1994 SUMMARY
REPORT
ON THE
PAK 1-36 CLAIMS

Located in the Pelly Mountains
Watson Lake Mining District
NTS 105G/7
61° 21′ North Latitude
130° 36′ West Longitude

-prepared for-
ATNA RESOURCES LIMITED

-prepared by-
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1994 SUMMARY REPORT ON THE PAK 1-36 CLAIMS

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1.0 INTRODUCTION

The Pak claims consist of 36 contiguous Yukon mineral claims located in the Watson Lake Mining District. They were staked in 1993 to cover a Northern Minfile occurrence situated within a Devonian-Mississippian sequence considered favourable for hosting volcanogenic massive sulphides (VMS). The Pack Showing was first explored by Conwest in 1961, who conducted an exploration drill program. The property was briefly examined again in 1980 by Archer Cathro Limited, as part of a regional program conducted on behalf of Chevron Canada Limited.

In August of 1994, an additional 16 contiguous claims were added to the Pak group bringing the total to 36 units. During the period August 29 through September 16, 1994 Equity Engineering Ltd. conducted a grid-based four man field program on behalf of Atna Resources Ltd.. The program consisted of soil geochemistry, rock sampling, geological mapping at 1:5000 scale, prospecting and magnetometer-VLF surveys. The objective of the program was to further assess, areas of mineralization found in the 1993 reconnaissance program. The program was also aimed at discovering new extensions to mineralized horizons through soil geochemistry, prospecting, geochemistry and geophysics.

2.0 LIST OF CLAIMS

Yukon government records indicate that the following claims (Table 2.0.1)(Figure 2) are owned by Westmin Resources Limited.

TABLE 2.0.1
CLAIM DATA

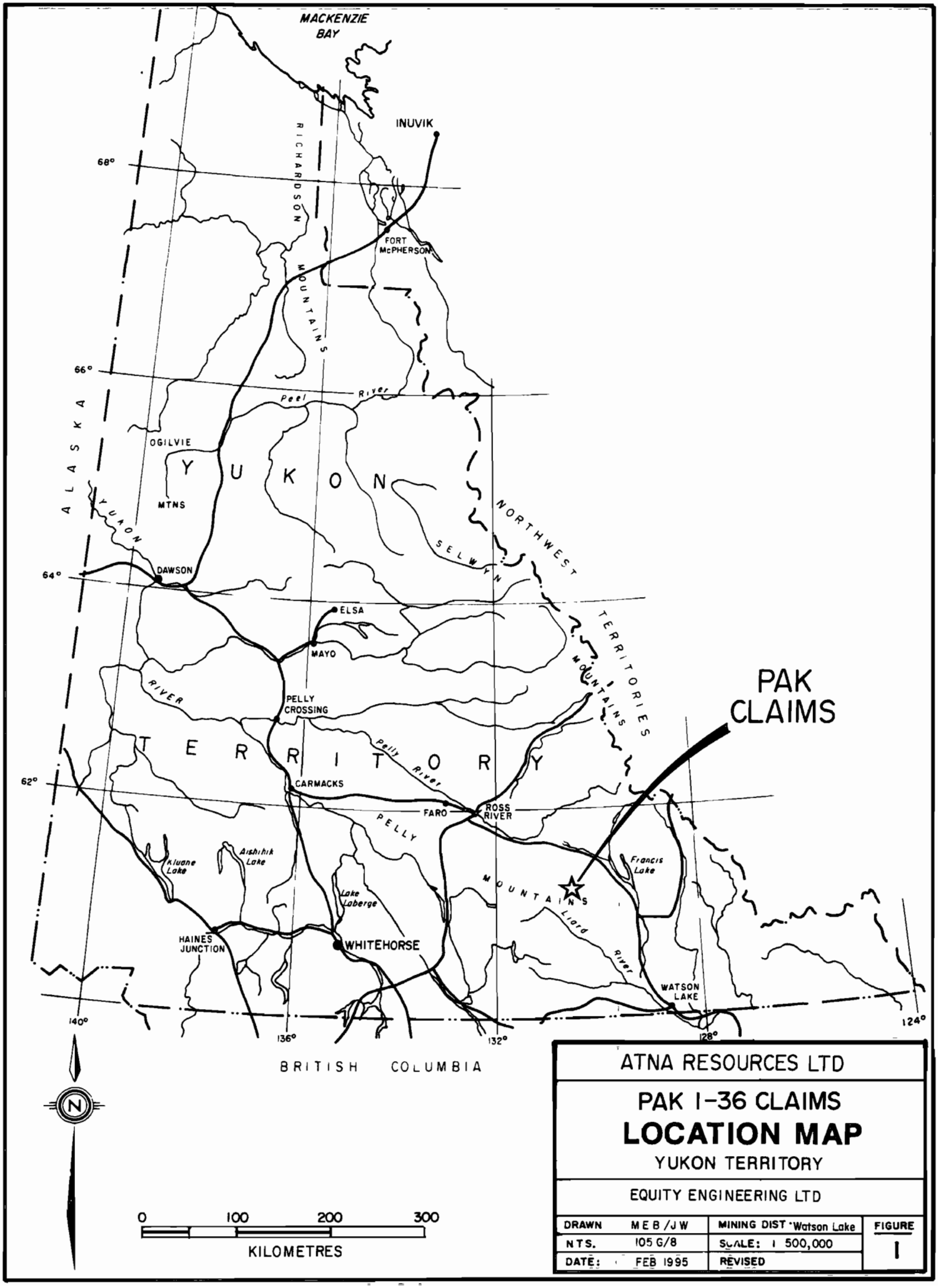
Claim Name	Record Numbers	Record Date	Expiry Date	NTS
Pak 1 - 20	YB45974-993	19/07/93	31/12/2002	105G/7
Pak 21 - 36	YB51516-531	09/08/94	31/12/1999	105G/7

* Subject to approval of assessment work covered by this report

3.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Pak claims are located within the Pelly Mountains, approximately 120 kilometres southeast of Ross River, in the southeast Yukon (Figure 1). They lie within the Watson Lake Mining District, centred at 61° 21′ north latitude and 130° 36′ west longitude.

Access to the Pak claims during the 1994 field program was provided by helicopter based out of Ross River. Camp materials

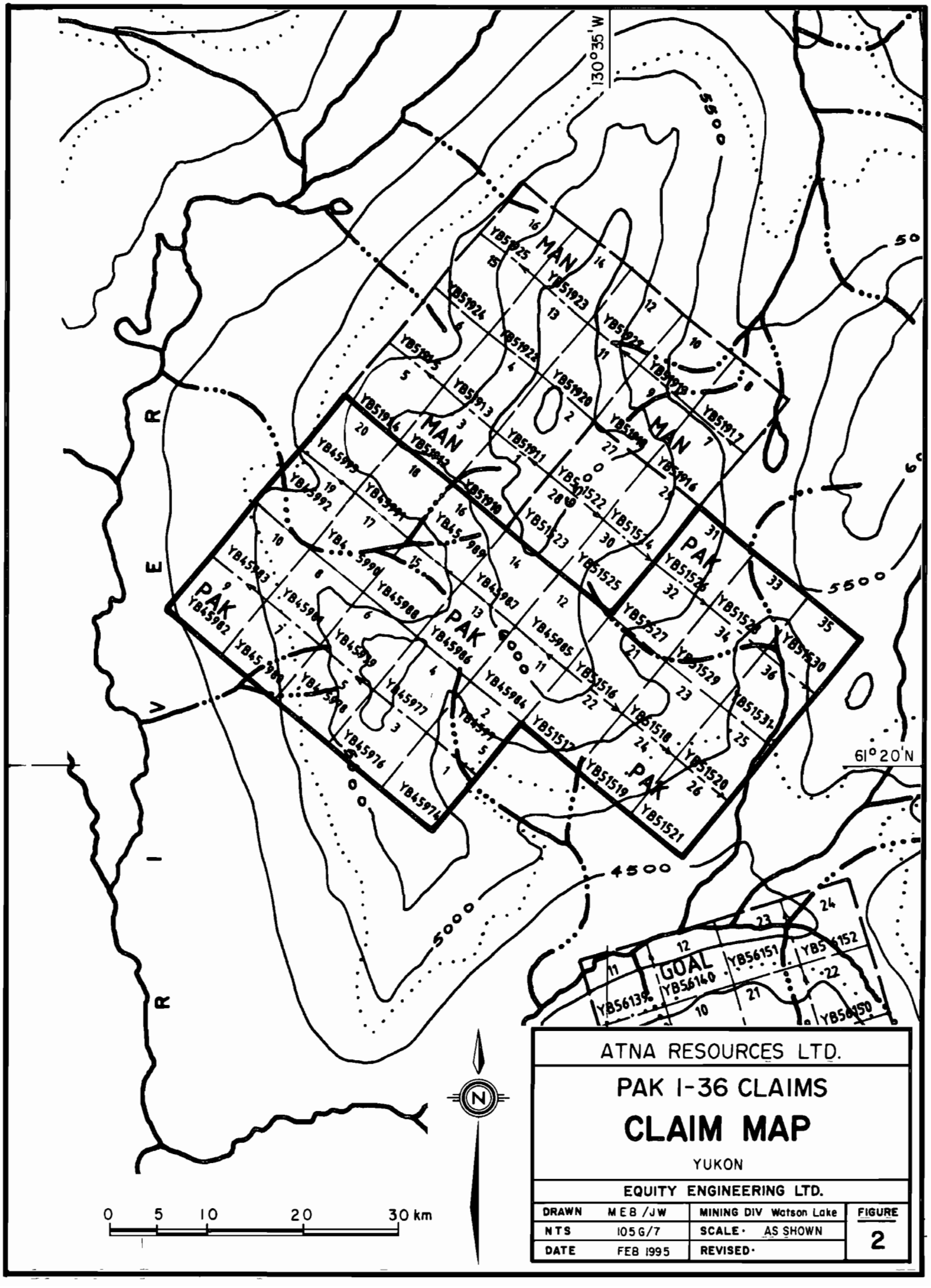


ATNA RESOURCES LTD

PAK 1-36 CLAIMS
LOCATION MAP
YUKON TERRITORY

EQUITY ENGINEERING LTD

DRAWN	M E B / J W	MINING DIST. Watson Lake	FIGURE 1
N T S.	105 G/8	SCALE: 1 500,000	
DATE:	FEB 1995	REVISED	



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PAK 1-36 CLAIMS

CLAIM MAP

YUKON

EQUITY ENGINEERING LTD.

DRAWN	M E B / J W	MINING DIV Watson Lake	FIGURE 2
NTS	105 G/7	SCALE· AS SHOWN	
DATE	FEB 1995	REVISED·	

were trucked from Ross River, 110 kilometres south along the Robert Campbell Highway to Finlayson Lake from which point they were transported by helicopter to the property. The south end of North Lakes, which would be adequate for float plane access, lies two kilometres to the north. Cominco is at present constructing a road from the Robert Campbell Highway, near Finlayson Lake to their ABM deposit. This will bring road access to a point approximately 12 kilometres from the Pak property.

The Pak claims lie on the east side of the North River valley opposite its source at North Lakes. The North River valley is at approximately 1250 metres elevation and is covered with scattered black spruce and low lying buck brush. Topography is moderately rugged with maximum elevations in the area averaging 2000 metres. Above tree line, which averages 1400 metres, vegetation is very sparse and most slopes are talus covered. The moderate alpine terrane with very little vegetation makes for easy access to most areas. Outcrop exposure is restricted to the higher slopes and averages approximately 15 to 20%.

4.0 PROPERTY EXPLORATION HISTORY

The Pack occurrence was first discovered by Conwest Exploration Company Limited in the summer of 1961 and staked as the Pack 1-88 claims. Conwest completed a prospecting program defining the extent of the original Pack occurrence and a second showing approximately 800 metres to the east. Conwest drilled two holes on the Pack occurrence that fall, totalling 161.2 metres, but failed to intersect mineralization (Ashton, 1961). The claims were staked as the Repack claims in 1977 by Cominco, but no work was filed. In 1979, the claims were staked as the Outlaw claims by Chevron Canada Ltd, which performed mapping (Schmidt, 1981). In 1993, the Pak 1-20 claims were staked and a limited exploration program including geological mapping, rock sampling, soil and silt sampling was completed by Equity Engineering Ltd. on behalf of Atna Resources Limited (Baknes, 1994).

5.0 1994 EXPLORATION PROGRAM

During the period August 29 - September 16, 1994, Atna Resources Ltd. carried out a field exploration program on the Pak claims, consisting of soil and rock geochemistry, limited geological mapping, prospecting and grid-based VLF-magnetometer surveys. The objective of the program was to further assess and expand the potential of mineralized areas found in the 1993 reconnaissance program.

The baseline was run from 10,000E to 12,600E (2.6 km) at 075° and slope-corrected using a hard chain and clinometer. Baseline stations were marked at 25 metre intervals with wooden pickets and

inscribed aluminium tags. A total of 28.8 kilometres of irregularly spaced cross lines were slope-corrected using hip chain and clinometer. An additional 3.5 kilometres of lines, running parallel to the baseline, were also established. A magnetic declination of 29° 45'east of true north was used in all compass work and mapping. Stations were marked at 25 metre intervals with tyvex tags and orange flagging. On most lines, rock cairns were also built at station locations. Geological mapping was carried out on a scale of 1:5000 using the grid and enlargements of 1:50,000 topographic maps for ground control. VLF and magnetometer surveys, totalling 31.6 kilometres were completed on the grid by SJ Geophysics Ltd.. A geophysical report, including maps, instrumentation and procedures is included in Appendix G.

A total of 34 rock, 174 soil samples and a single silt sample were taken on or adjacent to the claims. Rock, soil and silt samples were analyzed geochemically for gold and by ICP for 24 elements. 1993 samples were analyzed by ICP for 32 elements. As a result, the 1993 barium results are not dependable nor comparable with the 1994 results. Rock samples exceeding 10,000 ppm in copper, lead or zinc were assayed. Five whole rock samples of felsic rocks were collected and analyzed for major and trace elements by XRF. In the field, rock sample locations were marked by a metal tag and a combination of pink and blue flagging. Soil and silt sample locations were marked with orange flagging and tyvex tags. Samples were taken at 50 metre intervals on selected grid lines and an additional 60 soil samples were taken on a single contour line at elevation 1620 metres. Soil samples were collected, where possible, from "B" horizon material at depths ranging from 10 to 40 cm and placed in numbered kraft envelopes; however, many of the samples taken from steep slopes consisted largely of talus fines. The sampler recorded notes pertaining to sample horizon, colour, texture, and local physiography. Samples were partially dried in camp and then shipped to Chemex Labs of North Vancouver, B.C. for sample preparation and analysis. All rock samples are described in Appendix D, and analytical certificates for all samples are attached in Appendix E.

6.0 REGIONAL GEOLOGY

The region lying northeast of the Tintina Trench and southwest of Frances and Finlayson Lakes is referred to the South Yukon Tanana Terrane (SYTT). The regional geology of the SYTT has most recently been defined by the work of Tempelman-Kluit et al., (1976) and Mortensen (1985, 1992, Figure 3). Mortensen considers the SYTT to be the innermost of the accreted terranes in the western Canadian Cordillera. It is comprised largely of a Late Devonian-Mississippian volcanic-plutonic, pericratonic arc assemblage that was strongly deformed and metamorphosed by late Triassic time. The Yukon Tanana Terrane (YTT) extends into the northern Yukon and on into Alaska where it is host to several volcanogenic massive

LEGEND

(to accompany Figure 3)

NORTH AMERICAN CONTINENTAL MARGIN

14 — *Pre-Triassic* sedimentary and volcanic rocks

CAMBELL RANGE BELT

13 — massive carbonate

12 — dominantly grey chert and metachert, structurally interleaved with minor mafic and felsic metavolcanics, greenstone and serpentinite (Slide Mt.?)

YUKON-TANANA TERRANE

11 — *Early Jurassic* - mafic stocks

10 — augen orthogneiss

9 — monzonitic orthogneiss

8 — *Mid Paleozoic* - Simpson Range plutonic suite

7 — *Pennsylvanian-Permian* - massive carbonate and quartzite (*upper unit*)

6 — *Devonian-Mississippian* - interlayered mafic and minor felsic metavolcanic rocks, carbonaceous metasediments and quartzeye grits (*middle unit*, Nasina equivalent)

5 — *Pre-late Devonian* - micaceous quartzite, minor marble (*lower unit*, Nisling equivalent)

UNITS COMMON TO ALL THREE TERRANES

4 — *Cretaceous and Tertiary* - volcanic rocks

3 — *Mid-Cretaceous* - felsic intrusive rocks

2 — *Late Triassic* - immature clastic sediments

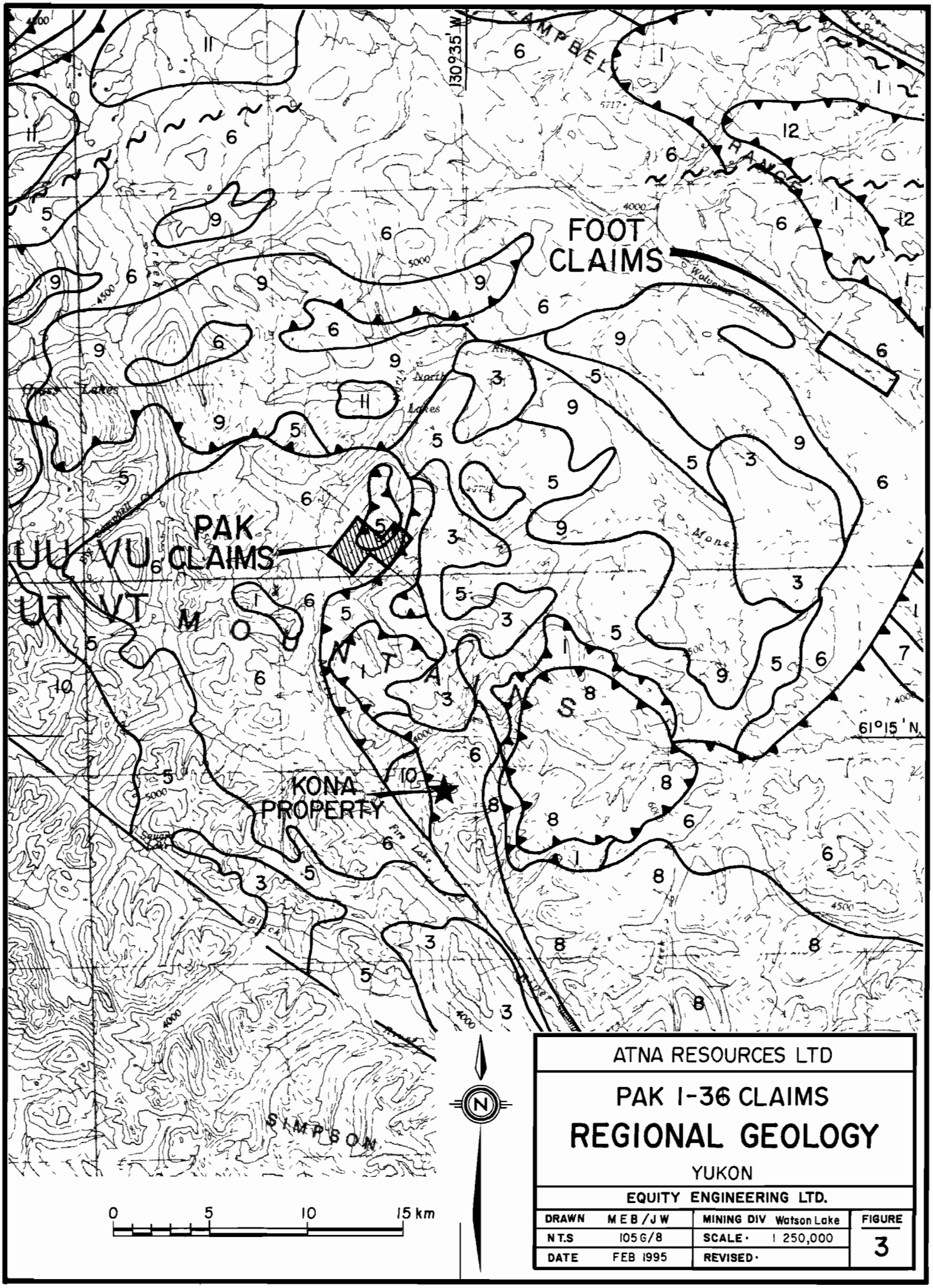
1 — serpentinized ultramafic rocks, greenstone, cherts, minor diabase and gabbro (Slide Mt.?)

SYMBOLS

stratigraphic or intrusive contact

thrust fault (teeth on hanging wall)

* Geology after Mortensen & Jilson, 1985



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PAK 1-36 CLAIMS

REGIONAL GEOLOGY

YUKON

EQUITY ENGINEERING LTD.

DRAWN	M E B / J W	MINING DIV Watson Lake	FIGURE 3
N.T.S	105 G/8	SCALE · 1 250,000	
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sulphide (VMS) deposits in the Delta district, including several moderate size deposits that total 18 million tonnes grading 0.3 to 0.7% copper, 3.0 to 6.0% zinc, 1.0 to 3.0% lead, 34.0 to 100.0 g/t silver and 1.0 to 3.4 g/t gold (Nokleberg et al., 1989). The YTT is believed to be a displaced equivalent to the Kootenay and Barkerville Terranes of southern and central British Columbia, which are host to several VMS deposits including the Goldstream deposit north of Revelstoke (3.2 million tonnes grading 4.5% copper, 3.1% zinc, 20 g/t silver, Høy, 1991). In 1994, Cominco Exploration announced the discovery of the ABM volcanogenic massive sulphide deposit, 12 kilometres north of the Pak property. Published results at the time of this report are 13 million tonnes of 5.5% zinc, 1% copper, 1.3% lead, 125 g/t silver and 1.2 g/t gold. The deposit is immediately overlain by felsic volcanics, and hypabyssal rocks and then by metasediments with intercalated mafic volcanics. The footwall to the deposit is mafic metavolcanics and felsic intrusive rocks.

The Layered Metamorphic Sequence (LMS) of the SYTT is host to the known VMS occurrences and is considered the most permissive. The Devonian-Mississippian interlayered mafic and felsic rocks, (middle unit of the LMS) which host the Pak occurrence and the ABM deposits, may be equivalent to the Nasina series of the Dawson district. The pre- to late Devonian (lower unit) is likely equivalent to the Nisling assemblage of northwestern B.C. and the western Yukon.

7.0 PROPERTY GEOLOGY

The Pak 1-36 claims are underlain by a sequence of Devonian-Mississippian interlayered schistose to gneissic metasediments and intermediate to felsic metavolcanics (**Unit V**, middle unit)(Figure 4). To the east of the claims, a thrust panel of pre-late Devonian micaceous quartzite (**Unit Q**, lower unit) overlies Unit V. Intrusive lithologies include monzonitic orthogneiss (**Unit G**) that lies in contact with Unit Q to the east and serpentinized ultramafic rocks (**Unit U**) that form fault slivers to the north of the claim group. Felsite occurs as 15-50 centimetre deformed sills within metasediments and metavolcanics. The metamorphic grade is amphibolite, as indicated by the presence of garnet and chlorite altered amphibole.

Structure on the property is dominated by a strong penetrative schistosity-gneissosity, striking northeast and dipping gently to the south. Folding is developed as isoclinal recumbent folds with subhorizontal fold axis and shallow south-dipping axial surfaces. Short amplitude minor folds are common and dislocation along axial surfaces is locally evident. Moderately well developed boudinage fabric is locally developed in felsic layers and conformable quartz veins. These generally have a long axis that trends and plunges parallel to the fold axes, indicating a stretch direction

perpendicular to the fold axis.

Mapping on the claims is still at a reconnaissance level, however, incorporation of 1994 mapping with the 1993 data and that of Archer Cathro (Schmidt, 1981) allowed the Middle Unit (**Unit V**) to be subdivided into eight subdivisions. A biotite quartzo-felspathic unit (**Unit Vbg**) varies from gneissic to schistose in texture to a clean biotite feldspathic quartzite. Occasional quartz eyes may indicate a felsic igneous protolith. Unit Vbg forms the hangingwall to the massive sulphide mineralization at the Pak Zone and comprises outcrops south of the claim block. Biotite schist (**Unit Vbs**) forms thin horizons in the East Cirque area consisting of massive granular biotite, chloritized biotite and minor quartz. It has characteristic waxy foliated surfaces and forms recessive outcrops with extensive talus fans. Chlorite schist (**Unit Vcs**) is an extensive unit that outcrops throughout the claim area. The chlorite schist is mainly comprised of chlorite, chloritized amphibole, with lesser biotite and minor quartz. An isolated outcrop of deformed pillows within chlorite schist suggests they represent in part, mafic pillowed flows. Laminated siliceous rocks (**Unit Vex**) that vary from chert, or possibly siliceous exhalite, to fine-grained quartzite are locally associated with the massive sulphides and also contain laminated sphalerite. The siliceous unit is essentially comprised of fine grained granular quartz with local calcareous sections. Fragments of Unit Vex may constitute inclusions in the massive sulphides. Felsic, massive to weakly schistose, quartzo-feldspathic units (**Unit Vfl**), that may represent felsic volcanics or perhaps hypabyssal intrusives are mapped on the east-west trending ridge, on the southern boundary of the claims. Typically, the rock is a granular, sometimes a sugary intergrowth of quartz and feldspar, with only a trace of biotite and rare quartz eyes. It is faintly foliated and texturally, resembles rocks that form thin sills or gneissic bands within biotite-quartzo-feldspathic gneiss (Unit Vbg) and chlorite schist (Unit Vcs). Graphitic biotite quartzite (**Unit Vgq**) comprises several narrow layers in the East Cirque area. The unit weathers light grey to black, is locally carbonaceous to graphitic, siliceous and often pyrrhotite ± sphalerite-bearing. Quartz-biotite-sericite schist (**Unit Vqb**), outcrops extensively in the east cirque area. The lithology often is light brown to buff and may be gossanous. The unit is comprised of a granular intergrowth of quartz and muscovite altered feldspars with 5-10% biotite flecks, which define the foliation. Perhaps the most extensive unit on the property are feldspathic quartzites and muscovite schists (**Unit Vsq**). This classification encompasses a variety of siliceous muscovite-bearing schistose to more massive muscovite-quartzite units. Locally, they contain opalescent quartz eyes, suggesting a felsic igneous protolith, but others resemble primary quartzites. The main constituent minerals are quartz, feldspar and muscovite, with minor carbonate and biotite.

8.0 MINERALIZATION

Mineralization on the Pak claims is concentrated in the Pak Cirque, which contains the Pak Zone, and in the East Cirque, which hosts the East Cirque Zone.

