

ATNA RESOURCES LTD.
GEOLOGICAL, GEOPHYSICAL,
and
DIAMOND DRILLING REPORT
on
THE ARGUS PROPERTY

093582

Yukon Territory
NTS 105G/12
61°33' North Latitude 131°33' West Longitude

Prepared for

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This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 256,045.61.

M. Baker

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

GEOLOGICAL, GEOPHYSICAL AND DIAMOND DRILLING REPORT ON THE ARGUS PROPERTY, YUKON TERRITORY

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1.0 INTRODUCTION

The Argus property is located in southeastern Yukon, approximately 62 km southeast of Ross River, in the Watson Lake Mining District (Figure 1). The Argus mineralization is hosted in Devonian-Mississippian sedimentary and lesser volcanic rocks of the Yukon Tanana Terrane, which are correlative to those hosting Cominco's ABM, Columbia Gold's Fyre Lake and Westmin/Atna's Wolverine deposit. The Argus property represents a SEDEX (sediment hosted exhalative) target containing primarily zinc with additional lead and silver. Previous work conducted in the early 1970's, including trenching, uncovered banded zinc mineralization in locally derived glacial till with grades averaging 7% zinc (Hulstein, 1993). The best drill results obtained in follow up of surface sampling was 4.4% zinc over 1.09 metres in the A-Zone and 3.0% zinc over 4.0 metres in the E-Zone (Archer, 1973). Later programs in the 1990's utilised soil and auger sampling techniques in an effort to more accurately determine the source of mineralized glacial till.

In June and July of 1996, a program involving grid establishment, magnetometer and VLF-EM surveying, geological mapping and diamond drilling was conducted to test several targets along the property's length. Atna Resources Ltd. contracted Equity Engineering Ltd. to conduct this program and to report on the fieldwork. The primary objectives of the program were three fold: 1) Determine through geological mapping, geophysics and drilling, the orientation of stratigraphy and the bedrock source of mineralized boulder till; 2) to establish whether the mineralization is SEDEX or epigenetic; 3) to either intersect ore grade and width mineralization or determine if potential exists elsewhere on the property.

2.0 LIST OF CLAIMS

The Argus claims are comprised of 110 contiguous Yukon mineral claims, located in the Watson Lake Mining District (Figure 2). The claims are currently under option agreement to Atna Resources Ltd. from YGC Resources Ltd. Claim data for the Argus property is summarized in Table 2.0.1.

Table 2.0.1
CLAIM DATA

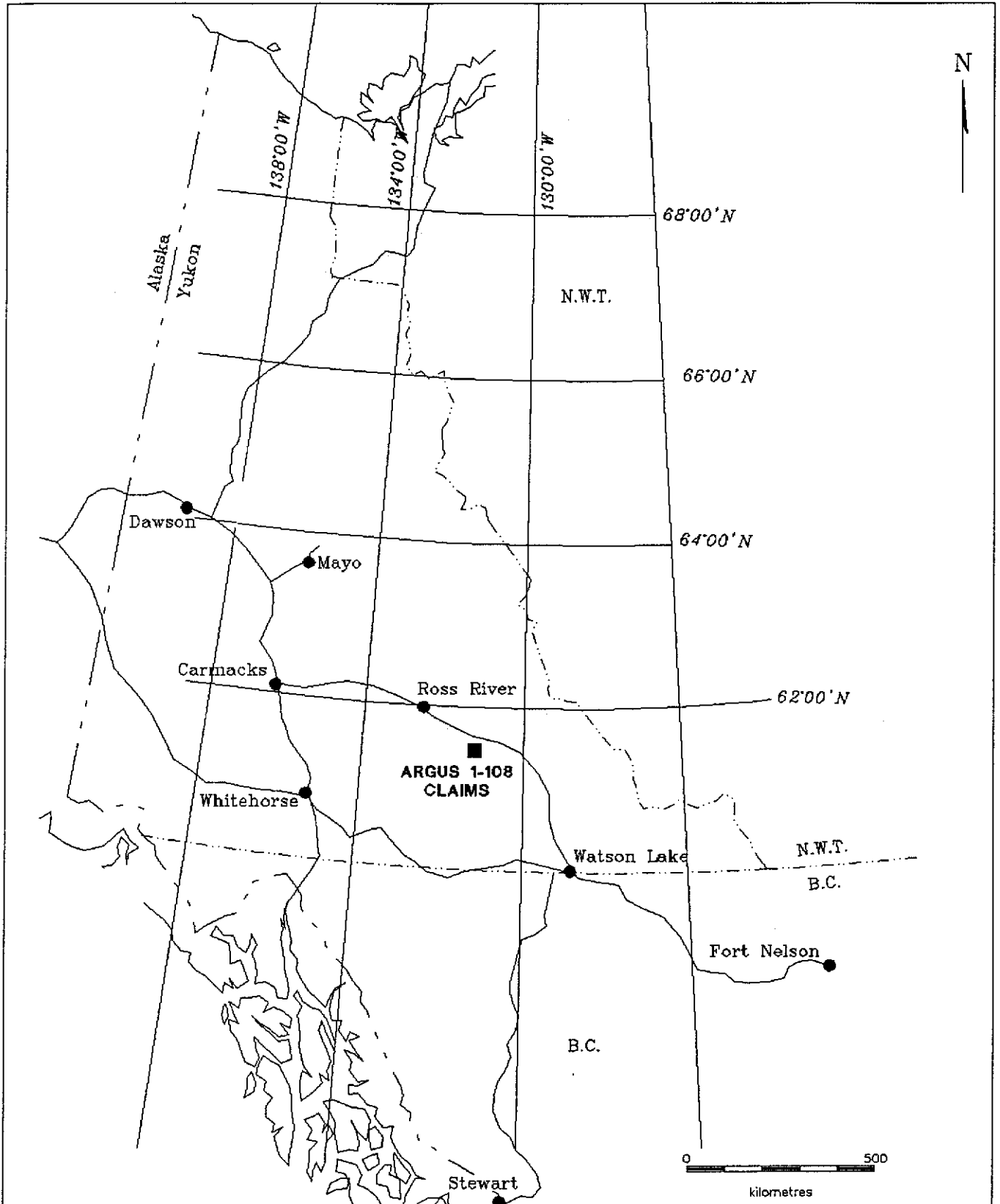
Claim Name	Grant Number	No. of Claims	Expiry Date
Argus 1-28	YB35082-109	28	March 18, ****
Argus 31-106	YB45845-920	76	March 18, ****
Argus 107-108	YB46289-290	2	March 18, ****
Argus 107-110	YB60244-247	4	August 7, ****

110

*Subject to approval of assessment work covered by this report.

3.0 LOCATION, ACCESS AND GEOGRAPHY

The Argus property is located approximately 62 kilometres southeast of Ross River, Yukon. The property lies on the north side of the Hoole River, at approximate co-ordinates 61°33'N, 131°33'W, on NTS map sheet 105G/12. A 750 metre long airstrip is located 2.6 kilometres south of the 1996 camp site and was used for mobilizing the drill and camp supplies with a Shorts Skyvan aircraft based out of Whitehorse. Materials were shuttled from Ross River to the airstrip and then moved by helicopter to the



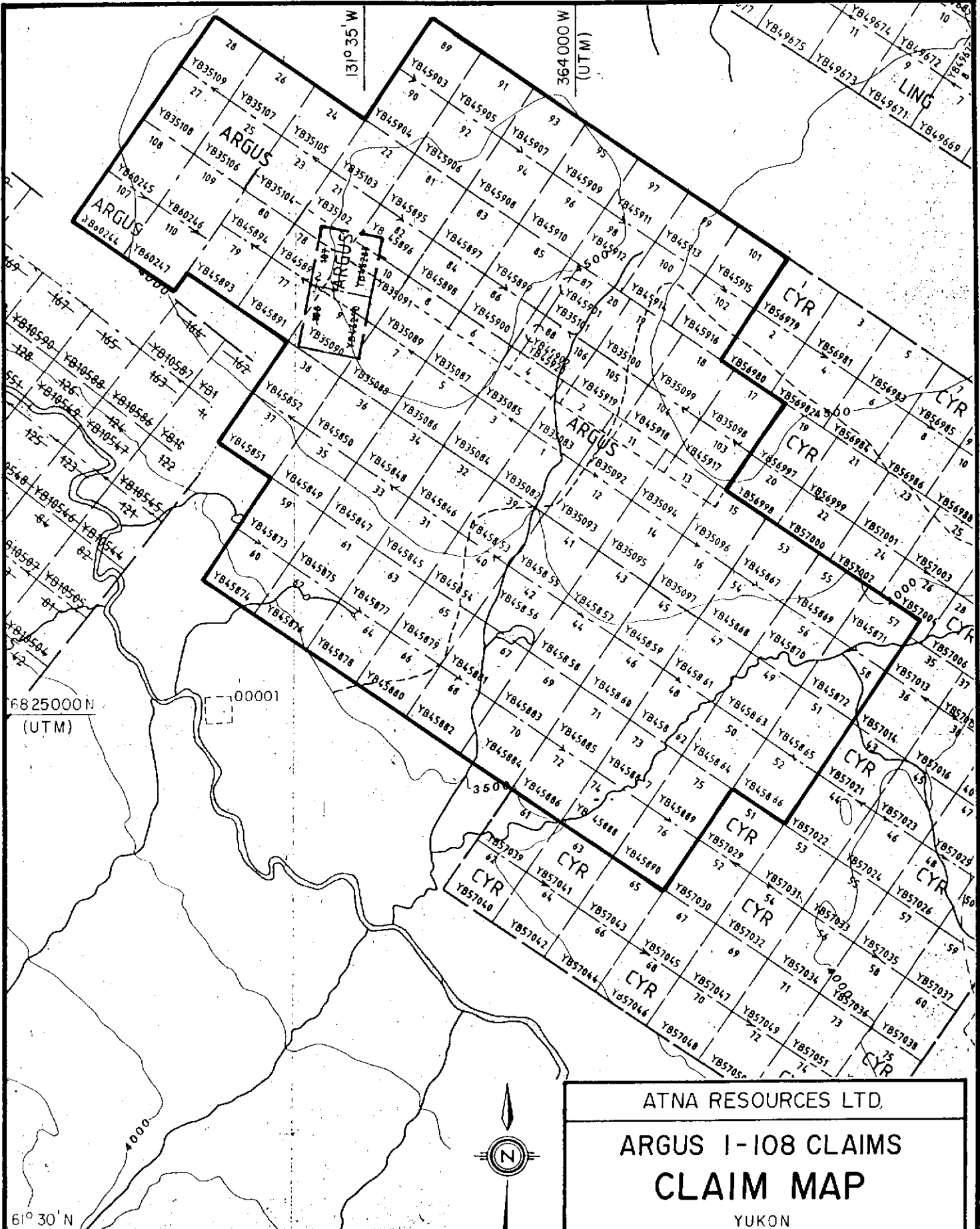
ATNA RESOURCES LTD.

ARGUS 1-108 CLAIMS

LOCATION

MAP

Date	25 JAN 1997	Scale	Figure
N.T.S.	105G/12	Mining District	1
		Watson Lake, Yukon	



ATNA RESOURCES LTD.		
ARGUS I-108 CLAIMS		
CLAIM MAP		
YUKON		
EQUITY ENGINEERING LTD.		
DRAWN: M.B./J.W	MINING DIV.: WATSON LAKE	FIGURE
N.T.S.: 105 G/12		2
DATE: JAN. 1997	REVISED:	

camp and drill site locations. A 4 kilometre long road extends from the airstrip to the campsite, however, this road is overgrown and deeply rutted, making it almost impassable, even with an all terrain vehicle (ATV). In the winter months of 1993, a Nodwell mounted auger drill was driven to the Argus property on a 25 kilometre winter road that leaves the Robert Campbell highway at Mink Creek.

The Argus claims lie within the Pelly Mountains, 5 kilometres north of the northwest-trending Tintina Trench. Elevations vary from 1050 to 1460 metres. The region was glaciated in the Pleistocene forming a terrane of rounded hills, ridges and wide valleys. Outcrop on the property averages <5% range and is restricted to ridges, small knobs (roche moutonnee), trenches and road cuts. Thick glacio-fluvial deposits cover the lower slopes and valleys, below 1250 metre elevation while thin glacial till covers the upper elevations. Average ice transport direction is 305° as determined by the Geological Survey of Canada and Kennecott's work (Hulstein, 1993).

The area has a continental climate with moderate levels of precipitation and a wide temperature range. Summers are typically pleasant with long daylight hours, whereas winters are long and may be extremely cold. Most of the snow cover will have disappeared by the start of June and may return by the middle of September.

4.0 REGIONAL AND PROPERTY EXPLORATION HISTORY

The property was first staked in January 1966 as the Hoo claims by Northlake Mining Limited to cover possible sources of mineralized (lead-zinc) limestone float discovered by K.G. Sanders and J. Ryan of Newmont, in 1955 (Indian and Northern Affairs Canada (INAC), 1995). Northlake Mining Limited flew an airborne magnetic and electromagnetic survey, carried out grid soil sampling and ground electromagnetic surveys (Ronka and Turam). One electromagnetic anomaly located in the Tintina Trench, south of the Hoole River, was tested by four diamond drill holes (486m) with negative results.

The property was restaked in 1972 as the HoHo claims by the South Yukon Joint Venture (Straus Exploration Limited, Marietta Resources International Limited, Union Oil Co. of Canada Limited, Chevron Oil Company) (INAC, 1995). Archer, Cathro & Associates (1981) Ltd. (Archer, Cathro) managed and carried out the exploration program on behalf of the South Yukon Joint Venture. They explored the property with grid soil sampling and mapping in 1972, and bulldozer trenching and eight diamond drill holes (762 metres) in 1973. The above work located several zones of mineralized (lead-zinc) limestone and quartzite in glacial till and four mineralized occurrences in trenches. Following the 1973 program, all participants, except Chevron, withdrew from the South Yukon Joint Venture.

The next significant exploration program was carried out in 1978 when a bulldozer trenching program managed by Archer, Cathro, tested suspected sources of mineralized float (Archer, 1979). The program was hampered by permafrost and the results were inconclusive. Following this the HoHo claims were allowed to lapse.

A prospector staked the Sarah claims over the D Zone in 1986 and sampled the existing bulldozer trenches in 1988 (INAC, 1995). These claims lapsed and beginning in 1992 YGC Resources Ltd. began staking the present Argus claims.

Kennecott Canada Inc. optioned the property from YGC Resources Ltd. in December, 1992. Archer Cathro managed the 1993 program, which consisted of geological mapping and geochemical sampling of old bulldozer trenches, orthophoto preparation, line cutting, geochemical soil sampling and overburden sampling, utilising a Nodwell mounted auger sampler. The auger sampling program was carried out over and up-ice from known mineral occurrences in the A-Zone. Almost all of the 1993 field

work was directed at the A-Zone and was designed to confirm the results of previous geochemical surveys and more accurately define the bedrock source of glacially-transported massive sulphide mineralization.

