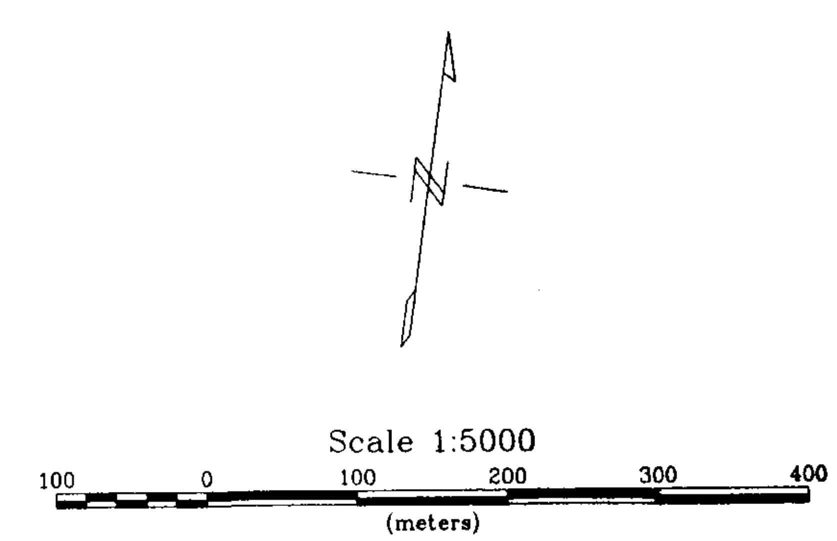
DWG 8
DIAND - YUKON REGION, LIBRARY





DWG (9)

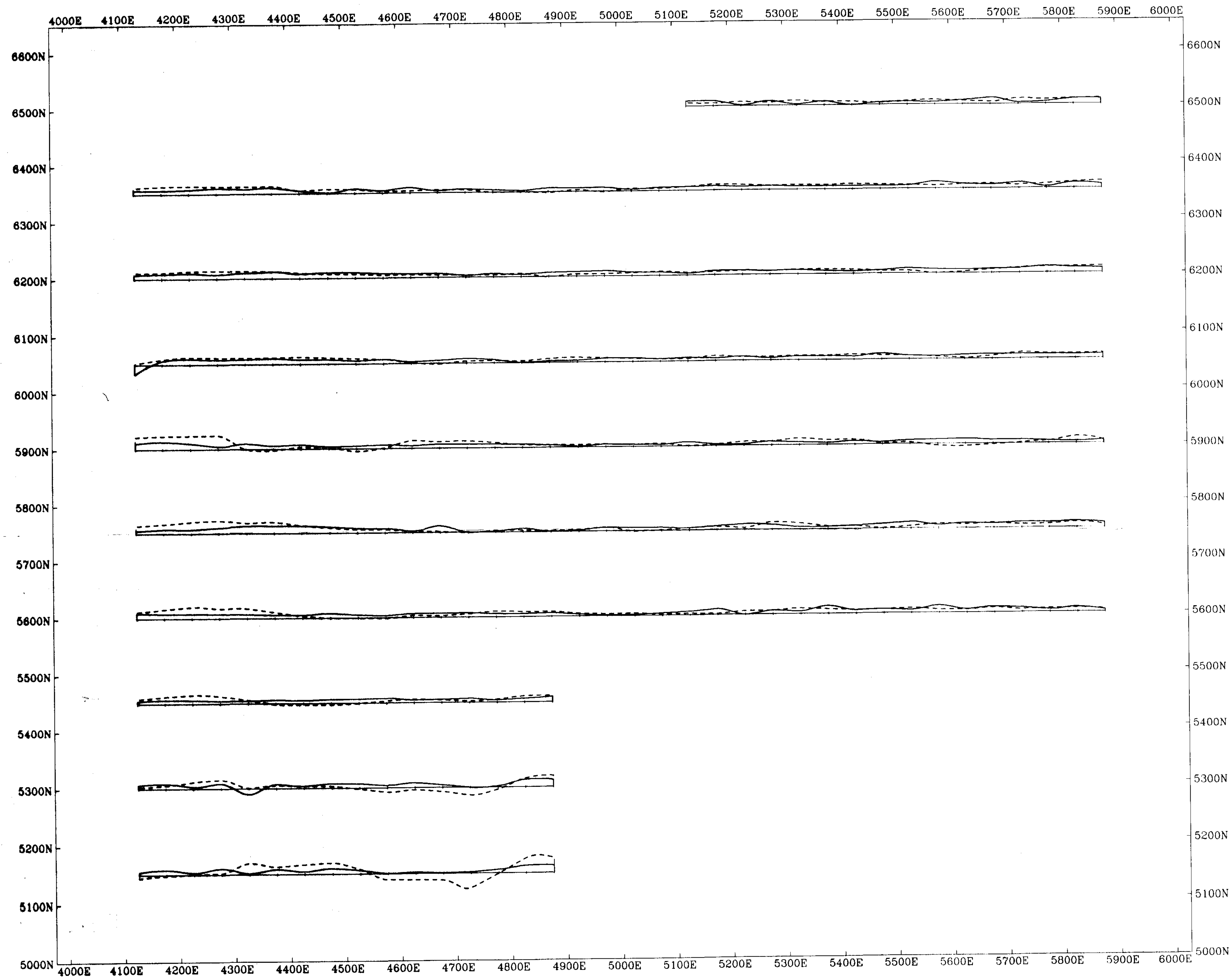
094001

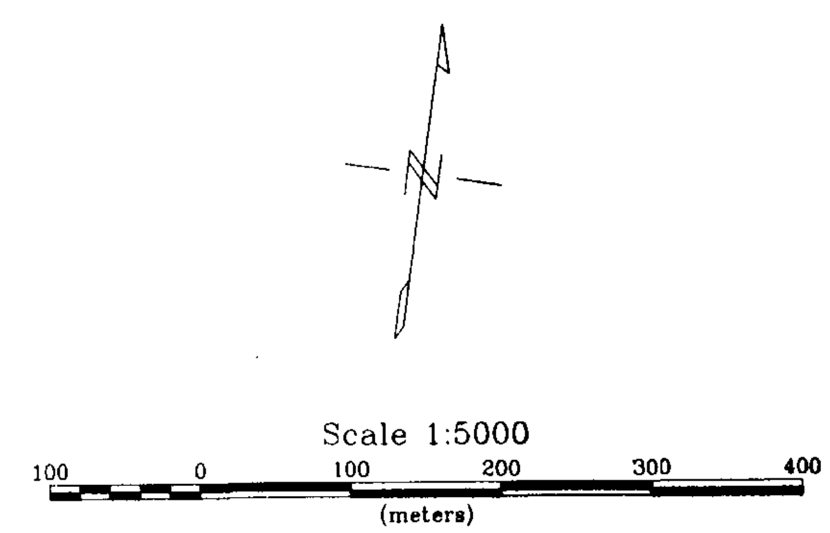
ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 220 Hz