The massive sulphides at the Pak showing are localized on the hinge of a recumbent isoclinal fold (Figure 4). The thickness of the mineralized horizon is variable, but averages 0.4 - 1.8 metres. Mapping in 1993 and 1994 confirmed that mineralization is exposed discontinuously along strike for a distance of approximately 300 metres. New copper-zinc mineralized float found 300 metres west along strike from the Pak showing indicates even further potential. Mineralization consists of massive pyrrhotite supporting quartz and wall rock inclusions with chalcopyrite as disseminations and irregular patches, often on the margins of inclusions. Pyrite within the pyrrhotite-dominated sections is relatively minor and occurs as massive ragged patches in association with chloritic zones near the margins of the massive sulphides. Pyrite also occurs, along strike from pyrrhotite zones as massive (>75%) granular pyrite with minor silica±sphalerite containing inclusions of graphitic wall rock. At one locality, a peculiar, jade green mineral occurs within the sulphides and closely resembles a barium-bearing feldspar noted within the massive sulphides at the ABM deposit. Sphalerite is locally massive, where it occurs as bands on the hanging wall side of the massive pyrrhotite. Generally, the sulphides are massive and dominated by cataclastic or durchbewegung textures, but there are zones of finely banded pyrrhotite, sphalerite and silica. Fragmental textures are indicative of high degrees of sulphide deformation and are very similar to the textures described at the Goldstream deposit in southeastern B.C.. Both the immediate hanging wall and footwall to the massive sulphides are comprised of quartz-muscovite-feldspar schists (Unit Vsq), containing disseminated pyrrhotite. These units appear to vary between 1 to 4-5 metres thick. In various localities, black graphitic biotite quartzite and schist (Unit Vgq) may also form the immediate footwall to sulphides. Above the immediate hangingwall, the Pak horizon is overlain by a greater than 20 metre thickness of blocky biotite quartzo-feldspathic gneiss (unit Vbg). An extensive thickness of chlorite schist (Vcs) generally forms the footwall to the massive sulphides, however, complex folding obscures this relationship in some areas.

The poorly exposed East Cirque Zone mineralization extends discontinuously over a strike length in excess of 100 metres. Mineralization in terms of mineralogy, texture and stratigraphic relationships are very similar to the Pak Zone. The immediate footwall of the East Cirque is comprised of a friable/fissile muscovite-sericite schist with abundant green mica or possible fuchsite. The main footwall unit, which is approximately 20 metres thick, is comprised of quartz-sericite schist. Within this unit, roughly 15 metres down section from the sulphide horizon, is a 15

centimetre to roughly 1 metre thick unit of well-banded, magnetite iron formation that can be traced discontinuously for 35 metres along strike. This quartz-sericite schist is in turn underlain by chlorite schist. The immediate hangingwall of the East Cirque Zone is not exposed, however the main overlying unit is quartz-biotite gneiss (Unit Vbg).

Table 8.0.1 lists anomalous rock samples taken during the 1994 program. Results from the 1993 sampling can be found in the 1993 assessment report (Baknes, 1993).

TABLE 8.0.1
ROCK GEOCHEMISTRY

Sample	Width (cm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Mo (ppm)
4308[1]	grab	177	3200	5780	5.0	<5	6
4311[1]	grab	1.63%	194	594	15.6	<5	3
4314[1]	grab	6780	356	280	14.8	50	13
4316[1]	float	1.55%	3780	1.56%	24.4	20	20
4317[1]	float	5770	324	2210	3.0	<5	41
4322[2]	80	4.97%	1.08%	2.71%	62.0	340	69
4323[2]	grab	54	3800	194	10.4	10	3
596833[3]	float	4190	116	5200	2.0	<5	4
596837[1]	15	2430	306	1400	4.2	<5	23
596898[3]	float	29	76	1950	0.4	<5	5
596900[3]	float	1.15%	264	2200	6.8	<5	10

1 - East Cirque Area
2 - Pak Zone
3 - West strike extension of Pak Zone

Sample 4308 lies structurally above the East Cirque Zone horizon in a 3 metre thickness of muscovite-biotite-quartz schist at the contact of overlying quartz-muscovite schist and underlying biotite schist. Moderate to weak sphalerite with associated pyrrhotite and galena occur as disseminations in poddy lenses with discontinuous strike extent. Sample 4311 was also taken structurally up section from the East Cirque Zone horizon. Mineralization occurs as blebby chalcopyrite in possible association with quartz-ankerite alteration related to an east-west trending fault zone. Sample 596837 was taken 5 metres from 4311, but consisted of massive magnetite iron formation with minor associated sphalerite and chalcopyrite. Although it was not noted during mapping, it seems plausible that the iron formation sampled by 596837 and the iron formation structurally beneath the East Cirque Zone horizon might be equivalent and connected by folding. Samples 4314-4317 are all samples from the East Cirque Zone mineralized horizon. Sample 4314 consists of oxidized laminated boxwork in sericite schist. Exposure is limited, but mineralized float indicates south strike extension. Sample 4316 was taken 60

metres along strike from sample 4314. Massive pyrrhotite is in contact with tightly folded and contorted black siliceous graphitic schist. Chalcopyrite, sphalerite and minor galena are both disseminated and in remobilized discordant stringers, hosted mainly in the graphitic schist. This mineralization in association with black graphitic schist adjacent to the massive sulphides, is very similar to that found in the Pak Zone.

Sample 4322 is from the Pak massive sulphide horizon and consists of typical cataclastic-textured massive sulphides with inclusions of quartz and bright green schist (fuchsite?). Both the footwall and hangingwall consist of quartz-muscovite schist. Sample 4323 is a character sample of the black graphitic footwall schist. Pyrrhotite minor pyrite and galena occur as wispy laminae parallel to foliation.

Samples 596833, 596898 and 596900 are all float samples taken west of the last exposures of the Pak Zone massive sulphide horizon. Mineralization consists of chalcopyrite and sphalerite in quartz muscovite ± biotite schists with minor associated gypsum. Outcrop sources have not yet been found, however, it seems likely that this mineralization represents the strike continuation of the Pak Zone horizon.

9.0 SOIL & SILT GEOCHEMISTRY

A total of 174 soil samples were collected both on the grid and the continuation of the 1620 metre contour line established in 1993 (Figures 5 & 6). A level of the mean plus two times the standard deviation for copper (256 ppm), lead (173 ppm), zinc (956 ppm), silver (1.1 ppm) and barium (6293 ppm) are considered highly anomalous. Other elements that show a positive correlation with elevated base metals are silver, manganese, phosphorous, barium and molybdenum. Based on these thresholds, it is apparent that there are several anomalous areas as defined by coincident copper, lead, zinc and silver. The most western anomaly is situated at the south ends of contour lines 1500 and 1600 and grid line 10,300E. Values exceed 170 ppm copper, 150 ppm lead, 800 ppm zinc, 1 ppm silver and 5000 ppm barium, in an area of no outcrop exposure. This area coincides with the projection of the Pak massive sulphide horizon. Two anomalies lie at either end of lines 11,200 and 11,400E. Soil values exceed 150 ppm copper, 150 ppm lead, 700 ppm zinc, 5000 ppm barium and 0.8 ppm silver. The southern anomaly probably reflects the presence of laminated sphalerite mineralization found in association with siliceous exhalites. The best rock sample collected from this area assayed 1.33% zinc and 5830 ppm lead in talus float. The anomaly at the north end of the lines is underlain by quartz-sericite schists, but no significant mineralization has yet been found to explain the soil response. A strong anomaly, defined by soil values exceeding 400 ppm copper, 150 ppm lead, 700 ppm zinc, 1.2 ppm silver and 3600 ppm barium,

lies along the length of line 11,950E. The south end of the anomaly, which is strongest in copper and barium is explained by the massive sulphide mineralization exposed in the East Cirque Zone. The north end of the anomaly is underlain by a complex interlayering of quartz sericite schists, quartz-biotite gneiss and quartz-biotite-sericite schist. To date, no significant mineralization has been found in this area, but the strength of this anomaly suggests good potential for mineralization. One of the strongest soil anomalies on the property is situated on contour line 1620 on the south side of the East Cirque. Soil results for this anomaly exceed 150 ppm copper, 150 ppm lead, 800 ppm zinc, 1.2 ppm silver and 5000 ppm barium. Poor outcrop exposures indicate the area is underlain by graphitic quartzites and schists and quartz-sericite schists. It is proposed that the best mineralization found so far, which assayed 2302 ppm zinc and 448 ppm lead, is not sufficient to explain the breadth and strength of this anomaly. Three more weak anomalies lie along contour line 1620 at 3000 metres south, 4200 metres south and 4850 metres south. The mineralized horizons exposed at the Pak Showing and the East Cirque Zone are almost flat lying, therefore it is possible that these anomalies represent down slope dispersion from unexposed traces of massive sulphides. It is also notable that the soil anomaly immediately down slope of the East Cirque massive sulphides is relatively weak, likely because of dilution by unmineralized talus fines. This masking of anomalies by dilution emphasises that all soil anomalies, regardless of strength, may be significant and related to massive sulphide mineralization.

The single silt sample, 94PD-01 was taken in a west flowing drainage north of the Pak Cirque. Results indicate the sample is highly anomalous, in copper, lead, zinc and molybdenum, relative to regional government samples taken in the area

10.0 WHOLE ROCK GEOCHEMISTRY

Five samples were analyzed for major and trace elements using XRF techniques. The purpose of the study was to determine whether or not the protolith of these felsic rocks was igneous or sedimentary, and determine the genetic relationship between felsic sill-like rocks (samples 4319, 4310, 4325) and quartz sericite-schist units (samples 4320, 4321).

Analysis of the samples confirmed that some of the rocks suspected of being metamorphosed quartzites were very likely felsic volcanics, based on their aluminium and alkali contents. There remains a possibility that these units are sediments, however, textural features are most suggestive of an igneous parentage.

Based on the assumption that the rocks are volcanic in origin, rock classification plots indicate that they are medium to high potassium, calc-alkaline rhyolites (Appendix F). Sample 4321 taken

from the footwall of the Pak showing does not plot with the cluster of other felsic samples, in terms of major and trace elements. It may represent a metasomatized rock or even more likely a siliceous exhalite. Plots of conserved elements (those not involved in fractionation or metasomatic processes) form a fairly tight cluster with the exception of sample 4321. On these conserved element plots, samples that plot on a common line that passes through the origin are likely comagmatic. Within the cluster of 4 felsic samples there may be two separate groups of two. Samples 4310, a suspected felsic intrusive body in the East Cirque and sample 4319, a narrow sill in quartz-biotite gneiss, plot as one group. Sample 4320, a sample of hangingwall schist from the Pak Zone and sample 4325, a possible meta-quartz eye rhyolite plot as the other group. As with the major element data, sample 4321 does not coincide with any of the other samples on the conserved element plots.

11.0 GEOPHYSICS

A VLF-magnetometer survey was conducted over 31.6 line kilometres. The objective of the survey was to detect massive sulphide mineralization, which includes magnetic pyrrhotite, along trend of the Pak and East Cirque showings and to identify any other mineralized horizons at different structural levels. A complete geophysical report, including instrumentation and interpretation, is included in Appendix G.

Essentially, four areas of prominent geophysical features are apparent and suspected of being related to massive sulphide mineralization. Other more subtle features may also reflect mineralization, however, further definition of these areas will be required. One of the most prominent, coincident VLF-magnetometer anomalies, is centred over the Pak Showing (M1). The anomaly defines the known and exposed mineralization, but also indicates possible strike extension to mineralization in excess of 800 metres. Another magnetometer anomaly is situated west of the Pak anomaly, north of the baseline, between lines 10,100E and 10,400E with another discrete anomaly at 10,500E, 9,900N. These anomalies, which are coincident with soil geochemical anomalies, may indicate the western projection of the Pak Zone horizon. A discrete three line, magnetic anomaly extends from 10,700E, 9400N to 10,900E, 9,500N. This also corresponds with a weak soil geochemical anomaly and the inferred southward projection of the Pak horizon. The most intense and extensive magnetic and VLF anomaly is situated in the East Cirque (M2, V2). This zone is coincident with anomalous soil geochemistry and quartz-sericite schists and graphitic schists to siliceous phyllites. The strong VLF anomaly may be reflecting conductive sediments that also contain minor sphalerite and pyrrhotite, however, the very intense magnetic response is not likely explained by the relatively minor disseminated pyrrhotite noted on surface. Other possible causes for the anomaly are: 1) a relatively flat-lying massive sulphide layer, either continuous

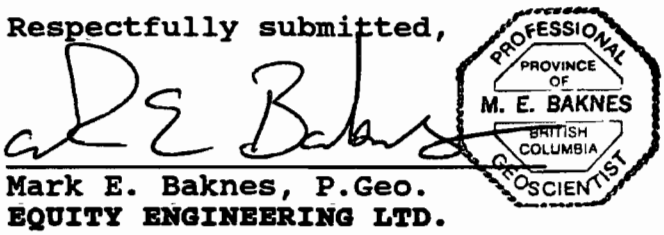
siliceous phyllites. The strong VLF anomaly may be reflecting conductive sediments that also contain minor sphalerite and pyrrhotite, however, the very intense magnetic response is not likely explained by the relatively minor disseminated pyrrhotite noted on surface. Other possible causes for the anomaly are: 1) a relatively flat-lying massive sulphide layer, either continuous with the Pak Zone horizon or another deeper horizon; 2) banded magnetite iron formation.

12.0 CONCLUSIONS AND RECOMMENDATIONS

Mineralization on the Pak claims consists of massive stratabound pyrrhotite with chalcopyrite, sphalerite and pyrite. Texturally, the massive sulphides are strongly deformed, however, sulphide textures, geological setting and whole rock geochemistry suggest they are volcanogenic in origin. The mineralization is hosted within felsic meta-rhyolites and graphitic sediments and siliceous exhalites at the boundary between footwall mafic meta-volcanics and hangingwall gneissic rocks. Some preliminary results suggest that felsic intrusive or hypabyssal rocks may also form part of the complex stratigraphy. The Pak Showing mineralization is located at the hinge of recumbent isoclinal folds, causing the mineralization to conform, in part, to a rod-like form with a subhorizontal plunge, and a trend near 070°. The East Cirque Zone may be continuous with the Pak horizon or represent another structural level of massive sulphide mineralization. Massive and disseminated, banded magnetite iron formation is spatially associated with the East Cirque mineralization, which is very similar in all aspects to the Pak Zone mineralization. Grid-based mapping, geophysics and soil geochemistry conducted beyond the immediate Pak showing have revealed very encouraging results including discovery of the East Cirque horizon, possible west and south extensions to the Pak horizon and definition of a large geochemical and geophysical anomaly in the floor of the East cirque. Mapping also indicates that mineralization occurs on more than one structural level, improving the potential for more significant mineralized horizons.

Exploration on the Pak claims is still at an early stage, but results obtained thus far are very encouraging and indicate abundant potential to discover additional mineralization. Recent discovery of the ABM deposit by Cominco in rocks believed to be correlative with those on the Pak property is encouraging, especially, in light of the fact that established massive sulphide camps are seldom host to a single significant ore deposit. Surface surveys on the Pak property are as yet too sparse and limited in scope for definition of well positioned drill targets. Further work to define quality drill targets and subsequent drilling is highly recommended.

Respectfully submitted,



Mark E. Baknes, P.Geo.
EQUITY ENGINEERING LTD.

Vancouver, British Columbia
February, 1995

APPENDIX A

BIBLIOGRAPHY

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APPENDIX B

LIST OF PERSONNEL

LIST OF PERSONNEL

Mark E. Baknes (Sr. Geologist)
207, 675 West Hastings Street
Vancouver, B.C. V6B 1N2

Tom Bell (Sr. Prospector)
207, 675 West Hastings Street
Vancouver, B.C. V6B 1N2

Mark J. Malfair (Sampler)
Box 962
Dawson City, Yukon

Bernie Redies
Box 63
Ross River, Yukon
YOB 1SO

APPENDIX C

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES
PAK 1-36 CLAIMS

CANADA) In the matter of an evaluation program on the
) Pak 1-36 Mineral Claims

I, Mark Baknes for Equity Engineering Ltd., 207, 675 West Hastings Street, Vancouver, B.C. do solemnly declare that a program consisting of rock and soil sampling, geological mapping, prospecting, and geophysical survey work, was carried out on Pak 1-36 Mineral Claims during the period August 29 to September 16, 1994.

The following expenses were incurred during the course of this work and in the compilation and reporting of the results:

PROFESSIONAL FEES AND WAGES:		
Mark Baknes, P. Geo.		
21.375 days @ $400/day	$ 8550.00	
Henry Awmack, P.Eng.		
0.5 days @ $400/day	200.00	
Tom Bell, Prospector		
19.334 days @ $275/day	5316.85	
Mark Malfair, Sampler		
18.375 days @ $225/day	4134.38	
Bernie Redies, Sampler		
1.0 day @ $225/day	225.00	
Clerical		
28.0 hours @ $25/hour	700.00	$ 19126.23
EXPENSES:		
Accommodation	$ 165.00	
Printing and Reproduction	664.99	
Camp Food	1442.01	
Meals	146.52	
Auto Fuel	233.96	
Travel	5.58	
Helicopter Charters	11484.08	
Telephone Distance Charges	144.58	
Materials and Supplies	433.13	
Maps and Publications	14.00	
Courier & Fax	114.68	
Chemical Analyses	3480.00	
Freight	235.29	
Expediting	720.00	
Drafting	385.00	$ 19668.82

EQUIPMENT RENTALS:		
Truck	$ 930.00	
Generator	220.00	
Handheld Radios	165.00	
Fly Camp	1925.00	
Chainsaw	40.00	$ 3280.00
SUBCONTRACTS:		
Geophysics		$ 13235.70
MANAGEMENT FEES:		
15% on expenses only	$ 2950.32	
7.5% on subcontracts	992.86	$ 3943.18
REPORT COSTS (estimate)		$ 2000.00
SUBTOTAL:		$ 61253.93
GST:		
7% on subtotal		4287.78
		$ 65541.71

And I make this solemn declaration conscientiously believing it to be true and knowing it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the)
Province of British Columbia this)
_____ day of_____, 19____)

_____

_____
A Commissioner for Oaths for, or
Notary Public for the Yukon Territory

APPENDIX D

ROCK SAMPLE DESCRIPTIONS

MINERALS AND ALTERATION TYPES

AB	albite	AD	adularia	AK	ankerite
AS	arsenopyrite	AZ	azurite	BA	barite
BI	biotite	BO	bornite	BR	brannerite
CA	calcite	CB	Fe-carbonate	CC	chalcocite
CL	chlorite	CO	cobaltite	CP	chalcopyrite
CY	clay	DI	diopside	DO	dolomite
EP	epidote	ER	erythrite	GA	garnet
GE	goethite	GL	galena	GR	graphite
HE	hematite	HS	specularite	JA	jarosite
KF	potassium feldspar	MC	malachite	MG	magnetite
MN	Mn-oxides	MR	mariposite	MS	muscovite/sericite
NE	neotocite	PO	pyrrhotite	PY	pyrite
QZ	quartz	SI	silica	SP	sphalerite
TT	tetrahedrite				

ALTERATION INTENSITIES

m	medium	s	strong	tr	trace
vs	very strong	vw	very weak	w	weak

Property : PAK 1-36 CLAIMS NTS : 105G/7 Date : MARCH 1, 1995

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802318 N	Type : Grab	Alteration :	wBI, wMS		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414606 E	Strike Length Exp. : m	Metallics :	0.5%SP							
4301	Elevation:		Sample Width : m	Secondaries:	sGE		<5	<0.2	4310.	25.	156.	922.
	Foliation :	120 / 72 S	True Width : 2 m	Host :	Felsic tuff?							

Comments : 2m thick layer with minor disseminated to laminated sphalerite, below a foliated biotite gneiss. 101+22N, 110+85E.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802536 N	Type : Float	Alteration :	mBI		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414911 E	Strike Length Exp. : m	Metallics :	3%PO, 1%PY, SP?							
4302	Elevation:	1830 m	Sample Width : m	Secondaries:	sGE		<5	0.8	220.	65.	112.	332.
	Orientation:	/	True Width : m	Host :	Black quartz-biotite-graphite schist							

Comments : Common in talus over a 30m area, looks similar to graphitic schists associated with PAK showing and at the bottom of East Cirque.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802334 N	Type : Float	Alteration :	wMS		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414926 E	Strike Length Exp. : m	Metallics :	trSP							
4303	Elevation:	1980 m	Sample Width : m	Secondaries:	mGE, sMN, HZ?		<5	<0.2	8550.	54.	2.	110.
	Orientation:	068 / 10 N	True Width : m	Host :	Platy sericitic quartzite -> quartz-muscovite schist							

Comments : Gossanous subcrop and outcrop, locally leached, possible laminae after sphalerite, abundant manganese stain.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802288 N	Type : Float	Alteration :	wCB, BI?		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414920 E	Strike Length Exp. : m	Metallics :	0.5%PO, SP?							
4304	Elevation:	1970 m	Sample Width : m	Secondaries:	wGE, HZ?		<5	<0.2	2670.	82.	4.	214.
	Orientation:	/	True Width : m	Host :	Black graphitic quartz schist							

Comments : Friable subcrop of graphitic schist likely underlying the rusty weathering quartzite, quartz-muscovite-schist unit.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802233 N	Type : Float/Grab	Alteration :	wBI, GR?		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414933 E	Strike Length Exp. : m	Metallics :	3%PO, 0.5%PY, 2%SP?							
4305	Elevation:	1965 m	Sample Width : m	Secondaries:	mGE, wJA, sMN		<5	0.8	1030.	83.	120.	652.
	Orientation:	180 / 05 W	True Width : m	Host :	Black quartz-graphite-biotite schist							

Comments : Similar to 4302, difficult to see sphalerite.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802066 N	Type :	Alteration :	wBI,		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414953 E	Strike Length Exp. : m	Metallics :	2%PO, 2%PY, 2%SP?							
4306	Elevation:	1960 m	Sample Width : m	Secondaries:	sGE, wJA, sMN, HZ?		<5	2.4	640.	99.	210.	808.
	Bedding :	/ 00	True Width : m	Host :	Black quartz-graphite-sphalerite bearing schist							

Comments : Directly above 509406, very close to outcrop, slumping outcrop on ridge.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802013 N	Type : Grab	Alteration :	wBI, wCB, mMS		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		414960 E	Strike Length Exp. : >50 m	Metallics :	1%PO, 1%PY, 1%SP							
4307	Elevation:	1945 m	Sample Width : m	Secondaries:	wGE, wJA, wMC, wND		<5	<0.2	1460.	112.	46.	144.
	Bedding	: 090 / 17 N	True Width : >15 m	Host :	Rusty weathering quartz-muscovite schist							

Comments : Local beds >1-2% sulphides with possible sphalerite. Same location as 509468 (1993). Sample was grabbed over >25m strike and 5m thickness where sulphides noted. Local muscovite adjacent to quartz boudins.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801567 N	Type : Select	Alteration :	sBI, sMS		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415159 E	Strike Length Exp. : 15 m	Metallics :	1%GL, 2%PO, 5%SP							
4308	Elevation:	1940 m	Sample Width : m	Secondaries:	sGE, mMN, mHZ		<5	5.0	1630.	177.	3200.	5780.
	Bedding	: 090 / 02 N	True Width : m	Host :	Muscovite-biotite-quartz schist							

Comments : 2-3m thickness of muscovite-biotite-quartz schist between the contact of overlying quartz-muscovite schist and biotite-quartz schist. Moderate to weak sphalerite mineralization in lens like zones. May not be very significant.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801509 N	Type : Float	Alteration :			(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415289 E	Strike Length Exp. : >100 m	Metallics :	0.5%PO, ?SP							
4309	Elevation:	1880 m	Sample Width : m	Secondaries:	mGE, ?HZ		<5	<0.2	1160.	29.	24.	168.
	Bedding	: 097 / 23 S	True Width : m	Host :	Rusty weathering quartz-muscovite schist to quartzite							

Comments : Typical quartzite like rock with rusty leached out banded/laminated sulphides, likely after pyrrhotite and possibly minor hydrozincite.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801962 N	Type : Grab	Alteration :			(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415058 E	Strike Length Exp. : >30 m	Metallics :								
4310	Elevation:	1820 m	Sample Width : m	Secondaries:			<5	<0.2	3230.	7.	32.	76.
	Orientation:	/	True Width : m	Host :	White quartz feldspar felsic intrusive							

Comments : Medium grained intergrowths of quartz and feldspar in an intrusive plug? The same material that forms sills in gneiss in Pak showing. Faintly foliated.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801956 N	Type : Grab	Alteration :	wBI, wCL, sMS		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415113 E	Strike Length Exp. : 20 m	Metallics :	4%CP, 2%PY							
4311	Elevation:	1875 m	Sample Width : 75 cm	Secondaries:	sGE		<5	15.6	100.	16300	194.	594.
	Bedding	: 145 / 03 SW	True Width : 75 cm	Host :	Quartz-muscovite+-chlorite schist							

Comments : Apparently conformable <0.8-1.5m thick rusty schist with stringers and blebs of chalcopyrite associated with silicification and quartz lenses. May be related to cross cutting vuggy quartz-ankerite vein even though mineralization persists beyond contact.

Sample No.							Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801924 N	Type : Grab	Alteration :			(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415112 E	Strike Length Exp. : 2 m	Metallics :	80%MG, 10%PY, SP?							
4312	Elevation:	1850 m	Sample Width : 1x2 m	Secondaries:	sGE		<5	<0.2	30.	23.	<2	42.
	Orientation:	145 / 5 SW	True Width : >1 m	Host :	Massive banded crystalline magnetite							

Comments : Faintly banded as defined by magnetite, grain size and proportion of interstitial quartz. Pyrite occurs in massive 1mm-1cm cross cutting veins. Looks bedded but subcrop has slumped. Magnetite exposed over 5m in outcrop where it is isoclinally folded.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801881 N	Type : Chip	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415096 E	Strike Length Exp. : >30 m	Metallics :	70%MG, 2%PO?, 1%PY						
4313	Elevation:	1850 m	Sample Width : 50 cm	Secondaries:	wGE, mMN	<5	<0.2	970.	182.	<2	172.
	Bedding :	180 / 02 W	True Width : 50 cm	Host :	Rusty sericitic quartzite and massive magnetite						

Comments : Similar to 4312. In place well banded with possibly a trace of pyrite and pyrrhotite +/- sphalerite. Only top of banded iron formation is exposed. Minor bright green mineral similar to that in the Pak showing possibly chrome mica??

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801881 N	Type : Grab	Alteration :	sMS, wMR						
		415096 E	Strike Length Exp. : >10 m	Metallics :	3%CP, trGL, 5%PY, 1%SP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4314	Elevation:	1860 m	Sample Width : 70 cm	Secondaries:	sGE, wJA	50.	14.8	160.	6780.	356.	280.
	Bedding :	084 / 10 N	True Width : >1 m	Host :	Muscovite-quartz schist						

Comments : Sericite schist >0.7m with >15-30% oxidized limonitic boxwork, well banded. 3% blebby and banded chalcopyrite and 1-2% fine grained banded sphalerite +/- galena (see station MB15).