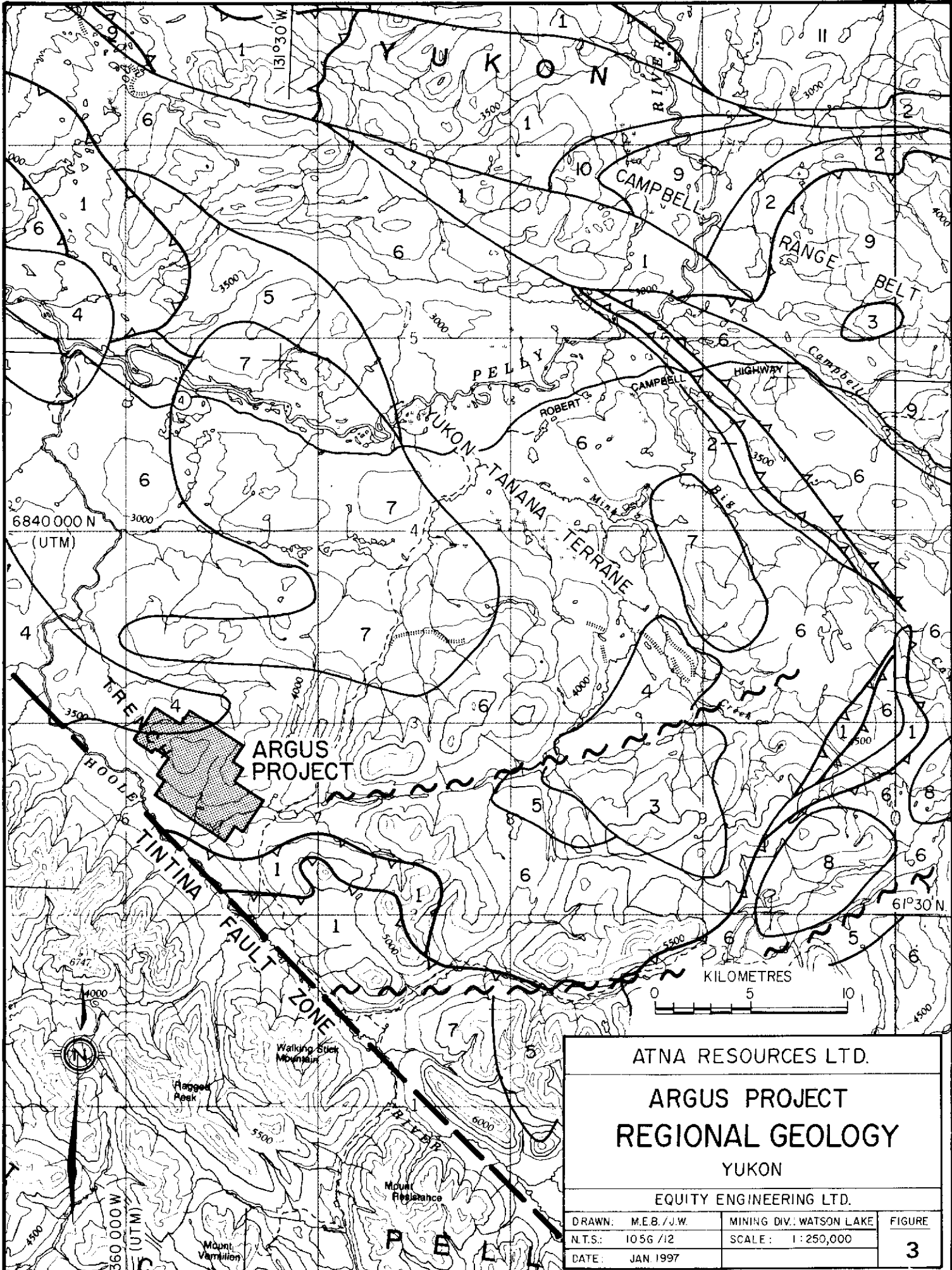
Atna Resources Ltd. optioned the Argus property from YGC Resources Ltd. in 1995 and carried out geological mapping and soil geochemical sampling in July of 1995. The program was designed to evaluate the potential of the known mineralized zones and further test the up-ice potential by extending soil geochemical surveys to the southeast of previous soil geochemical coverage (Kallock, 1996).

5.0 1996 EXPLORATION PROGRAM

During the periods June 11 through July 22 and August 6 through August 9, a program of grid establishment, property mapping, prospecting, rock sampling and diamond drilling was completed. A 5.5 kilometre long baseline, was cut on an azimuth of 134.5° (as measured on the orthophoto base map) (132.5° measured in the field), started from the A Zone, over the old Archer Cathro and Kennecott baseline "R". The 1996 baseline was cut, and a straight line maintained, using a survey transit. A total of 58 kilometres of slope corrected cross lines, at 100 metre spacing, were put in using chain and compass. Lines were marked using orange flagging and marked at 25 metre stations with blue flags and tyvek tags. A declination of 26°13'E was used on the property in all compass work as determined by the Geological Survey of Canada, Geomagnetic Laboratory in Ottawa, as it represents a more accurate declination than what can be determined on publicly available topographic maps. Mapping, carried out at a scale of 1:2500 and reproduced at a scale of 1:5000 for reporting, was confined to the trench areas and road cuts, as outcrops were scarce elsewhere. A total of 5 rock samples were collected on the property and analysed for 24 elements by ICP and two of those rocks were analysed by XRF for major element oxides and selected trace elements (4663, 4665). Magnetometer and VLF-EM geophysics were completed by S.J. Geophysics Ltd. over a total of 62 line kilometres, including the baseline. Details of geophysical instrumentation and procedure are stated in the appendices. Subsequent to the ground geophysics, a drill program consisting of 8 holes, totalling 908.5 metres was completed. Hole ARG96-8 was aborted in overburden. Drilling was carried out by Britton Brothers Drilling Ltd., of Smithers, B.C. using a NQ Britton 2500 drill rig. All core was logged, photographed and tested for magnetic susceptibility on the property. The 1973 core was also logged and those along with the 1996 drill logs are appended. Mineralized sections were split, with one half analysed for gold, plus 24 elements by ICP geochemistry. Lead, zinc and silver assays were performed on overlimit results. All core is stacked at the 1996 camp location, at grid coordinates 20,000E, 20,000N.

Table 5.0.1
DIAMOND DRILL HOLE SURVEY DATA

Hole #	Grid Location		Elevation (m)	Azimuth (°)	Dip (°)	Length (m)
	Northing (m)	Easting (m)				
ARG96-1	19923	20746	1296	-	-90.0	146.3
ARG96-2	19825	20778	1277	30	-82.0	104.2
ARG96-3	19803	20901	1272	30	-70.5	99.1
ARG96-4	19733	20998	1259	30	-71.0	128.0
ARG96-5	19387	16700	1281	43	-51.5	146.9
ARG96-6	19852	21101	1260	32	-70.0	97.5
ARG96-7	19900	21300	1235	32	-70.0	121.9
ARG96-9	19993	21500	1201	29	-70.0	64.6
A1 (1973)	20005	20652	1304	-	-90.0	119.5



ATNA RESOURCES LTD.

**ARGUS PROJECT
REGIONAL GEOLOGY
YUKON**

EQUITY ENGINEERING LTD.

DRAWN: M.E.B./J.W.	MINING DIV.: WATSON LAKE	FIGURE
N.T.S.: 1056 /12	SCALE: 1:250,000	3
DATE: JAN 1997		

LEGEND

(to accompany Figure 3)

NORTH AMERICAN CONTINENTAL MARGIN

11 *Pre-Triassic* sedimentary and volcanic rocks

CAMBELL RANGE BELT

10 massive carbonate

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

YUKON-TANANA TERRANE

8 *Early Jurassic* - mafic stocks

7 augen orthogneiss

6 *Devonian-Mississippian* - interlayered mafic and minor felsic metavolcanic rocks, carbonaceous metasediments and quartzite 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 serpentinitized 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

DIAMOND DRILL HOLE SURVEY DATA (continued)

A2 (1973)	20220	20361	1329	-	-90.0	121.9
A3 (1973)	19691	20660	1264	-	-90.0	86.9
D1 (1973)	19820	17965	1403	-	-90.0	93.9
E1 (1973)	19522	16706	1309	-	-90.0	104.2
E2 (1973)	19697	16478	1297	-	-90.0	84.7
E3 (1973)	19688	16812	1321	-	-90.0	72.5
E4 (1973)	19566	16804	1308	-	-90.0	78.5
TOTAL					1996	908.5

6.0 REGIONAL GEOLOGY

The region lying northeast of the Tintina Trench and southwest of Frances and Finlayson Lakes is referred to the Southern Yukon Tanana Terrane (SYTT)(Figure 3). The regional geology of the SYTT has most recently been defined by the work of Tempelman-Kluit et al., (1976) and Mortensen (1985, 1992) and Plint (1996).

Mortensen considers the Yukon Tanana Terrane (YTT) 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 the late Triassic. The YTT extends into the northern Yukon and on into Alaska where it is host to several volcanogenic massive sulphide (VMS) deposits in the Delta district. The YTT is believed to be a displaced equivalent to the Kootenay and Barkerville Terranes of southern and central British Columbia, which are also host to several VMS deposits.

The Yukon Tanana Terrane has recently been the focus of intense exploration and claim staking, spawned by recent VMS discoveries. In early August of 1994, Cominco Exploration Ltd. announced the discovery of their ABM (Kudz Ze Kayah Project) VMS deposit, which is now estimated to contain an open pit reserve of 11.3 million tons, grading 0.9% copper, 1.5% lead, 5.9% zinc, 1.3 g/t gold and 133 g/t silver (Northern Miner, Vol. 82, No. 27, 1996). The deposit, which is located 50 kilometre east of the Argus property, is hosted in felsic metavolcanics and sediments having a spatial association with a quartz-feldspar porphyry and mafic sill. In 1996, Columbia Gold Mines Ltd. extensively explored the Fyre Lake deposit, a mafic-hosted, copper-cobalt VMS deposit, 70 kilometres southeast of the Argus. Results of that program include drill hole intercepts of 6.6 metres grading 1.8% copper, 1.26 g/t gold, 0.22% cobalt and 31.3 metres of 2.29% copper and 0.52 g/t gold (Company comm., 1996). The Wolverine deposit of Westmin/Atna is located 75 kilometres east of the Argus. The Wolverine is a precious metal-rich, polymetallic VMS deposit hosted in argillaceous sediments and felsic volcanoclastics with associated porphyritic rhyolite domal rocks. Published reserves of the Wolverine are 5.3 million tonnes grading 1.81 g/t gold, 359.1 g/t silver, 12.96% zinc, 1.41% copper and 1.53% lead (Northern Miner, Vol. 82, No. 40).

The regional geology of the area is illustrated in Figure 3. 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 is also host to the Argus occurrence, may be equivalent to the Nasina series of the Dawson district, which is comprised mainly of carbonaceous quartzites. In the Dawson district, several SEDEX prospects have been identified in the Nasina rocks (Clip, Mort and Mickey). 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 & MINERALIZATION

The property geology is defined by trench exposures and drilling. Large covered areas between the above areas of detail make property-wide correlation difficult. The main lithologies include fine-to coarse-grained sericitic quartzites, grey crystalline limestone, grey to black siliceous phyllites, light to medium green phyllites and gritty phyllites. A less common unit is a dark green, chlorite-calcite schist that may or may not contain porphyroblasts of magnetite. In drill section, the order and continuity of units appear to be fairly consistent although the thickness and stratigraphic position of limestone units shows strong variability. This variation may reflect primary thickness variation of limestone reefs, or perhaps, unrecognised low angle faulting. The protoliths of these metamorphic rocks likely include impure and immature sandstones, arenaceous carbonaceous mudstones, reefal limestones and distal intermediate tuffs and mixed tuffaceous and epiclastic rocks. In terms of a paleo-environment, reefal limestones and lithologies diagnostic of both high and low energy environments suggest a basin-margin setting, or hinge zone. Distal volcanic tuffs and possible rhyolitic lithologies indicate the presence of a nearby volcanic arc.

Alteration in the A-Zone is dominated by quartz-ankerite±mariposite, which occurs as pervasive to banded, conformable zones concentrated in green phyllites. The conformable nature of this alteration is well illustrated in section (Figure 6) and appears to have a spatial association with mineralization. This same alteration assemblage also forms strong stockwork and local breccia zones. The origin of the chlorite-calcite-magnetite schist is more enigmatic. Two interpretations are that it represents a mafic meta-volcanic or a metasomatized stratigraphic unit. Mineralization in the A-Zone occurs in several habits and within several different lithologies. Sphalerite, with or without galena, occurs as primary wavy, disseminated to massive, 1 to 7 cm bands in calcareous to siliceous grey phyllites. Other areas contain conformable lenses and discordant stringers of sphalerite that often lie on the margins of replacement calcite/marble or granular quartz lenses. A less common habit is as massive patches in quartz-ankerite-calcite-cemented breccias and stockworks, such as found in the E-Zone.

The B-Zone lies in the northeast area of the grid and was discovered by trenching zinc soil geochemical anomalies. As in the A-Zone, quartz-ankerite alteration is well developed, occurring as porphyroblastic ankerite in green phyllites and local intense pervasive and stockwork-controlled alteration in carbonaceous phyllites. Sphalerite and galena mineralization is spotty and occurs primarily in quartz±carbonate stringers.

The D-Zone is exposed by two trenches in the central area of the grid. In the area of hole D1, the geology is dominated by intense quartz-ankerite-calcite-sphalerite veining and brecciation that grades down-slope into grey, weakly altered limestone. Hole D1 failed to intersect the mineralization exposed on surface, indicating that the mineralization is controlled by a vertical structure and is not conformable. Exposures of quartz-sericite schist of possible rhyolitic origin were noted in trench D1. In both of these localities, thin wisps of disseminated sphalerite occur within the quartz-sericite schists.

The E-Zone geology is defined by exposures in two trenches and by the results of four 1973 holes and a hole drilled in the current program (ARG96-5). Stratigraphy is complex, but is dominated by sericitic to phyllitic quartzites, grits and minor siliceous limestone. Narrow intervals of possible meta-rhyolite were noted in hole E1. Quartz-ankerite alteration is locally very strongly developed in the matrix of siliceous limestones both on surface and in hole E1. This breccia is host to most of the sphalerite mineralization which occurs as blebs and stringers. A minor proportion of sphalerite occurs as thin conformable bands in carbonaceous phyllite.

Structure on the property is best observed in core and in the few trenches that expose undisturbed bedrock. Generally rocks are phyllitic to schistose with a penetrative foliation (S_1) parallel to

or at a very low angle to compositional layering (S_0). Measurements taken from vertical drill holes indicate compositional layering dips of between 15° - 20° . Measurements on surface generally agree with this, but variation along with heterogeneous, non-coaxial, tight folding show numerous inconsistencies and random orientations. A second foliation, (S_2) is often well developed within phyllite units and typically forms kink bands. Changes in the dip angle of S_0/S_1 within a single vertical hole, suggest fold closures and the existence of significant fold forms. In these instances, S_2 bisects the angle formed by the change in S_0/S_1 and forms a near horizontal intersection lineation. These relationships suggest two phases of folding with the tight to isoclinal F2 folds, having near horizontal fold axis and axial planes that dip 15° - 20° to the south. Faulting on the property is not easily observed because of poor stratigraphic control. Tectonic brecciation related to faulting is, however, suspected in the mineralized and altered breccias of the E and D zones. Conformable mineralization and strata noted on section A-A' (Figure 6) appears to be offset, suggesting the existence of a northwest trending normal fault.

8.0 DIAMOND DRILLING

The drilling program was concentrated in the A-Zone; one hole was targetted at the E-Zone (Table 9.0.1). Previous drilling was not very successful as only one hole intersected significant mineralization (Table 9.0.2). Information from the 1973 drilling was insufficient to define the A-Zone stratigraphy or the source of the mineralized boulder till. Drilling of the A-Zone in 1996 was aimed at defining the orientation of stratigraphy, the source of mineralized till and determine the strike and down-dip continuity of mineralization.

Table 8.0.1
SUMMARY OF SIGNIFICANT INTERCEPTS - 1996 DRILLING

Hole #	From (m)	To (m)	Width (m)	Ag (ppm)	Pb (%)	Zn (%)	Horizon
ARG96-1	6.5	13.8	7.3	7.06	0.12	2.75	lower
including	13.0	13.8	0.8	8.80	0.16	6.19	
and	20.4	24.4	4.0	13.50	0.65	2.86	
ARG96-2	24.3	39.3	15.0	10.96	0.75	2.67	lower
including	25.4	27.0	1.6	14.40	0.68	9.69	
ARG96-3	33.3	34.4	1.1	29.00	0.52	2.76	upper
and	36.5	39.8	3.3	4.65	0.23	1.26	
and	43.7	44.4	0.7	32.00	2.16	9.50	lower
and	56.6	63.7	7.1	13.10	0.03	2.23	
including	56.6	57.0	0.4	13.40	0.02	9.67	
and	65.6	71.2	5.6	8.20	0.42	2.23	
including	66.5	67.2	0.7	5.80	0.01	6.77	
ARG96-4	88.1	90.0	1.9	1.40	0.04	1.16	-
ARG96-5	23.7	24.9	1.2	0.40	0.07	0.73	-
ARG96-6	41.7	49.2	7.3	9.50	0.56	2.97	lower
including	43.7	45.7	2.0	10.00	0.77	3.97	
ARG96-7	34.7	44.8	10.1	18.70	0.86	3.26	upper
including	42.7	44.8	2.1	45.20	1.50	4.63	
ARG96-9	46.1	52.1	6.0	1.00	0.05	1.13	upper