In-phase deleted, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, ***Fig # 4.1***





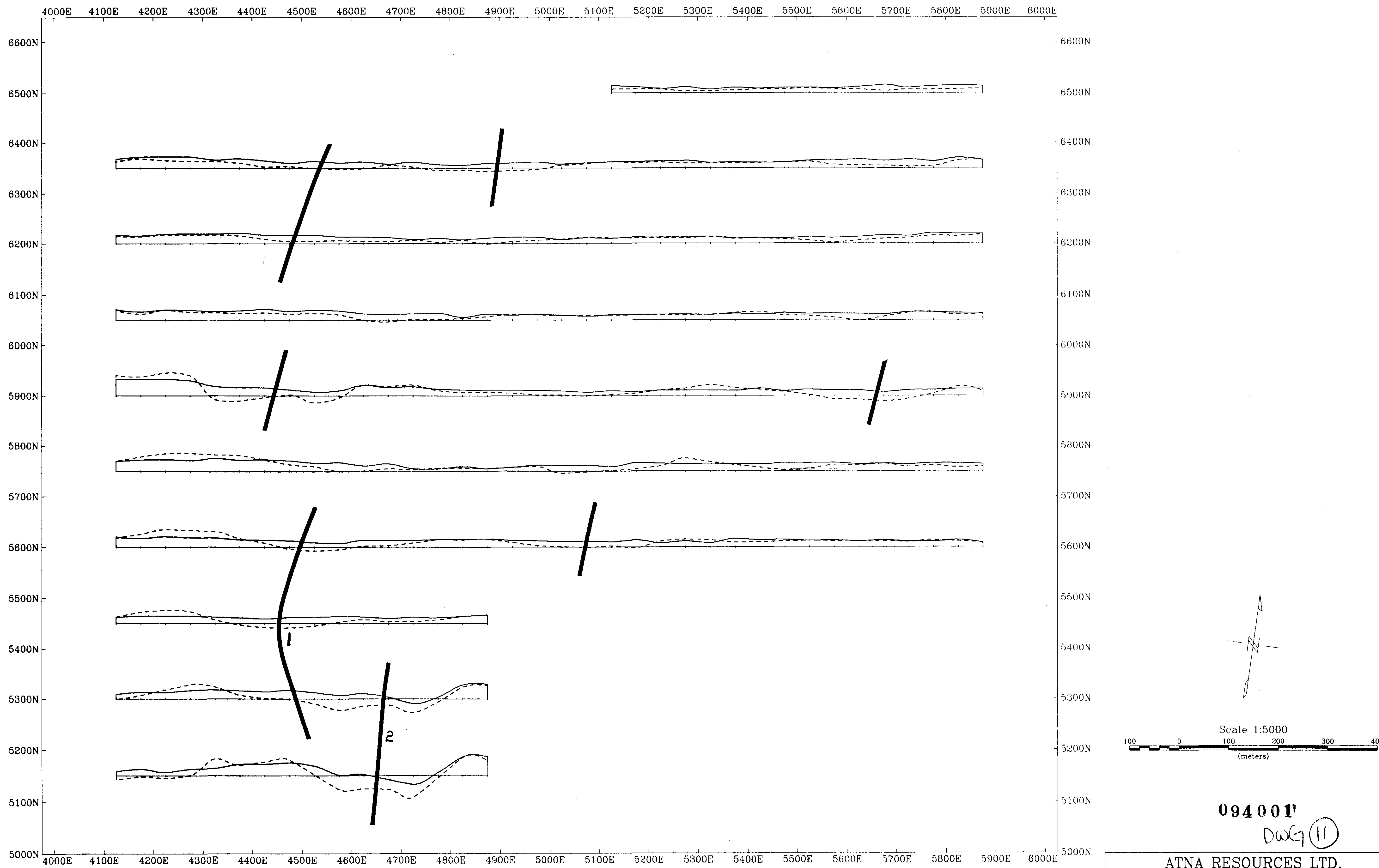
094001
DWG (10)

ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 440 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.2**



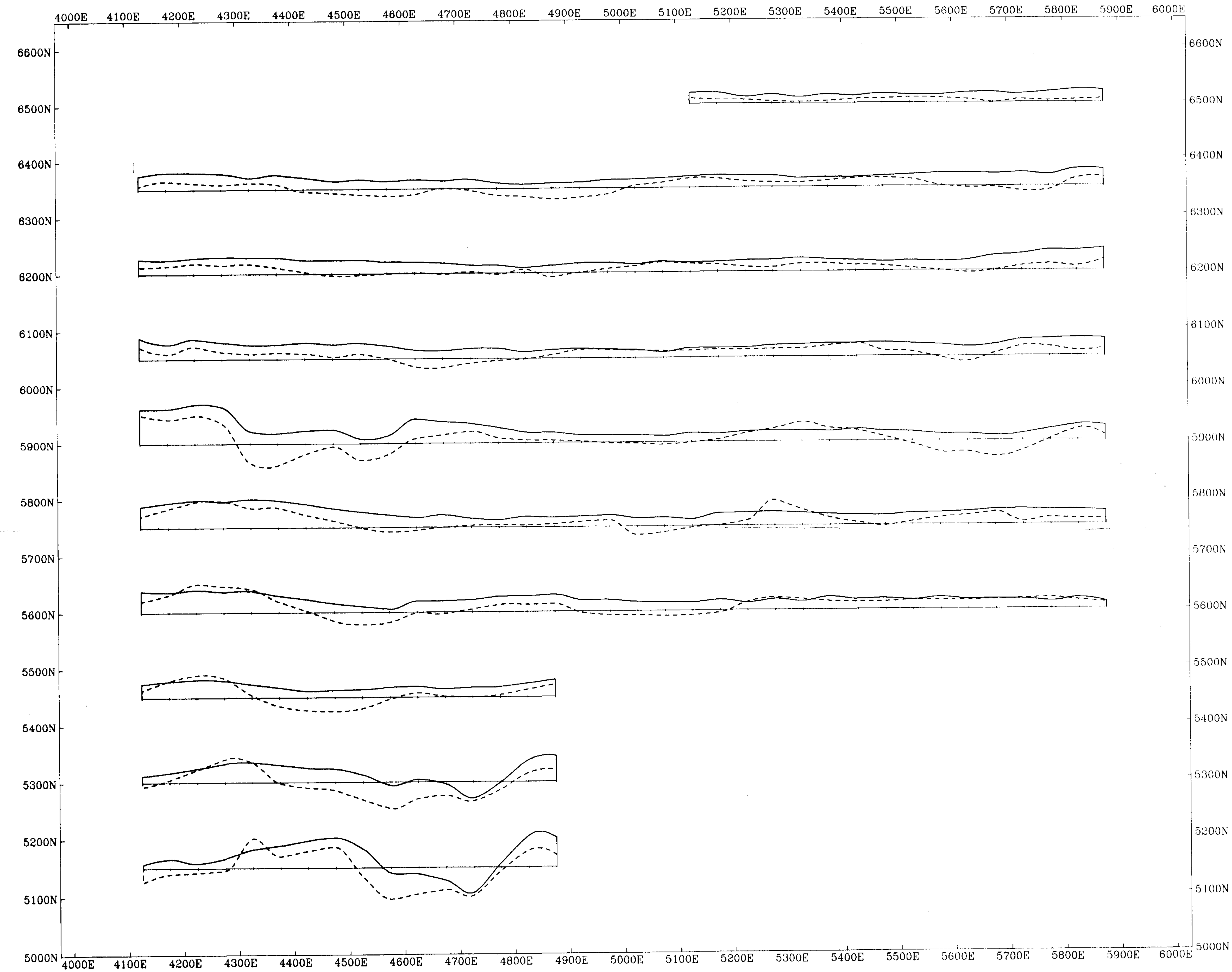
094001
DWG (11)