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801818 N	Type : Grab	Alteration :							
		415101 E	Strike Length Exp. : >50 m	Metallics :	1%PO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4315	Elevation:	1860 m	Sample Width : 15 cm	Secondaries:	sGE	35.	2.6	180.	1450.	420.	118.
	Bedding :	184 / 10 N	True Width : 15 cm	Host :	Black graphitic quartz schist						

Comments : Immediate footwall of sample 4314, full thickness not exposed.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801818 N	Type : Float	Alteration :							
		415101 E	Strike Length Exp. : m	Metallics :	5%CP, 2%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4316	Elevation:	1875 m	Sample Width : m	Secondaries:	sGE	20.	24.4	20.	15500.	3780.	15600.
	Orientation:	/	True Width : m	Host :	Folded black graphitic quartz schist						

Comments : 1.2x0.7x0.5m boulder. May be subcrop of black graphitic schist in contact with massive pyrrhotite. Chalcopyrite as coarse blebs, cross-cutting veins and disseminations along laminae. Appears to be remobilized chalcopyrite in fold related structures.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801868 N	Type : Float	Alteration :							
		414081 E	Strike Length Exp. : m	Metallics :	90%PO, 3%SP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4317	Elevation:	1875 m	Sample Width : m	Secondaries:	sGE	<5	3.0	<10	5770.	324.	2210.
	Orientation:	/	True Width : m	Host :	Massive granular pyrrhotite						

Comments : Same as #4316.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801808 N	Type : Float	Alteration :	sBI						
		414073 E	Strike Length Exp. : m	Metallics :	0.5%CP, 10%PO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4318	Elevation:	1875 m	Sample Width : m	Secondaries:	sGE	<5	1.6	60.	498.	44.	124.
	Orientation:	/	True Width : m	Host :	Quartz-feldspar-biotite schist/gneiss						

Comments : Abundant talus of pyrrhotite bearing schist. Mineralization in boulders is in contact with felsite (contact effect?). 100+95N, 108+15E.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801922 N	Type :	Grab	Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		414179 E	Strike Length Exp. :	>50 m	Metallics :	trPO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4319	Elevation:	1810 m	Sample Width :	m	Secondaries:	wGE	<5	<0.2	2290.	19.	26.	30.
	Orientation:	090 / 15 S	True Width :	m	Host :	Fresh unaltered felsite sill						

Comments : Whole rock sample of 0.7m thick sill in quartz-biotite gneiss. 100+40N, 107+95E.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801933 N	Type :	Grab	Alteration :	wGE, mMS	Au	Ag	Ba	Cu	Pb	Zn
		414174 E	Strike Length Exp. :	>25 m	Metallics :	1%PO, trSP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4320	Elevation:	1720 m	Sample Width :	30 cm	Secondaries:	mGE	<5	<0.2	1800.	53.	22.	72.
	Bedding :	016 / 15 W	True Width :	2 m	Host :	Quartz-muscovite-feldspar schist						

Comments : Hangingwall of PAK horizon. Pale white to geenish, fine grained, moderately schistose with moderate muscovite in quartz-feldspathic rock. Might be a felsic volcanic, compare with felsite and footwall sample 4321.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801936 N	Type :	Grab	Alteration :	wCB, mMS	Au	Ag	Ba	Cu	Pb	Zn
		414199 E	Strike Length Exp. :	>100 m	Metallics :	1%PO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4321	Elevation:	1715 m	Sample Width :	15 cm	Secondaries:	mGE	<5	<0.2	250.	156.	16.	86.
	Orientation:	134 / 05	True Width :	>10 m	Host :	Quartz-muscovite-feldspar schist						

Comments : Foot wall of PAK massive sulphide horizon. Very similar to 4320. Good sericitic quartz-feldspar schist with disseminated sulphides. May be felsic, both footwall and massive sulphides appear to be cut by felsite.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801936 N	Type :	Chip	Alteration :	wCL	Au	Ag	Ba	Cu	Pb	Zn
		414198 E	Strike Length Exp. :	>100 m	Metallics :	5%CP, 70%PO, trPY, 4%SP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4322	Elevation:	1720 m	Sample Width :	80 cm	Secondaries:	sGE	340.	62.0	10.	49710.	10800.	27100
	Bedding :	074 / 05 S	True Width :	80 cm	Host :	Massive sulphides in quartz-muscovite schist						

Comments : Typical massive sulphides, 20-30% 1-5mm clear quartz fragments with minor fragments of bright green schist. Quartz-muscovite schist in both hangingwall and footwall. Zone is continuous from blast trench. Azimuth of 003o to 11000N, 10325E.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801943 N	Type :	Grab	Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		414236 E	Strike Length Exp. :	>100 m	Metallics :	3%CP, 10%PO, 2%PY, 5%SP?	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4323	Elevation:	1720 m	Sample Width :	m	Secondaries:	sGE	10.	10.4	390.	54.	3800.	194.
	Orientation:	074 / 01 S	True Width :	m	Host :	Black graphititc quartz schist with sulphides						

Comments : Black graphitic footwall here seems to form the ore horizon. Hangingwall sericite schist <1m thick, strongly folded, locally very siliceous.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801045 N	Type :	Float	Alteration :	wBI, wCB	Au	Ag	Ba	Cu	Pb	Zn
		415100 E	Strike Length Exp. :	m	Metallics :	5%PO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4324	Elevation:	1620 m	Sample Width :	m	Secondaries:	sGE	<5	0.4	490.	65.	20.	226.
	Orientation:	/	True Width :	m	Host :	Quartz-muscovite-biotite schist						

Comments : Disseminated pyrrhotite along foliation, possible chalcopyrite. Abundant in talus.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801071 N	Type :	Float	Alteration :	wMS						
		414688 E	Strike Length Exp. :	m	Metallics :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4325	Elevation:	1620 m	Sample Width :	m	Secondaries:		<5	<0.2	4820.	21.	20.	50.
	Orientation:	/	True Width :	m	Host :	Felsic quartz porphyry?						

Comments : Abundant in talus 15-20%, 1-3mm quartz eyes and crystals in weakly foliated felsic groundmass with sericitic partings. Volcanic??

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801925 N	Type :	Select	Alteration :							
		414165 E	Strike Length Exp. :	10 m	Metallics :	PO, PY, CP, SP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4351	Elevation:	1760 m	Sample Width :	m	Secondaries:		<5	9.0	100	5370	1220	>10000
	Orientation:	/	True Width :	2 m	Host :	Banded orthogneiss						

Comments : Sphalerite is present in parallel laminations. Sequence consists of an alternating succession of black, biotite rich and felsic (tuff?) horizons. Rocks are well foliated and folded (usually recumbant with NE trending axis). Felsic layers are boudined.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6801965 N	Type :	Select	Alteration :							
		414314 E	Strike Length Exp. :	m	Metallics :	PO, PY, SP, CP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
4352	Elevation:	1760 m	Sample Width :	m	Secondaries:		<5	1.0	60	5360	48	>10000
	Orientation:	/	True Width :	m	Host :	Biotite-quartz gneiss and chlorite schist						

Comments :

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6802055 N	Type :	Float	Alteration :	sBI, mQZ						
		413910 E	Strike Length Exp. :	m	Metallics :	2-3%CP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
596833	Elevation:		Sample Width :	m	Secondaries:	sJA	<5	2.0	40.	4190.	116.	5200.
	Orientation:	/	True Width :	m	Host :	Quartz-biotite-schist						

Comments : 102+25N, 106+88E.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6802119 N	Type :	Select/grab	Alteration :	sBI						
		415065 E	Strike Length Exp. :	>10 m	Metallics :	>1%CP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
596834	Elevation:	1856 m	Sample Width :	1 m	Secondaries:	wJA	<5	<0.2	400.	284.	4.	90.
	Bedding	: 070 / 30 NW	True Width :	1 m	Host :	Biotite gneiss						

Comments : Pyrite-chalcopyrite? along layering.

Sample No.	UTM :		Type :		Alteration :		Au	Ag	Ba	Cu	Pb	Zn
		6802056 N	Type :	Select grab	Alteration :	sBI, sMS, sQZ						
		415107 E	Strike Length Exp. :	2-3 m	Metallics :	trCP, trGL, 1-2%PO, trSP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
596835	Elevation:	1875 m	Sample Width :	1 m	Secondaries:	sJA	<5	1.0	1660.	105.	620.	1690.
	Bedding	: 050 / 15 NW	True Width :	1 m	Host :	Schist						

Comments : 15m at 240o to 10000N/11850E. Mineralization best over 2-3 m thickness but concentrated over 50 cm.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802031 N	Type : Select/Grab	Alteration :	sCB, sQZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415122 E	Strike Length Exp. : >10 m	Metallics :	>1%CP, 1%PY						
596836	Elevation:	1875 m	Sample Width : 75 cm	Secondaries:	wGE, wHE, sJA	<5	0.2	490.	18.	46.	528.
	Vein :	001 / 90	True Width : 75 cm	Host :	Quartz-carbonate vein						

Comments : Cross cuts bedding.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6801972 N	Type : Chip	Alteration :	sBI, sMS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		415055 E	Strike Length Exp. : 0.5 m	Metallics :	1%CP, 99%PO						
596837	Elevation:	1890 m	Sample Width : 15 cm	Secondaries:	sGE, sHE, sJA	<5	4.2	10.	2430.	306.	1400.
	Orientation:	055 / 10 NW	True Width : m	Host :	Biotite-muscovite schist						

Comments : 5m north of #4311. Massive magnetite, strongly folded.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802274 N	Type : Float	Alteration :	wBI, wMS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		413469 E	Strike Length Exp. : m	Metallics :	2%PO, 2%SP						
596898	Elevation:	1595 m	Sample Width : m	Secondaries:	sGE	<5	0.4	680.	29.	76.	1950.
	Orientation:	/	True Width : m	Host :	Rusty weathering, quartz-muscovite schist						

Comments : 30x30cm angular block of talus, quartz feldspar schist with muscovite +/- biotite partings. Sulphides are banded and may only be pyrrhotite, but may contain fine-grained sphalerite. Rare in talus.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802089 N	Type : Float	Alteration :	mBI, mMS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		413923 E	Strike Length Exp. : m	Metallics :	0.8CP, 4%PO, trSP						
596899	Elevation:	1650 m	Sample Width : m	Secondaries:	sGE, wJA	<5	<0.2	2390.	96.	4.	166.
	Orientation:	/	True Width : m	Host :	Quartz-biotite-muscovite schist						

Comments : Angular talus likely from outcrop 50m up slope. 103+45N, 107+10E.

Sample No.						Au	Ag	Ba	Cu	Pb	Zn
	UTM :	6802078 N	Type : Float	Alteration :	sBI, mQZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		413908 E	Strike Length Exp. : m	Metallics :	5%CP, trGL, 5%PO, 3%SP						
596900	Elevation:		Sample Width : m	Secondaries:	sGE	<5	6.8	60.	11500.	264.	2220.
	Orientation:	/	True Width : m	Host :	Quartz-biotite-gypsum schist						

Comments : Deformed massive sulphides and schist with durchbewegund fabric with quartz fragments, chalcopyrite is in discordant remobilized veins to patchy disseminations with local lenses of gypsum. 30% of talus over 25m is mineralized. 103+37N, 107+00E.

APPENDIX E

CERTIFICATES OF ANALYSIS

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE 604-984-0221

To. EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST
VANCOUVER, BC
V6B 1N2

A9427545

Comments: ATTN MARK BAKNES

CERTIFICATE A9427545

(EIA) - EQUITY ENGINEERING LTD

Project ATNA-94-02
P O #.

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	34	Geochem ring to approx 150 mesh
226	34	0-5 lb crush and split
285	29	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	29	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
578	29	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	29	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	29	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	29	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	29	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	29	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	29	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	29	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	29	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	29	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	29	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	29	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	29	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	29	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	29	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	29	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	29	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	29	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	29	Pb ppm: 24 element, rock & core	AAS	2	10000
582	29	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	29	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	29	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	29	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	29	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE· 604-984-0221

To: EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ATNA-94-02
Comments ATTN MARK BAKNES

Certificate Date. 07-OCT-94
Invoice No. I9427545
P O Number
Account EIA

CERTIFICATE OF ANALYSIS A9427545

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)
4301	205 226	< 5	< 0.2	5.91	4310	2.0	< 2	1.11	4.0	4	125	25	1.30	1.40	0.33
4302	205 226	< 5	0.8	4.48	220	2.0	< 2	1.49	1.0	8	218	65	2.76	2.39	0.63
4303	205 226	< 5	< 0.2	1.71	8550	< 0.5	< 2	0.08	< 0.5	6	219	54	1.52	0.44	0.27
4304	205 226	< 5	< 0.2	2.77	2670	1.0	< 2	0.60	< 0.5	12	258	82	1.50	1.39	0.31
4305	205 226	< 5	0.8	3.98	1030	1.5	< 2	0.64	6.0	22	225	83	2.67	1.91	0.57
4306	205 226	< 5	2.4	4.18	640	1.5	< 2	0.80	2.0	10	246	99	3.00	2.20	0.62
4307	205 226	< 5	< 0.2	6.29	1460	1.5	< 2	0.75	< 0.5	4	149	112	2.04	3.93	0.43
4308	205 226	< 5	5.0	7.10	1630	2.5	< 2	1.69	46.5	12	263	177	2.16	3.89	1.92
4309	205 226	< 5	< 0.2	7.77	1160	4.5	< 2	1.91	< 0.5	9	96	29	3.69	4.13	0.41
4310	205 226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4311	205 226	< 5	15.6	6.40	100	1.5	< 2	1.04	1.5	18	159	>10000	5.69	2.08	1.83
4312	205 226	< 5	< 0.2	1.88	30	< 0.5	< 2	0.27	< 0.5	< 1	128	23	>25.0	0.25	0.23
4313	205 226	< 5	< 0.2	0.33	970	< 0.5	< 2	1.13	< 0.5	2	181	182	24.4	0.02	0.04
4314	205 226	50	14.8	7.23	160	1.0	< 2	0.66	0.5	9	266	6780	6.44	2.45	0.42
4315	205 226	35	2.6	1.91	180	< 0.5	10	0.02	< 0.5	2	236	1450	5.50	0.83	0.14
4316	205 226	20	24.4	2.03	20	< 0.5	36	0.40	45.0	14	324	>10000	10.35	0.86	0.19
4317	205 226	< 5	3.0	0.81	< 10	< 0.5	< 2	0.18	4.0	26	72	5770	>25.0	0.15	0.10
4318	205 226	< 5	1.6	6.93	60	< 0.5	< 2	0.86	< 0.5	50	118	498	9.18	0.69	0.62
4319	205 226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4320	205 226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4321	205 226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4322	205 226	340	62.0	0.80	10	< 0.5	< 2	0.17	72.0	27	75	>10000	>25.0	0.16	0.11
4323	205 226	10	10.4	7.83	390	3.5	< 2	3.99	< 0.5	27	212	54	2.90	3.32	0.81
4324	205 226	< 5	0.4	9.19	490	4.0	< 2	4.53	< 0.5	34	245	65	3.31	3.50	0.92
4325	205 226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
596833	205 226	< 5	2.0	5.34	40	< 0.5	< 2	1.90	13.5	121	144	4190	15.00	2.03	1.91
596834	205 226	< 5	< 0.2	7.47	400	< 0.5	< 2	7.65	0.5	35	82	284	6.75	0.64	3.29
596835	205 226	< 5	1.0	6.06	1660	2.0	< 2	0.64	14.0	4	151	105	3.05	2.51	0.51
596836	205 226	< 5	0.2	3.25	490	1.5	< 2	2.95	2.0	6	187	18	2.46	1.15	0.47
596837	205 226	< 5	4.2	2.55	10	< 0.5	< 2	0.60	4.5	188	179	2430	>25.0	0.90	0.76
596893	205 226	< 5	< 0.2	5.59	2390	< 0.5	< 2	3.48	< 0.5	61	2120	102	5.93	0.72	8.21
596898	205 226	< 5	0.4	7.82	680	2.0	< 2	2.50	10.0	10	101	29	2.13	1.57	0.32
596899	205 226	< 5	< 0.2	5.37	2390	< 0.5	< 2	3.45	< 0.5	57	1985	96	5.83	0.74	8.32
596900	205 226	< 5	6.8	5.54	60	< 0.5	< 2	2.34	6.0	52	129	>10000	8.04	0.85	0.98

CERTIFICATION Jan Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD

207 - 675 W. HASTINGS ST
VANCOUVER, BC
V6B 1N2

Project ATNA-94-02
Comments: ATTN: MARK BAKNES

Page Number :1-B
Total Pages 1
Certificate Date: 07-OCT-94
Invoice No I9427545
P.O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9427545

SAMPLE	PREP CODE		Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)			
4301	205	226	435	4	2.30	11	210	156	166	0.13	32	< 10	922			
4302	205	226	1395	6	0.30	32	610	112	205	0.19	170	< 10	332			
4303	205	226	1405	< 1	0.06	46	90	2	64	0.07	87	< 10	110			
4304	205	226	1210	1	0.07	67	90	4	107	0.12	144	< 10	214			
4305	205	226	1815	8	0.45	103	610	120	144	0.17	230	< 10	652			
4306	205	226	1870	8	0.16	44	680	210	116	0.18	182	< 10	808			
4307	205	226	625	2	0.57	6	200	46	133	0.16	14	< 10	144			
4308	205	226	505	6	0.31	56	290	3200	200	0.23	78	< 10	5780			
4309	205	226	955	4	1.09	8	840	24	282	0.50	25	< 10	168			
4310	205	226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
4311	205	226	595	3	1.19	13	430	194	197	0.45	136	< 10	594			
4312	205	226	1450	4	0.09	19	1300	< 2	115	0.07	38	< 10	42			
4313	205	226	1345	2	< 0.01	19	2580	< 2	161	< 0.01	25	< 10	172			
4314	205	226	340	9	1.92	9	850	356	419	0.45	137	< 10	280			
4315	205	226	75	13	0.06	7	350	420	17	0.08	156	< 10	118			
4316	205	226	945	20	0.09	39	1310	3780	63	0.09	236	< 10	>10000			
4317	205	226	645	41	0.06	113	140	324	10	0.02	57	< 10	2210			
4318	205	226	450	1	4.26	163	930	44	472	0.22	49	< 10	124			
4319	205	226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
4320	205	226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
4321	205	226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
4322	205	226	1035	69	0.05	113	220	10000	38	0.02	33	< 10	>10000			
4323	205	226	810	3	0.55	55	1250	3800	381	0.69	173	< 10	194			
4324	205	226	975	3	0.69	66	1550	20	459	0.80	205	< 10	226			
4325	205	226	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
596833	205	226	820	4	1.42	60	1400	116	211	1.25	295	< 10	5200			
596834	205	226	1220	1	1.80	42	900	4	341	1.01	317	< 10	90			
596835	205	226	350	10	1.38	6	260	620	184	0.20	30	< 10	1690			
596836	205	226	1275	1	0.07	11	100	46	65	0.07	31	< 10	528			
596837	205	226	650	23	0.18	166	340	306	46	0.20	85	< 10	1400			
596893	205	226	1490	< 1	0.85	542	190	2	305	0.34	205	< 10	170			
596898	205	226	845	5	4.25	26	380	76	356	0.33	17	< 10	1950			
596899	205	226	1395	1	0.76	508	190	4	287	0.33	197	< 10	166			
596900	205	226	845	10	2.86	33	540	264	218	0.23	78	< 10	2220			

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE 604-984-0221

To EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9428843

Comments ATTN: MARK BAKNES

CERTIFICATE A9428843

(EIA) - EQUITY ENGINEERING LTD

Project ATNA-94-2
P O #

Samples submitted to our lab in Vancouver, BC.
This report was printed on 21-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	4	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	4	Cu %: Reverse Aqua-Regia digest	AAS	0.01	100.0
316	2	Zn %: Reverse Aqua-Regia digest	AAS	0.01	100.0
312	1	Pb %: Reverse Aqua-Regia digest	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST
VANCOUVER, BC
V6B 1N2

Project : ATNA-94-2
Comments ATTN. MARK BAKNES

Page Number :1
Total Pages :1
Certificate Date: 21-OCT-94
Invoice No : I9428843
P O Number
Account : EIA

CERTIFICATE OF ANALYSIS A9428843

SAMPLE	PREP CODE	Cu %	Zn %	Pb %
4311	244 --	1.63	-----	-----
4316	244 --	1.55	1.56	-----
4322	244 --	4.97	2.71	1.08
596900	244 --	1.15	-----	-----

CERTIFICATION: Abraste

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE 604-984-0221

To: EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST
VANCOUVER, BC
V6B 1N2

A9427547

Comments ATTN: MARK BAKNES

CERTIFICATE A9427547

(EIA) - EQUITY ENGINEERING LTD

Project ATNA-94-02
P O #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	5	Pulp; prepped on other workorder

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
902	5	Al2O3 %: XRF	XRF	0.01	100.00
906	5	CaO %: XRF	XRF	0.01	100.00
2590	5	Cr2O3 %: XRF	XRF	0.01	100.00
903	5	Fe2O3 %: XRF	XRF	0.01	100.00
908	5	K2O %: XRF	XRF	0.01	100.00
905	5	MgO %: XRF	XRF	0.01	100.00
1989	5	MnO %: XRF	XRF	0.01	100.00
907	5	Na2O %: XRF	XRF	0.01	100.00
909	5	P2O5 %: XRF	XRF	0.01	100.00
901	5	SiO2 %: XRF	XRF	0.01	100.00
904	5	TiO2 %: XRF	XRF	0.01	100.00
910	5	LOI %: XRF	XRF	0.01	100.00
2540	5	Total %	CALCULATION	0.01	105.00
2891	5	Ba ppm: XRF	XRF	2	10000
2067	5	Rb ppm: XRF	XRF	2	10000
2898	5	Sr ppm: XRF	XRF	2	10000
2973	5	Nb ppm: XRF	XRF	2	10000
2978	5	Zr ppm: XRF	XRF	3	10000
2974	5	Y ppm: XRF	XRF	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE· 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : ATNA-94-02
Comments: ATTN. MARK BAKNES

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P O Number
Account EIA

CERTIFICATE OF ANALYSIS A9427547

SAMPLE	PREP CODE		Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na2O % XRF	P2O5 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL %	Ba ppm	Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm
4310	299	--	14.06	0.98	0.02	0.93	4.81	0.14	0.02	5.00	0.03	70.51	0.09	1.41	98.00	2520	69	1970	9	145	7
4319	299	--	14.70	0.86	0.02	0.77	2.73	0.29	0.01	6.52	0.03	70.28	0.08	1.37	97.66	1920	44	755	8	115	< 2
4320	299	--	14.42	1.20	0.02	1.40	3.66	0.34	0.04	5.34	0.06	69.29	0.15	1.60	97.52	4770	95	935	12	143	5
4321	299	--	7.62	0.45	0.04	2.46	2.84	0.65	0.06	0.36	0.05	81.24	0.33	1.68	97.78	8590	94	218	11	54	8
4325	299	--	15.32	1.48	0.02	1.36	3.50	0.50	0.03	4.43	0.05	71.68	0.18	0.86	99.41	3610	80	1610	11	168	7

CERTIFICATION

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD.

207 - 675 W HASTINGS ST
VANCOUVER, BC
V6B 1N2

A9428844

Comments ATTN MARK BAKNES

CERTIFICATE A9428844

(EIA) - EQUITY ENGINEERING LTD

Project ATNA-94-2
P.O # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	5	Pulp; prev. prepared at Chemex
285	5	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	5	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
578	5	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	5	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	5	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	5	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	5	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	5	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	5	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	5	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	5	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	5	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	5	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	5	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	5	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	5	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	5	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	5	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	5	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	5	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	5	Pb ppm: 24 element, rock & core	AAS	2	10000
582	5	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	5	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	5	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	5	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	5	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To EQUITY ENGINEERING LTD.

207 - 675 W HASTINGS ST.
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V6B 1N2

Project ATNA-94-2
Comments: ATTN. MARK BAKNES

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Account :EIA

CERTIFICATE OF ANALYSIS A9428844

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)
4310	244	285	< 5	< 0.2	7.93	3230	1.5	2	0.70	< 0.5	3	113	7	0.64	3.15	0.03
4319	244	285	< 5	< 0.2	7.68	2290	1.5	< 2	0.59	< 0.5	3	130	19	0.52	1.95	0.13
4320	244	285	< 5	< 0.2	7.98	1800	1.5	2	0.84	< 0.5	4	135	53	0.96	2.80	0.15
4321	244	285	< 5	< 0.2	3.95	250	1.5	2	0.30	< 0.5	15	274	156	1.65	2.08	0.32
4325	244	285	< 5	< 0.2	8.52	4820	1.5	4	1.05	< 0.5	5	135	21	0.96	3.14	0.25

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

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To EQUITY ENGINEERING LTD

207 - 675 W HASTINGS ST.
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V6B 1N2

Project ATNA-94-2
Comments: ATTN: MARK BAKNES

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Total Pages :1
Certificate Date 25-OCT-94
Invoice No 19428844
P.O. Number
Account EIA

CERTIFICATE OF ANALYSIS A9428844

SAMPLE	PREP CODE		Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)			
4310	244	285	245	< 1	3.34	2	130	32	2040	0.03	8	< 10	76			
4319	244	285	135	< 1	4.59	1	80	26	677	0.03	6	< 10	30			
4320	244	285	415	1	3.82	1	260	22	934	0.07	17	< 10	72			
4321	244	285	580	2	0.22	31	200	16	200	0.15	178	< 10	86			
4325	244	285	335	< 1	3.41	3	250	20	1720	0.11	20	< 10	50			

CERTIFICATION Stewart Buchan

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9427544

Comments ATTN: MARK BAKNES

CERTIFICATE A9427544

(EIA) - EQUITY ENGINEERING LTD

Project. ATNA-94-02
P O #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-OCT-94.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	176	Dry, sieve to -80 mesh
285	176	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
578	176	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	176	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	176	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	176	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	176	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	176	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	176	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	176	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	176	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	176	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	176	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	176	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	176	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	176	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	176	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	176	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	176	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	176	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	176	Pb ppm: 24 element, rock & core	AAS	2	10000
582	176	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	176	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	176	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	176	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	176	Zn ppm: 24 element, rock & core	ICP-AES	2	10000
100	176	Au ppb: Fuse 10 g sample	FA-AAS	5	10000

Chemex Labs Ltd.