Table 8.0.2
SUMMARY OF SIGNIFICANT INTERCEPTS - 1973 DRILLING

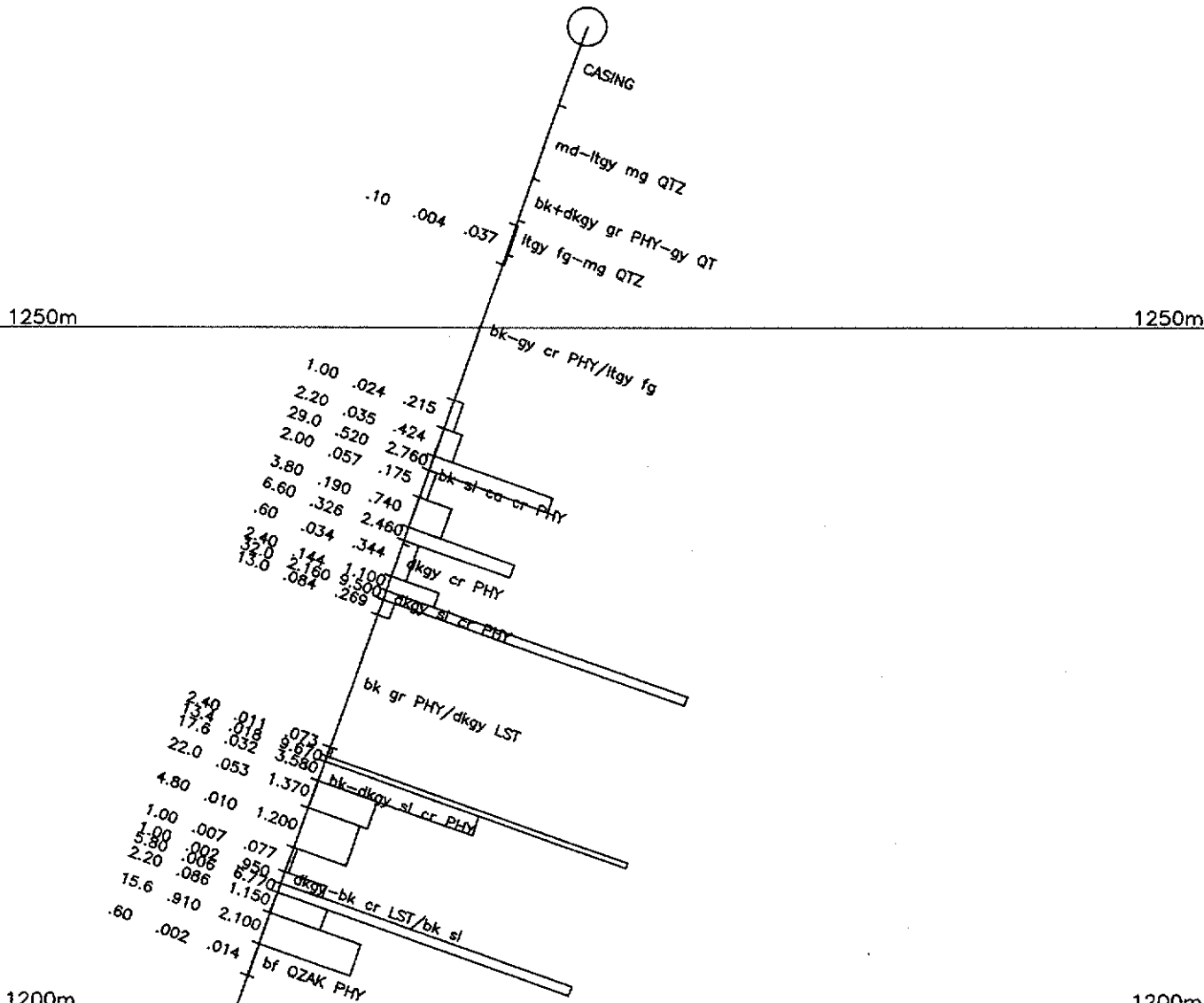
Hole #	From (m)	To (m)	Width (m)	Ag (ppm)	Pb (%)	Zn (%)	Horizon
A1 including	11.4	12.5	1.1	-	0.60	4.44	unknown
	22.2	28.0	5.8	-	<100	1.16	
	23.2	24.8	1.6	-	<100	2.20	
E1	17.8	18.9	1.1	-	0.30	9.67	-
	20.1	20.8	0.7	-	0.03	3.90	-
	28.6	29.4	0.8	-	0.03	0.98	-
	54.9	57.9	3.0	-	0.19	2.88	-
E4	26.2	29.3	3.1	-	0.04	1.50	-

***NOTE:** Results and intervals obtained directly from drill sections in assessment report by Archer, A.R., (1973): Yukon Assessment Report, Hoo Joint Venture Final Report, Ho-Ho 1-272 Claims, 105G/12.

On the basis of the 1996 magnetometer and VLF-EM survey, the strike and dip of conductive units was determined, and as a result hole ARG96-1 was drilled on the south side of hole A1. The mineralization intersected in ARG96-1 is from a structurally higher zone than the intercept in hole A1, which appears to pinch out down-dip. A second hole, ARG96-2 was drilled 100 metres down dip of ARG96-1 and intersected higher metal grades, but showed a dramatic decrease in the limestone units thickness. Previous soil sampling and auger sampling surveys combined with the knowledge of ice transport direction (300°-310°) suggest that the source area for the surface geochemical anomalies lies in the area centred on grid coordinates 20,950E, 19,860N. Therefore, hole ARG96-3 was drilled slightly down-dip of ARG96-2 and along strike toward the possible source area (Figure 7). Again mineralization was intersected with similar grades as ARG96-1 and 2, but over narrower widths. Results from hole ARG96-3 also showed the existence of an upper and lower horizons of mineralization that can be correlated between holes. The mineralization in ARG96-3 is distinctly banded and represents the best example of syngenetic-looking, SEDEX mineralization. Hole ARG96-4 was drilled, but failed to intersect mineralization further down dip from ARG96-3 (Figure 8). The absence of mineralization and correlative stratigraphy in both A3 and ARG96-4 with holes to the north indicate the presence of a northwest trending fault or perhaps a tight fold structure. Three subsequent 200 metre step-out holes (ARG96-6, 7, 9), east of ARG96-3, were drilled to test for strike continuity (Figure 10, 11, 12). All three holes intersected mineralization, although grades and thickness tend to decline in this direction. There is a distinct possibility that the upper mineralized intercept in ARG96-7 is correlative with the mineralized intercept in ARG96-9, but that ARG96-9 was not drilled deep enough to intersect the lower intercept encountered in ARG96-7.

In the schematic long section it has been assumed that the contact between the limestones and the underlying green chlorite-calcite schist unit is correlative between all holes and forms a lithologic datum (Figure 13). When this datum is used, the most dramatic change in the geology from west to east is the variability in the thickness and facies of the overlying limestone. The long section also illustrates the seemingly conformable nature of the quartz-ankerite alteration lying above the chlorite-calcite schist unit, and the overlying mineralized horizon ("lower horizon"). Quartzites and phyllites overlie the entire sequence.

In the E-Zone a single drill hole was collared southwest of and drilled toward hole E1 to intersect



REFER TO FIG.4 FOR LITHOLOGICAL LEGEND

HISTOGRAM RESULTS:
 Ag(ppm) Pb(%) Zn(%)
 1cm = 2% Zn



ARG96-3

ATNA RESOURCES LTD.			
ARGUS 1-108 CLAIMS			
DRILL SECTION			
ARG96-3			
Date	25 JAN 1997	Scale	1:500
N.T.S.	105G/12	Mining District	Watson Lake, Yukon
			Figure 7

1250m

1250m

1200m

1200m

.40 .020

.140

128.00

ARG96-4

bk gr PY PHY/gy QZT

ltgn-gy QZT/gy gt PH

ltgy mg QZT

mdgy mg QZT

ltgy mg QZT/cr QZT/c

mdgn bx CLCA SCH

ltgn-gy fg QZT

md-dkgn CLCA SCH

ltgn-gy mg QZT

dkgy gt cr PHY

ltgn gt PHY/cg QZT

ltgy QZAK fg PHY

bf QZAKPY PHY

mdgn fg bn PHY

dkgn CLCA SCH

.40 .015
.40 .004
.10 .007

.137
.538
.013

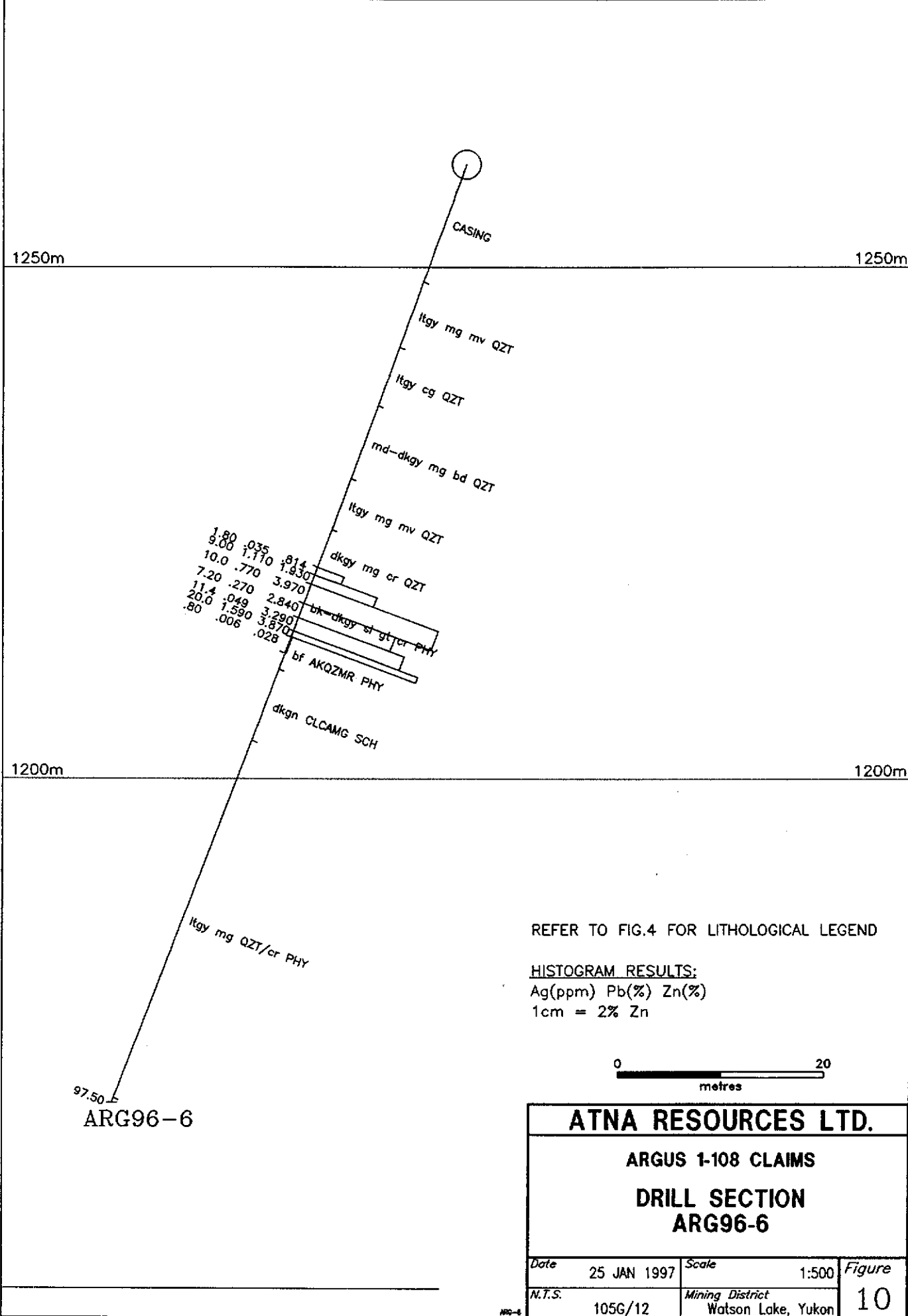
REFER TO FIG.4 FOR LITHOLOGICAL LEGEND

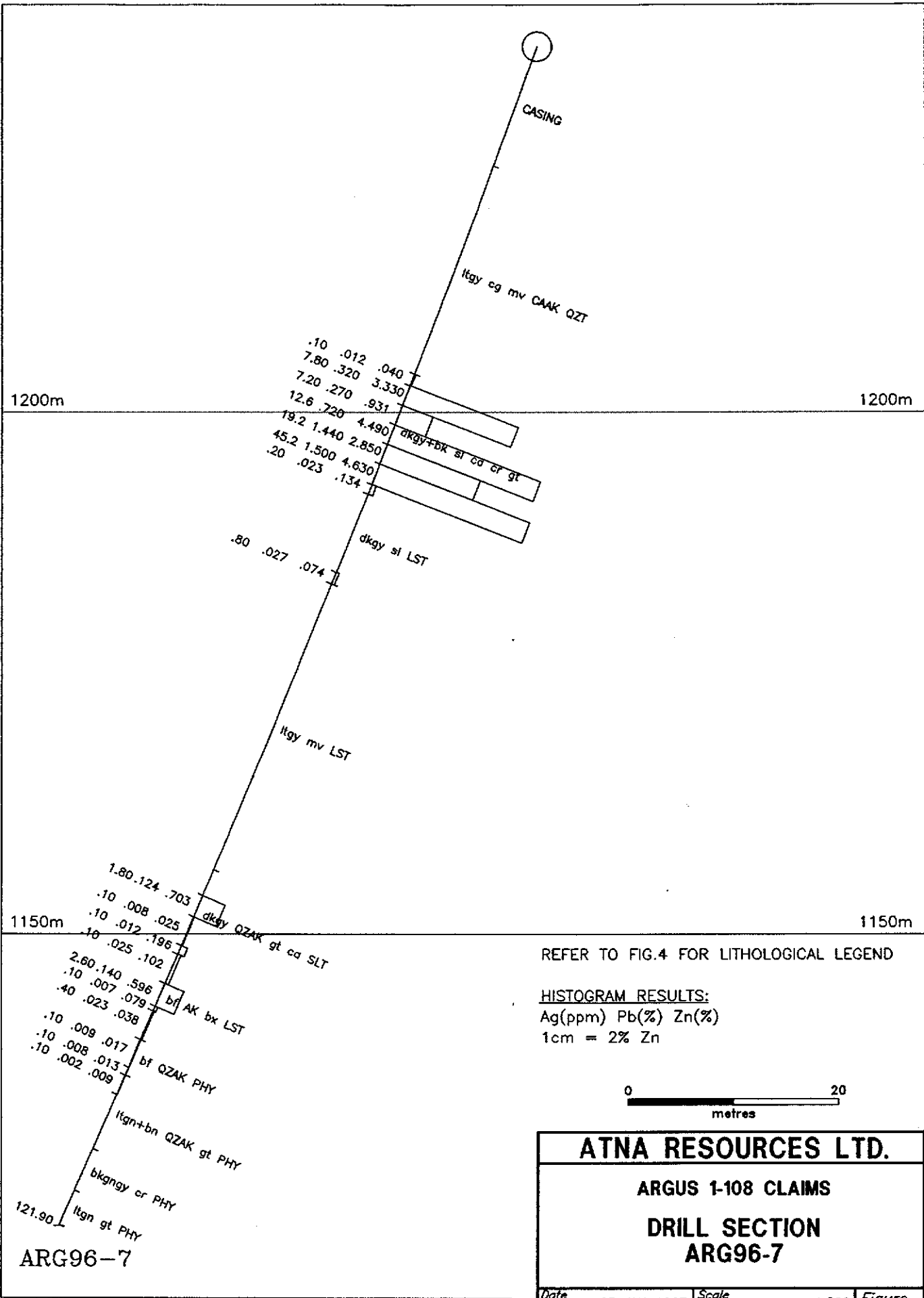
HISTOGRAM RESULTS:
Ag(ppm) Pb(%) Zn(%)
1cm = 2% Zn



ATNA RESOURCES LTD.			
ARGUS 1-108 CLAIMS			
DRILL SECTION			
ARG96-4			
Date	25 JAN 1997	Scale	1:500
N.T.S.	105G/12	Mining District	Watson Lake, Yukon
			Figure 8

ARG-4



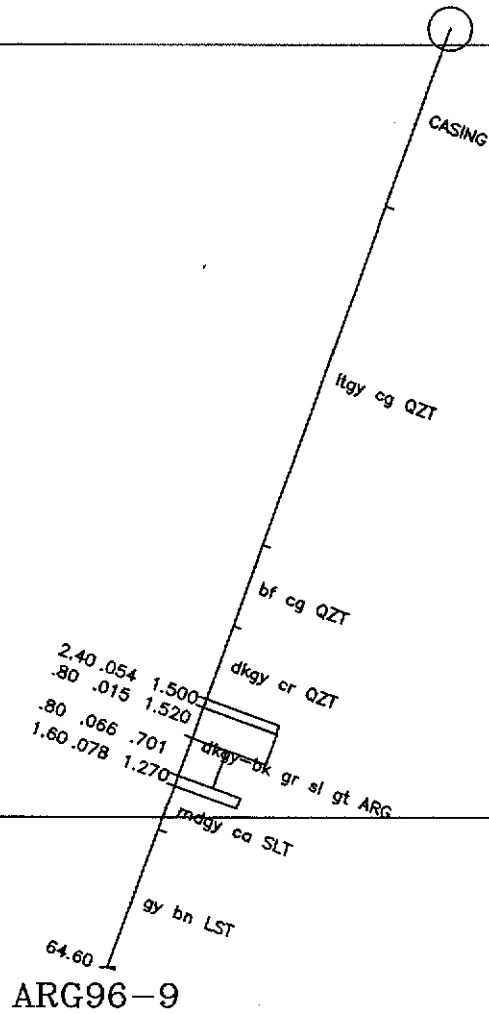


1200m

1200m

1150m

1150m



REFER TO FIG.4 FOR LITHOLOGICAL LEGEND

HISTOGRAM RESULTS:
 Ag(ppm) Pb(%) Zn(%)
 1cm = 2% Zn



ATNA RESOURCES LTD.