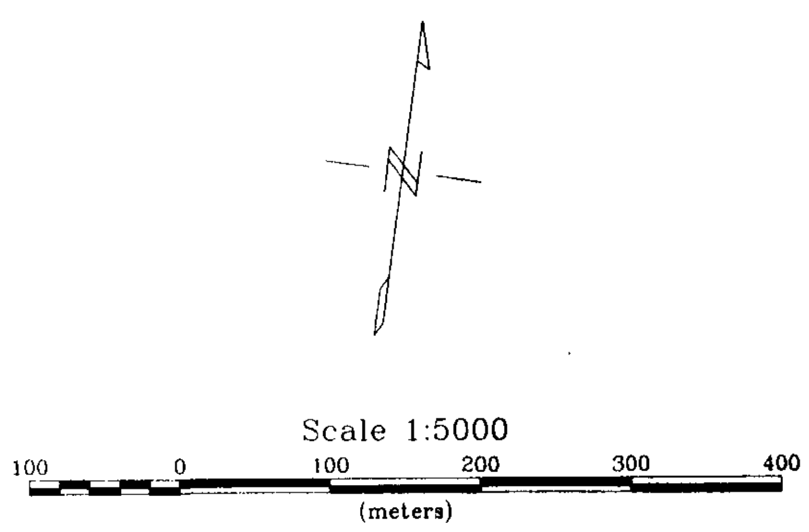
ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 880 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.3**





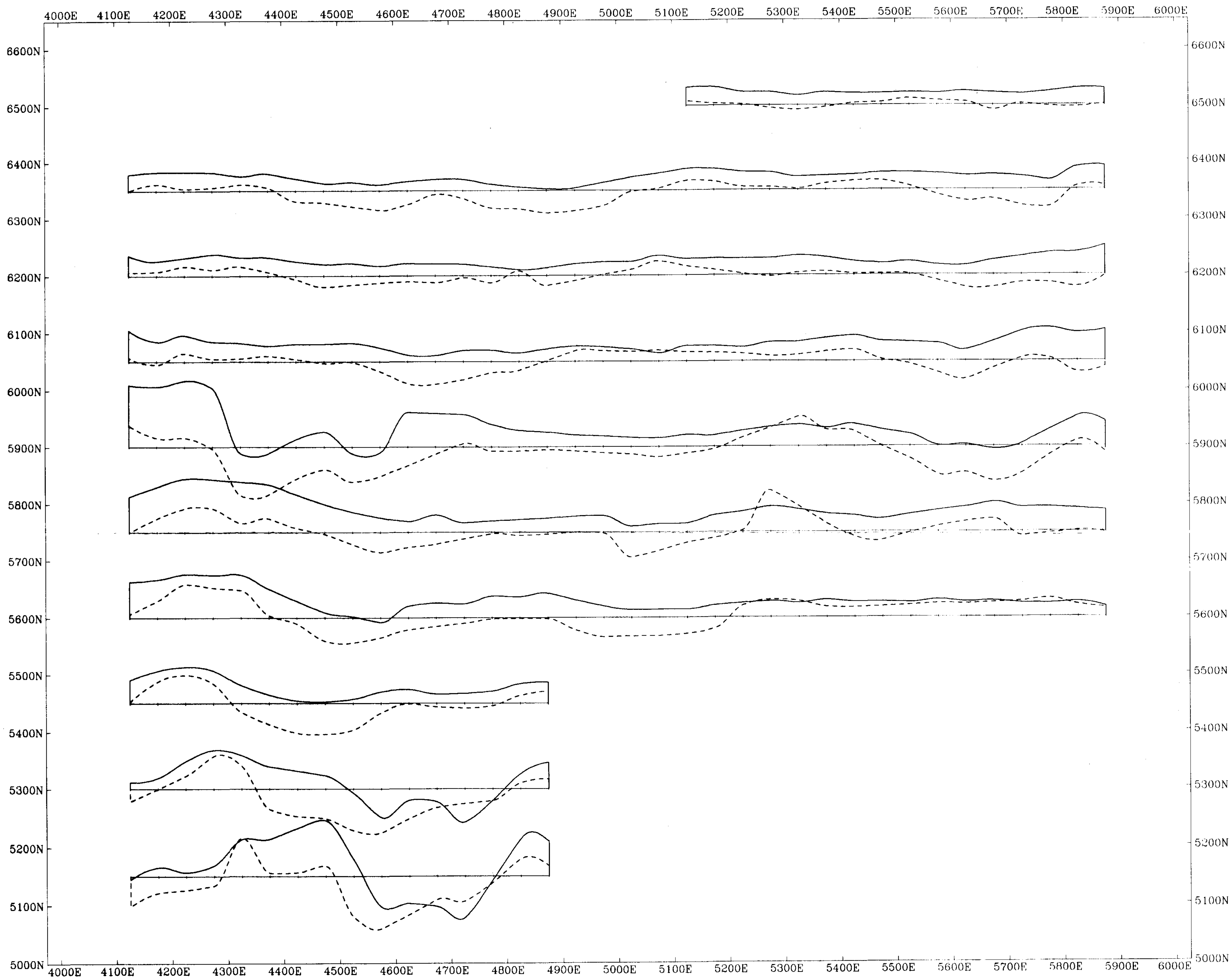
094001 DWG (12)