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207 - 675 W HASTINGS ST
VANCOUVER, BC
V6B 1N2

Project ATNA-94-02
Comments ATTN: MARK BAKNES

Certificate Date: 07-OCT-94
Invoice No 19427544
P O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
CL1620 1950S	201	285	1.2	7.93	1790	3.0	< 2	0.44	< 0.5	17	56	97	5.34	3.81	0.50	850
CL1620 2000S	201	285	0.8	10.60	2960	5.0	< 2	0.58	7.5	49	146	98	6.04	4.66	1.08	2070
CL1620 2050S	201	285	0.4	8.28	1770	2.5	< 2	1.28	< 0.5	12	63	43	2.64	2.26	0.54	575
CL1620 2100S	201	285	< 0.2	8.78	7130	4.0	< 2	0.64	< 0.5	29	215	167	4.20	2.84	1.35	3340
CL1620 2150S	201	285	< 0.2	6.66	2440	1.0	< 2	2.49	< 0.5	20	151	50	5.25	1.49	1.83	1140
CL1620 2200S	201	285	0.4	7.36	1730	1.0	< 2	1.60	< 0.5	9	31	35	2.28	2.04	0.66	870
CL1620 2250S	201	285	< 0.2	6.60	6130	2.0	< 2	0.13	< 0.5	26	101	96	3.61	1.69	0.28	7110
CL1620 2300S	201	285	0.4	7.52	4620	3.0	< 2	0.39	< 0.5	18	124	70	4.01	2.17	0.48	2640
CL1620 2350S	201	285	< 0.2	6.51	2400	1.5	< 2	0.87	< 0.5	12	110	39	3.35	1.80	0.72	885
CL1620 2400S	201	285	0.4	7.02	5410	2.0	< 2	0.64	< 0.5	10	91	46	3.60	3.00	0.49	685
CL1620 2450S	201	285	0.2	7.50	1130	1.0	< 2	2.01	< 0.5	12	25	19	2.32	1.98	0.82	875
CL1620 2500S	201	285	0.6	6.71	3010	1.5	< 2	0.58	< 0.5	13	100	36	3.72	2.82	0.54	1060
CL1620 2550S	201	285	0.2	6.78	2810	2.0	< 2	0.93	0.5	15	116	34	3.65	2.65	0.82	765
CL1620 2600S	201	285	0.6	7.24	3860	2.0	< 2	0.64	1.0	14	83	40	3.65	2.74	0.66	725
CL1620 2650S	201	285	0.4	6.85	3300	2.0	< 2	0.71	0.5	12	104	39	3.57	2.63	0.71	465
CL1620 2700S	201	285	0.4	7.79	3320	2.5	< 2	0.60	1.0	12	94	39	3.45	2.91	0.74	430
CL1620 2750S	201	285	0.4	6.88	4860	2.0	< 2	0.56	< 0.5	11	101	32	3.55	2.49	0.73	585
CL1620 2800S	201	285	0.4	7.31	3840	2.0	< 2	1.21	< 0.5	14	113	35	3.51	2.26	0.98	650
CL1620 2850S	201	285	0.4	7.54	1240	1.5	< 2	1.88	< 0.5	12	30	32	2.73	1.82	0.86	630
CL1620 2900S	201	285	0.6	8.02	2880	2.0	< 2	0.75	1.0	12	223	27	3.26	2.96	0.55	625
CL1620 2950S	201	285	0.8	12.30	5750	4.0	< 2	0.30	< 0.5	13	401	44	5.13	4.88	0.42	270
CL1620 3000S	201	285	0.4	6.37	5140	2.0	< 2	0.64	< 0.5	9	63	33	2.81	2.08	0.59	685
CL1620 3050S	201	285	1.0	7.19	6810	3.0	< 2	0.71	0.5	16	56	82	3.76	2.20	0.74	1300
CL1620 3100S	201	285	1.2	7.70	7490	4.0	< 2	0.59	0.5	21	47	84	4.47	2.42	0.89	1610
CL1620 3150S	201	285	0.4	6.25	4600	2.0	2	1.12	0.5	12	62	47	3.06	1.92	0.82	705
CL1620 3200S	201	285	0.4	8.13	9240	4.0	2	0.78	0.5	21	76	102	4.44	2.97	1.01	1575
CL1620 3250S	201	285	0.6	5.87	2620	1.5	< 2	1.02	< 0.5	7	37	29	2.08	1.98	0.54	250
CL1620 3300S	201	285	0.2	5.94	2520	1.5	< 2	1.39	0.5	13	77	57	3.32	1.57	0.91	680
CL1620 3350S	201	285	0.6	10.00	1960	4.0	< 2	0.90	4.5	54	231	100	5.57	3.94	1.09	1440
CL1620 3400S	201	285	0.6	6.67	3190	2.0	< 2	1.21	1.0	17	100	44	3.50	2.33	0.86	735
CL1620 3450S	201	285	0.4	8.12	7260	2.5	< 2	0.38	3.0	32	121	105	5.74	3.92	1.42	1435
CL1620 3500S	201	285	0.8	9.44	3020	4.0	< 2	0.90	0.5	30	174	90	4.66	3.69	0.81	895
CL1620 3550S	201	285	0.8	7.78	1760	3.5	< 2	0.70	3.0	16	101	38	4.36	2.44	0.86	725
CL1620 3600S	201	285	0.8	7.90	2090	3.5	2	0.56	0.5	17	92	30	3.82	2.54	0.70	840
CL1620 3650S	201	285	0.4	5.78	3160	1.5	< 2	0.92	< 0.5	12	67	31	3.22	2.04	0.75	815
CL1620 3700S	201	285	0.4	6.04	2290	2.0	< 2	0.75	0.5	13	90	29	3.67	1.88	0.82	720
CL1620 3750S	201	285	0.2	5.80	3050	1.5	< 2	0.76	< 0.5	11	75	31	3.32	1.62	0.76	655
CL1620 3800S	201	285	0.2	6.00	2850	1.5	< 2	0.79	< 0.5	10	75	23	3.75	1.87	0.71	615
CL1620 3850S	201	285	0.2	6.54	3160	2.0	< 2	1.19	0.5	14	82	36	3.12	1.96	0.95	645
CL1620 3900S	201	285	0.2	6.35	2890	1.5	< 2	1.22	< 0.5	14	89	37	3.33	1.83	0.96	650

CERTIFICATION: Hart Bichler

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To. EQUITY ENGINEERING LTD
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Project : ATNA-94-02
Comments: ATTN MARK BAKNES

Certificate Date 07-OCT-94
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P O Number
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CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	Au ppb FA+AA
CL1620 1950S	201 285	7	0.67	40	3370	210	320	0.49	204	< 10	282	< 5
CL1620 2000S	201 285	4	0.60	113	1820	154	147	0.65	244	< 10	892	< 5
CL1620 2050S	201 285	1	2.01	27	750	14	413	0.28	98	< 10	140	< 5
CL1620 2100S	201 285	5	0.68	77	930	26	146	0.49	185	< 10	182	< 5
CL1620 2150S	201 285	1	1.30	40	800	34	211	0.70	242	< 10	116	< 5
CL1620 2200S	201 285	2	2.27	14	1040	12	485	0.31	80	< 10	66	< 5
CL1620 2250S	201 285	2	0.35	45	840	20	150	0.29	130	< 10	118	< 5
CL1620 2300S	201 285	2	0.60	51	920	20	170	0.38	153	< 10	142	< 5
CL1620 2350S	201 285	1	1.02	35	1110	20	219	0.44	141	< 10	116	< 5
CL1620 2400S	201 285	4	0.90	30	1790	76	277	0.50	192	< 10	200	< 5
CL1620 2450S	201 285	2	2.52	11	1020	16	571	0.32	80	< 10	74	< 5
CL1620 2500S	201 285	4	0.70	35	2860	58	256	0.63	173	< 10	242	< 5
CL1620 2550S	201 285	3	0.98	39	2430	54	216	0.44	155	< 10	250	< 5
CL1620 2600S	201 285	4	1.07	41	1820	98	272	0.43	173	< 10	334	< 5
CL1620 2650S	201 285	3	0.99	42	1360	52	232	0.40	151	< 10	372	< 5
CL1620 2700S	201 285	2	0.97	42	1640	76	254	0.42	173	< 10	414	< 5
CL1620 2750S	201 285	3	1.03	30	1410	60	248	0.36	160	< 10	236	< 5
CL1620 2800S	201 285	2	1.36	33	1220	46	308	0.47	149	< 10	190	< 5
CL1620 2850S	201 285	1	2.28	13	1190	24	516	0.34	91	< 10	88	< 5
CL1620 2900S	201 285	2	0.88	20	1890	54	185	0.47	224	< 10	102	< 5
CL1620 2950S	201 285	6	0.63	32	1350	126	262	0.68	409	< 10	142	< 5
CL1620 3000S	201 285	3	1.19	22	2060	48	269	0.31	130	< 10	136	< 5
CL1620 3050S	201 285	4	1.16	48	1230	92	368	0.26	123	< 10	444	< 5
CL1620 3100S	201 285	5	0.99	57	880	96	324	0.27	129	< 10	570	< 5
CL1620 3150S	201 285	2	1.42	31	950	46	325	0.33	125	< 10	244	< 5
CL1620 3200S	201 285	5	1.22	55	830	88	411	0.35	177	< 10	588	< 5
CL1620 3250S	201 285	3	1.16	12	1690	12	365	0.26	95	< 10	56	< 5
CL1620 3300S	201 285	1	1.38	26	520	38	279	0.41	143	< 10	252	< 5
CL1620 3350S	201 285	5	0.85	110	1320	50	427	0.67	228	< 10	670	< 5
CL1620 3400S	201 285	1	1.22	46	1210	38	333	0.47	136	< 10	278	< 5
CL1620 3450S	201 285	4	0.58	67	1310	36	407	0.47	152	< 10	382	< 5
CL1620 3500S	201 285	4	0.90	75	1690	60	336	0.57	251	< 10	296	< 5
CL1620 3550S	201 285	4	0.87	42	2670	44	251	0.38	160	< 10	250	< 5
CL1620 3600S	201 285	4	0.83	39	1640	50	197	0.39	150	< 10	310	< 5
CL1620 3650S	201 285	1	1.16	28	1230	34	291	0.43	115	< 10	178	< 5
CL1620 3700S	201 285	2	0.96	31	2260	26	211	0.43	127	< 10	158	< 5
CL1620 3750S	201 285	1	1.08	25	1500	28	241	0.37	120	< 10	132	< 5
CL1620 3800S	201 285	1	1.19	25	700	40	252	0.44	139	< 10	136	< 5
CL1620 3850S	201 285	1	1.48	32	890	28	321	0.41	123	< 10	198	< 5
CL1620 3900S	201 285	1	1.53	32	780	26	311	0.43	127	< 10	144	< 5

CERTIFICATION Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE 604-984-0221

To. EQUITY ENGINEERING LTD

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project ATNA-94-02
Comments ATTN: MARK BAKNES

Certificate Date 07-OCT-94
Invoice No I9427544
P.O Number .
Account :EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
CL1620 3950S	201	285	< 0.2	6.42	2710	1.5	< 2	1.29	< 0.5	11	74	33	3.16	1.98	0.93	520
CL1620 4000S	201	285	0.2	6.13	2610	1.5	< 2	1.33	< 0.5	11	77	33	3.21	1.86	0.91	580
CL1620 4050S	201	285	0.2	6.21	2410	1.5	< 2	1.41	< 0.5	12	78	43	3.11	1.68	1.00	645
CL1620 4100S	201	285	< 0.2	6.77	2480	1.5	< 2	1.41	< 0.5	14	82	43	3.14	1.86	1.01	755
CL1620 4150S	201	285	< 0.2	6.43	4980	2.0	< 2	0.83	< 0.5	12	56	44	2.86	2.63	0.67	1015
CL1620 4200S	201	285	< 0.2	6.09	2220	2.0	< 2	0.68	1.0	11	65	21	3.06	2.24	0.69	690
CL1620 4250S	201	285	1.0	8.56	1820	3.5	< 2	0.99	5.5	39	180	56	5.57	3.58	0.90	2350
CL1620 4300S	201	285	< 0.2	8.55	3240	3.5	< 2	0.67	< 0.5	16	78	48	4.24	2.27	0.91	1440
CL1620 4350S	201	285	< 0.2	6.66	2610	1.5	< 2	1.10	0.5	13	95	25	3.90	2.59	0.91	595
CL1620 4400S	201	285	< 0.2	7.92	2170	2.0	< 2	1.04	< 0.5	17	128	27	4.01	2.77	0.94	885
CL1620 4450S	201	285	< 0.2	9.54	1470	5.0	< 2	0.59	< 0.5	11	76	16	2.59	2.66	0.45	545
CL1620 4500S	201	285	< 0.2	7.57	1360	3.0	< 2	0.97	< 0.5	12	68	18	3.34	2.51	0.94	625
CL1620 4550S	201	285	0.2	6.58	1880	2.0	< 2	1.60	4.0	27	153	50	4.75	2.39	1.64	1640
CL1620 4600S	201	285	< 0.2	8.21	2980	3.5	< 2	1.07	1.0	21	68	51	4.90	3.11	1.45	1615
CL1620 4650S	201	285	0.4	9.42	1940	2.0	< 2	0.55	< 0.5	15	180	40	7.73	3.97	0.91	1105
CL1620 4700S	201	285	0.4	8.96	3640	4.0	2	0.71	0.5	23	131	63	4.75	3.47	1.61	1530
CL1620 4750S	201	285	< 0.2	7.44	1720	1.0	< 2	3.16	< 0.5	34	200	68	5.77	1.74	2.78	1340
CL1620 4800S	201	285	< 0.2	7.71	2720	2.0	< 2	1.49	0.5	24	79	61	3.67	2.20	1.15	1400
CL1620 4850S	201	285	0.4	7.87	2770	3.0	< 2	0.79	< 0.5	48	143	122	4.70	2.09	1.01	2730
CL1620 4900S	201	285	0.4	9.37	4550	3.5	< 2	0.82	2.5	40	153	111	6.19	2.70	1.78	2330
PAK10300E 09750N	201	285	0.4	7.66	3550	3.0	< 2	0.46	1.0	12	30	195	3.23	2.47	0.48	1595
PAK10300E 09775N	201	285	0.4	5.97	>10000	2.5	< 2	0.35	1.5	28	89	171	6.03	2.61	0.91	3910
PAK10300E 09800N	201	285	0.8	7.37	>10000	3.0	< 2	0.61	4.0	36	123	181	6.64	3.01	1.42	3970
PAK10300E 09900N	201	285	1.0	8.74	3860	4.5	< 2	0.69	10.0	44	131	673	7.13	3.62	1.40	4040
PAK10300E 09950N	201	285	< 0.2	7.44	1700	1.0	< 2	2.82	< 0.5	30	188	58	5.75	1.70	2.56	1370
PAK10300E 10000N	201	285	< 0.2	6.72	1500	1.0	< 2	2.81	< 0.5	27	196	36	5.27	1.23	2.57	1055
PAK10300E 10050N	201	285	< 0.2	7.01	7350	2.0	< 2	2.18	1.0	28	122	105	5.35	1.84	2.03	2340
PAK10300E 10100N	201	285	< 0.2	8.38	3090	3.0	< 2	1.10	< 0.5	23	129	49	4.84	2.94	1.67	1350
PAK10300E 10150N	201	285	< 0.2	7.25	1590	1.0	< 2	2.93	< 0.5	32	356	93	5.91	1.59	3.21	1245
PAK10300E 10200N	201	285	< 0.2	7.11	1050	0.5	< 2	3.48	< 0.5	33	208	69	5.96	1.29	2.92	1360
PAK10300E 10250N	201	285	< 0.2	7.11	880	0.5	< 2	3.71	< 0.5	33	207	64	6.23	1.29	3.10	1230
PAK10300E 10300N	201	285	< 0.2	7.15	620	< 0.5	< 2	4.22	< 0.5	36	209	70	6.67	0.80	3.16	1325
PAK10300E 10350N	201	285	< 0.2	6.66	540	< 0.5	< 2	4.01	< 0.5	36	203	86	6.90	0.66	3.29	1340
PAK10300E 10400N	201	285	< 0.2	7.00	410	< 0.5	< 2	4.87	< 0.5	41	252	83	7.19	0.46	4.00	1460
PAK10800E 09300N	201	285	< 0.2	7.32	3520	2.0	< 2	0.71	0.5	15	66	22	3.28	2.61	0.70	1105
PAK10800E 09350N	201	285	0.4	8.12	1410	2.0	< 2	1.70	3.0	31	169	35	4.97	2.47	1.67	1955
PAK10800E 09400N	201	285	< 0.2	7.37	2620	2.5	< 2	0.94	< 0.5	17	84	38	3.68	2.40	0.83	1055
PAK10800E 09450N	201	285	0.4	6.09	5260	2.0	< 2	0.65	< 0.5	11	74	60	3.51	1.98	0.70	1030
PAK10800E 09500N	201	285	0.2	7.43	2700	2.0	< 2	0.85	< 0.5	12	52	33	2.90	1.99	0.62	1400
PAK10800E 09550N	201	285	< 0.2	6.18	3330	1.0	< 2	0.78	< 0.5	10	50	34	2.69	1.77	0.57	715

CERTIFICATION: Ian Bachlan

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To EQUITY ENGINEERING LTD

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Project : ATNA-94-02
Comments: ATTN MARK BAKNES

Page Number 2-B
Total Pages 5
Certificate Date 07-OCT-94
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P O Number
Account EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	Au ppb FA+AA			
CL1620 3950S	201	285	1	1.72	26	480	24	325	0.42	130	< 10	120	< 5			
CL1620 4000S	201	285	1	1.59	27	550	26	323	0.44	126	< 10	114	< 5			
CL1620 4050S	201	285	1	1.60	31	1070	24	313	0.41	123	< 10	132	< 5			
CL1620 4100S	201	285	1	1.81	34	970	24	348	0.43	123	< 10	128	< 5			
CL1620 4150S	201	285	2	1.61	30	720	46	510	0.30	97	< 10	246	< 5			
CL1620 4200S	201	285	2	1.20	24	880	28	306	0.37	102	< 10	204	< 5			
CL1620 4250S	201	285	3	0.84	76	1790	96	399	0.86	236	< 10	460	< 5			
CL1620 4300S	201	285	2	1.57	35	1780	52	418	0.36	135	< 10	302	< 5			
CL1620 4350S	201	285	2	1.02	29	720	32	304	0.57	150	< 10	166	< 5			
CL1620 4400S	201	285	2	1.07	32	1520	28	332	0.55	163	< 10	156	< 5			
CL1620 4450S	201	285	3	0.74	21	1110	20	219	0.28	95	< 10	128	< 5			
CL1620 4500S	201	285	3	1.15	28	1040	14	252	0.39	99	< 10	100	< 5			
CL1620 4550S	201	285	2	0.75	59	1440	22	365	0.50	149	< 10	296	< 5			
CL1620 4600S	201	285	4	0.83	49	1220	36	383	0.48	112	< 10	516	< 5			
CL1620 4650S	201	285	20	1.02	33	880	18	428	0.39	180	< 10	130	< 5			
CL1620 4700S	201	285	2	0.76	76	1010	72	287	0.47	142	< 10	302	< 5			
CL1620 4750S	201	285	< 1	1.35	103	1150	16	413	0.69	206	< 10	162	< 5			
CL1620 4800S	201	285	1	1.62	53	1200	32	471	0.39	121	< 10	276	< 5			
CL1620 4850S	201	285	7	1.10	94	1750	60	305	0.34	152	< 10	320	< 5			
CL1620 4900S	201	285	3	0.81	96	1440	178	378	0.52	202	< 10	1075	< 5			
PAK10300E 09750N	201	285	5	2.66	19	710	150	652	0.17	79	< 10	842	< 5			
PAK10300E 09775N	201	285	6	0.50	73	1160	160	352	0.29	209	< 10	860	< 5			
PAK10300E 09800N	201	285	6	0.80	96	1200	186	415	0.40	217	< 10	1240	10			
PAK10300E 09900N	201	285	10	0.67	111	1820	448	288	0.47	179	< 10	2430	< 5			
PAK10300E 09950N	201	285	1	1.49	64	700	54	327	0.60	210	< 10	292	< 5			
PAK10300E 10000N	201	285	< 1	1.50	58	890	24	319	0.59	212	< 10	130	< 5			
PAK10300E 10050N	201	285	5	1.23	74	770	68	262	0.43	171	< 10	374	< 5			
PAK10300E 10100N	201	285	1	1.00	49	1230	66	276	0.51	155	< 10	326	< 5			
PAK10300E 10150N	201	285	1	1.23	99	840	28	258	0.62	210	< 10	206	< 5			
PAK10300E 10200N	201	285	< 1	1.47	68	1720	14	320	0.91	247	< 10	126	< 5			
PAK10300E 10250N	201	285	< 1	1.42	60	570	8	411	0.70	241	< 10	112	< 5			
PAK10300E 10300N	201	285	< 1	1.63	71	790	6	268	0.72	262	< 10	110	< 5			
PAK10300E 10350N	201	285	< 1	1.52	62	730	6	189	0.69	272	< 10	110	< 5			
PAK10300E 10400N	201	285	< 1	1.66	76	680	4	196	0.70	276	< 10	108	< 5			
PAK10800E 09300N	201	285	2	1.73	24	1570	46	451	0.43	117	< 10	274	< 5			
PAK10800E 09350N	201	285	1	1.50	56	1580	18	442	0.66	149	< 10	394	< 5			
PAK10800E 09400N	201	285	2	1.50	39	1280	24	452	0.39	111	< 10	242	< 5			
PAK10800E 09450N	201	285	4	1.13	32	1500	40	337	0.29	130	< 10	260	< 5			
PAK10800E 09500N	201	285	2	1.79	22	1490	28	374	0.28	95	< 10	174	< 5			
PAK10800E 09550N	201	285	1	1.79	22	1180	28	378	0.27	88	< 10	134	< 5			

CERTIFICATION: Stan Buchan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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British Columbia, Canada V7J 2C1
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To. EQUITY ENGINEERING LTD

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V6B 1N2

Project · ATNA-94-02
Comments· ATTN: MARK BAKNES

Certificate Date 07-OCT-94
Invoice No .I9427544
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Account ·EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
PAK10800E 09600N	201	285	< 0.2	6.66	3690	1.5	< 2	1.07	< 0.5	12	51	41	2.71	1.96	0.67	1220
PAK10800E 09650N	201	285	< 0.2	6.45	2990	2.0	< 2	1.10	< 0.5	12	75	36	2.95	2.18	0.80	770
PAK10800E 09700N	201	285	< 0.2	6.68	2260	2.0	< 2	0.99	< 0.5	9	41	33	2.63	2.52	0.71	580
PAK10800E 09750N	201	285	< 0.2	6.67	1960	2.0	< 2	1.09	< 0.5	11	49	29	2.99	2.45	0.84	580
PAK10800E 09800N	201	285	< 0.2	7.15	2120	2.0	< 2	1.30	< 0.5	13	76	36	3.37	2.40	1.01	705
PAK10800E 09850N	201	285	< 0.2	6.99	1230	1.0	2	2.20	< 0.5	13	86	27	2.84	1.66	1.21	680
PAK10800E 09900N	201	285	< 0.2	6.47	2370	2.0	< 2	1.40	< 0.5	15	122	41	4.44	1.86	1.32	915
PAK10800E 09950N	201	285	< 0.2	6.30	2000	1.0	< 2	1.84	< 0.5	16	122	31	4.02	1.53	1.46	910
PAK10800E 10000N	201	285	< 0.2	7.71	1980	2.0	< 2	2.55	< 0.5	37	256	74	6.18	1.49	2.75	1705
PAK11100E 09300N	201	285	0.2	6.84	3470	2.0	< 2	1.12	0.5	16	103	39	3.60	2.01	1.04	790
PAK11100E 09350N	201	285	0.2	6.30	6250	1.5	< 2	0.57	< 0.5	10	53	32	2.46	2.25	0.57	920
PAK11100E 09400N	201	285	< 0.2	6.13	3320	1.5	2	1.12	0.5	11	68	41	2.94	1.76	0.80	695
PAK11100E 09450N	201	285	< 0.2	6.22	3240	1.5	< 2	1.11	< 0.5	12	82	45	3.15	1.79	0.81	630
PAK11100E 09550N	201	285	0.2	6.83	4560	1.5	< 2	1.52	< 0.5	15	73	53	3.23	1.76	1.05	940
PAK11100E 09600N	201	285	< 0.2	6.51	3460	1.5	< 2	1.46	< 0.5	14	62	64	3.04	1.94	0.98	775
PAK11100E 09650N	201	285	< 0.2	4.65	1340	1.0	< 2	1.16	< 0.5	9	59	36	2.30	1.13	0.80	515
PAK11100E 09700N	201	285	< 0.2	5.91	1830	1.0	2	1.73	< 0.5	13	87	38	3.25	1.41	1.09	580
PAK11100E 09750N	201	285	< 0.2	6.56	1920	1.5	< 2	1.82	0.5	17	118	55	3.69	1.67	1.33	765
PAK11100E 09800N	201	285	0.2	6.72	1480	1.5	< 2	2.23	< 0.5	19	115	99	4.34	1.56	1.61	975
PAK11100E 09850N	201	285	< 0.2	6.89	1760	1.5	< 2	2.05	< 0.5	17	107	65	4.04	1.61	1.52	745
PAK11100E 09900N	201	285	< 0.2	6.88	1690	2.0	2	1.54	< 0.5	14	75	41	3.32	2.02	1.11	790
PAK11100E 09950N	201	285	0.4	6.93	1980	2.0	2	1.26	< 0.5	13	66	53	3.08	2.05	0.96	575
PAK11100E 10000N	201	285	0.2	6.77	2100	2.5	2	0.94	0.5	12	50	38	3.02	2.21	0.82	985
PAK11100E 10050N	201	285	< 0.2	7.17	1760	2.5	2	1.20	< 0.5	14	75	34	3.55	2.36	1.12	710
PAK11200E 10400N	201	285	< 0.2	8.36	1940	3.5	< 2	1.06	0.5	34	175	64	6.94	3.01	2.67	1920
PAK11200E 10450N	201	285	< 0.2	8.72	1420	3.5	< 2	1.00	< 0.5	33	165	80	5.71	2.86	2.15	1425
PAK11200E 10500N	201	285	0.8	7.21	1550	2.0	< 2	2.07	1.0	30	93	65	6.93	2.18	2.43	1305
PAK11200E 10550N	201	285	0.4	7.37	1680	2.0	< 2	1.57	1.0	25	85	67	5.98	2.01	2.04	1260
PAK11200E 10600N	201	285	< 0.2	6.89	1420	1.5	< 2	2.46	< 0.5	32	107	67	7.39	1.57	2.66	1305
PAK11200E 10650N	201	285	< 0.2	6.33	1020	0.5	< 2	3.26	< 0.5	32	113	55	7.50	1.27	2.80	1275
PAK11200E 10700N	201	285	0.2	6.38	1290	1.0	< 2	2.36	< 0.5	28	113	52	6.70	1.34	2.38	1220
PAK11200E 10750N	201	285	0.4	6.10	1180	1.0	< 2	2.22	< 0.5	32	393	63	6.01	1.38	3.71	1145
PAK11200E 10800N	201	285	0.2	7.03	1640	1.0	< 2	2.46	< 0.5	31	169	64	6.81	1.66	2.54	1265
PAK11200E 10850N	201	285	0.2	7.24	2090	1.5	2	1.82	< 0.5	21	142	46	4.84	1.84	1.97	910
PAK11200E 10900N	201	285	< 0.2	7.45	1900	2.0	< 2	2.26	0.5	28	138	59	5.30	2.00	2.43	1140
PAK11200E 10950N	201	285	0.6	7.50	2990	4.0	2	0.57	3.0	16	81	90	4.23	3.09	1.20	1365
PAK11200E 11000N	201	285	0.8	9.80	2920	5.0	< 2	0.70	1.0	21	96	172	5.84	3.09	1.50	1760
PAK11200E 11050N	201	285	0.2	7.31	>10000	2.0	< 2	0.26	< 0.5	18	81	150	5.26	2.08	0.50	1205
PAK11200E 11100N	201	285	0.2	5.67	7610	1.5	< 2	0.34	0.5	22	63	126	4.04	1.74	0.78	1180
PAK11200E 11150N	--	--	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.