ARGUS 1-108 CLAIMS

**DRILL SECTION
ARG96-9**

Date	25 JAN 1997	Scale	1:500	Figure
N.T.S.	105G/12	Mining District	Watson Lake, Yukon	12

the possible down-dip continuation of mineralization. Mineralization on E1 is largely hosted in brecciated siliceous limestones and to a lesser extent in and drilled

9.0 ROCK GEOCHEMISTRY

No surface sampling of typical mineralization was conducted in this years program since earlier programs included fairly exhaustive sampling programs of the existing showings. Three of the samples collected this year were of quartz-sericite schists in the D-Zone and upper E-Zone trenches. Whole rock analyses, with reference to both major and trace elements, suggest that the quartz sericite schists may well be of rhyolitic parentage, however, unusually high silica contents create some doubt. These high, silica contents may indicate a protolith comprised of mixed epiclastic felsic volcanic with a component of clastic quartz, or alternatively, may be the result of silicification of a rhyolite. The minor amounts of conformable zinc and lead mineralization in these "rhyolitic" units are encouraging, defining a new target type.

10.0 GEOPHYSICS

The purpose of carrying out geophysical surveys on the Argus property was largely directed at defining trends in the stratigraphy. The possibility of detecting massive sulphides was not considered high since mineralization is sphalerite dominant and thereby non-conductive. In carrying out the magnetometer survey, it was hoped that the extent of the magnetite-bearing chlorite calcite schist unit might be defined.

Results of the survey, contained in the appendices, show a number of northwest trending, moderate to strong VLF-EM conductors across the breadth of the grid. Magnetic response is weak and only a few ovoid, non-linear highs were detected. In the A-Zone, one strong EM conductor (upper A-Zone conductor) is defined over a strike in excess of one kilometre. By using the relationship of the surface trace of this conductor and topographic contours, an orientation of $129^{\circ}/15-20^{\circ}\text{S}$ was determined. The cause of this particular conductor is a carbonaceous unit, intersected in the bottom of hole A1 and through much of the length of hole A2. A weak, 400 metre long, magnetic high on the hanging wall side of the conductor, appears to reflect the magnetite-bearing chlorite-calcite schist unit, exposed in the trenches and in several adjacent drill holes. Another VLF-EM conductor (lower A-Zone conductor) lies near to the south of holes ARG96-2, 3 and 6. The full length of this conductor is unclear, but a weak extension to the southeast and a fragmented extension to the northwest indicate a possible strike in excess of 1400 metres. As with the upper A-Zone anomaly, a moderate magnetic high lies on the hanging-wall side of the conductor. The cause of the conductor-magnetic anomaly pair is uncertain. No source was intersected in hole A3, drilled under the anomaly pair, however, this may result from the inferred normal fault immediately north of the hole. The remarkable similarity between the upper and lower A-Zone anomalies suggests that the stratigraphy has been repeated, either by a fold or a northeast directed thrust. Since correlations on section A-A' are consistent, a fold is less likely and a fault, passing somewhere near hole ARG96-2, is more probable.

Several northwest trending conductors exist in the area between the A- and E-Zones, but there is very little exposure or drilling information in this area as to the cause of the conductors. A large magnetic low between the A- and E-Zones, trends east-southeast and is coincident with a number of limestone outcrops. This magnetic low may outline a larger expanse of limestone than can be defined by the surface geology. In the E-Zone the geology is poorly understood and correlations between drill holes has largely been unsuccessful. Because of this poor knowledge-base, explanations for the individual conductive bodies is made difficult.

11.0 DISCUSSION AND CONCLUSIONS

To address the original goals of the project, the program was successful in defining the underlying geology and locating the potential source to mineralized glacial till. Results from geophysics and drilling established that stratigraphy is shallow southwest-dipping and that discontinuities in section, with respect to mineralization and stratigraphy, can be explained by thrust faults, normal faults and perhaps, recumbent, northeast verging folds. The specific point or up-dip projection of the mineralized horizons that provided the source for the mineralized float train was not positively identified, however, it may be that float mineralization was derived from a higher, and since eroded horizon, or an up-thrust block of the same mineralization intersected in drilling.

Another objective of the project was to determine the genetic nature of the mineralization on the Argus property. This still remains problematic as the Argus mineralization is complex and difficult to classify as either syngenetic or epigenetic. Textures suggesting a syngenetic origin are not common, but include distinctive banding of massive, to more often disseminated, sphalerite±galena in grey to black carbonaceous phyllites. Also in support of a syngenetic origin is the apparent stratabound nature of zinc-lead mineralization. A feature not often emphasised in previous reports, is the extensive development of quartz-ankerite(carbonate)±mariposite alteration over much of the property. This assemblage is often spatially associated with and often includes sphalerite mineralization in vein stockworks and breccia matrices. The quartz-ankerite assemblage is compatible with alteration found in some SEDEX deposits, although the addition of mariposite±chlorite/magnetite is more characteristic of listwanite-type assemblages. This latter possibility is supported by the nearby mass of ultramafic rocks, mapped as Slide Mountain Terrane, emplaced along east-west trending thrust faults (Mortensen, 1985). It is plausible that low angle syn-emplacment faults cut the Argus stratigraphy, providing a conduit for hydrothermal fluids causing listwanite alteration. These hydrothermal fluids would have remobilized existing zinc-lead mineralization, creating the combination of observed syngenetic and epigenetic textures. In section, the quartz-ankerite alteration and chlorite-calcite±magnetite schist unit form conformable layers. This relationship can be interpreted as semi-conformable footwall-type alteration, as described for a SEDEX model, or alternatively, alteration developed along a very low angle thrust fault or permeable unit. In hole A1, there are two intercepts of chlorite-calcite-magnetite schist and in both instances, the unit is flanked by strong-pervasive quartz-ankerite±mariposite alteration. In several of the other holes, the schist is on the footwall side of strong quartz-ankerite alteration. Possible interpretations of these relationships include: 1) the chloritic-calcite schist represents a thin wedge of mafic-ultramafic rock with associated listwanite alteration; 2) the alteration is a result of iron-magnesium metasomatism analogous to a volcanogenic massive sulphide (VMS) model and; 3) a mafic meta-volcanic unit that has no causative relationship with the quartz-ankerite alteration.

These varied interpretations of the Argus geology emphasize the ambiguous nature of the Argus alteration and mineralization. Perhaps an answer or clue may come from lead isotope dating techniques that are presently being undertaken. If it can be determined that the Argus mineralization is largely syngenetic, then it still represents an atypical Yukon SEDEX deposit for a number of reasons. One peculiarity is the host Yukon Tanana rocks, which to date are not known to host any significant SEDEX deposits. This statement should be weighed against the fact that until 1994 there also were no significant VMS deposits hosted in the Yukon Tanana Terrane. Another distinction of the Argus is the stratigraphy which indicates a shallow water paleo-environment; is not typical of SEDEX deposits. Some vein-type barite has been found on the property, but there is no known bedded barite, which is very common in SEDEX deposits. These factors do not necessarily argue against the Argus mineralization being syngenetic, but they do illustrate that exploration on the Argus should not rely heavily on standard

Yukon SEDEX deposit model characteristics as a basis for further exploration.

Drilling on the Argus this year was successful in defining extensions to the A-Zone mineralization, along strike to the southeast. In the A-Zone, banded and remobilized sphalerite and galena were intersected in 6 holes over 800 metres strike length. This drilling tested an interval of approximately 150-200 metres of stratigraphic thickness, but unfortunately none of the intercepts can be considered as ore grade. Some of the most significant drill results include 1.6 metres in ARG96-2, grading 9.7% Zn and 14.4 ppm Ag, and in ARG96-7, 10.1 metres grading 3.3% Zn and 18.7 ppm Ag. With the available footage, and the relative successes in the A-Zone, only the E-Zone was considered of enough priority to be drilled. The single E-Zone hole (ARG96-5) failed to intersect any significant mineralization.

Potential on the Argus property for mineralization can be put into two categories: 1) targets based on continued follow up of the A-Zone mineralization and, 2) less well defined targets, based largely on soil geochemistry, outside of the A-Zone. Further work on the A-Zone mineralization to the southeast is not recommended since poorer metal grades and thickness are evident in this direction. The best potential exists to the northwest of the A-Zone, where no drilling has yet been carried out and soil geochemical anomalies are strong. Potential in the down-dip direction of the A-Zone is limited by an inferred fault, although this would have to be further verified by drilling. Targets outside the A-Zone are based on minor surface exposures and soil geochemistry. Mineralization in the E and D-zone trenches, are likely satisfactory to explain the anomalous geochemistry, and thus these areas are not considered to have good potential for better grade mineralization. Very little information exists between the A and B-Zones, and to date, extensive soil and auger geochemical anomalies are without explanation. These areas may represent different sections of stratigraphy, or as previously discussed, may be repeats of the A-Zone stratigraphy through a process of folding or thrust faulting. Testing of these targets would be satisfied by drilling a reconnaissance-scale fence of holes from north of the A-Zone toward the B-Zone.

APPENDIX A

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APPENDIX B

STATEMENT OF EXPENDITURES

**STATEMENT OF EXPENDITURES
ARGUS PROPERTY
June 11 -August 9, 1996**

CANADA) In the matter of an evaluation program on the Argus property

I, Mark E. Baknes for Equity Engineering Ltd., 207, 675 West Hastings Street, Vancouver, B.C. do solemnly declare that a program consisting of geochemical sampling, geological mapping, prospecting and diamond drilling was carried out on the ARGUS Mineral Claims between June 11 and August 9, 1996. 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 E. Baknes, P.Geo.		
47.5 days @ \$425/day	\$20,187.50	
David A. Caulfield, P.Geo.		
0.25 days @ \$425/day	106.25	
Henry J. Awmack, P.Eng.		
0.13 days @ \$ 425/day	55.25	
Jason S. Weber, Geologist		
0.125 days @ \$350/day	43.75	
Chris Hope, Field Assistant		
61 days @ \$225/day	13,725.00	
Matt Henry, Field Assistant/First Aid		
54 days @ \$225/day	12,150.00	
54 days @ \$25/day	1,350.00	
Dirk Moraal, Prospector		
8 days @ \$300/day	2,400.00	
Robert Blusson, Field Assistant		
48 days @ \$225/day	10,800.00	
Devon Holbek, Labourer		
4.625 days @ \$225/day	1,040.63	
Frank Sunsini, Labourer		
2.25 days @ \$225/day	506.25	
Carol Krismer, Cook		
44.625 days @ \$250/day	11,156.25	
Clerical		
29 hours @ \$25/hour	<u>725.00</u>	\$74,245.88

EQUIPMENT RENTALS

Fly Camp		
294 man-days @ \$25/man-day	\$7,350.00	
Generator, 5kVA		
44 days @ \$20/day	880.00	
4x4 Truck		
4 days @ \$80/day	320.00	
4x4 Truck, Standby		
5 days @ \$30/day	150.00	
Chainsaw		
57 days @ \$15/day	855.00	
Water/Fire Pump		
34 days @ \$10/day	340.00	
ATV Trailer		
20 days @ \$5/day	100.00	
Mag Susceptibility Meter		
6 days @ \$10/day	60.00	
Transit		
12 days @ \$10/day	120.00	
Computer		
18 days @ \$15/day	<u>270.00</u>	\$10,445.00

EXPENSES

Accommodation	\$761.70
Aircraft Charters	18,647.00
Airfare	4,558.63
Automotive Fuel	701.04
Bulk Fuel	4,540.14
Busfare	48.85
Camp Food	9,328.50
Chemical Analyses	2,161.51
Courier	144.76
Drafting	60.00
Expediting	3,348.37
Fax Charges	15.00
Freight	3,618.89
Geophysical Mobilization (Truck Rental)	50.00
Geophysical Work and Equipment	20,070.83
Helicopter Charters	35,918.20
Maps and Publications	114.21
Materials and Supplies	8,602.33
Meals	556.60
Office and Camp Supplies	456.58
Printing and Reproductions	1,548.68
Radio Rental	1,436.22

EXPENSES (Continued):

Taxis and Airporters	28.04	
Telephone Distance Charges	524.97	
Tolls and Airport Taxes	5.00	\$117,246.05

SUB-CONTRACTS

Britton Bros. Drilling:		
Mob/Demob	\$4,800.00	
Footage	60,376.60	
Materials	2,642.85	
Reaming	270.30	
ATV	455.00	
Standby/Moves/Travel	1,040.00	\$69,584.75

MANAGEMENT FEES

15% on expenses only	\$17,586.91	
7.5% on sub-contracts	5,218.86	\$22,805.76

REPORT: (estimated) \$10,000.00


SUBTOTAL \$304,327.44

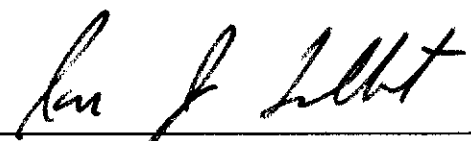
GST
7.0 % on subtotal 21,302.92

TOTAL \$325,630.36

And I make this solemn declaration conscientiously believing it to be true and knowing that 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)
31 day of January, 19 97)


Mark E. Baknes


Notary Public for the Province of British Columbia

IAN J. TALBOT
Barrister & Solicitor
MORTON & COMPANY
1750 - 750 WEST PENDER STREET
VANCOUVER, B.C. V6C 2T8
681-1194

APPENDIX C

DIAMOND DRILL LOGS

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT ATN96-01	GROUND ELEV.
HOLE NO. ARG96-01	BEARING -
LOCATION A Zone. 19,923 N, 20796 E	DIP -90
	TOTAL LENGTH 146.3m
LOGGED BY M. E. Baknes	HORIZONTAL PROJECT
DATE July 12/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE
CORE SIZE NQ	
DATE STARTED July 12/96	TOTAL SULPHIDE SCALE
DATE COMPLETED July 13/96	
DIP TESTS none	
COMMENTS	LEGEND

PAGE	OF	PROJECT:	HOLE NO. AR696-1						
MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		Pb	Zn	Ag	
(6.5-8.5) oxidized 15% leached carbonate & sulphides	6.5	6.5	8.5	2.0	109001	1700	1.8%	8.8	
(8.5-10.6) oxidized 20% leached carbonate & sulphides 3% coarse pyrite in siliceous bands.	8.5	8.5	10.6	2.1	109002	1500	2.78%	7.8	
(10.6-11.7) weakly oxidized 4-5% sphalerite as medium disem. grains + disem. bands	10.6	10.6	11.7	1.1	109003	640	3.36%	7.2	
(11.7-13.0) Limestone breccia minor sphalerite. 1% SP tr GL	11.7	11.7	13.0	1.3	109004	80	1.53%	2.0	
(13.0-13.8) 6% disem + disem banded sphalerite.		13.0	13.8	0.8	109005	1600	6.19%	8.8	
(13.8-14.6) 2% Fg. disem py.	13.8	13.8	14.6	0.8	109006	20	1715	0.2	
(14.6-15.0) 30% leached gossan box 3% GL	14.6	14.6	15.0		109007	296	2620	<0.2	
(15.0-18.0) 4% disseminated + banded py, minor sp tr GL.	15.0	15.0	18.0	3.0	109008	32	516	<0.2	
(18.0-20.4) 4% disem band py, 1-2% GL with PY, trace SP	18.0	18.0	20.4	2.4	109009	700	394	0.8	
(20.4-20.8) 7% SP as irregular bands on margins + bands within white marble. 3% GL	20.4 20.8	20.4	20.8	0.4	109010	138%	3.52%	16.4	
(20.8-21.8) 5% band SP often marble-margins	21.8	20.8	21.8	1.0	109011	7200	3.35%	12.0	
(21.8-23.4) 3% SP, 2% PY, 1% GL marble margins	21.8	21.8	23.4	1.6	109012	7500	3.24%	18.4	
(23.4-24.4) 2% fine banded pyrite	23.4	23.4	24.4	1.0	109013	1400	1.48%	6.0	

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	M.S.
					AK A	CA B	CL C	MS D	E			
26	100			20.8-24.4 BLACK + GREY SILICEOUS + bk+gy, CA CALCAREOUS LOCALLY GRAPHITIC GR, PHY+LST PHYLLITE. + MARBLE								.00
27				Similar to 6.5-11.7. Fine laminated carbonaceous + siliceous phyllite								
28				with calcareous + siliceous laminae.								
29	100			15% of section white crystalline marble, as conformable irregular lenses.								.05
30				Alteration: possible silicification Mineralization: Sp as dissem. lenses								
31				+ bands, often occurs as "selva- ges" on the margins of marble bands.								.00
32	59											
33				24.4-28.0 BUFF TO GREENISH STRONGLY bf-Hgr, AK, ANKERITE ALTERED GRITTY gt, PHY PHYLLITE (Dirty fine sandstone/wacke)								
34				Pervasive ankerite alteration, locally fine phyllite (mudstone) to gritty phyllite (wacke) minor fuchsite.								.01
35	92			Alteration: strong-intense ank. alt.								
36				Mineralization: patchy pyrrhotite in siliceous lenses.								.00
37												
38	100			28.0-46.9 MEDIUM GREY MASSIVE TO mdgy, mv- LOCALLY BEDDED LIMESTONE bd, LST								
39				Mainly massive grey crystalline limestone with 3-10% calcite stringers. Stylolites common.								
40				subparallel to bedding. In bedded sections folding often noted with shallow plunging fold axis. Minor stringer calcite.								.01
41	100			(29.7-30.3) calcite veins (33.5-33.8) calcite cemented limestone breccia.								.02
42												
43												
44	100											
45												
46												
47	100											.00
48												