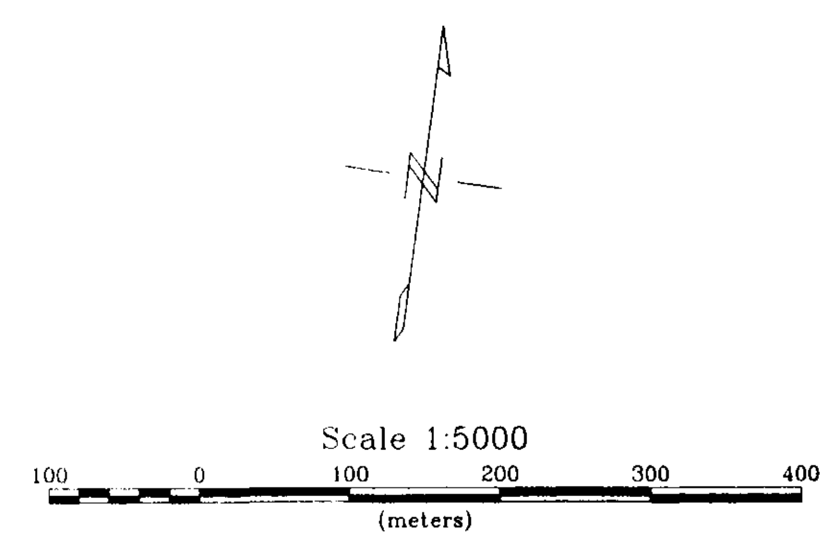
ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 1760 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.4**





094001

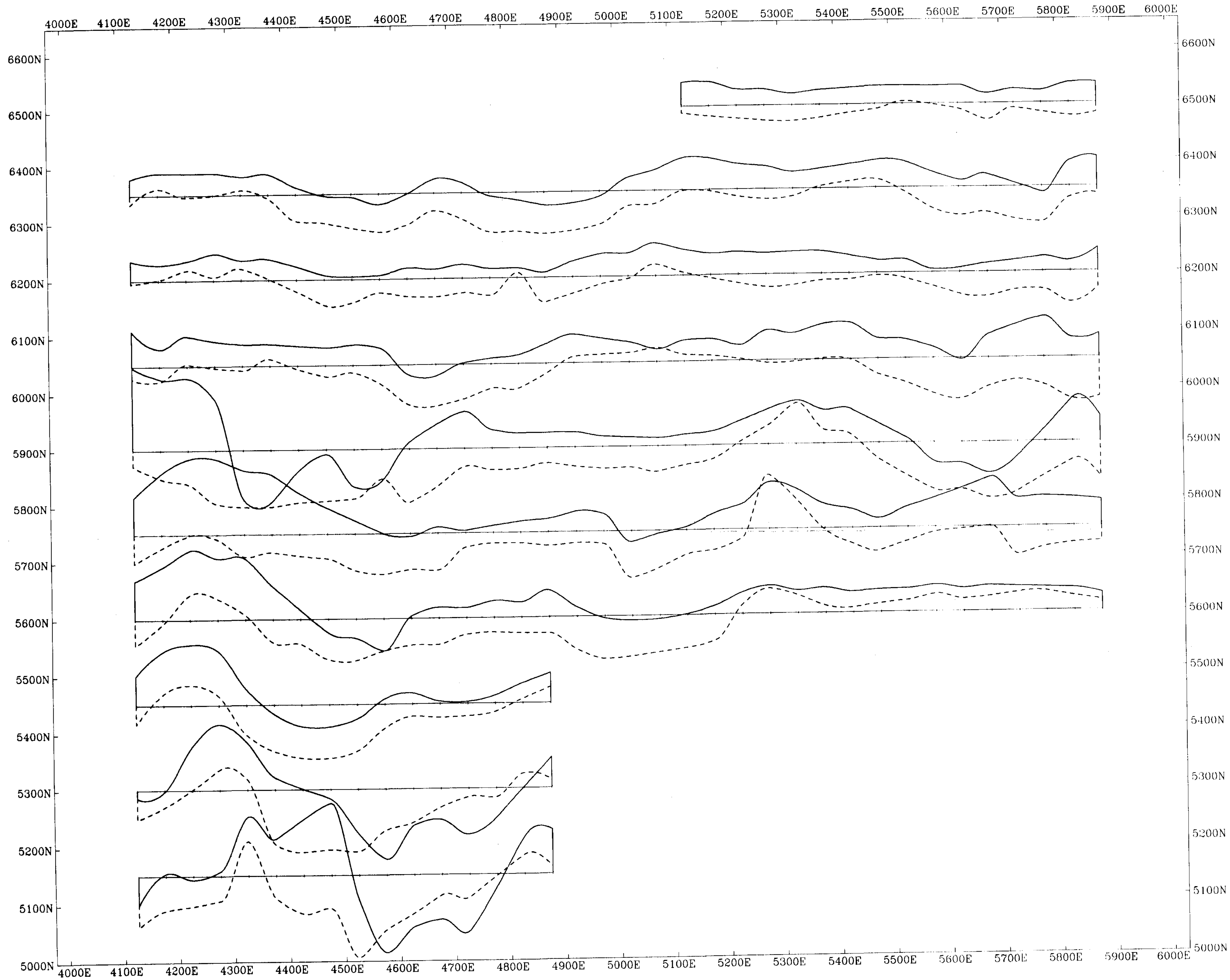
DWG 13

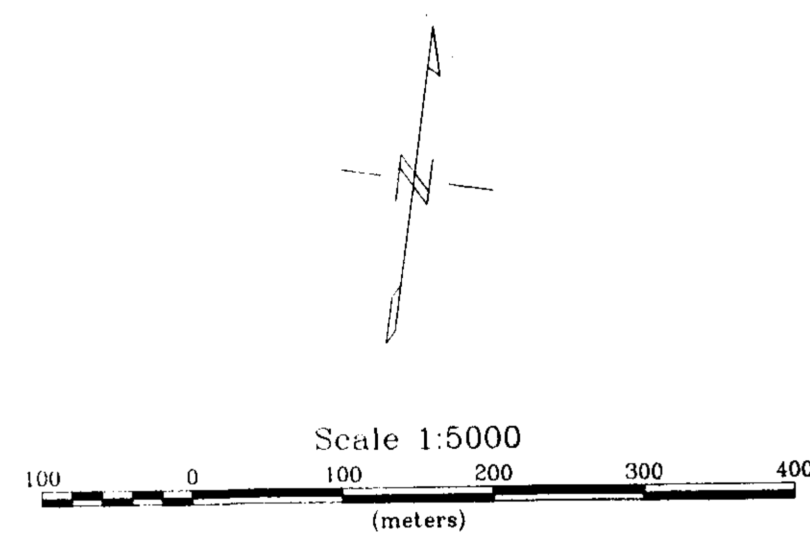
ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 3520 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.5**