CERTIFICATION: Stuart Bichler

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PAK10800E 09600N	201	285	2	1.84	22	1480	26	408	0.26	97	< 10	130	< 5			
PAK10800E 09650N	201	285	1	1.63	29	670	34	347	0.37	104	< 10	170	< 5			
PAK10800E 09700N	201	285	2	1.69	23	890	34	363	0.30	82	< 10	190	< 5			
PAK10800E 09750N	201	285	1	1.54	26	860	38	286	0.37	100	< 10	190	< 5			
PAK10800E 09800N	201	285	1	1.70	28	1170	42	361	0.45	115	< 10	198	< 5			
PAK10800E 09850N	201	285	1	2.33	22	1300	14	431	0.34	103	< 10	84	< 5			
PAK10800E 09900N	201	285	2	1.36	37	1380	56	271	0.54	171	< 10	238	< 5			
PAK10800E 09950N	201	285	< 1	1.53	35	1570	16	307	0.61	180	< 10	110	< 5			
PAK10800E 10000N	201	285	2	1.30	86	1540	14	304	0.68	231	< 10	168	5			
PAK11100E 09300N	201	285	1	1.42	39	940	30	345	0.45	139	< 10	340	< 5			
PAK11100E 09350N	201	285	2	1.75	26	770	40	512	0.26	125	< 10	156	< 5			
PAK11100E 09400N	201	285	< 1	1.71	33	810	32	385	0.34	111	< 10	190	< 5			
PAK11100E 09450N	201	285	1	1.67	31	950	26	372	0.39	120	< 10	146	< 5			
PAK11100E 09550N	201	285	2	1.79	28	1620	34	379	0.32	131	< 10	140	< 5			
PAK11100E 09600N	201	285	1	1.79	32	840	26	375	0.37	114	< 10	178	< 5			
PAK11100E 09650N	201	285	1	1.30	24	450	22	194	0.30	87	< 10	118	< 5			
PAK11100E 09700N	201	285	< 1	1.64	26	1350	18	278	0.47	136	< 10	106	< 5			
PAK11100E 09750N	201	285	< 1	1.76	37	880	20	325	0.53	143	< 10	144	< 5			
PAK11100E 09800N	201	285	1	1.77	39	1340	32	308	0.55	171	< 10	176	< 5			
PAK11100E 09850N	201	285	1	1.78	37	790	22	260	0.54	161	< 10	166	< 5			
PAK11100E 09900N	201	285	< 1	1.74	28	1090	24	354	0.46	122	< 10	168	< 5			
PAK11100E 09950N	201	285	1	1.95	27	860	32	341	0.40	109	< 10	160	< 5			
PAK11100E 10000N	201	285	3	1.62	22	1230	42	317	0.38	100	< 10	198	< 5			
PAK11100E 10050N	201	285	1	1.62	30	1080	30	271	0.48	121	< 10	182	< 5			
PAK11200E 10400N	201	285	1	0.89	59	1710	42	168	0.89	199	< 10	348	< 5			
PAK11200E 10450N	201	285	2	0.50	68	1630	24	81	0.68	185	< 10	236	< 5			
PAK11200E 10500N	201	285	< 1	1.25	42	1110	194	167	0.90	253	< 10	594	< 5			
PAK11200E 10550N	201	285	1	1.21	43	1740	58	206	0.67	207	< 10	322	< 5			
PAK11200E 10600N	201	285	< 1	1.35	43	980	20	156	0.90	292	< 10	172	< 5			
PAK11200E 10650N	201	285	< 1	1.53	44	990	8	159	0.85	315	< 10	138	< 5			
PAK11200E 10700N	201	285	< 1	1.29	47	940	12	137	0.76	264	< 10	158	< 5			
PAK11200E 10750N	201	285	1	1.12	249	880	10	147	0.62	215	< 10	152	< 5			
PAK11200E 10800N	201	285	< 1	1.12	57	1040	12	151	0.80	276	< 10	222	< 5			
PAK11200E 10850N	201	285	1	1.50	52	1120	18	248	0.60	189	< 10	186	< 5			
PAK11200E 10900N	201	285	< 1	1.26	57	1050	12	291	0.66	202	< 10	184	< 5			
PAK11200E 10950N	201	285	2	0.71	46	1010	180	98	0.35	127	< 10	788	< 5			
PAK11200E 11000N	201	285	6	1.00	59	1040	280	158	0.40	171	< 10	1345	< 5			
PAK11200E 11050N	201	285	2	0.65	104	950	20	178	0.26	183	< 10	334	< 5			
PAK11200E 11100N	201	285	2	0.70	50	1400	40	93	0.26	114	< 10	276	< 5			
PAK11200E 11150N	--	--	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.	miss.			

CERTIFICATION: Stewart Buchan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave , North Vancouver
British Columbia, Canada V7J 2C1
PHONE. 604-984-0221

To EQUITY ENGINEERING LTD
207 - 675 W. HASTINGS ST
VANCOUVER, BC
V6B 1N2

Project : ATNA-94-02
Comments: ATTN: MARK BAKNES

Page Number :4-A
Total Pages :5
Certificate Date 07-OCT-94
Invoice No :19427544
P O. Number
Account EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
PAK11200E 11200E	201	285	< 0.2	4.49	7600	1.5	< 2	0.07	< 0.5	4	65	46	2.90	1.86	0.48	445
PAK11200E 11250E	201	285	0.2	10.30	3740	6.5	< 2	0.78	< 0.5	16	127	27	4.64	3.39	1.72	1250
PAK11200E 11300N	201	285	0.2	8.98	9520	5.5	< 2	0.72	0.5	26	193	84	5.12	3.15	1.94	2620
PAK11200E 11350N	201	285	0.4	8.83	2210	4.5	< 2	0.49	< 0.5	9	44	38	4.06	2.85	1.02	685
PAK11200E 11400N	201	285	0.8	7.32	1280	3.0	< 2	0.40	< 0.5	6	58	40	3.51	1.93	0.83	265
PAK11400E 10400N	201	285	0.6	7.87	1840	2.5	< 2	1.44	0.5	34	118	101	7.09	3.05	2.49	1615
PAK11400E 10450N	201	285	1.2	7.71	1300	2.5	< 2	1.30	1.5	27	80	50	6.02	3.04	2.11	1155
PAK11400E 10500N	201	285	0.6	8.28	2490	3.0	< 2	1.31	1.0	23	63	66	6.08	2.44	1.75	1550
PAK11400E 10550N	201	285	< 0.2	6.70	860	1.0	< 2	2.97	1.5	32	84	31	8.04	2.53	2.51	1325
PAK11400E 10600N	201	285	0.6	8.20	1730	3.0	< 2	1.53	0.5	21	64	41	6.11	2.60	1.70	1155
PAK11400E 10650N	201	285	< 0.2	7.07	1250	0.5	< 2	2.92	< 0.5	37	109	78	8.43	2.08	3.11	1430
PAK11400E 10700N	201	285	0.4	8.05	2560	3.0	< 2	0.83	0.5	23	65	70	4.48	3.63	1.76	1180
PAK11400E 10750N	201	285	0.2	6.66	1400	1.0	< 2	2.25	< 0.5	29	150	55	6.52	1.62	2.46	1435
PAK11400E 10800N	201	285	1.4	6.93	2130	1.5	< 2	1.64	0.5	32	224	86	5.70	2.09	2.50	1800
PAK11400E 10850N	201	285	< 0.2	6.94	2450	2.0	< 2	0.94	< 0.5	23	126	78	5.68	2.09	1.92	1405
PAK11400E 10900N	201	285	0.2	7.98	3160	3.5	< 2	1.17	1.5	34	180	129	6.22	2.98	2.30	2060
PAK11400E 10950N	201	285	0.4	8.09	2100	3.0	< 2	1.08	1.0	28	130	95	6.53	2.87	2.22	1590
PAK11400E 11000N	201	285	0.2	5.87	2280	3.0	< 2	0.39	1.0	10	49	58	2.98	2.40	0.88	940
PAK11400E 11050N	201	285	0.6	7.25	4030	2.0	< 2	0.78	1.5	33	169	201	6.19	2.03	2.26	1560
PAK11400E 11100N	201	285	0.6	7.30	3240	2.0	2	1.02	5.5	29	123	164	4.84	3.12	1.85	1210
PAK11400E 11150N	201	285	0.4	5.76	5280	1.5	< 2	0.51	0.5	25	75	221	5.53	1.78	1.01	2780
PAK11400E 11300N	201	285	0.4	5.55	>10000	3.0	< 2	0.30	0.5	39	66	321	5.04	2.08	0.82	2910
PAK11400E 11350N	201	285	0.4	8.67	>10000	6.5	< 2	0.32	1.5	29	84	107	4.41	3.05	1.09	2560
PAK11950E 09300N	201	285	0.4	5.42	5200	1.5	< 2	0.69	0.5	10	70	48	3.65	1.71	0.67	1040
PAK11950E 09350N	201	285	< 0.2	6.00	4910	2.0	< 2	0.89	< 0.5	13	88	50	3.66	1.81	0.90	1065
PAK11950E 09400N	201	285	0.4	5.17	5010	1.0	< 2	0.56	< 0.5	8	81	53	2.96	1.81	0.50	595
PAK11950E 09450N	201	285	< 0.2	7.02	3460	2.0	< 2	0.67	< 0.5	12	76	94	3.31	1.95	0.67	640
PAK11950E 09500N	201	285	< 0.2	8.11	4720	3.0	< 2	0.93	< 0.5	20	68	99	4.21	2.14	0.79	1725
PAK11950E 09550N	201	285	< 0.2	9.34	5500	3.5	< 2	0.78	< 0.5	13	52	80	3.55	2.85	0.63	1480
PAK11950E 09600N	201	285	< 0.2	7.48	2410	1.5	< 2	2.54	1.0	23	98	215	5.13	1.57	1.77	1400
PAK11950E 09650N	201	285	< 0.2	7.50	2000	1.0	< 2	3.47	< 0.5	32	169	212	6.14	1.41	2.60	1425
PAK11950E 09700N	201	285	< 0.2	7.23	1060	< 0.5	< 2	4.91	< 0.5	40	191	275	7.43	0.79	3.50	1525
PAK11950E 09750N	201	285	< 0.2	7.08	1010	< 0.5	< 2	4.59	< 0.5	39	215	245	7.12	0.78	3.51	1415
PAK11950E 09800N	201	285	0.4	7.23	1240	< 0.5	< 2	4.00	0.5	38	254	424	7.92	1.33	3.70	1325
PAK11950E 09850N	201	285	0.6	7.43	2390	0.5	< 2	3.13	1.0	39	194	480	7.50	1.46	2.88	1560
PAK11950E 09900N	201	285	0.2	6.54	2580	1.0	< 2	2.06	0.5	35	266	645	7.09	1.88	2.96	1575
PAK11950E 09950N	201	285	< 0.2	7.17	1540	1.0	< 2	2.50	0.5	34	213	176	7.08	1.76	2.81	1465
PAK11950E 10000N	201	285	< 0.2	7.93	1840	2.0	< 2	1.65	< 0.5	34	194	93	6.64	2.66	2.83	1530
PAK11950E 10050N	201	285	< 0.2	7.42	1370	1.5	< 2	2.41	< 0.5	33	247	83	7.04	2.23	3.20	1405
PAK11950E 10100N	201	285	< 0.2	7.25	1270	1.0	< 2	2.74	< 0.5	33	197	73	6.92	2.33	3.09	1385

CERTIFICATION: Stewart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE 604-984-0221

To EQUITY ENGINEERING LTD

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project ATNA-94-02
Comments ATTN: MARK BAKNES

Certificate Date 07-OCT-94
Invoice No :I9427544
P O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	Au ppb FA+AA			
PAK11200E 11200E	201	285	1	0.20	22	430	18	111	0.17	205	< 10	122	< 5			
PAK11200E 11250E	201	285	4	0.65	44	760	34	89	0.30	64	< 10	420	< 5			
PAK11200E 11300N	201	285	5	0.62	119	730	54	109	0.29	94	< 10	778	< 5			
PAK11200E 11350N	201	285	5	1.16	19	1050	38	125	0.28	84	< 10	284	< 5			
PAK11200E 11400N	201	285	4	0.73	17	690	268	125	0.31	150	< 10	490	< 5			
PAK11400E 10400N	201	285	1	0.93	54	2070	108	141	0.97	229	< 10	476	< 5			
PAK11400E 10450N	201	285	1	1.53	27	1710	188	179	0.96	195	< 10	632	< 5			
PAK11400E 10500N	201	285	2	1.04	36	1200	350	191	0.81	197	< 10	870	< 5			
PAK11400E 10550N	201	285	< 1	1.09	15	2860	50	175	1.47	317	< 10	364	< 5			
PAK11400E 10600N	201	285	1	1.28	30	1820	110	194	0.87	169	< 10	432	< 5			
PAK11400E 10650N	201	285	< 1	1.25	56	960	16	174	0.95	330	< 10	178	< 5			
PAK11400E 10700N	201	285	1	0.75	59	820	54	141	0.46	139	< 10	312	< 5			
PAK11400E 10750N	201	285	1	1.34	55	1340	20	158	0.73	229	< 10	216	< 5			
PAK11400E 10800N	201	285	1	0.88	92	1400	104	173	0.60	185	< 10	468	< 5			
PAK11400E 10850N	201	285	2	1.19	66	1140	28	186	0.59	177	< 10	334	< 5			
PAK11400E 10900N	201	285	2	0.89	99	1780	54	236	0.62	199	< 10	512	< 5			
PAK11400E 10950N	201	285	1	0.87	64	1390	166	202	0.76	200	< 10	720	< 5			
PAK11400E 11000N	201	285	3	0.56	29	650	116	77	0.22	98	< 10	458	< 5			
PAK11400E 11050N	201	285	6	0.90	105	790	100	158	0.42	176	< 10	1445	< 5			
PAK11400E 11100N	201	285	4	0.51	98	1940	48	126	0.38	212	< 10	702	< 5			
PAK11400E 11150N	201	285	3	0.78	123	660	62	177	0.25	164	< 10	478	< 5			
PAK11400E 11300N	201	285	2	0.41	155	510	28	108	0.21	112	< 10	400	< 5			
PAK11400E 11350N	201	285	4	0.48	111	790	90	90	0.27	129	< 10	694	< 5			
PAK11950E 09300N	201	285	4	1.09	24	1010	84	261	0.31	134	< 10	248	< 5			
PAK11950E 09350N	201	285	3	1.21	42	610	42	276	0.37	131	< 10	298	< 5			
PAK11950E 09400N	201	285	3	1.02	25	1370	24	278	0.35	121	< 10	154	< 5			
PAK11950E 09450N	201	285	3	1.30	40	620	36	279	0.32	106	< 10	224	< 5			
PAK11950E 09500N	201	285	7	2.05	47	930	42	569	0.33	108	< 10	358	< 5			
PAK11950E 09550N	201	285	2	1.21	31	730	34	447	0.27	94	< 10	332	< 5			
PAK11950E 09600N	201	285	2	1.83	41	950	32	433	0.49	167	< 10	610	< 5			
PAK11950E 09650N	201	285	3	1.76	60	860	66	397	0.65	212	< 10	374	< 5			
PAK11950E 09700N	201	285	1	1.83	72	680	46	298	0.78	276	< 10	402	< 5			
PAK11950E 09750N	201	285	< 1	1.84	72	730	28	234	0.71	272	< 10	352	< 5			
PAK11950E 09800N	201	285	2	1.58	94	730	70	279	0.71	255	< 10	542	< 5			
PAK11950E 09850N	201	285	3	1.60	78	860	76	364	0.69	236	< 10	704	< 5			
PAK11950E 09900N	201	285	4	1.03	99	1060	78	337	0.63	202	< 10	808	< 5			
PAK11950E 09950N	201	285	1	1.14	71	1090	96	197	0.86	248	< 10	420	< 5			
PAK11950E 10000N	201	285	2	0.84	77	1660	34	141	0.86	220	< 10	278	< 5			
PAK11950E 10050N	201	285	2	1.18	94	1060	36	210	0.83	242	< 10	310	< 5			
PAK11950E 10100N	201	285	1	1.26	73	1420	22	211	0.91	246	< 10	216	< 5			

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE. 604-984-0221

To EQUITY ENGINEERING LTD
207 - 675 W. HASTINGS ST
VANCOUVER, BC
V6B 1N2

Project : ATNA-94-02
Comments: ATTN. MARK BAKNES

Certificate Date :07-OCT-94
Invoice No :I9427544
P.O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9427544

SAMPLE	PREP CODE		Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
PAK11950E 10150N	201	285	< 0.2	6.99	1490	1.0	< 2	1.99	< 0.5	37	283	91	7.17	2.57	3.30	1580
PAK11950E 10200N	201	285	1.2	7.14	1180	1.0	< 2	1.74	1.5	34	110	84	7.45	2.54	2.49	1505
PAK11950E 10250N	201	285	0.2	7.55	1750	2.0	< 2	1.18	0.5	29	114	72	6.63	3.01	2.06	1360
PAK11950E 10300N	201	285	< 0.2	7.43	1940	2.0	< 2	1.24	0.5	25	94	42	7.23	2.65	2.16	1080
PAK11950E 10350N	201	285	< 0.2	8.50	4140	3.5	< 2	0.92	1.5	24	94	64	6.02	2.60	1.85	1595
PAK11950E 10400N	201	285	< 0.2	6.76	1300	1.5	< 2	1.77	< 0.5	22	85	33	5.71	1.88	1.83	1040
PAK11950E 10450N	201	285	< 0.2	7.14	1520	2.0	< 2	1.69	0.5	26	149	35	7.04	2.04	2.24	1410
PAK11950E 10500N	201	285	< 0.2	6.85	1620	2.5	< 2	1.58	1.5	37	357	98	6.13	2.22	2.92	1800
PAK11950E 10550N	201	285	< 0.2	8.34	3650	4.0	< 2	0.89	1.0	17	69	171	4.48	2.31	1.16	1735
PAK11950E 10600N	201	285	< 0.2	6.80	3770	3.0	< 2	0.92	2.0	16	66	233	4.90	1.42	1.19	4050
PAK11950E 10650N	201	285	4.4	6.85	1170	3.0	< 2	0.62	< 0.5	8	65	79	3.61	1.79	0.92	650
PAK11950E 10700N	201	285	1.8	6.44	1310	2.0	< 2	0.58	< 0.5	11	99	76	5.52	2.29	0.87	770
PAK11950E 10750N	201	285	< 0.2	7.25	2150	2.5	2	0.82	< 0.5	17	136	30	3.66	2.69	1.41	765
PAK11950E 10800N	201	285	< 0.2	5.66	2310	1.5	< 2	0.71	< 0.5	10	70	26	2.55	1.90	0.88	545
PAK SILT #1 TB	201	285	< 0.2	7.23	1310	5.0	< 2	2.68	< 0.5	32	232	95	5.31	1.68	2.64	1135
PAK SILT #2 TB	201	285	< 0.2	7.31	2040	5.5	< 2	1.85	< 0.5	20	141	43	3.56	2.12	1.45	845
94PD-1	201	285	< 0.2	7.66	3480	3.5	< 2	1.28	1.0	25	163	94	5.13	2.90	1.91	1470

CERTIFICATION: Hart Bichler

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To EQUITY ENGINEERING LTD

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Total Pages :5
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PAK11950E 10150N	201	285	< 1	1.03	100	1420	24	178	0.93	224	< 10	300	< 5			
PAK11950E 10200N	201	285	2	1.03	40	1990	230	132	1.32	301	< 10	706	< 5			
PAK11950E 10250N	201	285	1	0.91	47	2120	86	127	0.98	195	< 10	414	< 5			
PAK11950E 10300N	201	285	< 1	1.22	36	1940	90	168	1.23	247	< 10	362	< 5			
PAK11950E 10350N	201	285	2	0.95	53	1070	180	149	0.72	194	< 10	758	< 5			
PAK11950E 10400N	201	285	2	1.70	27	1690	56	276	0.91	173	< 10	306	< 5			
PAK11950E 10450N	201	285	1	1.41	44	1640	66	259	1.08	174	< 10	434	< 5			
PAK11950E 10500N	201	285	2	0.86	138	1860	124	221	0.83	156	< 10	810	< 5			
PAK11950E 10550N	201	285	3	1.38	52	1020	384	192	0.33	112	< 10	996	< 5			
PAK11950E 10600N	201	285	2	1.04	78	710	278	164	0.30	116	< 10	1115	< 5			
PAK11950E 10650N	201	285	4	0.99	28	960	78	136	0.28	112	< 10	318	< 5			
PAK11950E 10700N	201	285	10	0.96	58	1510	50	153	0.38	187	< 10	484	< 5			
PAK11950E 10750N	201	285	2	1.35	42	990	38	154	0.47	120	< 10	172	< 5			
PAK11950E 10800N	201	285	2	1.18	25	790	120	130	0.33	85	< 10	240	< 5			
PAK SILT #1 TB	201	285	< 1	1.52	92	840	22	170	0.58	192	< 10	174	< 5			
PAK SILT #2 TB	201	285	1	1.74	78	1150	32	206	0.45	123	< 10	144	< 5			
94PD-1	201	285	4	0.75	87	880	92	109	0.40	163	< 10	586	< 5			