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	M.S.
					AK A	CA B	CL C	MS D	E			
72	8			Local very fine disseminated mag- netite.	/	/	/					.05
73			75	Alteration: moderate pervasive- conformable AK-QZ. local strong chlorite, minor fuchsite	/	/	/					
74				Mineralization: local fg. disem.	/	/	/					
75	100			MG, local c.g. pyrite in siliceous bands.	/	/	/					.0
76				(71.3-72.8) 1% fg magnetite	/	/	/					
77				(75.0-77.5) 5% Pyrite	/	/	/					
78				(78.0-80.2) 1% fg. magnetite.	/	/	/					.03
79			80		/	/	/					
80					/	/	/					
81	96				/	/	/					.03
82					/	/	/					
83					/	/	/					
84	100				/	/	/					.03
85					/	/	/					
86	85.8			85.8-93.0 GREY COARSE TO VERY COARSE GRAINED QUARTZITE (Felsic epichstic??)	/	/	/					
87	100			Variable grain size from 0.5-1mm to 5-8mm white to opalescent blue quartz grains in a weakly micaceous matrix. locally weakly argillaceous. Some sections not clearly chstic grey lency frags (lapilli?) Possible that Felsic epichstic is quartz eyes + glassy rhyolite lapilli.	/	/	/					.03
88				Alteration: nil.	/	/	/					
89	96			Mineralization: trace py.	/	/	/					.01
90				(86.0-88.0) very coarse 4-10mm.	/	/	/					
91				(91.0-92.7) " " "	/	/	/					
92	68			possible felsic lapilli, lency frags??	/	/	/					.01
93					/	/	/					
94					/	/	/					



DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	M.S.	
					AK A	CA B	CL C	MS D	E				
116	98			+ GRITTY GREEN PHYLITE - CARBONACEOUS PHYLITE (interbedded sandstone + argillaceous tuff)								.01	
119				Well bedded quartzite locally very coarse grains - blue quartz frings & black carbonaceous inter- laminae. Also isolated carbonaceous rip up clast. Contacts between argillaceous - tuffaceous beds + clean quartzites sharp. possibly scoured. Traces fuchate									.03
121	96			Alteration: local moderate chlorite weak sericite Mineralization: trace py + ps									.01
123													
124	100												
125				125.7 - 146.3 DARK GREEN FINE GRAINED EDH CHLORITIC PHYLITE									.05
126	100	52 70° 15° CL, PHY 5-10°		Fine grained very finely laminat- ed. strongly chloritic. Very little variability (fine tuffaceous sed- iment?) local short sections of moderate quartz arkose alteration. Minor patchy ps in strongly chloritic sections									.01
127													
128													
129	100												.01
130													
131													
132													
133	100												.07
134													
135	92												.07
138	100												.06
140													
142	100												.23
144	100												.05
146													

MAY NOT BE ALTERED

138 scale change

EQUITY ENGINEERING LTD.

DRILL LOG



PROJECT ATN96-01 ARGUS	GROUND ELEV.
HOLE NO. ARG96-02	BEARING 030°
LOCATION (A-Zone 1925N 2077E	DIP -82°
	TOTAL LENGTH 342' 104.2 m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 15/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> absent slight moderate intense
CORE SIZE NQ	
DATE STARTED July 13/96	
DATE COMPLETED July 14/96	
DIP TESTS none	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10%
COMMENTS limestone pinches or faulted out.	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					AK A	CA B	CL C	MS D	QZ E			
12				0 - 12.2 CASING								
12.2 - 21.3				OVERBURDEN								
13				OB								
14	37											.01
15												
16												
17	27											.02
18												
19												
20	23											.01
21	21.3			21.3 - 39.3 BLACK-DARK GREY SILICEOUS bk-dkgy, sl, FINE GRAINED ARGILLITE WITH Fg, ARG + QUARTZ STOCKWORK								
22				QZSW Fine grained very siliceous non laminated								
23	17			5-15% QUARTZ as conformable 1-3 mm stringers + brittle stockwork having veins with minor carbonate Veins are recrystallized. Some larger veins wider and are filled with white marble. Locally strongly silicified by stockwork + in situ brecciated								.01
24												
25												
26	92			(25.0 - 26.8) 20% wte marble lenses. (35.5 - 37.0) >30% quartz veins replacement and white marble. (33.8 - 34.0) augillaceous limestone								.04
27				Alteration: silicification - stockwork, possibly pervasive.								
28				Mineralization: up to 5% SP + GL ±								.00
29	100			Py in minor amounts in quartz veins + as selvages in white marble lenses + veins								
30												
31												
32	100											.02
33												
34												

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ	M.S.
					AK A	CA B	CL C	MS D	QZ E			
58												
59												.07
60	100											
61				61.2 - 65.0 GREY GREEN CHLORITIC-ANKERITIC								
62				gn, CLAK QUARTZ SHEAR ZONE								
63	100			QZ, SZ Sheared equivalent of above unit. high angle shear veins of quartz- ankerite-chlorite + magnetite								.05
64												
65				65.0 - 67.1 MASSIVE GREEN FINE GRAINED								
66	66			gn, fg, mv PHY Massive weakly banded green moderately ankerite altered phyllite.								.02
67												
68				67.1 - 70.1 MEDIUM GREEN MODERATELY								
69	96			mdgn bn ANKERITE ALTERED BANDED AK, CL, PHY CHLORITE PHYLLITE (Fine tuff?) Similar to 50.6-61.2 but banded								.05
70												
71				70.1 - 74.4 DARK GREEN CHLORITE-CALCITE- dkgn, CLCA ANKERITE SCHIST								
72	100			AK, SCH Massive fine grained chlorite schist locally 1-3mm ankerite porphyroblastic. no lapilli texture. Mineralization: minor fine grained pyrite, trace chalcopyrite Alteration: Strong chlorite moderate ankerite.								.05
73												
74												
75	100			(75.2-75.6) coarse grained quartzite. (77.1-78.2) well banded.								.03
76												
77				78.4-79.9 DARK GREEN-GREY FINE GRAINED								
78	90			dkgn-gv, ARGILLACEOUS CHLORITE SCHIST/PH fg, CL, SCH Fine laminated chlorite phyllite with argillaceous bands.								.06
79												
80												

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT ARGUS	GROUND ELEV.
HOLE NO. ARG96-03	BEARING 030°
LOCATION A zone 19803 N 20901 E	DIP - 70.5
	TOTAL LENGTH 99.1 m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 16/96	VERTICAL PROJECT
CONTRACTOR Birton Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> 0 absent 1 slight 2 moderate 3 intense
CORE SIZE NQ	
DATE STARTED July 14/96	
DATE COMPLETED July 15/96	
DIP TESTS none.	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> 0 traces only 1 < 1% 2 1% - 3% 3 3% - 10% 4 > 10%
COMMENTS "Strongly graphitic section with "syngenetic" baking sphalerite.	LEGEND



MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS		
		FROM	TO	WIDTH		Pb	Zn	Ag
(29.0-31.2) 3% coarse py in siliceous bands, minor SP to py. Section brecciated & faulted.	29.0	29.0	31.2		109025	244	2150	1.0
(31.2-33.3) 4% py both c.g. in silic bands & very fg. conform. laminar. SP 1% as med grain crystals in quartz stringers	31.2	31.2	33.3		109026	350	4240	2.2
(33.3-34.4) 3-4% SP fg. disem bands 2% py fg. banded & coarse grained.	33.3	33.3	34.4		109027	5200	2.76%	29.0
(34.4-36.5) 3% c.g. py to sp in qtz stringers	34.4	34.4	36.5		109028	572	1750	2.0
(36.5-38.8) 3% c.g. py, traces SP.	36.5	36.5	38.8		109029	1900	7400	3.8
(38.8-39.8) 3% fg. banded sp & on margins of calcite bands. Minor GL, 2% fg. banded py.	38.8	38.8	39.8		109030	3260	2.46%	6.6
(39.8-42.6) trace py.	39.8	39.8	42.6		109031	340	3440	0.6
(42.6-43.7) 1% med grained SP disem & in quartz stringers	42.6	42.6	43.7		109032	1440	1.10%	2.4
(43.7-44.4) 12% SP, 3% GL as semi msv bands and discordant stringers	43.7	43.7	44.4		109033	216%	9.50%	32.0
(44.4-45.6) 1% Py fg, 1% SP disem, veins	44.4	44.4	45.6		109034	840	2690	13.0

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS		
		FROM	TO	WIDTH		Pb	Zn	Ag
(55.9-56.6) trace py.	55.9	55.9	56.6		109035	100	732	2.4
(56.6-57.0) 8% SP tr GL 3% fg py SP Finely banded.	56.6	56.6	57.0		109036	176	9.67%	13.4
(57.0-58.5) 2% SP, 2% Py.	57.0	57.0	58.5		109037	320	358%	17.6
(58.5-60.6) 2% SP Fine dissem banded, 3% Fine banded PY.	58.5	58.5	60.6		109038	532	1.37%	22.0
(60.6-63.7) 2-3% SP 1% Py fine - grained dissem. & finely banded.	60.6	60.6	63.7		109039	90	1.2%	4.8
(63.7-65.6) trace SP & Py in quartz - calcite stringers.	63.7	63.7	65.6		109040	70	774	1.0
(65.6-66.5) local dissem of fg. banded SP is med - coarse grn py SP 1% PY 3%	65.6	65.6	66.5		109041	18	0.95%	1.0
(66.5-67.2) 12% SP 5% PY Fine grained finely banded. in siliceous phyllite + white marble.	66.5	66.5	67.2		109042	64	6.77%	5.0
(67.2-68.8) 2-3% SP 3% PY fg well lamina- ted.	67.2	67.2	68.8		109043	860	1.15%	2.2
(68.8-71.2) 5% SP, 2% GL, 3% PY in DZ-AK-CA vein. Perv alt vein margins	68.8	68.8	71.2		109044	9100	2.10%	15.6
(71.2-73.7) 3% py beds & fine laminae in pervasive ank alt ph.	71.2	71.2	73.7		109045	20	144	0.6

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	M.S.
					AK A	CA B	CL C	D	QZ E			
75	100			73.7-91.8 DARK GREEN CHLORITE-CALCITE- dkgn, CLCA (BIOTITE) MAGNETITE SCHIST MG, SCH (Chlorite altered lapilli tuff)	/	/	/					.26
76				dark green felted chlorite (>75%) with calcareous patches ragged	/	/	/					
77				biotite blebs. 0.25-3cm ragged	/	/	/					
78	100			felsic fragments possible lapilli. Magnetite as 1-3mm subhedral porphyroblasts. Very similar to CL-CA-MG Schist on surface.	/	/	/					.52
79					/	/	/					
80	89				/	/	/					.25
81					/	/	/					
82					/	/	/					
83					/	/	/					.39
84	89				/	/	/					
85					/	/	/					
86					/	/	/					.17
87	89				/	/	/					
88					/	/	/					
89					/	/	/					
90	100				/	/	/					.06
91				91.8-96.3 PALE GREENISH GREY MEDIUM Hgn-qu, mg, GRAINED PHYLITIC QUARTZITE QZT-PHY Moderately ankervite altered, local F.g. phyllite to distinct quartzite/ gritty texture.	/	/	/					.02
92					/	/	/					
93	46				/	/	/					
94					/	/	/					
95				96.3-99.1 INTERBANDED CARBONACEOUS cr PHY/CL, PHYLITE + CHLORITIC PHYLITE PHY Fine grained phyllite with 1-5cm irregular chloritic (alteration bands)	/	/	/					.03
96	65				/	/	/					
97					/	/	/					

EQUITY ENGINEERING LTD.

DRILL LOG



PROJECT ARGUS	GROUND ELEV.
HOLE NO. ARG96-04	BEARING 030°
LOCATION A zone 19733 N 20998 E	DIP -71
	TOTAL LENGTH 128.0 m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 17/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> 0 absent 1 slight 2 moderate 3 intense
CORE SIZE NQ	
DATE STARTED July 15/96	
DATE COMPLETED July 16/96	
DIP TESTS none.	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> 0 traces only 1 < 1% 2 1% - 3% 3 3% - 10% 4 > 10%
COMMENTS	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QZ	M.S
					AK A	CA B	CL C	MS D	QZ E			
0 - 3.7				CASING								
3.7 - 4.2				OVERBURDEN								
4.2 - 13.0	67			DARK GREEN CHLORITE CALCITE SCHIST								.05
				Dark green fine grained chlorite schist/phyllite with abundant 1-4mm calcite blebs/porphyroblasts. No magnetite noted or kspilli/tuff texture.								
13.0 - 15.4	85			MEDIUM GREEN FINE GRAINED BANDED PHYLLITE (Moderately quartz-ankerite altered)								.04
				Gradational to above & below, pervasive ankerite, often along bedding. Fine grained								
15.4 - 21.3	98			BUFF, INTENSE QUARTZ-ANKERITE-PYRITE ALTERED PALE GREEN PHYLLITE								.05
				Intense alteration > 20% ragged foliation parallel QZ-AK-CA veins with coarse pyrite & fuchsite patches. Gradational alteration contacts.								
21.3 - 26.6	97			LIGHT GREY STRONGLY QUARTZ-ANKERITE ALTERED FINE-GRAINED PHYLLITE								.05
				Similar to above slightly weaker alteration, local SP in quartz pyrite veins								

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ	M.S
					AK A	CA B	CL C	MS D	QZ E			
26	87			26.6-30.0 PALE GREEN INTERBEDDED								.05
27		Hgn, gt, PHY/ cg, QZT		GRITTY PHYLLITE + COARSE GRAI- NED QUARTZITE.								
28	66			Heterogeneous gritty phyllite, foliiform quartz lenses + local coarse xtaline quartzite								.02
29												
30				30.0-34.0 DARK GREY GRITTY CARBONA- CEOUS PHYLLITE								
31	66			dkgn, gt, cr, PHY								.05
32				Dark grey fine grained to gritty carbonaceous phyllite, locally strongly chloritic.								
33												
34	68			34.0-38.3 LIGHT GREENISH GREY MEDIUM GRAINED QUARTZITE								
35				Hgn-gy, mg, QZT								.02
36				Generally massive medium grained with distinct 0.5-1mm quartz grains weakly sericitic quartzite.								
37												
38	95			38.3-42.0 MEDIUM-DARK GREEN CHLOR- ITE CALCITE-SCHIST								.02
39				CLCA, SCH								
40				Weakly banded chlorite schist with 1-3mm ankerite/calcite porphyro- blasts. No lapilli tuff texture or magnetite.								
41	62			Alteration: strong chlorite.								.03
42				Mineralization: none.								
43	89			42.0-45.5 PALE GREENISH GREY FINE GRAINE D QUARTZITE								
44				Hgn-gy, fg, QZT								.02
45	85			45.5-48.1 MEDIUM GREEN STRONGLY FAULT- ED + BRECCIATED CHLORITE-CAL- CITE SCHIST.								
46				mdgn, br, ci CA SCH								.05
47				Very similar to 38.3-42.0 but faulted + brecciated								
48												

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DRILL LOG

PROJECT ARGOS	GROUND ELEV.
HOLE NO. AR696-S	BEARING 043
LOCATION E. zone. 19387 N 16700 E	DIP - 51.5
	TOTAL LENGTH 146.9 m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE Aug 6/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> 0 absent 1 slight 2 moderate 3 intense
CORE SIZE NQ	
DATE STARTED July 16/96	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> 0 traces only 1 < 1% 2 1% - 3% 3 3% - 10% 4 > 10%
DATE COMPLETED July 18/96	
DIP TESTS -49 @ EDH	
COMMENTS	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	mag. SUSC.
					A	B	C	D	E			
52	92			porphyroblasts in carbonaceous sections.								.02
54	98			spinelite rare in quartz-ankerite stringers								.03
56	100			(61.2-61.7) green banded phyllite.								.01
58	99			(62.5-63.0) gritty carbonaceous phyllite.								.01
60	100			(72.0-80.3) interbedded carbonaceous-cherty qtz + coarse-grained quartzite.								.11
62	100			(80.3-91.4) interbedded green phyllite + grey coarse quartzite								.01
64	100											.03
66	100											.02
68	100											.01
70	100											.01
72	92											.02
74	89											.04
76	85											.02
78	75											.04
80	59											.04
82	43											.04
84	33											.01
86	59											.03
88	98			914-975 PALE GREEN + DARK GREEN RHYTHMIC- ALLY LAMINATED GREEN PHYLLITE								.03
90	71			6 lgn-dkgn PHY 1-2 mm dark green + light green phyllite bands (tuffaceous seeds) with minor calcite clay blebs. Minor disseminated pyrite.								.03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	ZONES
					A	B	C	D	E			
98				97.5-100.6 SAND WASH								
	32			7 FZ								
100				100.6-140.9 GREENISH GREY WEAKLY CHLOR -								
102	98	B gngy, ca		ITIC COARSE GRAINED QUARTZITE								
104		QZT/gn, PHY		(CLAY ALT. FELDSPAR) + GREEN PHYLLITE								.01
106	85			largely massive weakly chloritic med-								
108	85			coarse grained quartzite with local								.02
110	95			white clay replacements of feldspar								
112				crystal fragments? and a weakly								
114	89			chloritic matrix. Also minor carbon-								.02
116				aceous laminae.								
118	95			Mineralization: minor fracture py-								
120	92			rite trace py sp in quartz segre-								.02
122				gations.								
124	85			(102-103) to SP PY + py in siliceous								.03
126	100			redoximable segregations.								
128				(104-106) quartzite with 1-3 mm								.03
130	100			blue grey quartz frags + 1-4 mm								
132				white clay after feldspar. (felsic								.03
134	100			epiclastic ??								
136	100			(109.3-111.3) gully chloritic phyllite								.02
138	100			(113.2-114.0) very coarse grained quartzite								.02
140	79			(125.3-125.4) massive coarse to very								
142	42			coarse grained quartzite. Minor clay								
144				alt. feldspar xtal frags?								.03
146				(135.4-137.0) carbonaceous phyllite inter-								.03
148				beds.								
150				(139.5-139.9) laminated green phyllite.								.05
				714								
				140.9-143.9 BLACK CARBONACEOUS PHYLLITE								.02
				7 bk, cr, PHY + CARBONACEOUS QUARTZITE								
				1/cr, QZT Fine grained phyllite to weakly								.02
				chloritic carbonaceous phyllite								.03
				grading into carbonaceous quartz-								.02
				ite with 1-3mm blue grey								.02
				quartz fragments.								.04
				(145.6-146.9) black <u>non</u> gully phyllite								
				146.9								

SCALE CHANGES

EQUITY ENGINEERING LTD.