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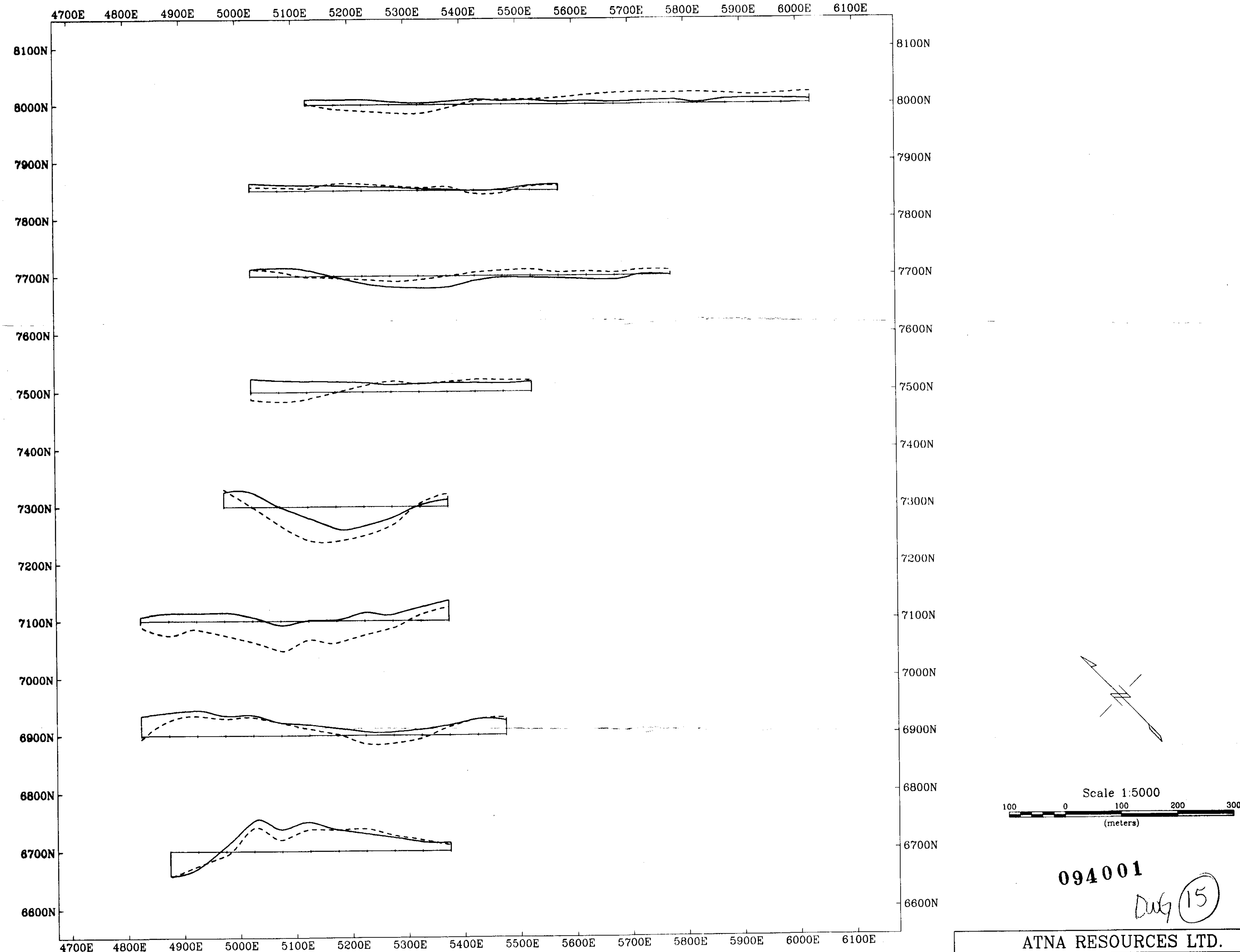
DWG (14)

ATNA RESOURCES LTD.

TREE/FIRE GRID #1 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 7040 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.6**



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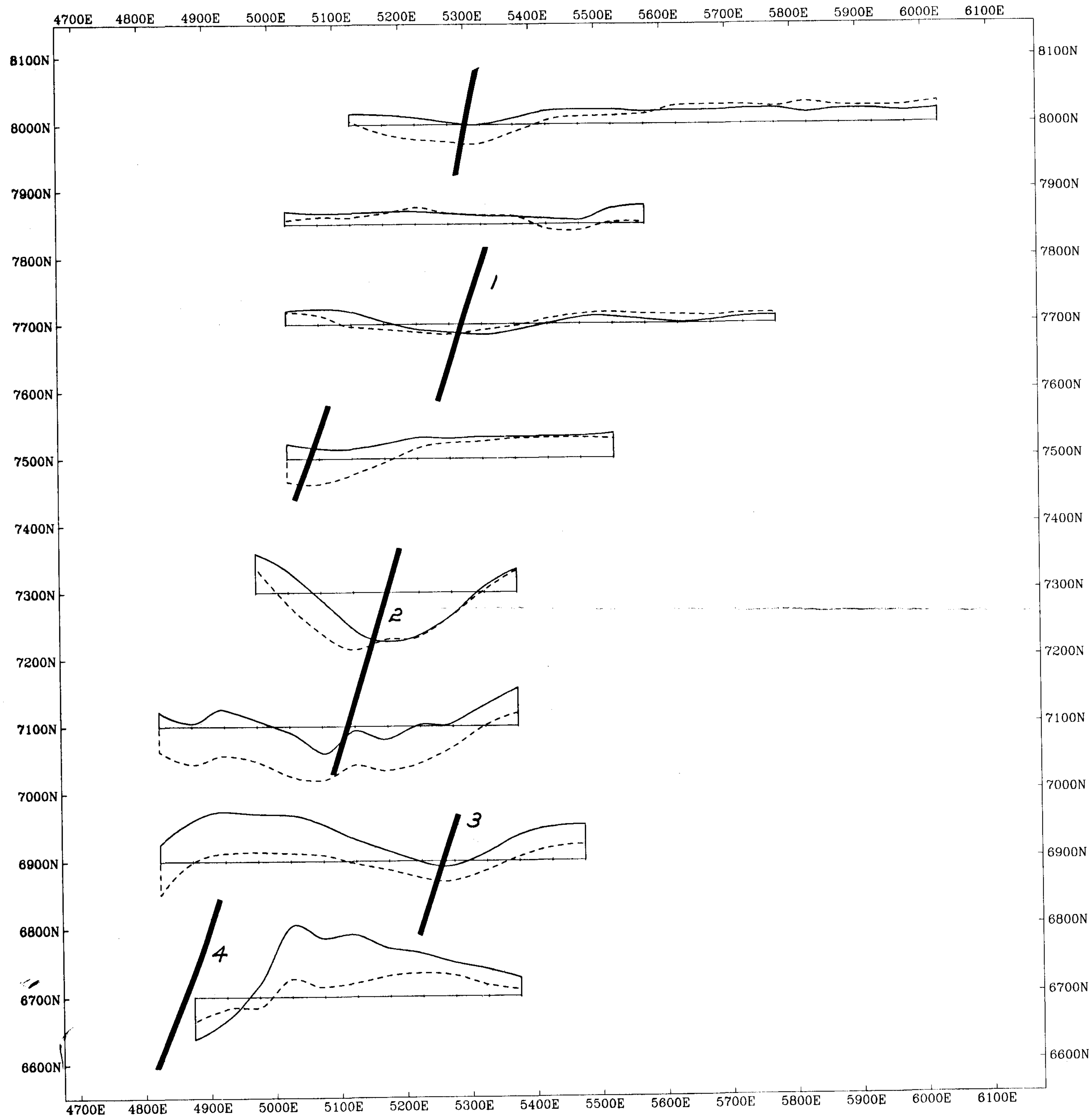
DWG (15)