CERTIFICATION: Stewart Bichler

APPENDIX F

WHOLE ROCK GEOCHEMICAL PLOTS

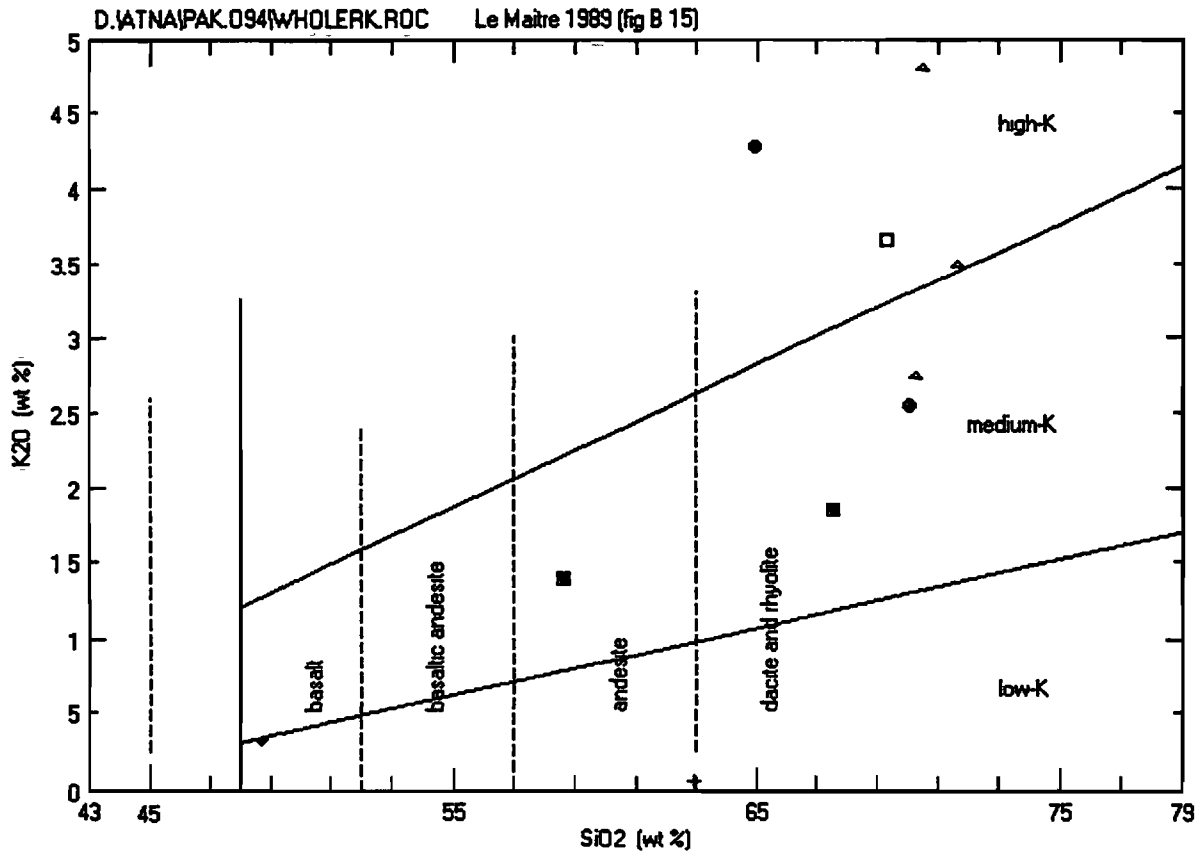
EXPLANATION OF PLOT SYMBOLS

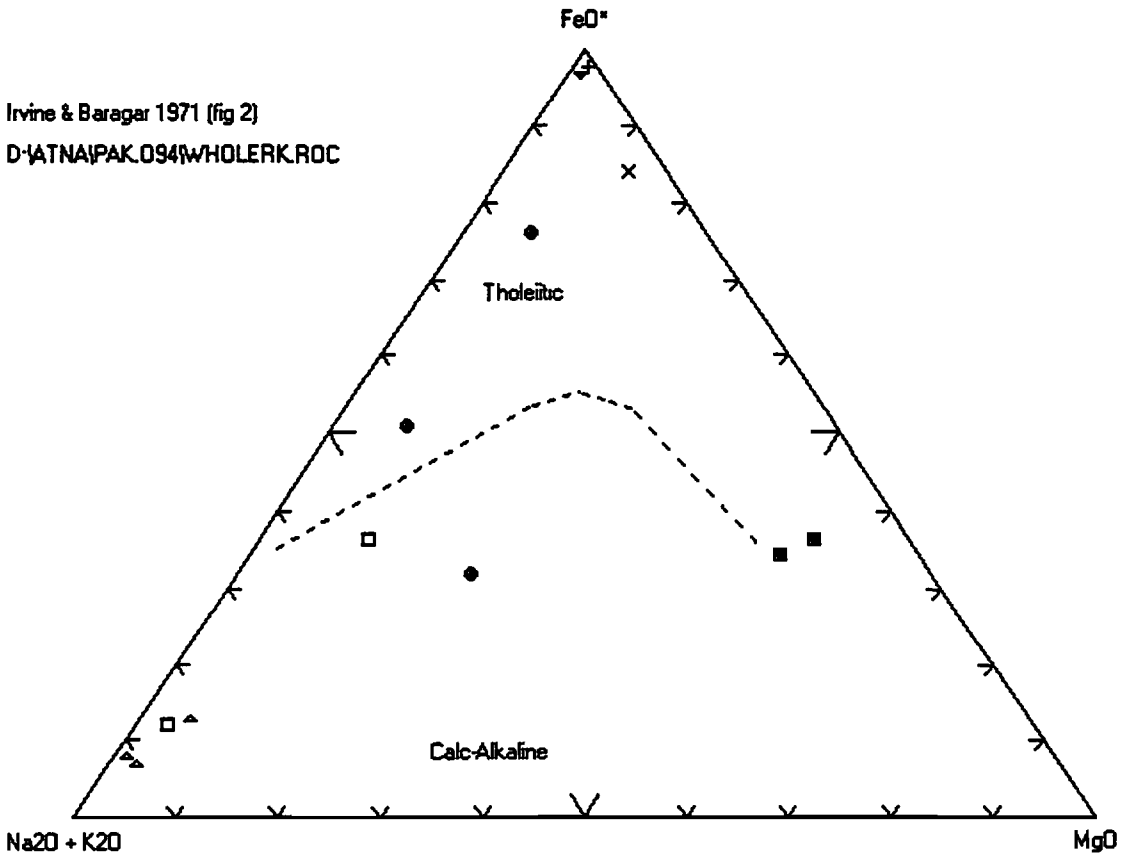
PAK PROPERTY

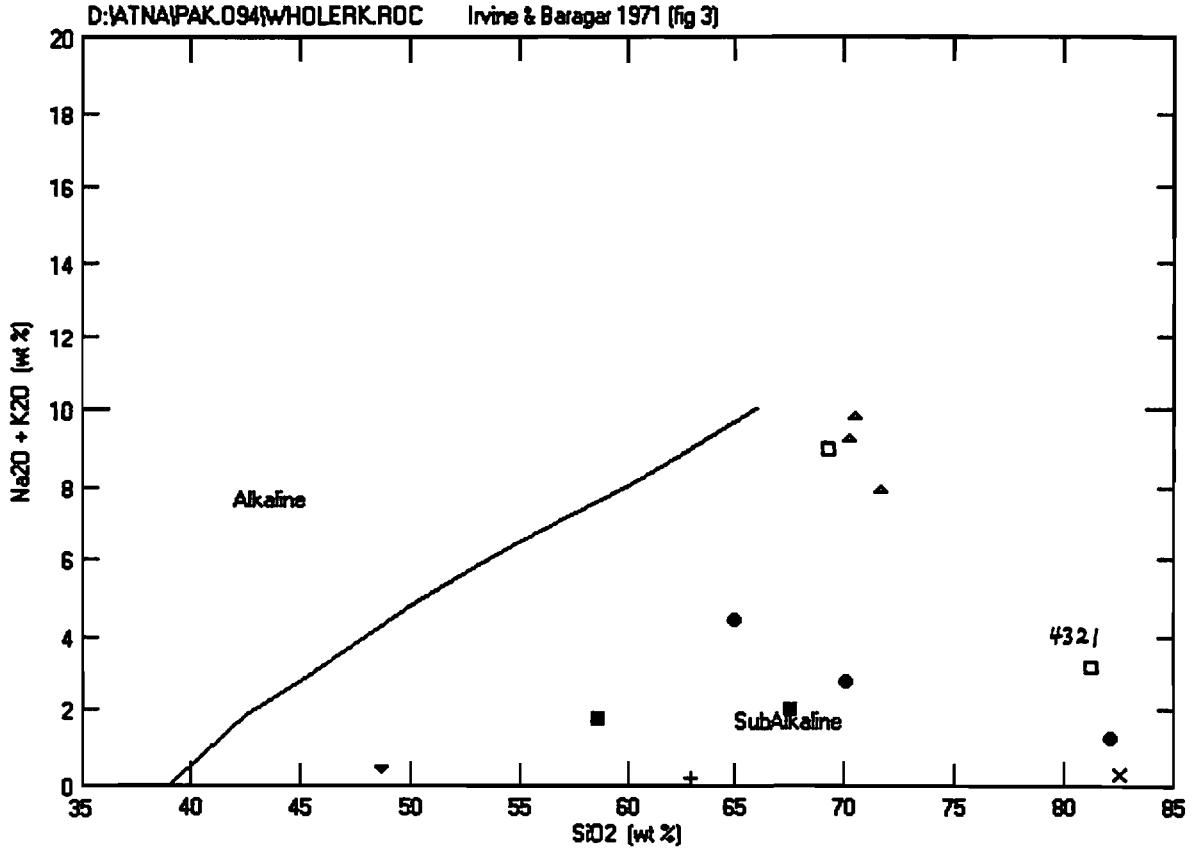
SYMBOL	SAMPLE NO.	LITHOLOGY CODE	DESCRIPTION
△	4310	Vfl	meta-feldspar porphyry, possible rhyolitic intrusive from E-W ridge at east end of property
△	4319	Vfl	typical felsite sill hosted in quartz-biotite gneiss
□	4320	Vsq	quartz sericite schist from foot wall of Pak massive sulphide
□	4321	Vsq	quartz sericite schist from hangingwall of Pak massive sulphide
△	4325	Vfl	quartz eye felsite from south side of claims on contour line 1620

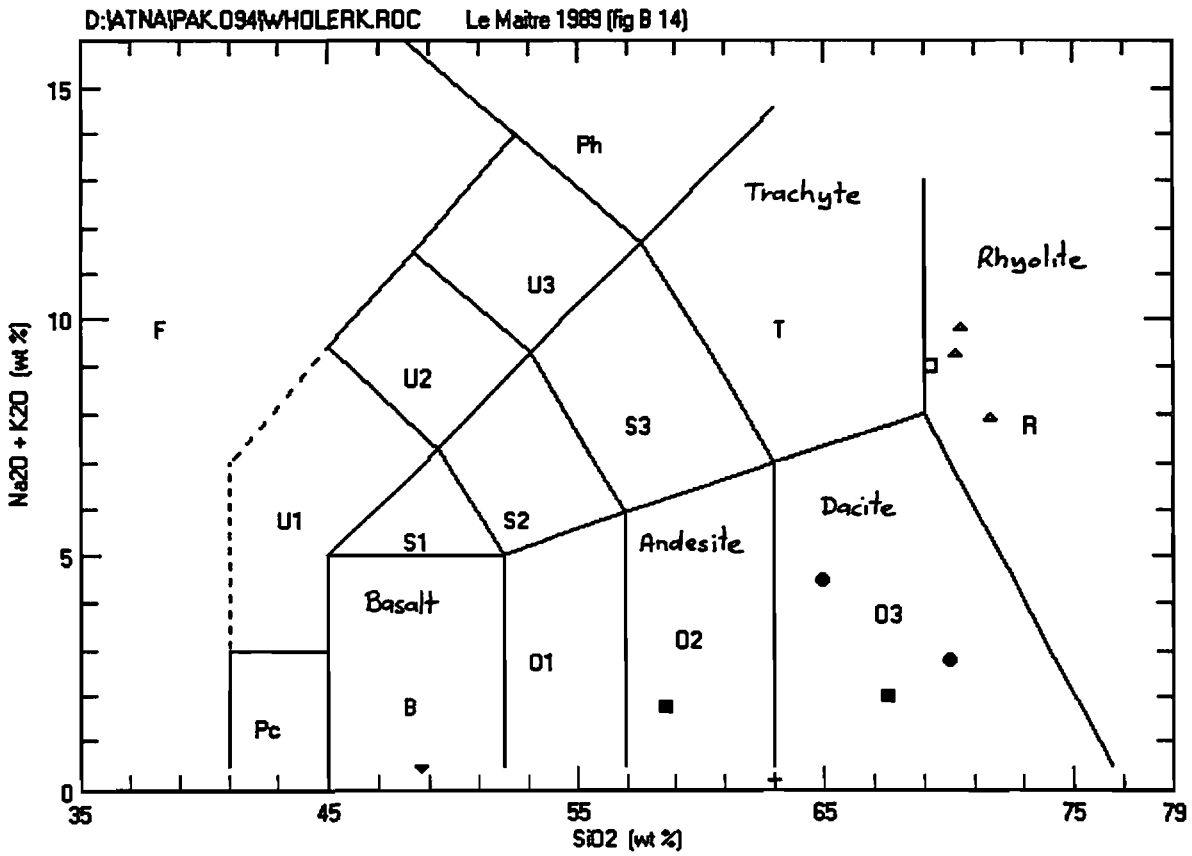
FOOT PROPERTY (Fetish property)

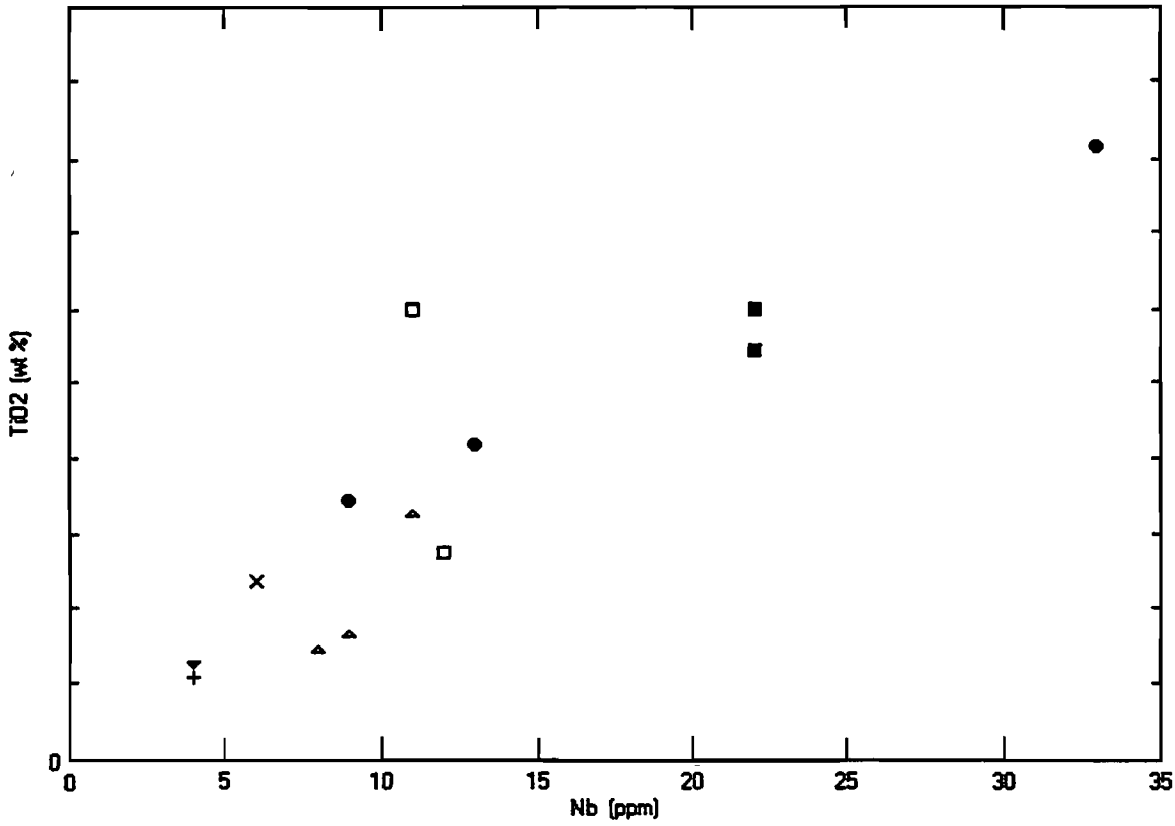
SYMBOL	SAMPLE NO.	HOLE - FOOTAGE	DESCRIPTION
×	4501	F1-76′	Magnetite iron formation
▼	4502	F1-134′	semi-massive pyrite in quartz sericite schist
●	4503	F1-179′	graphitic phyllite
■	4504	F1-287′	talcose phyllite
+	4505	F2-85′	banded magnetite iron formation
●	4506	F2-123′	graphitic phyllite
■	4507	F2-178′	talcose phyllite
●	4508	F2-343′	graphitic phyllite

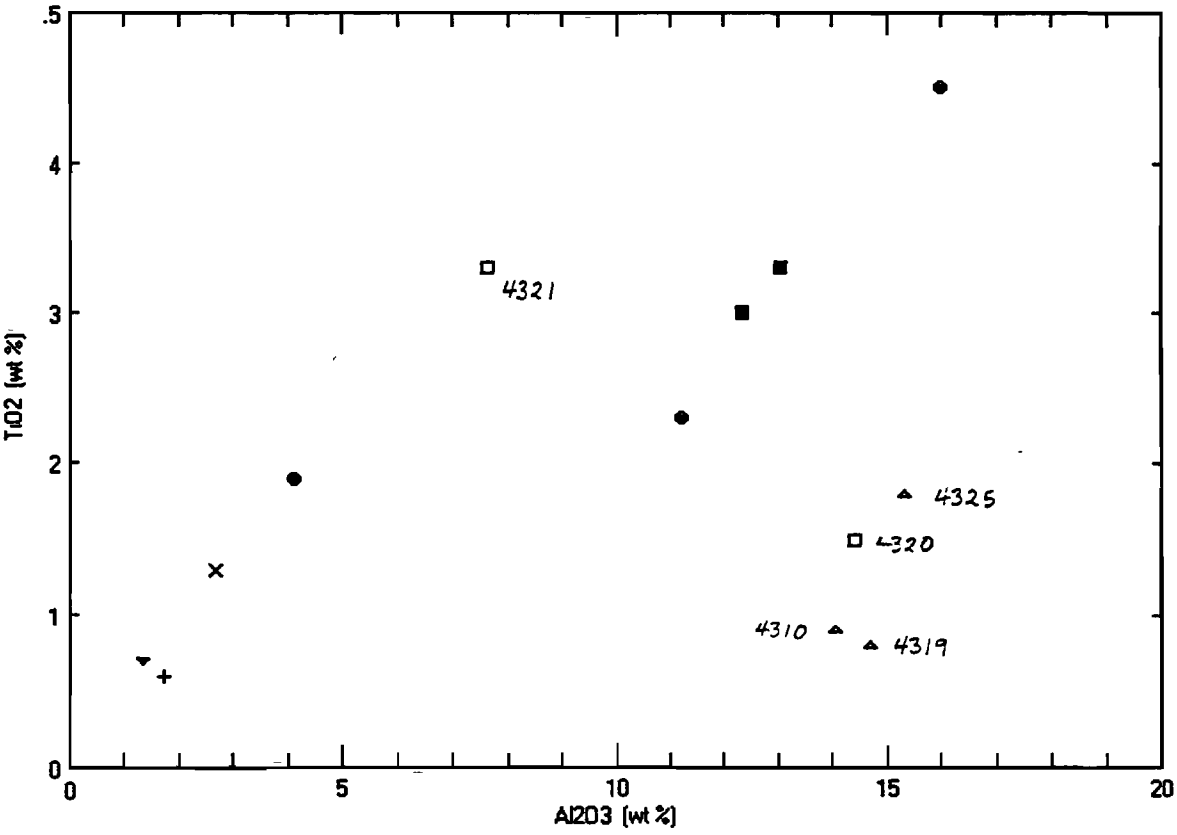

D:\ATNA\PAK.094\WHOLERK.ROC Le Maitre 1989 (fig B 15)
high-K
medium-K
low-K
basalt
basaltic andesite
andesite
dacite and rhyolite
K2O (wt %)
SiO2 (wt %)
0
5
1
1 5
2
2.5
3
3.5
4
4 5
5
43
45
55
65
75
79

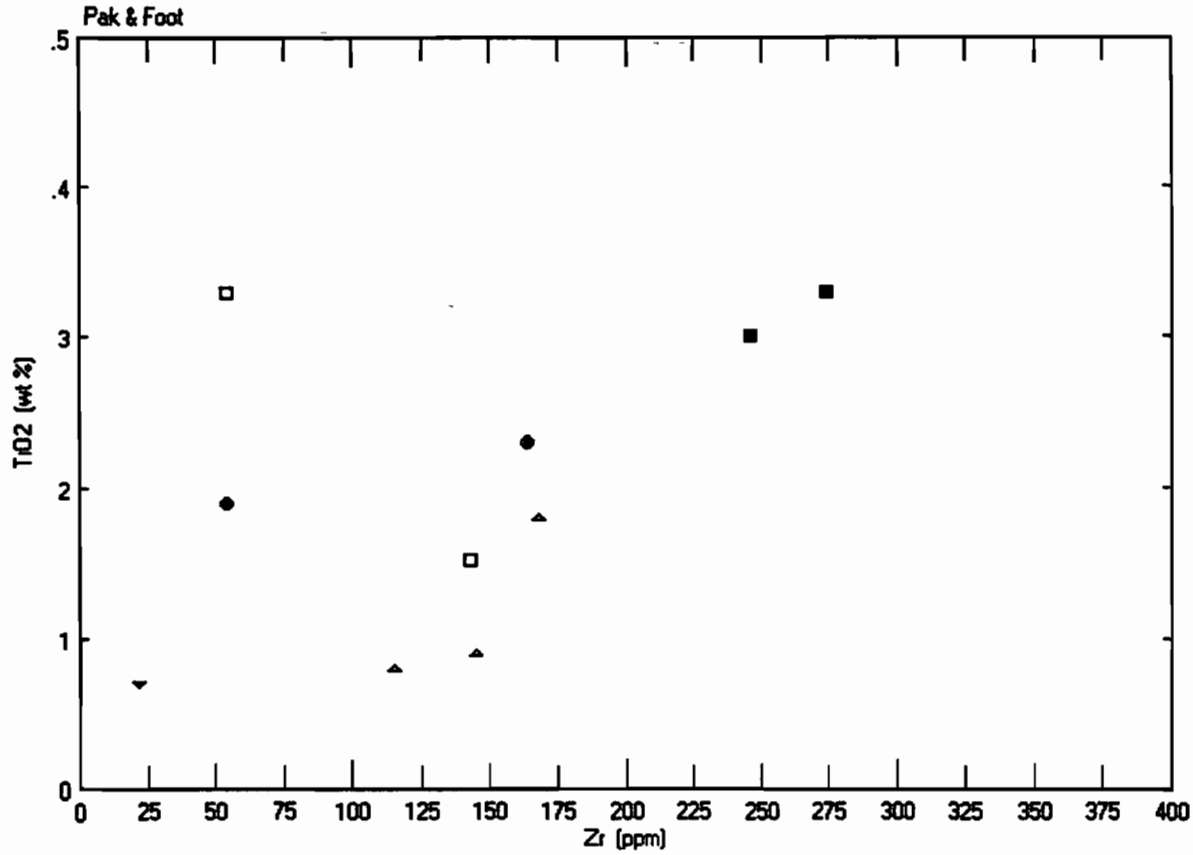

Irvine & Baragar 1971 (fig 2)
D:\ATNA\PAK.094\WHOLERK.ROC
FeO*
Tholeiitic
Calc-Alkaline
Na2O + K2O
MgO

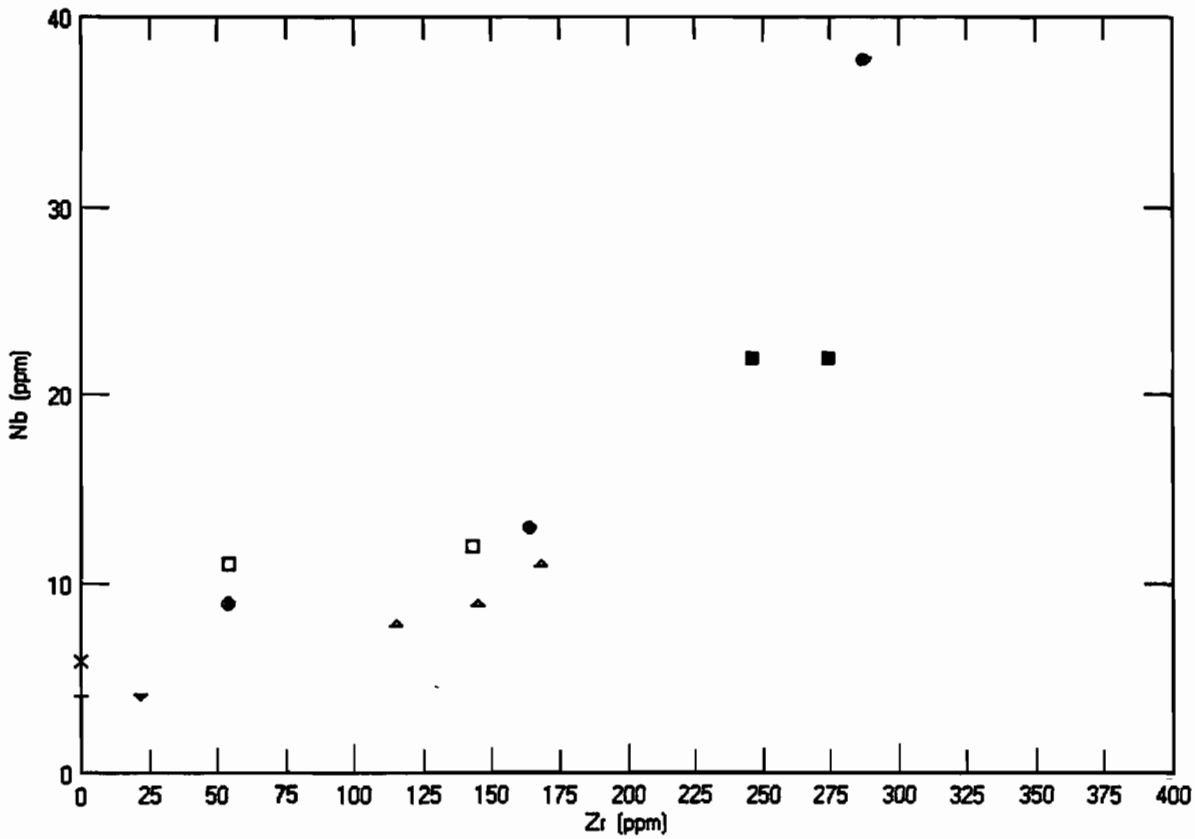

D:\ATNA\PAK.094\WHOLERK.ROC Irvine & Baragar 1971 (fig 3)
Na2O + K2O (wt %)
SiO2 (wt %)
Alkaline
SubAlkaline
4321


D:\ATNA\PAK.094\WHOLERK.ROC Le Maitre 1989 (fig B 14)
Na2O + K2O (wt %)
SiO2 (wt %)
Ph
Trachyte
Rhyolite
U3
F
T
U2
S3
R
U1
S2
S1
Andesite
Dacite
Basalt
O3
O2
O1
B
Pc


TiO2 (wt %)
0
5
10
15
20
25
30
35
Nb (ppm)


TiO2 (wt %)
0
1
2
3
4
5
0
5
10
15
20
Al2O3 (wt %)
4321
4325
4320
4310
4319


Pak & Foot
TiO2 (wt %)
Zr (ppm)
0
1
2
3
.4
.5
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400


Nb (ppm)
Zr (ppm)
0
10
20
30
40
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400

APPENDIX G

GEOPHYSICS REPORT

GEOPHYSICAL REPORT

MAGNETOMETER AND VLF-EM SURVEY

on the

PAK 1-36 CLAIMS

Watson Lake, Mining Division N.T.S. 105 G/7

Prepared for:

EQUITY ENGINEERING LTD.

#207 - 675 West Pender Street,
Vancouver, B.C.
V6B 1N2s

Prepared by:

Todd A. Ballantyne, P. Geo.

SJ GEOPHYSICS LTD.

11762 - 94th Avenue
Delta, British Columbia
Canada V4C 3R7

November 1994

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RECOMMENDATIONS 5

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Figure 1. Remanent Magnetism Profiles. 3

INTRODUCTION

A magnetometer and VLF-EM survey was completed by SJ Geophysics Ltd. for Equity Engineering Ltd. on behalf of Atna Resources Ltd. on the Pak 1-36 Claims. The Pak 1-36 Claims are located 120 Kilometres southeast of Ross River, latitude 61°21'N and longitude 130°36'W, in the Watson Lake mining division, B.C. (N.T.S. 105 G/7).

The purpose of the survey was to aid in the mapping of local geology and delineate the known massive sulphide Pak showing. This report is an addendum to the geological report written by Equity Engineering Ltd..

FIELD WORK AND INSTRUMENTATION

The Magnetometer and VLF-EM Survey was completed during the period September 4th to 20th, 1994, which comprised 13 data acquisition days, 1 VLF transmitter maintenance day, 1 weather day and 2 mobe/demobe days. Data acquisition, field processing and presentation was performed by Todd A. Ballantyne (Geophysicist). Data acquisition was also performed by Mark Malfair of Equity Engineering Ltd. under the supervision of T. Ballantyne. Surveying was performed at 12.5 metre intervals along 100 and 200 metre flagged lines. Surveying totaled 31.6 Kilometres.

An EDA OMNI PLUS combined proton precession magnetometer and VLF-EM system was used for data acquisition and a GEM SYSTEMS GSM-19 Overhauser magnetometer was used as a base station which recorded data in three second intervals. The VLF-EM survey used signals from Hawaii (23.4 kHz, NPM), Cutler (24.0 kHz, NAA), and Jim Creek (Seattle 24.8 kHz, NLK) for the tie-lines. The Seattle transmitter is the strongest of the three frequencies used, but it is poorly situated for use with the orientation of the grid lines and hence only used for base and tie-lines. VLF data was acquired facing north and east. The GEM Systems GSM-19 was also used to acquire magnetometer and VLF-EM data for one day while the EDA system was also surveying.

The data was field processed as time permitted by a geophysicist. Data was finalized in the office. Final data plotting was performed on a 36 inch Ink Jet Colour Plotter.

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DATA PRESENTATION

The magnetic data, VLF-EM data, filtered VLF-EM data (using a standard four point Fraser filter) and compilation of the magnetic and VLF-EM data are presented on the following plates:

Plate G1A	Magnetometer Survey Total Field Profiles	In Pocket
Plate G1B	Magnetometer Survey Total Field Contours	In Pocket
Plate G1C	Magnetometer Survey Colour Contour Map	In Pocket
Plate G2A	VLF-EM Survey - Hawaii, NPM 23.4 kHz Dip Angle & Quadrature Profiles	In Pocket
Plate G2B	VLF-EM Survey - Hawaii, NPM 23.4 kHz Fraser Filtered Dip Angle Contours	In Pocket
Plate G3A	VLF-EM Survey - Cutler, NAA 24.0 kHz Dip Angle & Quadrature Profiles	In Pocket
Plate G3B	VLF-EM Survey - Cutler, NAA 24.0 kHz Fraser Filtered Dip Angle Contours	In Pocket
Plate G4A	Magnetometer and VLF-EM Survey Compilation Map	In Pocket

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INTERPRETATION

The complete interpretation is presented on the compilation map plate G4A. Only the most prominent anomalies will be discussed. Three zones M1/V1, M2/V2 and M3/V3 are coincident magnetic and VLF-EM anomalies. Area M1/V1 includes the Pak showing. The two other areas show promise with comparable geophysical signatures. Numerous smaller magnetic and VLF-EM anomalies, presented on the compilation map, may become significant when correlated to the geological and geochemical sampling or geological follow-up of these anomalies.