DRILL LOG

PROJECT ARGUS	GROUND ELEV.
HOLE NO. ARG96-06	BEARING 032°
LOCATION A Zone 19852 N, 21101 E	DIP -70°
	TOTAL LENGTH 320' 97.5m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 20/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE <ul style="list-style-type: none"> 0 absent 1 slight 2 moderate 3 intense
CORE SIZE NQ	
DATE STARTED July 19/96	TOTAL SULPHIDE SCALE <ul style="list-style-type: none"> 0 traces only 1 < 1% 2 1% - 3% 3 3% - 10% 4 > 10%
DATE COMPLETED July 19/96	
DIP TESTS -69° eoh.	
COMMENTS	LEGEND

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS		
		FROM	TO	WIDTH		Pb	Zn	Ag
(41.9-42.7) trace SP 1% PY silicified zone.	41.9	41.9	42.7		109052	350	8140	1.8
(42.7-43.7) 2% SP, fault gouge and carb oxide cemented breccia.	42.7	42.7	43.7		109053	1.11%	1.93%	9.0
(43.7-45.7) 4% SP tr GL banded + forming selvages on marble lenses (poor rec- overy)	43.7	43.7	45.7		109054	7700	3.97%	10.0
(45.7-47.2) 4% SP, tr GL, 1% coarse py banded + on marble lense selvages. (poor recovery)	45.7	45.7	47.2		109055	2700	2.84%	7.2
(47.2-48.6) 1% SP on fractures.	47.2	47.2	48.6		109056	490	3.29%	11.4
(48.6-49.2) 5% SP 3% GL in calcareous. fault breccia?	48.6	48.6	49.2		109057	1.59%	3.87%	20.0
(49.2-50.9) Intense AK-G2-fuchsite alt- ered. phyllite?	49.2	49.2	50.9		109058	64	276	0.8
	50.9							

EQUITY ENGINEERING LTD.

DRILL LOG



PROJECT ARGUS	GROUND ELEV.
HOLE NO. ARG96-7	BEARING 032°
LOCATION A Zone. 19900 N 21300 E	DIP = 70°
	TOTAL LENGTH 400' 121.9 m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 21/96	VERTICAL PROJECT
CONTRACTOR Britton Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> absent slight moderate intense
CORE SIZE NQ	
DATE STARTED July 20/96	
DATE COMPLETED July 21/96	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10%
DIP TESTS -66° eoh.	
COMMENTS	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	Mag. SUSC.
					AK A	CA B	CL C	D	E			
0-12.2				CASING								
12				1 CASING								
12.2-33.5				LIGHT GREY CALCAREOUS-ANKERITIC COARSE-GRAINED MASSIVE QUARTZITE.								
13	39			2 Hcy, cg: my, CA, K, QZT								0.02
14				Oxidized, gossanous (ankeritic) massive unbedded, coarse grained with distinct 1-2mm blue grey quartz fragments. Locally faulted & cut by calcite breccias.								
15				Mineralization: none.								
16	26			Alteration: pervasive mod-weak ankerite alteration								0.0
17												
18												
19				335-44.8 DARK GREY + BLACK FINE LAMINATED SILICEOUS-CALCAREOUS SILICATE, g, PHY + CARBONACEOUS PHYLLITE (GRITTY)								
20	75			Finely banded with with grey siliceous and calcareous bands and 15% 0.5-3cm irregular marble replacement lenses.								0.1
21				Mineralization: minor sphal. 1-4% as disse bands disseminations & selvages on marble lenses. Very similar to ARG96-3, 6. Calcua 1-10% mainly in calcareous & siliceous bands. Section is oxidized with 3-5% leached limpidic material.								
22	86											0.02
23												
24												
25												
26	66											0.02
27												
28												
29	62											0.0
30												
31												
32	82											0.0
33												
34												

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					AK	CA	CL	OZ			
					A	B	C	D	E		
104				ankerite altered. Minor Pp, PY, SP, GL.	/				/		
106	100			102.5-106.2 PALE BROWN INTENSELY QUARTZ 8 bf, OZAK, PH	/	/	/	/	/		.07
108	89			Almost total replacement by ankerite + locally quartz as conformable zones + narrow bands. Where alteration weaker green siliceous phyllite visible.	/	/	/	/	/		.04
110				Mineralization: local GL SP + some CD in siliceous segregations.	/	/	/	/	/		.04
112	85			Pp PY disse- throughout where coarse grained Pp replaces PY + CD locally as composite Pp- CD grains.	/	/	/	/	/		.04
114	75			106.2-113.9 PALE GREEN + BROWN VARIABLY 9 Hgn+bn OZAK,gt, PHY	/	/	/	/	/		.05
116	85			QUARTZ-ANKERITE ALTERED GREEN N SILICEOUS GRITTY PHYLLITE Ankerite-OZ alteration occurs as pervasive zones and 0.5-2cm bands often covered by quartz. Bands conformable + give characteristic stripped appearance. Mineralization: minor disseminated Pp + py. Alteration variable weak to intense Quartz ankerite (113.2-113.9) very distinctive coarse-gra- ined quartzite. 2-3 mm blue-green quartz grains in a sericitic matrix.	/	/	/	/	/		.04
118	66			113.9-118.3 BLACK + GREENISH GREY CARBON- 10 bKngy, cr, PHY	/	/	/	/	/		.05
120				Finely laminated/foliated carbonace- ous phyllite with silvery grey + greenish phyllite bands. Well developed 2nd cleavage causes curvature of S ₀₋₁ + minor folding Alteration: weak ankerite Mineralization: minor Pp in quartz segregations.	/	/	/	/	/		.05
122				118.3-121.9 PALE GREEN GRITTY PHYLLITE 11 Hgn,gt,PHY	/	/	/	/	/		.05
				Similar to 106.2-113.9, green.	/	/	/	/	/		.05

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DRILL LOG

PROJECT ATN96-02 ARGUS	GROUND ELEV.
HOLE NO. ARG96-9	BEARING 029°
LOCATION A Zone 19993 N 21500 E	DIP -70°
	TOTAL LENGTH 212', 64.6m
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE August 6/96.	VERTICAL PROJECT
CONTRACTOR Britten Bros.	ALTERATION SCALE  <ul style="list-style-type: none"> 0 absent 1 slight 2 moderate 3 intense
CORE SIZE NQ	
DATE STARTED July 21/96	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> 0 traces only 1 < 1% 2 1% - 3% 3 3% - 10% 4 > 10%
DATE COMPLETED July 22/96	
DIP TESTS none.	
COMMENTS	LEGEND

EQUITY ENGINEERING LTD.

DRILL LOG



PROJECT Argus	GROUND ELEV.
HOLE NO. A-1	BEARING -
LOCATION	DIP -90
	TOTAL LENGTH 392' (119.5)
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE June 17/96	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE
CORE SIZE B	
DATE STARTED	TOTAL SULPHIDE SCALE
DATE COMPLETED	
DIP TESTS .	LEGEND
COMMENTS Good intersection of Mg-bearing chlor- calcite schist unit. + relation of it to ankerite alteration.	

PAGE OF		PROJECT: <i>Argus</i>		HOLE NO. <i>A-1</i>								
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					A Ank	B Calcite	C QZ	D CAI	E			
				0-7 (0-2.1)	No core							
24				7-39 (2.1-11.9)	MEDIUM TO LIGHT GREY WEAKLY ARGILLACEOUS LIMESTONE.							
28				mod-thy, cr, LST	Massive crystalline to weakly laminated with thin wispy argillaceous laminae + or carbonaceous stylolites. < 10%.							
32					white crystalline calcite veining.							
36					Alteration: mod-weak calcite veining.							
40				39	10-16 mod ankerite alteration							
44				2.8 80° (3-5.2)	(10-17) pale green phyllitic section to mod. calcite-ankerite alt.							
48				39-57 (11.9-17.4)	PALE BROWNISH GREEN SERICITE QUARTZ CALCITE SCHIST (FELDSP							
52				lthgn, MS QZCA, SCH	ATHIC-QUARTZ SILTSTONE / FELSIC-INTERMEDIATE TUFF)							
56					Massive to weakly laminated fine to med. grained likely feldspathic sediment/wacke.							
60				17.7 57°	Alteration: discontinuous mod-weak ankerite calcite.							
64					Mineralization: traces sp in QZ-AK alt sections + siliceous sections.							
68				67-77 (17.4-23.5)	MEDIUM TO LIGHT GREY WEAKLY ARGILLACEOUS LIMESTONE							
72				mdgy, cr, LST	Same as 7-39. (2.1-11.9)							
76					Alteration: local QZ-CA + AK veining.							
80				23.5 77°	Mineralization: traces pyrite. (72.5-74) black weakly graphitic limy phyllite (22-22.6)							
84				77-93 (23.5-28.2)	MEDIUM GREY TO PALE GREEN LOCA-LLY CARBONACEOUS TO SERICITIC PHYLLITE (siliceous shale to tuff shale)							
88				mdgy-lthgn cr, PHY	(77-80) (23.5-24.4) dark grey carbonaceous quartzite with undulating carbonaceous laminae w/ mod crystalline laminae of sphalerite + minor py.							
92					(80-93) (24.4-28.3) light colored QZ-MS-CA schist strongly veined with QZ-CA-AK. May have 1-2 mm quartz grains, may be quartz sweets.							
96				30.1 15°	Similar to 39-57. Minor disem bands sphalerite (11.9-17.4)							
100												
104												
108												
112												

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					Ank A	Cal B	Chl C	D	E		
296				296-319 DARK GREEN CHLORITE-CALCITE		/	/				
300				(90.2-97.2) MAGNETITE SCHIST.		/	/				
304				Hgn, CLCA Well banded schist with porphyroblastic calcite dolomite + patchy black chlorite or biotite. Magnetite.		/	/				
308				MG SCH fine-gr. disse, not as coarse as above unit of CL schist.		/	/				
312	94.9			Upper cnt may be fault - Gradational contact with underlying unit.		/	/				
316						/	/				
320				319-347 PALE GREEN MODERATELY ANKERITE ALTERED GREEN CHLORITE		/	/				
324				(97.2-105.8) Hgn, AKCL, CARBONATE PHYLLITE		/	/				
328				PHY Well banded with variable strong to moderate ank alt. Local conformable quartz with stringers, 1-2% pyrite.		/	/				
332						/	/				
336						/	/				
340						/	/				
344						/	/				
348				347-354 LIGHT BROWN STRONGLY ANKERITE ALTERED GREEN PHYLLITE		/	/				
352				(105.8-107.9) bf, AK, PHY Gradational with above unit, strong ank + quartz alt as perv alt of veins. 1-3% Pyrite.		/	/				
356						/	/				
360	109.7			354-379 LIGHT GREENISH GREY PHYLLITIC QUARTZITE / GRIT.		/	/				
364				(107.9-115.5) Hgn, gt, PHY Gradational with above, largely phyllitic with gritty sections, minor carbonaceous sections.		/	/				
368						/	/				
372	112.8			379-391 LIGHT GREY + GREEN FINELY LAMINATED CARBONACEOUS + CHLORITIC PHYLLITE		/	/				
376				(115.5-119.1) Hgn cr, CL, PHY Gradational with above, locally rhythmic interbedded grey phyllite, siliceous phyllite + chloritic phyllite.		/	/				
380				Section shows numerous structural elements. Well defined Kink bands give S ₁ change which cuts across compositional layering.		/	/				
384						/	/				
388						/	/				


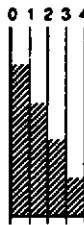
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DRILL LOG

PROJECT ATN96-01 ARGUS	GROUND ELEV.
HOLE NO. A:2	BEARING
LOCATION	DIP
	TOTAL LENGTH
LOGGED BY M. Baknes.	HORIZONTAL PROJECT
DATE June 20/96	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE  <ul style="list-style-type: none"> absent slight moderate intense
CORE SIZE B	
DATE STARTED 1973	
DATE COMPLETED	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10%
DIP TESTS	
COMMENTS	LEGEND

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT Argus	GROUND ELEV.
HOLE NO. A-3	BEARING -
LOCATION	DIP vertical
	TOTAL LENGTH
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE June 20/96	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE  <ul style="list-style-type: none"> absent slight moderate intense
CORE SIZE BQ	
DATE STARTED 1973	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10%
DATE COMPLETED	
DIP TESTS	
COMMENTS <p>Similar section to A-2. Mineralization in upper part of hole 10-15%. Sp over 1' not samples. last 2cm of core at EOH contains band of disseminated sphalerite. Hole should have continued -</p>	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					Ank A	Calcite B	Chlor C	Seric D	E		
10				CASING (0-4.9)							
20				Overburden? (4.9-13.7)							
30				WHITE & GREY MARBLE (Possibly overburden) (13.7-14.6)							
40				gn, LST Weakly quartz ankerite altered.							
50				MEDIUM GREEN CHLORITE-CALCITE SCHIST (INTERMEDIATE TUFF?) (14.6-17.4)							
60				mdgn, CLCA (Possibly overburden) , SCH Chloritic schist with 1-3mm calcite porphyroblasts, weak to moderate AK alt.							
80				LIGHT GREY INTERMIXED TO INTER BEDDED SERICITIC QUARTZITE/ (17.4-53) GRIT, ARGILLACEOUS QUARTZITE & Hgy, QZT/ CR, QZT SILICEOUS ARGILLITE							
100				Similar to section in A-2. Veins from light-white sericitic quartzite to argillaceous quartzite with thin wedges & beds of argillite/phyllite. In folded contorted sections essentially siliceous-sericitic gneiss. May be sericite altered.							
120											
130											
140											
150				LIGHT GREY WEAKLY CARBONACEOUS (53-86.9) & SERICITIC MEDIUM-GRAINED GRIT/QUARTZITE Hgy, mg, QZT							
160				Generally massive with minor carbon- aceous sections, weak Ankerite alteration, rare coarse pyritic oolites.							
170											
180				(77.1-86.9) (263-285) greater proportion of carbonac- eous phyllite interbeds							
190				(86.9) (285') last 2m of core 6% sph as disem. band in siliceous section? * this hole should not have been stopped.							
200				* Some of carbonaceous bands may be weakly graphitic							
210											
220											
230											
240											
285											

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DRILL LOG

PROJECT ATN96-01 ARGUS	GROUND ELEV.
HOLE NO. D-1	BEARING
LOCATION	DIP -90
	TOTAL LENGTH 93.9
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 4/96	VERTICAL PROJECT
CONTRACTOR	<p style="text-align: center;">ALTERATION SCALE</p> <p>0 1 2 3</p> <p>absent slight moderate intense</p>
CORE SIZE BQ	
DATE STARTED 1973	
DATE COMPLETED	
DIP TESTS	<p style="text-align: center;">TOTAL SULPHIDE SCALE</p> <p>0 1 2 3 4</p> <p>traces only < 1% 1% - 3% 3% - 10% > 10%</p>
COMMENTS	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					Ank A	Cal B	Chlv C	Musc D	Qtz E		
0				0-2.4 OVERBURDEN							
2				CASING							
4				2.4-23.8 MEDIUM TO PALE GREEN FINE-							
6				GRAINED CALCAREOUS PHYLLITE (INTERMEDIATE WACKE?)							
8				17-23.8 miss- (ms)							
10				Hgn, fg, CA, PHY Medium green fine grained phyllite with porphyroblastic + pervasive calcite ± dolomite/ankerite alteration.							
12				Gradational contact with below. Alteration: moderate to strong ankerite + calcite alteration, pervasive + as							
14				Foliation parallel veins with quartz. Minor muscovite. (7.9-23.8) strong qtz-ank alteration.							
16											
18											
20											
22											
24				23.8-42.9 MEDIUM GREEN - GREY GREEN MEDI-							
26				UM TO FINE GRAINED GRITTY PHYL-							
28				LITE TO GRITTY CARBONACEOUS (Crenulated) PHYLLITE							
30				Variable section, carbonaceous sections very soft possibly faulted strongly crenulated							
32				(23.8-34.7) Green gritty phyllite (34.7-42.9) dark greenish grey weakly carbonaceous phyllite.							
34											
36											
38											
40											
42				42.9-52.4 GREENISH GREY COARSE GRAINED							
44				TO VERY COARSE GRAINED SERI-							
46				CITIC QUARTZITE							
48				Locally up to 4mm blue-grey quartz fragments in a sericitic to weakly chloritic phyllitic matrix. Local thin bands of carbonaceous phyllite.							