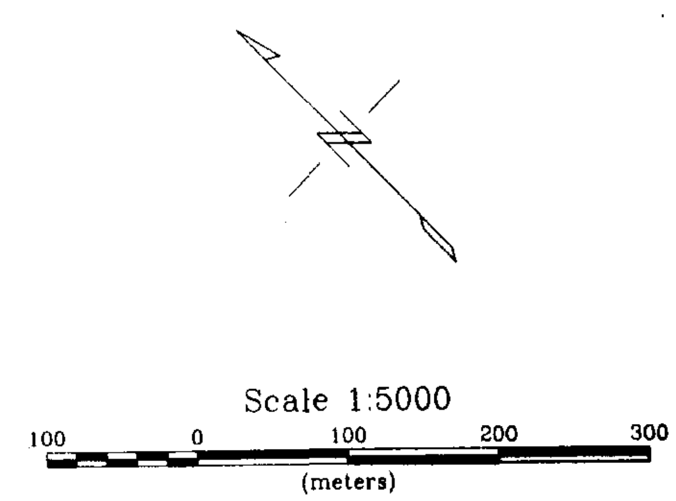
ATNA RESOURCES LTD.

TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 220 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig # 4.7*





094001F

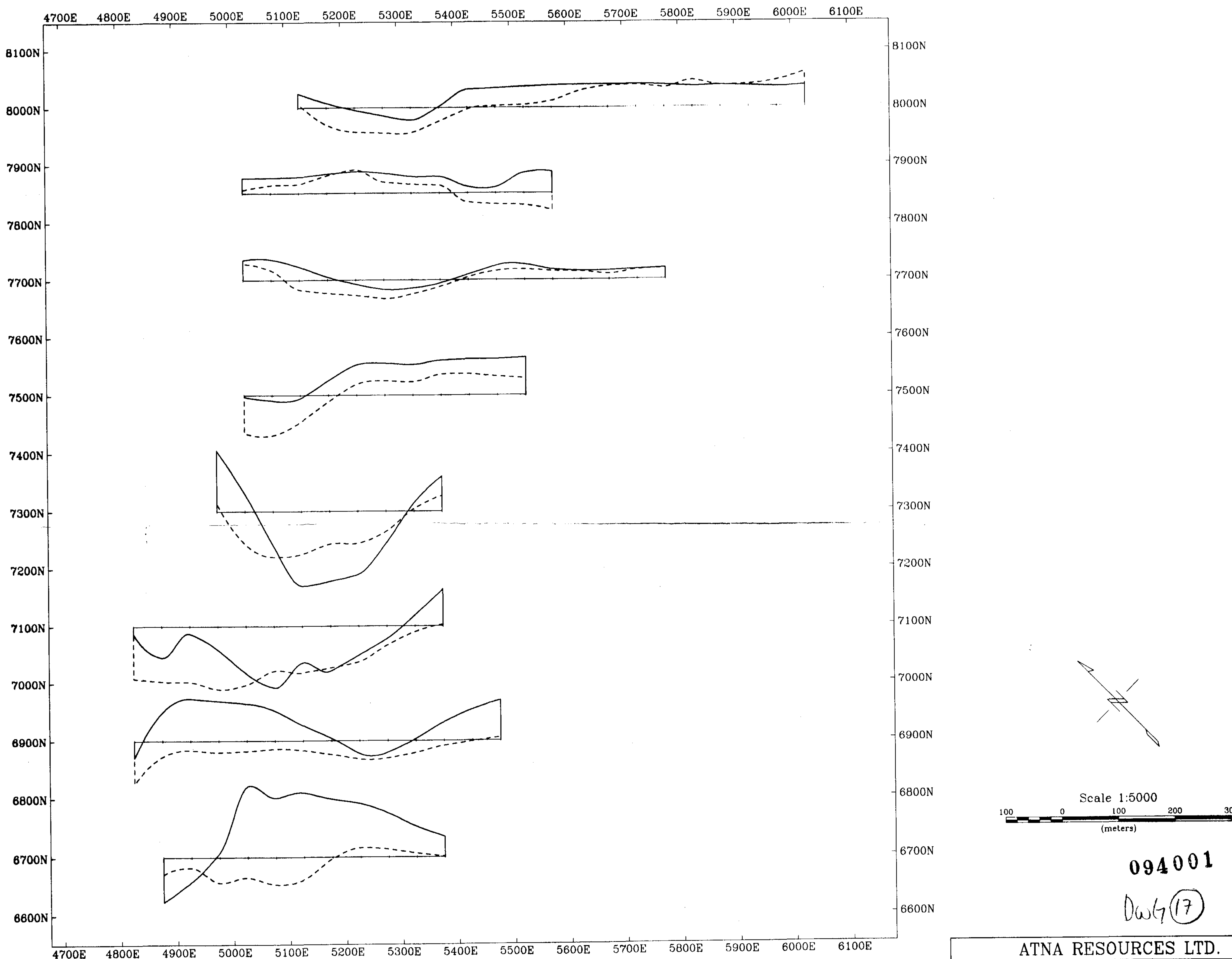
DWG (16)

ATNA RESOURCES LTD.

TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 440 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #* **4.9**

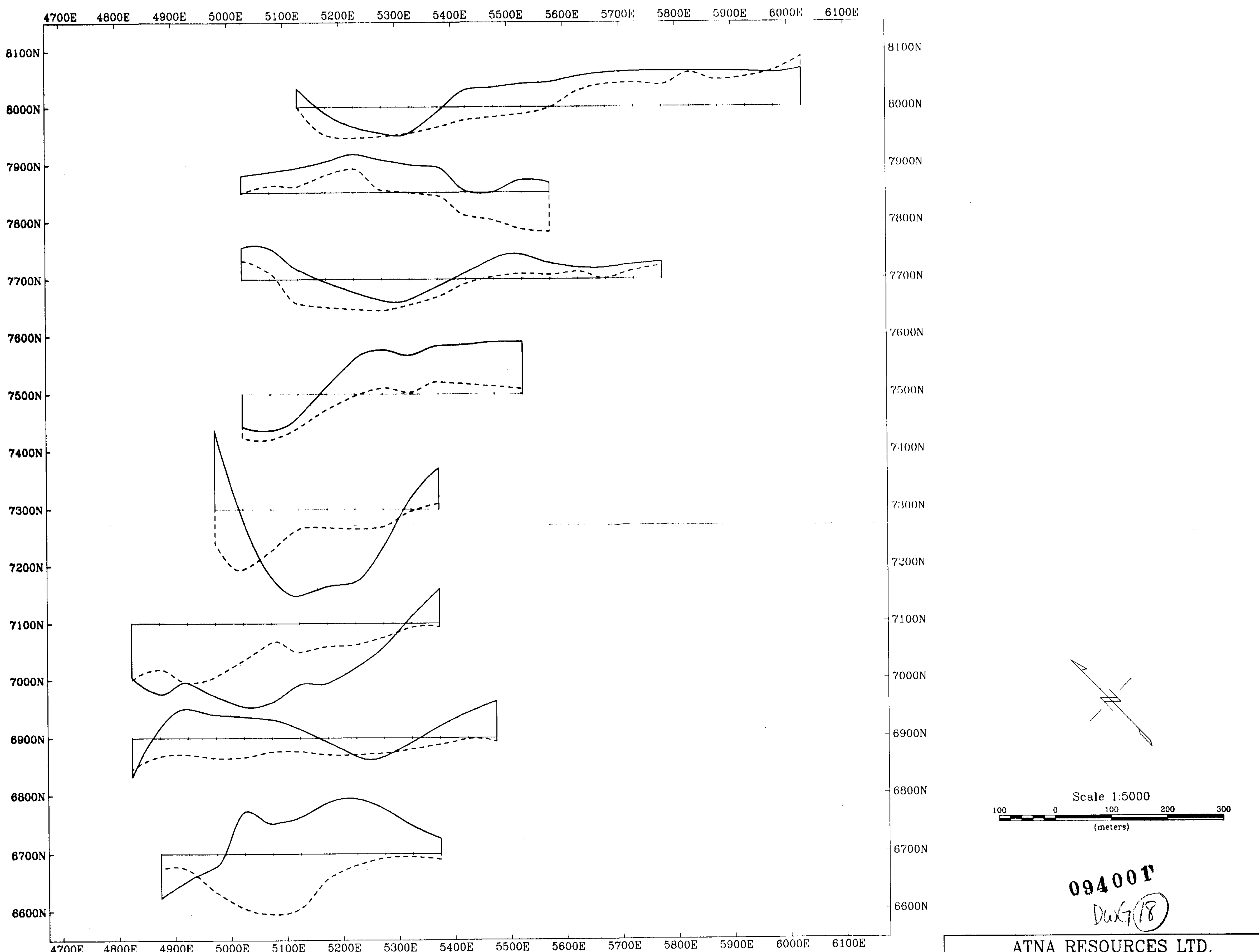


ATNA RESOURCES LTD.

TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 880 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #4.10*