The overall magnetic relief on the survey grid ranges from 57,352 nT to 59,102 nT giving a 1,750 nT variation. Generally the magnetic response was uncomplicated. Three magnetically active areas are noted on the compilation map as M1, M2 and M3. The combination of remanent magnetism associated with pyrrhotite and factors such as dip, plunge and traverse angle across the structure contribute to the difficulty in determining anomaly size and location from the geophysical data alone. Pyrrhotite often generates an asymmetric anomaly profile (see figure 1) as opposed to a symmetric highs or lows.

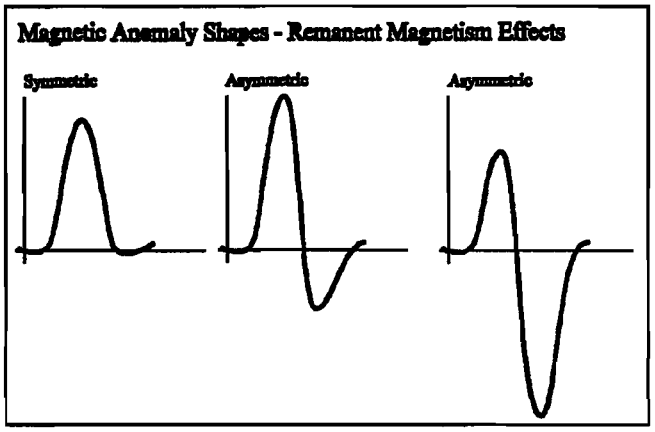

Figure 1. Remanent Magnetism Profiles.

Anomaly M1 is located along the ridge above South Cirque in the Pak showing area and is comprised of two magnetic high anomalies. Presently this magnetic signature is not well understood. This is because these anomalies may be discrete mag highs with a low in between or a dipolar signature of a single rock unit. This would vary the placement of the center of the causative bodies, either at the high/low transition of the magnetic profile or its' center. More geological information is needed to understand this geophysical signature. Perhaps the best information to come from M1/V1 area is that signatures of this nature, in light of the less complicated magnetic responses over most of the surveyed area, are of interest and should be followed up elsewhere on the grid.

Especially if these magnetic areas are associated with VLF-EM anomalies as is the case with M1. Magnetic anomalies M2 and M3 are of interest on this basis.

Anomaly V1 outlines a series of strong and weak sub-parallel VLF-EM anomalies associated with magnetic anomaly M1. The effect of topography should be minimal in this area as the change in topography in the cirque is very rapid compared to the long wavelength of the VLF signal. Although the steep topography does not appear to have had a serious effect on the data it does complicate the data acquisition and its' interpretation. It is not known from the VLF data alone whether these conductors define isolated structures or the edges of wider structures. The source of these anomalies can either be massive sulphides, conductive contacts/faults or a combination of both. The coincidence of the V1 anomalies with the magnetically active zone M1 serves as a general target criteria, but at this time no specific correlation between VLF anomalies and either magnetic highs or lows can be made. There exist isolated VLF anomalies on the survey grid that should also be followed up and these are noted on the compilation map plate G4A.

Magnetic anomaly M2 is located in the East Cirque grid area predominantly below the base line and is associated with VLF-EM anomalies. The extent of M2 has been defined by an elevated background magnetic response. Within this area, specifically on line 12100E, are strong magnetic anomalies very similar in signature to those of the Pak showing - anomaly M1. M2 may represent a change in lithology and the narrow active magnetic responses than predominate line 12100E may represent a different lithology of a much higher magnetic mineral content that have interrupted the region of M2. These magnetic anomalies may extend west to line 11950E, but are weaker on line 11950E. The majority of these anomalies do not extend east to line 12300E, but one magnetic high may be continuous over this 200 metre separation. Anomaly M2 may extend through the gap in the southern grid area, between lines 11400E and 11700E where the magnetic response is weaker and less active, to terminate between lines 11100E and 11200E. Further geophysical information can be gained from this data when more geological information is available and a geologist and geophysicist can correlate the results.

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Anomaly V2 outlines numerous weak VLF conductors within a more conductive background response in the vicinity of line 12100E and 9700N. The density of survey data is insufficient to determine a well defined relationship between the magnetics and the VLF, but they are coincident and reminiscent of anomalies V1/M1. This region appears to be due to a flat lying conductive source with more conductive features within. The conductors on line 12100E may be due to sulphide mineralization and roughly correlate with the magnetics.

Anomaly V3 is a series of weak VLF anomalies associated with a magnetic anomaly(M3) and is located north of the base line between lines 10000E through 10400E. These VLF conductors are not indicated as continuous on the compilation map, but may prove to be continuous with further geophysical surveying or geological information. These anomalies have been defined as an anomalous area rather than discrete anomalies because of their similarity to the magnetic and VLF responses of the Pak showing. The magnetic response M3 in this area is weaker than either M1 or M2, but it exhibits a similar signature and is therefore worth following up.

VLF anomalies from the Seattle data are presented on the Compilation map, but at this time any discussion of their results is not warranted.

RECOMMENDATIONS

The geophysical data should be compiled with geological mapping and sampling to determine if infill mag/VLF or other geophysical techniques are required enhance the geological and geophysical information. If the results of the mag/vlf survey prove useful for mapping the geology, it is recommended to further interpret the geophysics with a geophysicist and the project geologist.

Detailed magnetic and VLF-EM surveying is recommended in the East Cirque in the area outlined by the magnetic anomaly M2. The current amount of information in this area, noting the 200 metre line spacing, is not sufficient for a detailed interpretation of the geophysics and subsequent correlation with the geology. The grid area south of the base line should be detailed to obtain more information regarding the background or non-anomalous response the entire grid area.

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The area of anomalies M3 and V3 would warrant further geophysics if the geology and sampling indicate an interest. This area is similar to the responses of the Pak showing and M2/V2 in the East Cirque, but lower in magnitude.

Further lithological information would be obtained with use of geophysical surveys such as HLEM MaxMin or UTEM 3 time domain EM. These surveys employ their own local electromagnetic source, are not dependent on the fixed location of a few VLF transmitters and can be orientated specifically for the geological strike to maximize the geophysical signature. Typically, these surveys yield much more information regarding the lithology than is capable (accurately) with the VLF-EM method.

CONCLUSION

The magnetometer and VLF-EM survey has delineated three zones of coincident magnetic and VLF-EM anomalies. The first zone contains the Pak showing and the other two exhibit similar geophysical signatures. In the East Cirque grid area is a zone of very active magnetic response associated with VLF anomalies. The VLF data suggests a flat lying conductive source with possible massive sulphide mineralization. The magnetic data also suggests sulphide mineralization by comparison with the Pak showing data which is known to contain significant amounts of pyrrhotite mineralization. The third area is on the western edge of the grid and just above the base line. The geophysical signature of this zone is similar to both the Pak showing and the East Cirque, but it lower in magnitude magnetically. Numerous isolated VLF-EM and magnetic anomalies have been outlined in this survey and these also warrant investigation.

17 November, 1994

Todd A. Ballantyne, B.Sc., P. Geo.
Geophysicist

SJ Geophysics Ltd. 11762 - 94th Ave., Delta, B.C. Canada tel (604) 582-1100 fax (604) 589-7466

APPENDIX I

Statement of Qualifications

Statement Of Qualifications

I, Todd A. Ballantyne, of 3538 West Sixteenth Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

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

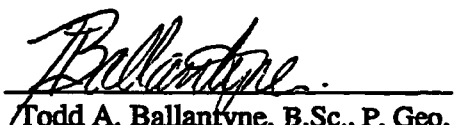
2. THAT I have been engaged in mining and petroleum exploration since 1987.

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

3. THAT this report is based on fieldwork carried out by myself in September 1994.

4. THAT I own no shares, directly or indirectly in Atna Resources Ltd., nor do I expect to acquire any shares. I have no interest, directly or indirectly, in the Pak 1-36 Claims.

5. THAT I consent to the use by Equity Engineering Ltd. of this report in a Statement of Material Facts or any such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.



17 November, 1994

Todd A. Ballantyne, B.Sc., P. Geo.
Geophysicist

SJ Geophysics Ltd. 11762 - 94th Ave., Delta, B.C. Canada tel (604) 582-1100 fax (604) 589-7466

APPENDIX H

GEOLOGIST'S CERTIFICATE

GEOLOGIST'S CERTIFICATE

I, Mark E. Baknes, of 4355 St. Catherines Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

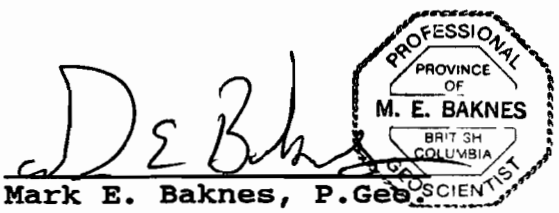
1. THAT I am a Consulting Geologist with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.

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

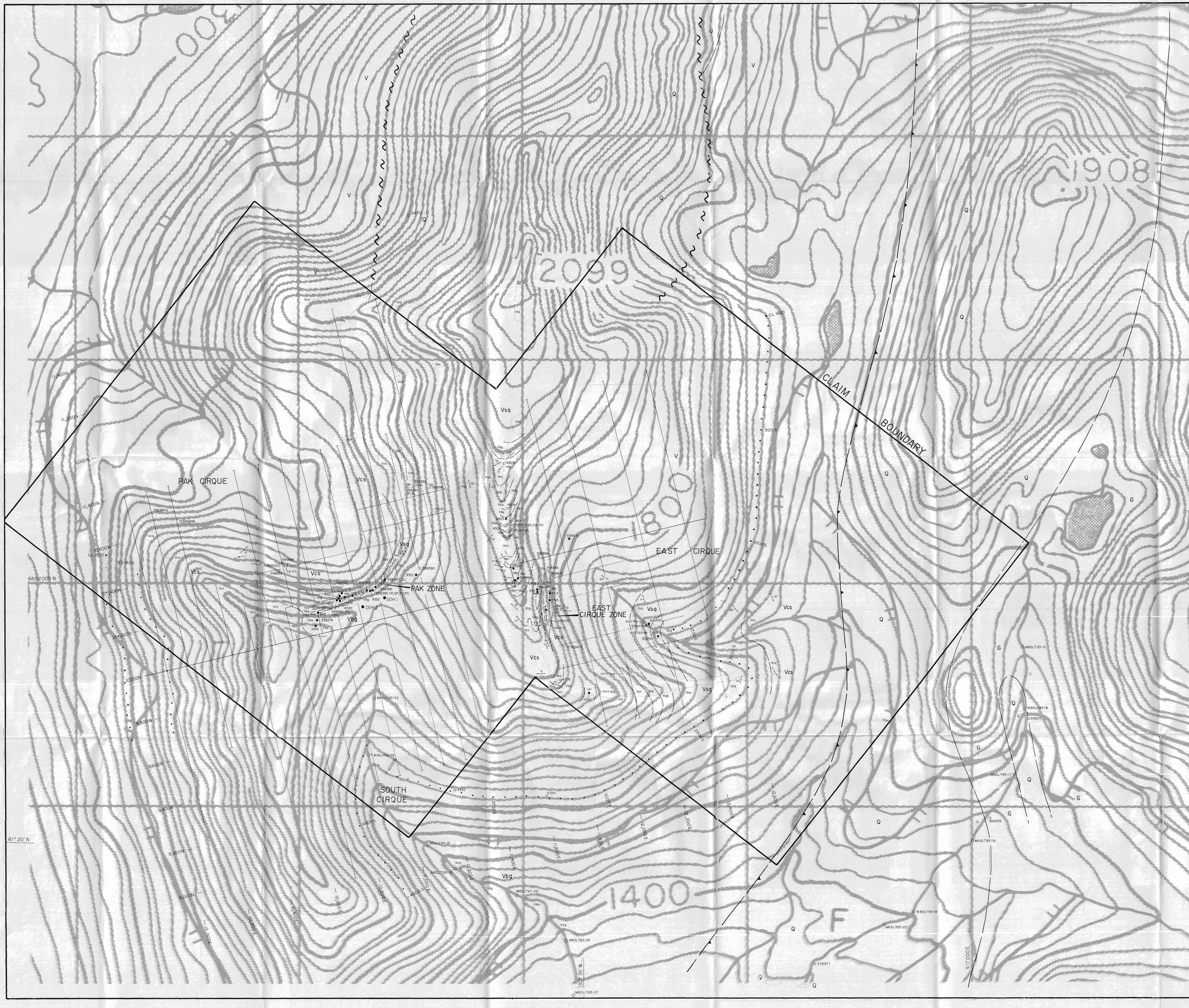
3. THAT I am a Professional Geoscientist registered in good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4. THAT this report is based in part on property work I personally completed and/or directly supervised between August 29 to September 16, 1994, government publications and assessment reports filed with the Yukon.

DATED at Vancouver, British Columbia, this 27th day of February, 1995.



Mark E. Baknes, P.Geo.



LEGEND

LITHOLOGIES

YUKON TANANA TERRANE

G *Monzonitic Orthogneiss* (age unknown)

U *Serpentinized Ultramafic - Mafic Rocks* (Carboniferous and Permian), possibly Slide Mountain

V *Middle Unit:* (Devonian-Mississippian) Interlayered mafic and minor felsic metavolcanic rocks, carbonaceous metasediments and quartzeye grits (Nasina equivalent)
- **Vbg** biotite quartzo-feldspathic gneiss
- **Vbs** biotite schist
- **Vcs** chlorite ± biotite schist - amphibolite (metamorphosed mafic volcanic?)
- **Vex** laminated siliceous exhalite-chert, fine-grained quartzite
- **Vfl** felsic, massive to weakly schistose, quartzo-feldspathic intrusive/volcanic?
- **Vgq** graphitic biotite quartzite, possible exhalite
- **Vqb** quartz-biotite-sericite schist
- **Vsq** sericitic feldspathic quartzite - muscovite schist, locally with quartz eyes
- **V** undifferentiated

Q *Lower Unit:* (pre-late Devonian) Micaceous quartzite, minor marble (Nisling equivalent)
- **Q** undifferentiated

MINERALIZATION

CP - chalcopyrite
MG - magnetite
PY - pyrite
PO - pyrrhotite
SP - sphalerite

SYMBOLS

Geological contact (approximate)
Fault (assumed)
10 Foliation;
12 Fold axis
recumbent fold (synform, antiform)
DDH 1 Diamond drill hole
Rock sample (float, outcrop)
Silt sample
Contour soil sample
Trace of massive sulphides/magnetite

1993 ROCK SAMPLE ANALYSES

Sample	Width (m)	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
358375	float	<5	0.6	574	2	18
358376	float	<5	0.2	215	2	52
358377	float	<5	<0.2	169	410	8406
358378	float	<5	0.6	276	16	146
358379	1.60	<5	8.2	4530	2024	1.88%
358380	0.60	10	17.6	3809	3788	2.17%
358381	0.60	<5	12.4	1.30%	820	9424
358382	0.40	<5	12.2	6301	1326	1.26%
358383	1.00	<5	8.8	1.40%	910	8144
358384	float	<5	0.4	1421	32	232
358385	1.80	30	5.4	3477	2776	6.60%
358386	grab	75	17.4	114	3006	990
358387	0.40	15	5	1.11%	3078	11.1%
358388	1.20	15	3	3224	174	2958
358389	float	<5	1.4	376	592	8172
358390	float	<5	25.6	60	2960	5250
358391	float	<5	1.4	48	192	6394
358392	float	<5	4.4	100	5830	1.33%
358393	grab	<5	0.8	52	180	210
509468	float	<5	1.8	687	36	126
509469	float	<5	4	228	44	222
509470	float	25	5.2	412	706	4686
509471	grab	<5	0.6	52	332	406
509472	grab	<5	0.6	50	46	68
509473	grab	<5	1.6	52	448	2302
509474	float	<5	4	2525	1258	9190
509475	float	20	70.2	1258	>10000	4978
509476	grab	5	<0.2	18	240	72

1993 SILT SAMPLE RESULTS

Sample	Ag (ppm)	Cu (ppm)	Mo (ppm)	Pb (ppm)	Zn (ppm)
S-20TB	0.2	707	3	86	1058
MBSLT93-15	0.2	19	<1	24	94
MBSLT93-16	<0.2	34	<1	18	118
MBSLT93-17	<0.2	16	<1	8	74
MBSLT93-18	0.4	25	<1	16	168
MBSLT93-19	<0.2	22	<1	14	152
MBSLT93-20	0.2	21	<1	12	142
MBSLT93-27	<0.2	62	2	34	324
MBSLT93-28	<0.2	57	2	28	322
MBSLT93-29	0.2	60	3	34	368
MBSLT93-30	<0.2	50	3	32	306
MBSLT93-31	<0.2	52	3	44	322
MBSLT93-32	<0.2	49	2	28	200
MBSLT93-33	<0.2	48	1	22	136
MBSLT93-34	0.2	397	3	64	1288

STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL SILT SAMPLES ON MAP 105G

Percentile	Ag (ppm)	Cu (ppm)	Mo (ppm)	Pb (ppm)	Zn (ppm)
80th	0.3	42	3	23	241
90th	0.4	54	6	33	322
95th	0.7	69	8	45	504
99th	1.1	123	15	90	1065

1994 ROCK SAMPLE ANALYSES

Sample	Width (m)	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
4301	grab	<5	<0.2	25	156	922
4302	float	<5	0.8	65	112	332
4303	float	<5	<0.2	54	2	110
4304	float	<5	<0.2	82	4	214
4305	float	<5	0.8	83	120	652
4306	float	<5	2.4	99	210	808
4307	grab	<5	<0.2	112	46	144
4308	grab	<5	5	177	3200	5780
4309	float	<5	<0.2	29	24	168
4310	grab	<5	<0.2	7	32	76
4311	grab	<5	15.6	1.63%	194	594
4312	grab	<5	<0.2	23	<1	42
4313	0.5	<5	<0.2	182	<1	172
4314	0.7	50	14.8	6780	356	280
4315	grab	35	2.6	1450	420	118
4316	float	20	24.4	1.55%	3780	1.56%
4317	float	<5	3	5770	324	2210
4318	float	<5	1.6	498	44	124
4319	grab	<5	<0.2	19	26	30
4320	grab	<5	<0.2	53	22	72
4321	grab	<5	<0.2	156	16	86
4322	0.8	340	62	4.97%	1.08%	2.71%
4323	grab	10	10.4	54	3800	194
4324	float	<5	0.4	65	20	226
4325	float	<5	<0.2	21	20	50
4351	grab	<5	9	5370	1220	>10000
4352	grab	<5	1	5360	48	>10000
596833	float	<5	2	4190	116	5200
596834	float	<5	<0.2	284	4	90
596835	float	<5	1	105	620	1690
596836	float	<5	0.2	18	46	528
596837	0.15	<5	4.2	2430	306	1400
596898	float	<5	0.4	29	76	1950
596899	float	<5	<0.2	96	4	166
596900	float	<5	6.8	1.15%	264	2220

METRES
0 100 200 300 400 500

ATNA RESOURCES LTD.

PAK I-36 CLAIMS

GEOLOGY & GEOCHEMISTRY

YUKON

EQUITY ENGINEERING LTD.

DRAWN: M.E.B./J.W.	MINING DIV.: WATSON LAKE	FIGURE
N.T.S.: 105 G/7	SCALE: 1:5000	4
DATE: NOV. 1994	REVISED.	

413900 E
414000 E
415900 E
416000 E
417000 E
6804000 N
6803000 N
6802000 N
6801000 N
11,200N
10,800N
10,400N
10,000N
9,600N
9,200N
CL 1500
CL 1600
CL 1620
400S
800S
500S
1000S
1500S
2000S
2500S
3000S
4500S
10,000E
10,400E
10,800E
11,200E
11,600E
12,000E
12,400E
T.N.
G.N.
TRUE NORTH IS 1°32' E. OF UTM GRID NORTH
Cu bubble scale is 5ppm/m
METRES
0 100 200 300 400 500

ATNA RESOURCES LTD.

PAK 1-36 CLAIMS

Copper, Silver & Barium in Soils & Silts

YUKON

EQUITY ENGINEERING LTD.

DRAWN.	M.E.B./J.W.	MINING DIV. WATSON LAKE	FIGURE
N.T.S.	105 G/7	SCALE. 1:5000	5
DATE.	FEB. 1995	REVISED.	

413900 E
414000 E
415500 E
416500 E
417200 E
6804000 N
6803000 N
6802000 N
6801000 N
11,200N
10,800N
10,400N
10,000N
9,600N
9,200N
CL 1500
CL 1600
CL 1620
400 S
800S
500S
1000S
1500S
2000S
2500S
3000S
4500S
10,400 E
10,000 E
11,200 E
11,600 E
12,000 E
10,800 E
T.N.
G.N.
TRUE NORTH IS 1°32' E OF UTM GRID NORTH
Pb bubble scale is 3ppm/m
METRES
0 100 200 300 400 500

ATNA RESOURCES LTD.

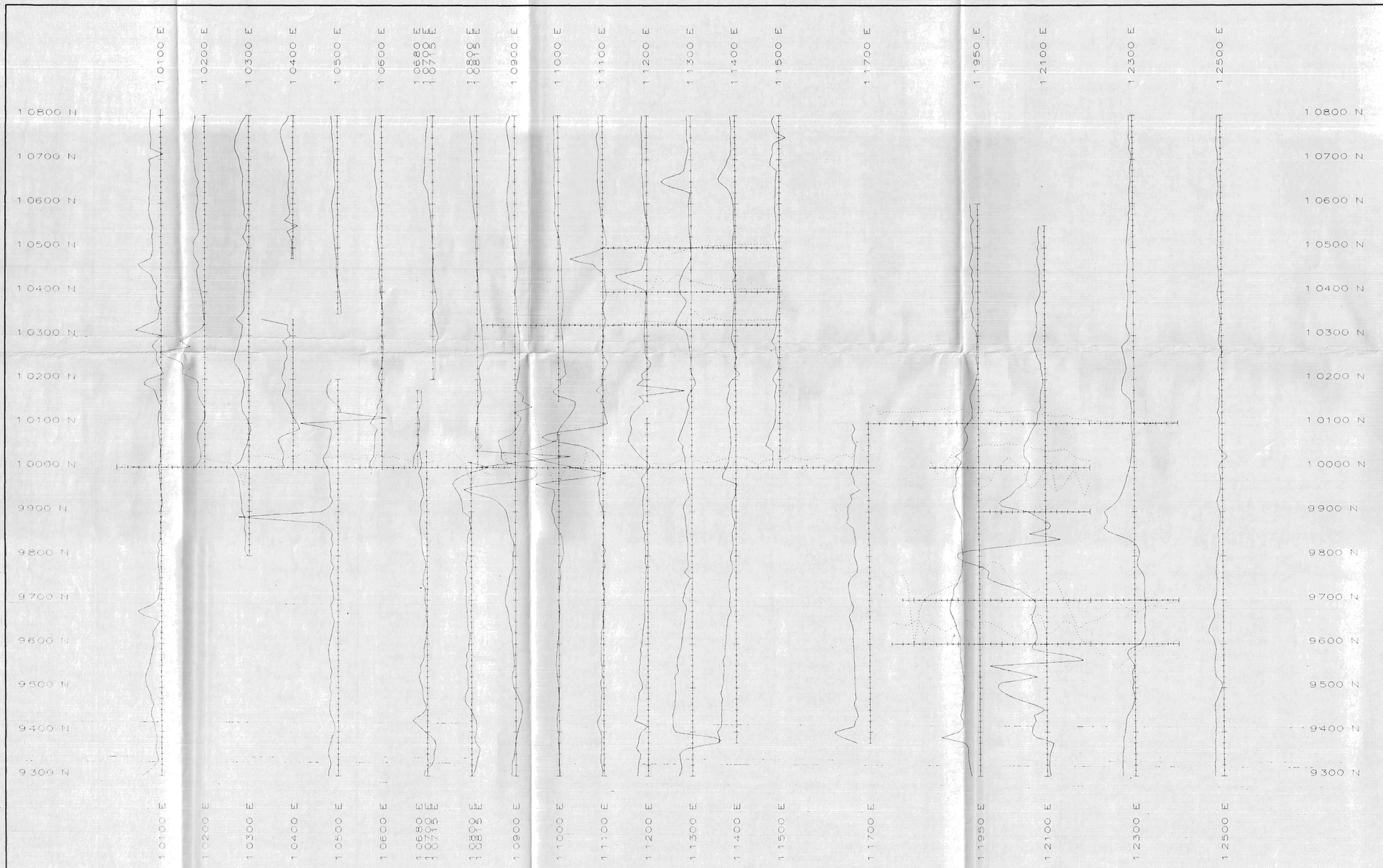
PAK 1-36 CLAIMS

Lead & Zinc in Soils & Silts

YUKON

EQUITY ENGINEERING LTD.

DRAWN: M.E.B./J.W.	MINING DIV.: WATSON LAKE		FIGURE
N.T.S.: 105 G/7	SCALE: 1:5000		6
DATE: FEB 1995	REVISED:		



LEGEND

PROFILES ARE POSITIVE UP AND LEFT
PROFILE SCALE: 200 nT / cm
PROFILE BASE VALUE: 58,200 nT
BASE AND TIE LINE PROFILES ARE DASHED
MINIMUM VALUE: 57,352 nT
MAXIMUM VALUE: 59,103 nT

EQUIPMENT:
FIELD UNIT – EDA OMNI PLUS COMBINED PROTON PRECESSION MAGNETOMETER AND VLF–EM SYSTEM
BASE UNIT – GEM SYSTEMS GSM–19 OVERHAUSER MAGNETOMETER

ATNA RESOURCES LTD.