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					Ank A	Cal B	Chlor C	Musc D	Qtz E		
50				(42.9-43.4) very coarse grained quartzite 2-4mm blue-grey quartz frags.							
52				52.4-54.9 BLACK CARBONACEOUS PHYLLITE							
54		bk, cr, PHY		locally siliceous phyllite some weakly "graphitic" surfaces. (not conductive)							
56				some chloritic sections + 0.5-1cm euhedral pyrite porphyroblasts.							
58				54.9-56.5 WEAK TO MODERATELY ANKERITE							
60		Hgn AK, PHY		ALTERED PALE GREEN PHYLLITE							
62				Pale green phyllite with 1-2mm Calcite + ankerite porphyroblasts							
64				56.5-67.0 MEDIUM GREEN FINE TO MEDIUM							
66		mgn, mg, gt PHY/Hgn PHY		GRAINED INTERBANDED GRITTY GREEN PHYLLITE AND FINE GRAINED GREEN PHYLLITE. (WACKE)							
68				Similar to above green porphyroblastic phyllite but have also green phyllite with distinct quartz grains.							
70				Weak alteration.							
72				67.0-76.8 PALE GREENISH GREY MEDIUM							
74		Hgn, QZT		GRAINED SERICITIC QUARTZITE							
76				Gradational with above weakly sericitic. local 1-2mm quartz eyes.							
78				76.8-84.8 BLACK + GREENISH GREY INTER							
80		bk, cr, PHY/ mgn, cr, gt PHY		BEDDED CARBONACEOUS PHYLLITE + CARBONACEOUS GRITTY PHYLLITE TO CARBONACEOUS PHYLLITE							
82				Mainly black carbonaceous phyllite with sharp interbeds of carbonaceous quartzite (wacke). Good minor fold closures + So.S ₁ .S ₂ relations.							
84				Abundant 2-10mm pyrite porphyroblasts							
86				(81.1-83.8) Pale green gritty phyllite.							
88				84.8-87.2 PALE GREENISH GREY MEDIUM							
90		Hgn, fg, QZT		TO FINE GRAINED QUARTZITE							
92				87.2-91.8 MODERATELY ANKERITE ALTERED							
94		plgn, AK, gt, PHY		PALE GREEN GRITTY PHYLLITE. Very similar to 54.9-56.5							

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DRILL LOG



PROJECT ATN96-01	GROUND ELEV.
HOLE NO. E1	BEARING —
LOCATION E zone.	DIP -90
	TOTAL LENGTH
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE June 22/96	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE
CORE SIZE BQ	
DATE STARTED 1973	TOTAL SULPHIDE SCALE
DATE COMPLETED	
DIP TESTS	
COMMENTS	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					AK A	CA B	QZ C	MS D	CL E		
46				47.5-65.2 LIGHT GREENISH GREY WEAKLY SERICITIC TO CHLORITIC COARSE GRAINED QUARTZITE Hgn, cg, QZT							
50				Varies from 15-40% 1-2mm distinct grey-blue rounded quartz grains in a sericitic to weakly chloritic groundmass. May be Qtz-eye phylite but proportion of quartz "eyes" makes this unlikely. Has locally strong schistose character. Pyrite tr = 2% as disem cubes. Sphalerite as disem to massive 1-5mm bands. Weakly carbonaceous.							
64				65.2-72.0 DARK GREY CARBONACEOUS PHYLITE (CARBONACEOUS QUARTZITE) dkgn, cr, gt, PHY							
68				Heterogeneous phyllite w/ 0.1-0.5 mm quartz grains in a carbonaceous matrix. Cut by numerous quartz carbonate veins. Weak AK QZ alt, as veins.							
72				72.0-77.8 MEDIUM GREEN QUARTZ-SERICITE/CHLORITE PHYLITE (Fine grained dirty quartzite/wacke) mgn, QZMS, CL, PHY							
76				Pale green fine grained wacke visible quartz grains. Mod QZ-AK alt as porphyroblasts & veins.							
80				77.8-82.7 MEDIUM GREY CARBONACEOUS VERY COARSE GRAINED QUARTZ SANDSTONE/QUARTZITE mgn, cr, cg, QZT							
84				1-4mm grey blue lency quartz grains in a grey phyllitic sericitic matrix. Resembles float in trench A-9.							
88				82.7-99.06 PALE GREEN QUARTZ-SERICITE SCHIST (Rhyolite tuff-sericite altered dirty quartzite) Hgn, QZMS, SCH							
92				Heterogeneous texture, lency tabular quartz, rare distinct 1-3mm quartz lenses (possible fragments) in a sericitic							

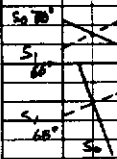
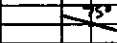
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					AK A	CA B	QZ C	MS D	CL E		
94			60°	groundmass. Siliceous bands often contain dolomite/ankerite veins.							
96				Sphalerite occurs as dissem & semi concordant bands, also minor pyrite w/SP							
98				* This lithology & mineralization very similar to that noted in the D1 trend.							
100				Short sections are less siliceous & more sericitic while others are mostly talcose.							
102			60°	(82.7-85.3) Pale green sericitic phyllite/schist.							
104			75°	(medium green sericite - talc? schist).							
		EDH		99.1-104.2 LIGHT GREENISH GREY FINE-GRAINED SERICITIC QUARTZITE-? (FELSIC TUFF?) SCHIST							
				Generally massive fine grained sericitic finely quartzose with patchy ankerite alteration.							
				(99.1-99.2) massive band of medium grained pyrite in a siliceous matrix.							

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DRILL LOG



PROJECT <i>Argus.</i>	GROUND ELEV.
HOLE NO. <i>E-2</i>	BEARING <i>-</i>
LOCATION	DIP <i>-90</i>
	TOTAL LENGTH <i>84.7m</i>
LOGGED BY <i>M. Baknes</i>	HORIZONTAL PROJECT
DATE <i>June 23/76</i>	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE  <ul style="list-style-type: none"> absent slight moderate intense
CORE SIZE <i>BQ</i>	
DATE STARTED <i>1973</i>	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10%
DATE COMPLETED	
DIP TESTS	
COMMENTS <i>Monotonous section of weak to moderately Ankerite altered medium green fine grained green phyllite + grey limestone and sections of interbedded ls + Ph.</i>	LEGEND

DEPTH (M)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QZ.
					AK A	QZ B	MS C	CL D	CP E		
4				0-4.9 CASING							
6				4.9-19.6 MEDIUM GREEN FINE GRAINED CALCAREOUS MODERATELY ANKER- ITE ALTERED PHYLLITE GRIT (GREYWACKE) Fine grained massive to weakly banded green phyllite with fine siliceous clastic component. Typical pale green phyllite. Moderately - pervasively ankerite altered. Minor disseminated pyrite * traces Pyrrhotite							
20				19.6-32.2 INTERBEDDED MEDIUM GREEN PHYLLITE + GREY CARBONACEOUS QUARTZITE (Calcareous) Similar to above unit but equal proportion of finely laminated carb- onaceous phyllite - gritty phyllite + white medium grained quartzite. Weakly altered local S ₁ + S ₂ relationships local brecciation of quartzites. Calcareous (26.0-27.0) white brecciated quartzite							
32				32.2-34.7 WHITE SERICITIC QUARTZITE Massive minor sericite minor pyrite							
38				34.7-48.3 INTERBEDDED MEDIUM GREEN PHYLLITE + GREY CARBONACEOUS QUARTZITE (Calcareous) Very similar to 19.6-32.2							



EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT ARGUS	GROUND ELEV.
HOLE NO. E3	BEARING -
LOCATION	DIP -90
	TOTAL LENGTH
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE June 23	VERTICAL PROJECT
CONTRACTOR	<p>ALTERATION SCALE</p>  <p>absent slight moderate intense</p>
CORE SIZE BQ	
DATE STARTED 1973	
DATE COMPLETED	
DIP TESTS	<p>TOTAL SULPHIDE SCALE</p>  <p>traces only < 1% 1% - 3% 3% - 10% > 10%</p>
COMMENTS	
	LEGEND

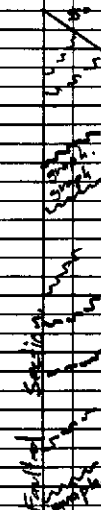
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ	
					AK	CA	QZ	CL	MS			
					A	B	C	D	E			
7				0-6.7 CASING								
8				CASING								
10				6.7-16.0 LIGHT GREENISH GREY MEDIUM lt gngy-mg, QZT TO COARSE GRAINED QUARTZITE Well defined quartzite texture with up to 2-3 mm lensy quartz grains in a weakly sericitic matrix. Generally fining upwards.								
16				16.0-45 INTERBEDDED MEDIUM GREEN, GRIT- mgn, gt, PHY TY PHYLLITE - PHYLLITE + GREENISH /gngy, QZT GREY MEDIUM GREY QUARTZITE								
20				Similar to section in E-1* non carbonaceous Varies from fine grained weakly chloritic phyllite to phyllite with medium-grained quartz frags (wacke) to fine-med grained quartzite. Short sections of grey carbonaceous quartzite-phyllite. (16.0-18) antiferite porphyroblasts in a chlorite phyllite (22-25.0) weakly carbonaceous								
24												
26												
28												
30												
32												
34												
36												
38												
40												
42												
44												
46				45.0-52.1 INTERBEDDED LIGHT GREY MASSIVE Hqy, MS, QZT SERICITIC QUARTZITE + GREY /cr, gt, PHY CARBONACEOUS GRITTY PHYLLITE (Non Carbonaceous) Sections of massive grey medium grained quartzite + black crenulated phyllite + gritty phyllite.								
48												
50												
52												

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DRILL LOG

PROJECT ATN 96-01 ARGUS	GROUND ELEV.
HOLE NO. E4	BEARING -
LOCATION E-Zone	DIP -90
	TOTAL LENGTH
LOGGED BY M. Baknes	HORIZONTAL PROJECT
DATE July 3/96	VERTICAL PROJECT
CONTRACTOR	ALTERATION SCALE <p>0 1 2 3</p> <p>absent</p> <p>slight</p> <p>moderate</p> <p>intense</p>
CORE SIZE BQ	
DATE STARTED 1973	
DATE COMPLETED	TOTAL SULPHIDE SCALE <p>0 1 2 3 4</p> <p>traces only</p> <p>< 1%</p> <p>1% - 3%</p> <p>3% - 10%</p> <p>> 10%</p>
DIP TESTS	
COMMENTS strongly faulted section, local intense ankerite + manganese alteration. -	LEGEND

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					AK A	CA B	DZ C	CL D	MS E		
56				46.7 - 78.5 MEDIUM TO PALE GREEN SERICITIC md-ltgn, + LOCALLY GRAPHITIC GRIT. (Highly gt, PHY faulted section)							
58				Variable section, largely light green fine-grained with local medium to coarse grit sections. Faulted sections carbonaceous to locally graphitic.							
60				(51.9 - 53.9) Quartz vein.							
62				(57.4 - 58) coarse grit							
64				(65.0 - 66.0) faulted, carbonaceous + graphitic with coarse pyrite.							
66				(71.9 - 74.1) sheaved + faulted carbonaceous surfaces							
68				(77.0 - 78.5) coarse sericitic quartzite.							
70											
72											
74											
76											
78											
80											
82											
84											
86											
88											
90											



78.5
E2H

APPENDIX D

ROCK SAMPLE DESCRIPTIONS

AK	Ankerite	BI	biotite	CA	calcite
CB	Fe-carbonate	CL	chlorite	CY	clay
EP	epidote	GE	goethite	GL	galena
GR	graphite	HE	hematite	JA	jarosite
KF	potassium feldspar	MG	magnetite	MN	Mn-oxides
MS	sericite	PY	pyrite	QZ	quartz
SI	silica	SP	sphalerite		

ALTERATION INTENSITY

tr	trace	w	weak	m	moderate
		s	strong		

Property : Argus

NTS : 105G

Date : January 20, 1997

Sample No. UTM : N Type : Float Alteration : wCL, sQZ Au Ag Cu Pb Zn Ba
 E Strike Length Exp. : m Metallics : 40%PY (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)
 4662 Elevation: 1360 m Sample Width : m Secondaries: mGE 40 <0.2 199 <2 38 40
 Orientation: / True Width : m Host : Chloritic Quartz Schist
 Comments : Southeast of E Zone. 15x10x10 cm subangular cobble in stream. Massive very fine-grained to medium-grained pyrite in siliceous weakly chloritic schist. Not obviously banded.

Sample No. UTM : N Type : Grab Alteration : sMS, mQZ Au Ag Cu Pb Zn Ba
 E Strike Length Exp. : 2 m Metallics : trGL, trPY, trSP (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)
 4663 Elevation: 1380 m Sample Width : m Secondaries: wGE <5 <0.2 7 180 128 960
 Foliation : 124 / 52 SW True Width : m Host : Quartz Sericite Schist
 Comments : Located between A and E zones. Quartz occurs as lenticular grains or eyes in a sericitic matrix. Varies from buff to white with quartz segregations, possibly a rhyolitic tuff. Sample submitted for whole rock analysis.

Sample No. UTM : N Type : Grab Alteration : sMS, mQZ Au Ag Cu Pb Zn Ba
 E Strike Length Exp. : 3 m Metallics : 3%SP, 1%GL (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)
 4664 Elevation: 1380 m Sample Width : 1 m Secondaries: wGE 10 0.8 16 940 17300 160
 Foliation : 124 / 52 SW True Width : m Host : Quartz Sericite Schist (Rhyolite?)
 Comments : Similar to 4663 but with more quartz- and sericite-rich. Sphalerite and galena occur as disseminations in 1-3 mm foliation-parallel bands. Likely a rhyolite tuff. At the same location as 4663.

Sample No. UTM : N Type : Float Alteration : sMS, sQZ Au Ag Cu Pb Zn Ba
 E Strike Length Exp. : m Metallics : trPY (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)
 4665 Elevation: 1350 m Sample Width : m Secondaries: wGE 5 1.4 4 20 96 2940
 Orientation: / True Width : m Host : Quartz Sericite Schist
 Comments : Very friable quartz-sericite schist with milky white folioform quartz and rare 1-2 mm grey quartz eyes. May be a rhyolite tuff. Similar to D trench. Sampled from Upper E trenches. Sample submitted for whole rock analysis.

Sample No. UTM : N Type : Grab Alteration : None Au Ag Cu Pb Zn Ba
 E Strike Length Exp. : 5 m Metallics : None (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)
 4666 Elevation: 1330 m Sample Width : 1 m Secondaries: None 10 <0.2 9 26 172 630
 Orientation: / True Width : >10 m Host : Heterolithic Quartz Feldspar Dacitic Tuff
 Comments : Very distinctive glassy quartz crystals, feldspar crystals and fragments in a dacitic tuff matrix. Also contains fragments of shale, rhyolite/dacite porphyry and ultramafics. Located north of E zone.

APPENDIX E

GEOPHYSICS REPORT

GEOPHYSICAL REPORT

ARGUS PROJECT, YUKON

FIELD WORK AND INSTRUMENTATION

Magnetic and a very low frequency electromagnetic (VLF-EM) surveys were completed on the Argus property, for Equity Engineering Ltd. by SJ Geophysics Ltd. The Argus property is located in the Watson Lake Mining District, NTS 105G/12, Yukon.

The geophysical crew consisted of Zoran Dujakovic (Geophysicist) and Robert J Ewen (Technician).