09400T

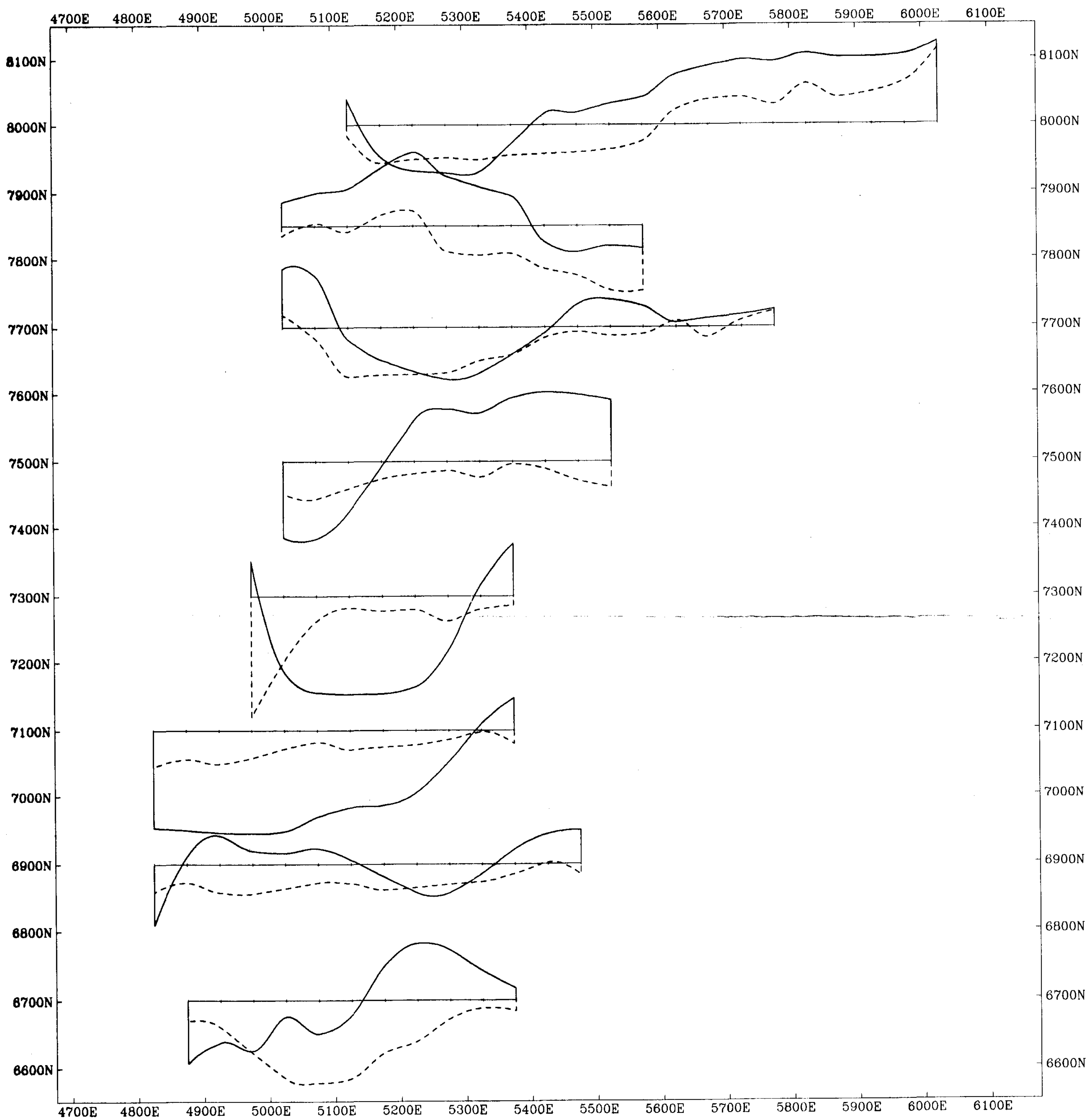
DWG 18

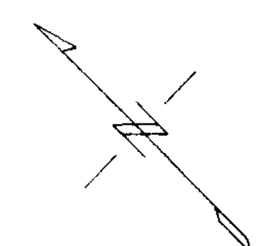
ATNA RESOURCES LTD.

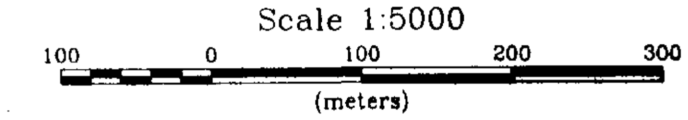
TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 1760 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #4.11*







094001

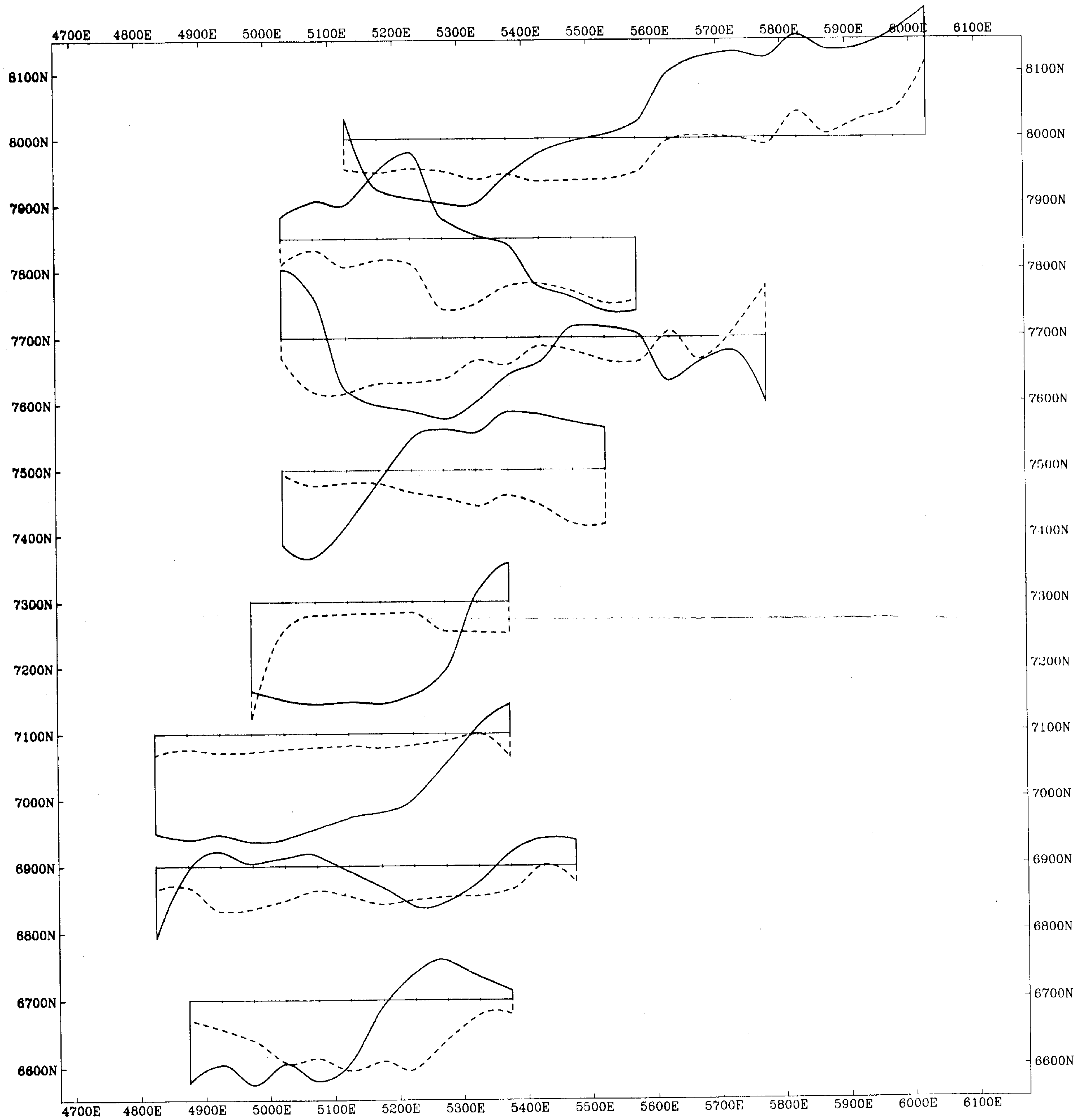
NG (19)

ATNA RESOURCES LTD.

TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 3520 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #4.12*



094001 DWG 20

ATNA RESOURCES LTD.

TREE/FIRE GRID #2 PROJECT
YUKON TERRITORY, CANADA
HORIZONTAL COPLANAR LOOP EM, FREQ. 7040 Hz

In-phase solid, Quadrature dashed, 1cm=30%
Coil separation 250m + to top
Apex Parametrics Maxmin instrument 98 1-9
July, 1998

DELTA GEOSCIENCE LTD, *Fig #4.13*