PAK 1–36 CLAIMS

MAGNETOMETER SURVEY

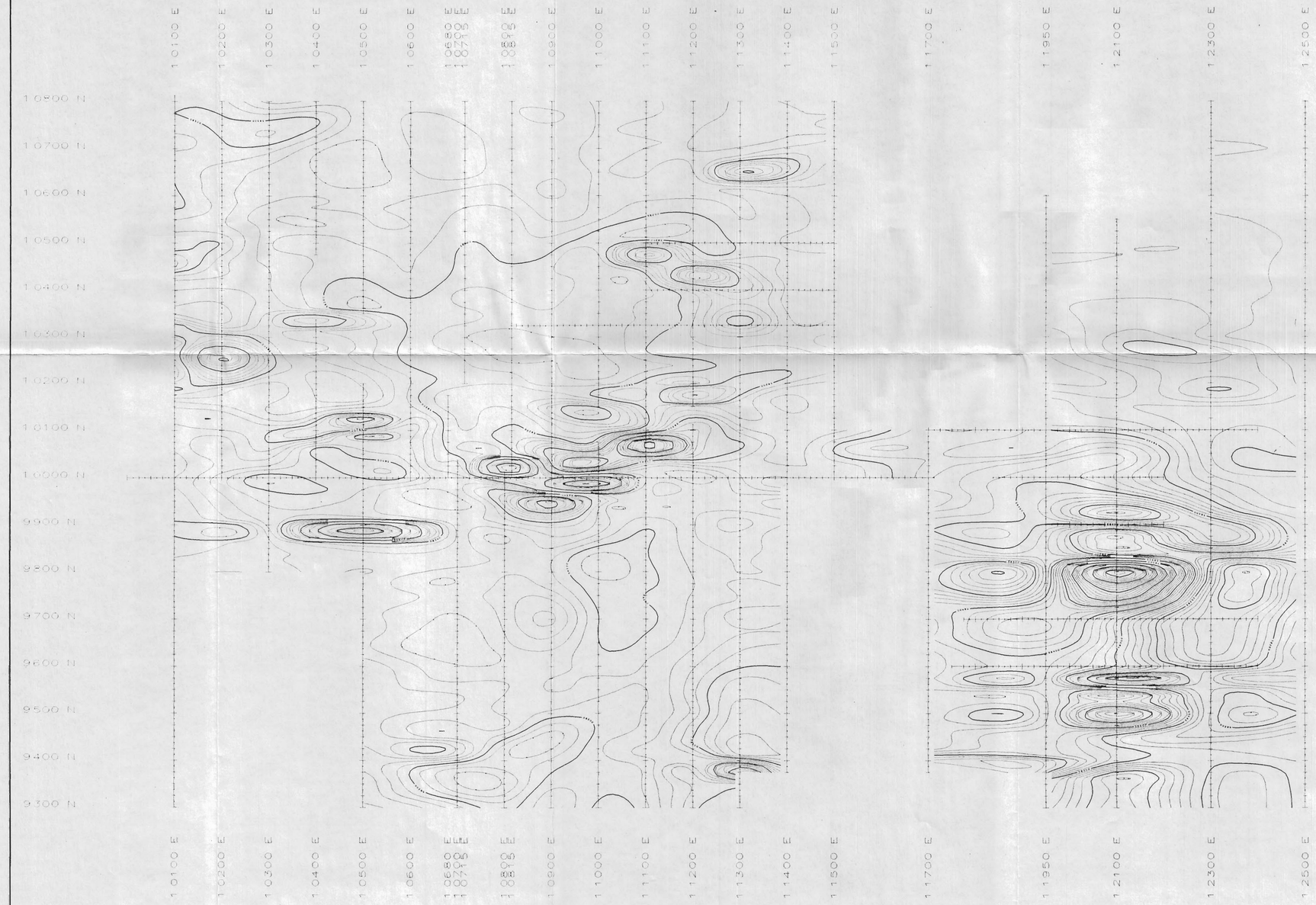
TOTAL FIELD PROFILES

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES

100 0 100 200 300

SEPTEMBER 1994 PLATE G1A



LEGEND

CONTOUR INTERVAL: 20 nT
POSTED INTERVAL: 100 nT
MINIMUM VALUE: 57,352 nT
MAXIMUM VALUE: 59,103 nT

EQUIPMENT:
FIELD UNIT – EDA OMNI PLUS COMBINED PROTON PRECESSION MAGNETOMETER AND VLF–EM SYSTEM
BASE UNIT – GEM SYSTEMS GSM–19 OVERHAUSER MAGNETOMETER

ATNA RESOURCES LTD.

PAK 1–36 CLAIMS

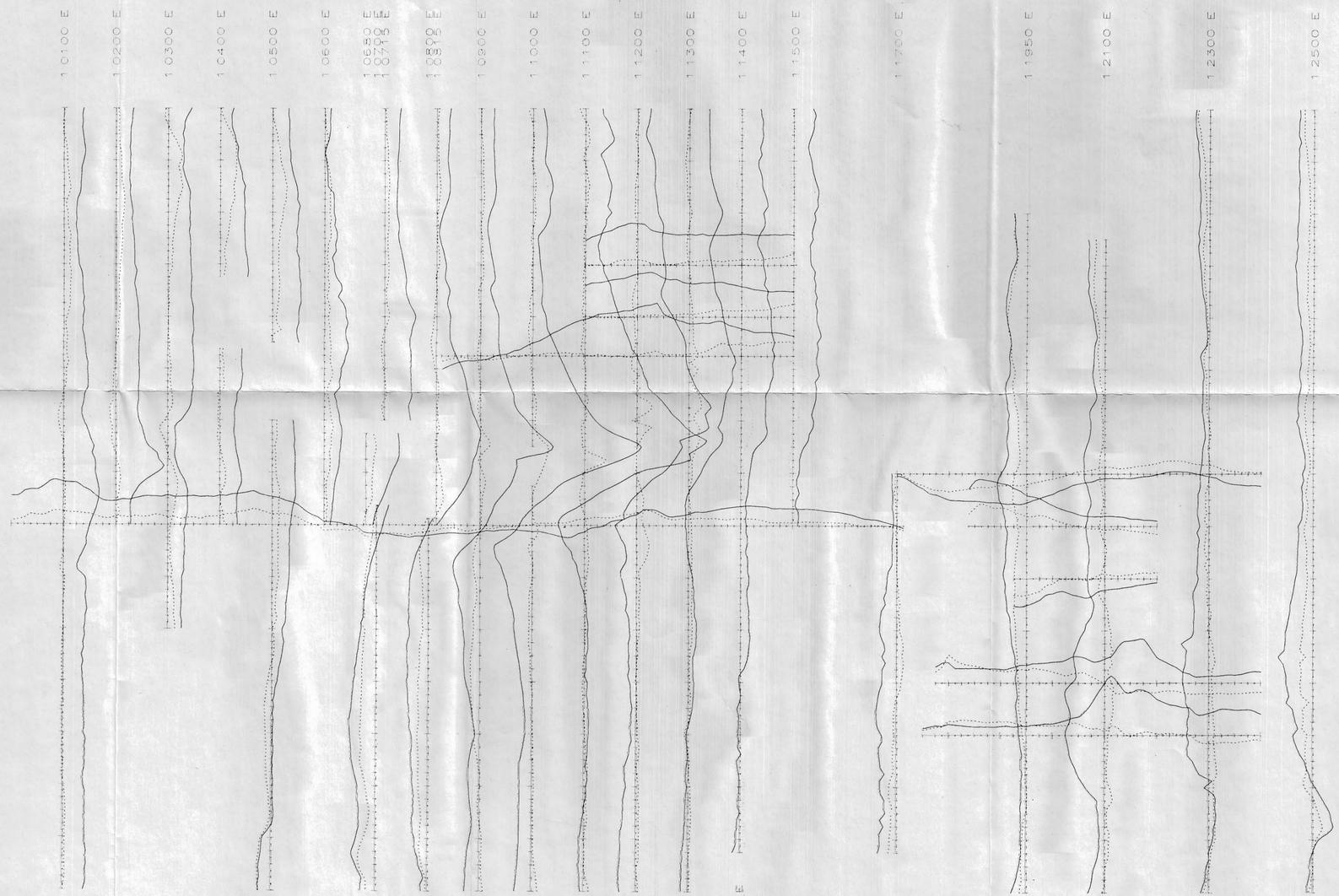
MAGNETOMETER SURVEY

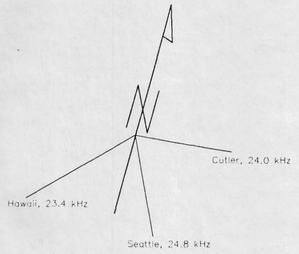
TOTAL FIELD CONTOURS

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES
100 0 100 200 300

SEPTEMBER 1994 PLATE G1B





LEGEND

PROFILES ARE POSITIVE UP AND LEFT
DATA ACQUIRED FACING NORTH AND EAST
PROFILE SCALE: 30% / CM
PROFILE BASE VALUE: 0%
DIP ANGLE – SOLID LINE
QUADRATURE – DASHED LINE
EQUIPMENT:
EDA OMNI PLUS COMBINED VLF-EM SYSTEM
AND PROTON PRECESSION MAGNETOMETER

VLF TRANSMITTER OFF: WEDNESDAY

VLF TRANSMITTER: NPM, 23.4 kHz, HAWAII

ATNA RESOURCES LTD.

PAK 1–36 CLAIMS

VLF–EM SURVEY PROFILES

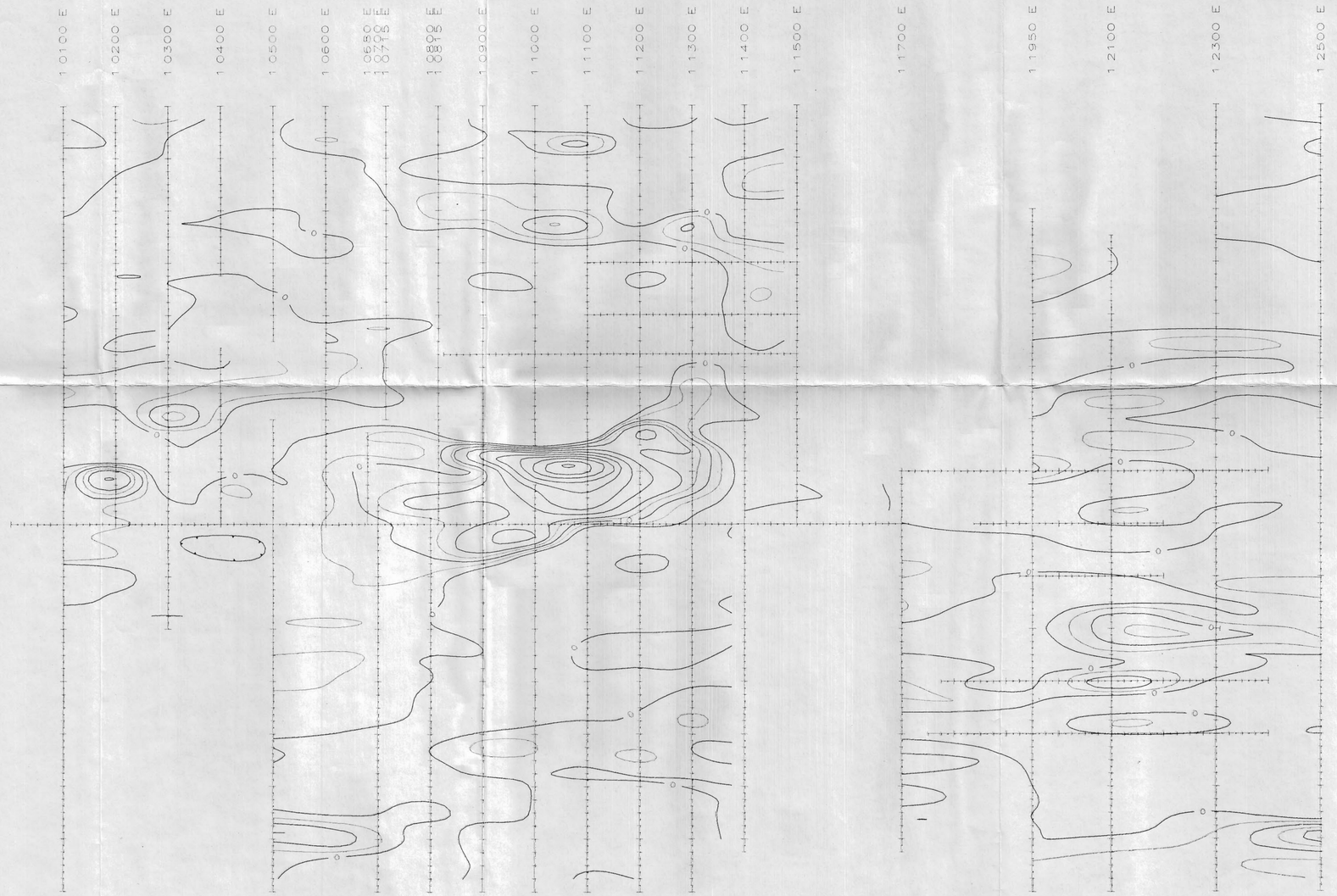
DIP ANGLE & QUADRATURE

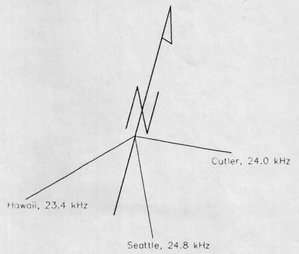
M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES

100 0 100 200 300

SEPTEMBER 1994 PLATE G2A





LEGEND

NEGATIVE CONTOURS ARE SUPPRESSED
DATA ACQUIRED FACING NORTH AND EAST
CONTOUR INTERVAL: 5 %
POSTED INTERVAL: 10 %
STANDARD FOUR POINT FRASER FILTER

EQUIPMENT:
EDA OMNI PLUS COMBINED VLF-EM SYSTEM
AND PROTON PRECESSION MAGNETOMETER

VLF TRANSMITTER OFF: WEDNESDAY
VLF TRANSMITTER: NPM, 23.4 kHz, HAWAII

ATNA RESOURCES LTD.

PAK 1-36 CLAIMS

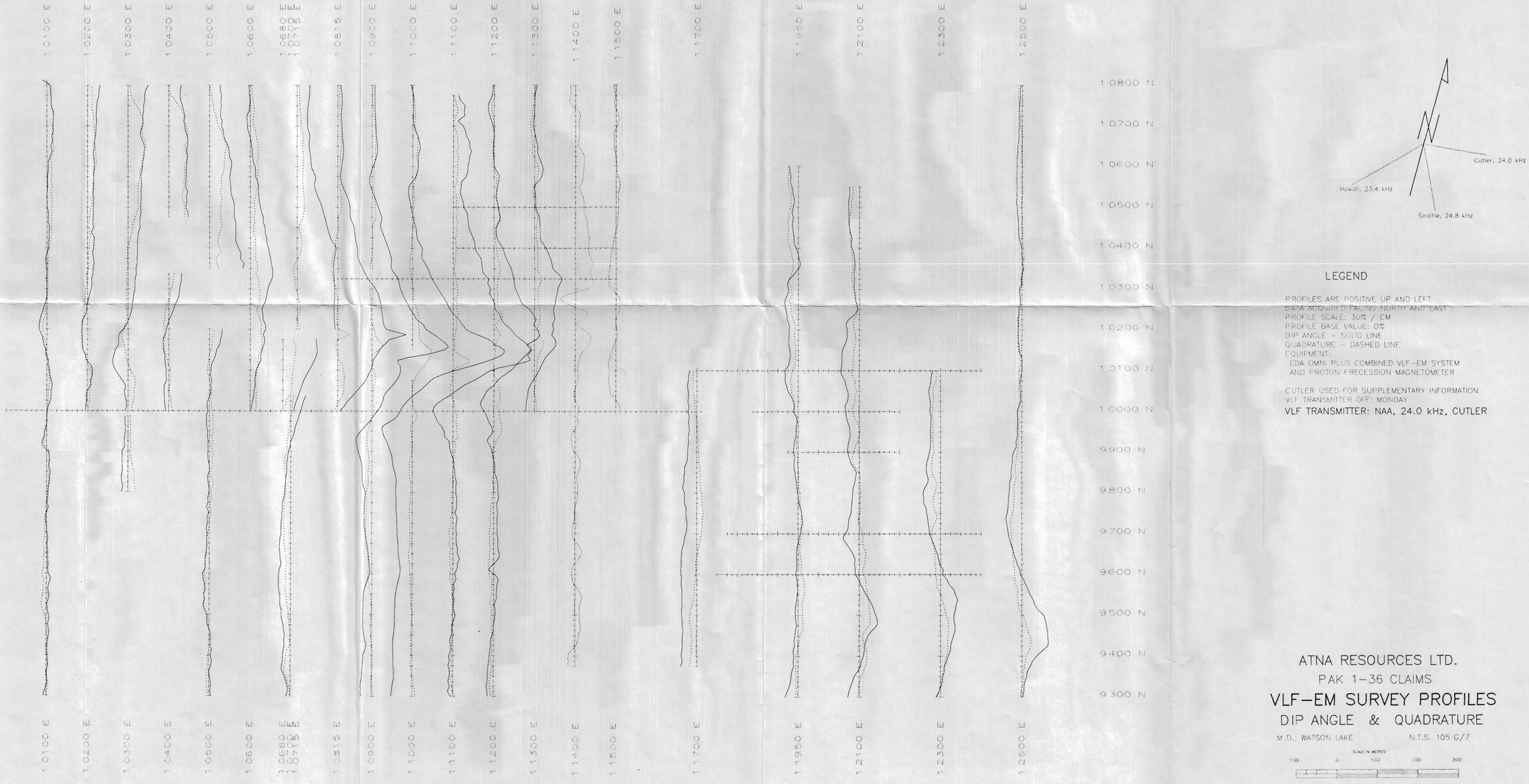
VLF-EM SURVEY CONTOURS

FRASER FILTERED DIP ANGLE

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES
100 0 100 200 300

SEPTEMBER 1994 PLATE G2B



LEGEND

PROFILES ARE POSITIVE UP AND LEFT
DATA ACQUIRED FACING NORTH AND EAST
PROFILE SCALE: 30% / CM
PROFILE BASE VALUE: 0%
DIP ANGLE – SOLID LINE
QUADRATURE – DASHED LINE
EQUIPMENT:
EDA OMNI PLUS COMBINED VLF-EM SYSTEM
AND PROTON PRECESSION MAGNETOMETER

CUTLER USED FOR SUPPLEMENTARY INFORMATION
VLF TRANSMITTER OFF: MONDAY
VLF TRANSMITTER: NAA, 24.0 kHz, CUTLER

ATNA RESOURCES LTD.

PAK 1-36 CLAIMS

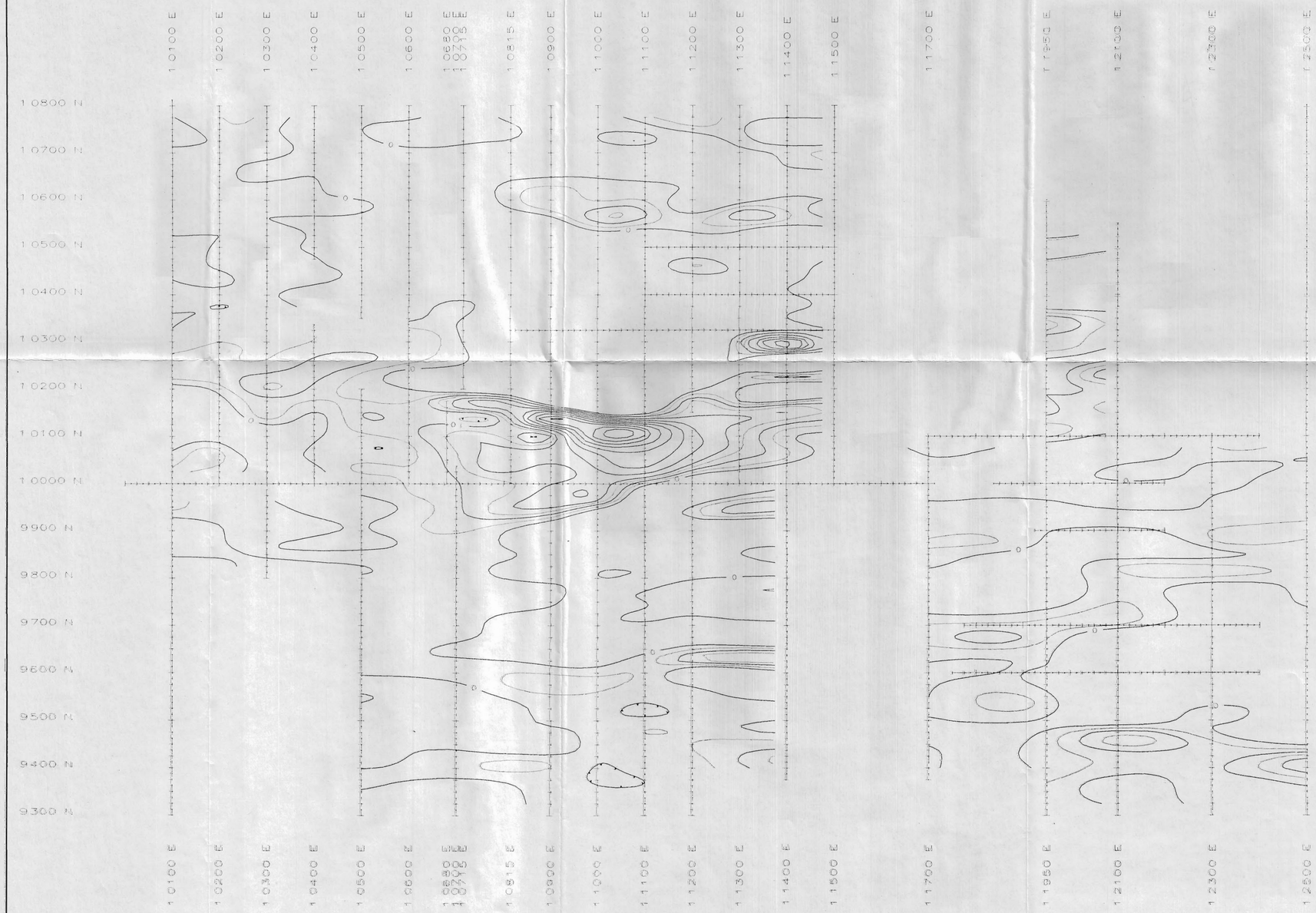
VLF-EM SURVEY PROFILES

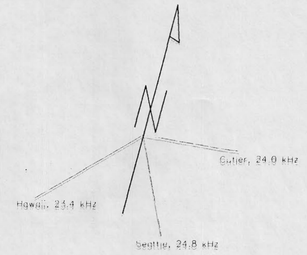
DIP ANGLE & QUADRATURE

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES
100 0 100 200 300

SEPTEMBER 1994 PLATE G3A





LEGEND

NEGATIVE CONTOURS ARE SUPPRESSED
DATA ACQUIRED FACING NORTH AND EAST
CONTOUR INTERVAL: 5%
POSTED INTERVAL: 10%
STANDARD FOUR POINT FRASER FILTER

EQUIPMENT:
EDA OMNI PLUS COMBINED VLF-EM SYSTEM
AND PROTON PRECESSION MAGNETOMETER

CUTLER USED FOR SUPPLEMENTARY INFORMATION
VLF TRANSMITTER OFF: MONDAY
VLF TRANSMITTER: NAA, 24.0 kHz, CUTLER

ATNA RESOURCES LTD.

PAK 1-36 CLAIMS

VLF-EM SURVEY CONTOURS

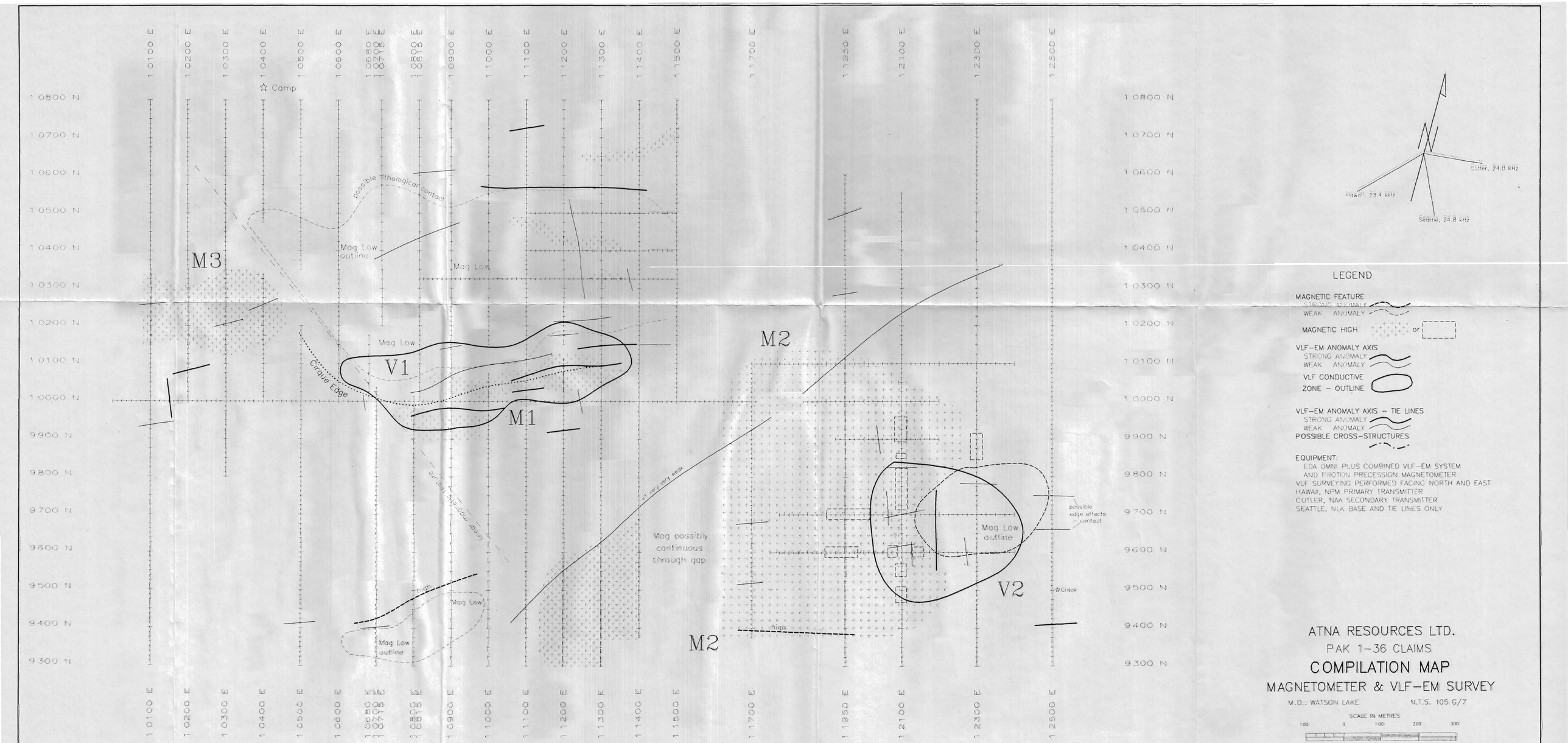
FRASER FILTERED DIP ANGLE

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES

100 0 100 200 300

SEPTEMBER 1994 PLATE G3B



LEGEND

MAGNETIC FEATURE
STRONG ANOMALY
WEAK ANOMALY

MAGNETIC HIGH or

VLF–EM ANOMALY AXIS
STRONG ANOMALY
WEAK ANOMALY

VLF CONDUCTIVE ZONE – OUTLINE

VLF–EM ANOMALY AXIS – TIE LINES
STRONG ANOMALY
WEAK ANOMALY

POSSIBLE CROSS–STRUCTURES

EQUIPMENT:
EDA OMNI PLUS COMBINED VLF–EM SYSTEM
AND PROTON PRECESSION MAGNETOMETER
VLF SURVEYING PERFORMED FACING NORTH AND EAST
HAWAII, NPM PRIMARY TRANSMITTER
CUTLER, NAA SECONDARY TRANSMITTER
SEATTLE, NLK BASE AND TIE LINES ONLY

ATNA RESOURCES LTD.

PAK 1–36 CLAIMS

COMPILATION MAP

MAGNETOMETER & VLF–EM SURVEY

M.D.: WATSON LAKE N.T.S. 105 G/7

SCALE IN METRES
100 0 100 200 300

SEPTEMBER 1994 PLATE G4A

SJ GEOPHYSICS LTD.