Magnetometer & VLF-EM surveys were completed July 01 to July 16, 1996. Data acquisition, processing and field presentation were performed by Zoran Dujakovic. The grid consisted of flagged, compass and hip-chain lines. Surveying was performed at 12.5 metre intervals along the 100 and 200m spaced lines for a total of approximately 60 kilometres.

Two EDA OMNI PLUS combined proton precession magnetometer and VLF-EM systems were used for data acquisition and an EDA OMNI IV proton precession magnetometer was used as a base station which recorded data in 30 seconds intervals. The VLF-EM survey used the signals from a Geonics NK27 portable transmitter transmitting at 18.6 kHz, Cutler (24.0 kHz, NAA) and Jim Creek (24.8 kHz, NLK). The Cutler transmitter is poorly orientated and was used primarily for conformation of anomalies detected with the portable transmitter. The signal/noise from Cutler transmitter was very bad and data from this station is not presented. Jim Creek transmitter was used just last couple days while it was transmitting. The direction of VLF-EM surveying is positive to the north.

All data was downloaded to a computer in the evening. The data was processed as time permitted by the geophysicist. The data was plotted on an Bubble Jet printer.

The data was re-plotted on a 36 inch Ink Jet colour plotter in Vancouver for the final presentation.

November, 1996

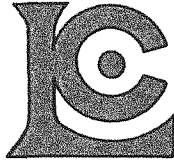
SJ Geophysics Ltd.

Zoran Dujakovic, Geophysicist



APPENDIX F

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 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

A9625654

Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

CERTIFICATE

A9625654

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
P.O. #:

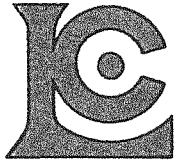
Samples submitted to our lab in Vancouver, BC.
This report was printed on 29-JUL-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	21	RUSH Geo ring to approx 150 mesh
295	21	RUSH crush and split (0-3 Kg)
3202	21	Rock - save entire reject
285	21	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	21	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
578	21	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	21	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	21	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	21	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	21	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	21	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	21	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	21	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	21	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	21	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	21	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	21	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	21	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	21	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	21	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	21	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	21	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	21	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	21	Pb ppm: 24 element, rock & core	AAS	2	10000
582	21	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	21	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	21	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	21	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	21	Zn ppm: 24 element, rock & core	ICP-AES	2	10000



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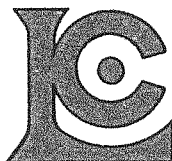
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 Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

CERTIFICATE OF ANALYSIS A9625654

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109017	255 295	10	14.4	0.28	60	< 0.5	10	4.70	283	25	151	29	4.87	0.06	0.26
109018	255 295	20	9.6	0.72	270	< 0.5	< 2	1.01	81.5	13	223	35	9.07	0.24	0.27
109022	255 295	10	2.4	0.52	60	< 0.5	8	3.88	9.0	6	127	14	2.42	0.20	0.88
109023	255 295	15	69.6	0.61	40	< 0.5	10	11.20	67.5	14	133	33	5.10	0.20	0.77
109024	255 295	5	7.8	1.21	60	< 0.5	< 2	2.27	49.0	13	147	31	6.16	0.30	0.67
109027	255 295	< 5	29.0	0.78	70	< 0.5	6	6.72	65.5	9	119	20	1.91	0.25	0.66
109030	255 295	< 5	6.6	0.92	80	< 0.5	6	4.16	38.0	8	149	38	1.66	0.36	0.48
109031	255 295	< 5	0.6	0.93	80	< 0.5	10	>25.0	7.5	7	70	13	0.88	0.37	0.34
109032	255 295	< 5	2.4	0.60	50	< 0.5	6	4.54	28.5	9	137	15	1.66	0.22	0.29
109033	255 295	< 5	32.0	0.54	50	< 0.5	12	2.42	203	10	145	33	1.42	0.20	0.31
109034	255 295	20	13.0	0.91	70	< 0.5	< 2	2.58	6.0	9	154	29	1.66	0.34	0.07
109035	255 295	15	2.4	0.29	20	< 0.5	2	6.01	1.0	2	94	51	0.56	0.10	0.21
109036	255 295	20	13.4	0.31	30	< 0.5	12	0.89	209	20	191	31	1.01	0.11	0.11
109037	255 295	45	17.6	0.89	90	< 0.5	2	2.32	73.5	11	130	30	1.43	0.35	0.34
109038	255 295	50	22.0	0.86	80	< 0.5	4	6.27	27.0	10	187	21	1.76	0.33	0.50
109039	255 295	30	4.8	0.44	40	< 0.5	10	13.05	24.5	7	92	14	1.62	0.17	0.77
109040	255 295	< 5	1.0	0.41	40	< 0.5	8	>25.0	1.5	6	46	8	0.99	0.19	0.62
109041	255 295	< 5	1.0	0.26	30	< 0.5	8	25.0	10.5	6	46	12	1.88	0.11	0.88
109042	255 295	15	5.8	0.38	40	< 0.5	12	9.70	134.0	18	89	30	3.03	0.17	1.63
109043	255 295	10	2.2	0.65	70	< 0.5	8	14.95	27.0	11	48	12	2.83	0.30	1.74
109044	255 295	45	15.6	0.53	80	< 0.5	2	5.54	56.5	15	187	60	3.15	0.23	0.74

CERTIFICATION:

Haut Buchler



Chemex Labs Ltd.

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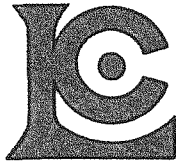
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 Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

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 Invoice No. : I9625654
 P.O. Number :
 Account : EIA

CERTIFICATE OF ANALYSIS A9625654

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109017	255	295	2930	< 1	0.01	17	950	6800	58	< 0.01	6	< 10	>10000			
109018	255	295	3510	< 1	0.02	28	1350	4000	25	0.01	9	< 10	>10000			
109022	255	295	1875	< 1	0.02	16	760	1300	61	< 0.01	7	< 10	4830			
109023	255	295	3730	< 1	0.03	18	320	>10000	139	0.01	10	< 10	>10000			
109024	255	295	3500	< 1	0.03	32	430	7100	43	0.03	10	10	>10000			
109027	255	295	1545	< 1	0.05	14	1590	5200	194	0.01	9	< 10	>10000			
109030	255	295	910	< 1	0.04	19	2630	3260	178	0.01	14	< 10	>10000			
109031	255	295	665	< 1	0.07	14	1630	340	1665	0.03	17	< 10	3440			
109032	255	295	565	< 1	0.04	29	2600	1440	235	0.01	11	< 10	>10000			
109033	255	295	850	< 1	0.03	16	1180	>10000	114	< 0.01	7	< 10	>10000			
109034	255	295	175	< 1	0.06	40	3200	840	137	0.06	19	< 10	2690			
109035	255	295	525	< 1	0.03	4	700	108	231	< 0.01	4	< 10	732			
109036	255	295	200	< 1	0.02	15	1130	176	33	< 0.01	4	< 10	>10000			
109037	255	295	705	< 1	0.04	21	1340	320	77	0.02	11	< 10	>10000			
109038	255	295	1310	< 1	0.05	28	1380	532	151	0.01	13	< 10	>10000			
109039	255	295	1560	< 1	0.03	11	1960	98	401	0.02	11	< 10	>10000			
109040	255	295	935	< 1	0.03	9	2200	70	1205	0.03	15	< 10	774			
109041	255	295	1620	< 1	0.02	7	1530	18	1080	0.01	10	< 10	>10000			
109042	255	295	2150	< 1	0.01	16	2570	64	213	0.01	15	< 10	>10000			
109043	255	295	2060	< 1	0.02	17	2670	860	368	0.02	17	< 10	>10000			
109044	255	295	1810	< 1	0.02	25	190	9100	126	< 0.01	8	10	>10000			

CERTIFICATION: Mark E. Baknes



Chemex Labs Ltd.

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Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

CERTIFICATE

A9625857

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Project: ATN 96-01
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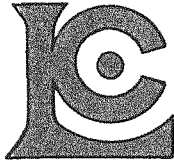
Samples submitted to our lab in Vancouver, BC.
 This report was printed on 29-JUL-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	9	RUSH Geo ring to approx 150 mesh
272	8	RUSH 4-7 Kg crush and split
3202	9	Rock - save entire reject
285	9	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
990	9	Au ppb: RUSH, fuse 10 g sample	FA-AAS	5	10000
578	9	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	9	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	9	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	9	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	9	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	9	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	9	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	9	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	9	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	9	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	9	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	9	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	9	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	9	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	9	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	9	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	9	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	9	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	9	Pb ppm: 24 element, rock & core	AAS	2	10000
582	9	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	9	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	9	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	9	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	9	Zn ppm: 24 element, rock & core	ICP-AES	2	10000



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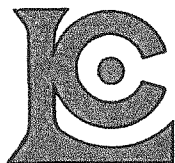
CERTIFICATE OF ANALYSIS

A9625857

SAMPLE	PREP CODE	Au ppb RUSH	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)
109016	255 202	< 5	3.2	0.31	50	< 0.5	< 2	3.96	36.5	5	132	22	1.24	0.08	0.06
109019	255 272	< 5	12.0	0.59	130	< 0.5	2	1.59	57.5	8	196	182	4.25	0.20	0.30
109020	255 272	< 5	2.0	0.62	80	< 0.5	< 2	0.66	18.5	6	272	24	1.11	0.21	0.13
109021	255 272	< 5	5.2	0.58	80	< 0.5	2	2.66	35.0	5	178	24	0.77	0.20	0.07
109025	255 272	10	1.0	3.56	260	0.5	2	2.80	4.0	11	323	35	2.91	1.22	0.96
109026	255 272	25	2.2	2.31	190	< 0.5	2	3.40	7.0	10	221	29	3.34	0.79	0.80
109028	255 272	< 5	2.0	3.36	270	0.5	4	7.92	4.0	10	142	43	3.03	1.25	1.22
109029	255 272	< 5	3.8	1.53	160	< 0.5	6	13.55	16.5	8	67	34	1.93	0.58	0.69
109045	255 272	< 5	0.6	4.81	510	0.5	< 2	8.59	< 0.5	35	418	47	6.78	1.90	3.40

CERTIFICATION:

Handwritten signature



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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)			
109016	255 3202	915	< 1	0.04	13	1000	1360	96	< 0.01	5	< 10	>10000			
109019	255 272	1820	< 1	0.02	20	1640	4300	38	0.01	9	< 10	>10000			
109020	255 272	415	< 1	0.02	21	1920	612	22	0.02	8	< 10	9300			
109021	255 272	315	< 1	0.03	12	1610	2600	80	0.01	8	< 10	>10000			
109025	255 272	1075	1	0.12	37	2160	244	110	0.07	38	< 10	2150			
109026	255 272	1345	< 1	0.10	48	1770	350	111	0.04	20	< 10	4240			
109028	255 272	2370	1	0.15	32	1680	572	328	0.05	33	< 10	1750			
109029	255 272	1380	< 1	0.06	21	2520	1900	705	0.03	21	< 10	7400			
109045	255 272	1935	< 1	0.17	177	1790	20	324	0.58	169	30	144			

CERTIFICATION: Hart Buchler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
 PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

A9625555

Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

CERTIFICATE

A9625555

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN96-01
 P.O. #:

Samples submitted to our lab in Vancouver, BC.
 This report was printed on 2-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	15	Geochem ring to approx 150 mesh
226	15	0-3 Kg crush and split
3202	15	Rock - save entire reject
285	15	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	15	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
578	15	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	15	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	15	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	15	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	15	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	15	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	15	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	15	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	15	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	15	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	15	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	15	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	15	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	15	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	15	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	15	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	15	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	15	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	15	Pb ppm: 24 element, rock & core	AAS	2	10000
582	15	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	15	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	15	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	15	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	15	Zn ppm: 24 element, rock & core	ICP-AES	2	10000



Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN96-01
Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

Page Number :1-A
Total Pages :1
Certificate Date: 02-AUG-96
Invoice No. :I9625555
P.O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9625555

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)
109001	205	226	< 5	8.8	2.02	170	< 0.5	2	3.66	34.0	13	107	24	3.36	0.85	0.18
109002	205	226	10	7.8	2.88	230	< 0.5	< 2	5.92	52.0	12	143	37	3.94	1.21	0.94
109003	205	226	10	7.2	0.60	50	< 0.5	< 2	4.84	63.0	11	82	18	2.63	0.25	0.93
109004	205	226	< 5	2.0	0.41	50	< 0.5	4	15.30	26.5	5	97	9	4.34	0.18	1.73
109005	205	226	10	8.8	1.58	110	< 0.5	< 2	3.35	110.0	21	214	15	2.77	0.52	0.58
109006	205	226	< 5	0.2	6.54	410	1.0	< 2	5.27	2.5	25	109	16	7.33	2.14	1.07
109007	205	226	5	< 0.2	2.15	170	< 0.5	2	6.27	5.0	12	139	6	4.94	0.77	0.27
109008	205	226	5	< 0.2	6.27	360	1.0	< 2	5.20	1.5	24	74	5	5.98	2.31	1.44
109009	205	226	10	0.8	6.51	310	1.0	< 2	2.89	2.0	27	95	4	4.77	2.62	0.67
109010	205	226	15	16.4	3.20	180	0.5	< 2	7.85	96.0	20	121	25	3.07	1.14	0.52
109011	205	226	25	12.0	0.90	70	< 0.5	< 2	6.63	82.5	12	99	69	4.51	0.37	0.56
109012	205	226	30	18.4	0.85	60	< 0.5	< 2	10.45	80.5	11	71	46	2.57	0.35	0.36
109013	205	226	115	6.0	1.62	70	< 0.5	< 2	3.74	33.0	13	176	35	7.46	0.48	0.91
109014	205	226	5	2.0	4.63	370	< 0.5	< 2	10.10	1.5	41	353	60	6.57	2.21	2.28
109015	205	226	65	< 0.2	3.47	120	0.5	< 2	6.89	0.5	39	517	72	4.95	1.66	1.07

CERTIFICATION:

Hart Bichler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN96-01
Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

Page Number :1-B
Total Pages :1
Certificate Date: 02-AUG-96
Invoice No. :I9625555
P.O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9625555

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)			
109001	205 226	2480	< 1	0.10	31	1400	1700	67	0.05	19	< 10	>10000			
109002	205 226	3530	< 1	0.15	26	1230	1500	136	0.05	23	10	>10000			
109003	205 226	2340	2	0.05	10	1560	640	76	< 0.01	12	< 10	>10000			
109004	205 226	3800	< 1	0.03	10	1110	80	300	< 0.01	13	10	>10000			
109005	205 226	1905	< 1	0.16	14	2090	1600	69	0.09	48	< 10	>10000			
109006	205 226	1740	< 1	0.57	24	2600	20	139	0.48	212	40	1715			
109007	205 226	4900	< 1	0.14	18	1130	296	80	0.16	66	20	2620			
109008	205 226	2110	< 1	0.55	9	1380	32	113	0.29	261	30	516			
109009	205 226	1845	< 1	0.68	16	1270	700	85	0.26	302	30	394			
109010	205 226	2460	< 1	0.30	32	780	>10000	172	0.26	120	< 10	>10000			
109011	205 226	2960	< 1	0.05	22	580	7200	63	0.01	9	10	>10000			
109012	205 226	2150	< 1	0.04	21	590	7500	105	0.01	7	< 10	>10000			
109013	205 226	4340	< 1	0.06	40	890	1400	67	0.04	18	30	>10000			
109014	205 226	1980	< 1	0.27	106	1530	100	266	0.44	157	50	596			
109015	205 226	1410	< 1	0.38	215	1520	48	236	0.53	165	30	328			

CERTIFICATION:

Mark E. Baknes



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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 PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

A9626380

Comments: ATTN:MARK E.BAKNES CC:RICK KEMP

CERTIFICATE

A9626380

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
 P.O. #:

Samples submitted to our lab in Vancouver, BC.
 This report was printed on 12-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	13	Geochem ring to approx 150 mesh
226	13	0-3 Kg crush and split
3202	13	Rock - save entire reject
285	13	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	13	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
578	13	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	13	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	13	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	13	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	13	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	13	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	13	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	13	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	13	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	13	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	13	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	13	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	13	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	13	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	13	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	13	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	13	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	13	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	13	Pb ppm: 24 element, rock & core	AAS	2	10000
582	13	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	13	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	13	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	13	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	13	Zn ppm: 24 element, rock & core	ICP-AES	2	10000



Chemex Labs Ltd.

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

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

Page Number : 1-A
 Total Pages : 1
 Certificate Date: 12-AUG-96
 Invoice No. : I9626380
 P.O. Number :
 Account : EIA

Project : ATN 96-01
 Comments: ATTN:MARK E.BAKNES CC:RICK KEMP

CERTIFICATE OF ANALYSIS A9626380

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)
109046	205 226	45	< 0.2	4.29	110	1.5	8	7.61	1.0	31	274	60	5.58	2.02	1.77
109047	205 226	75	0.4	3.64	180	0.5	4	6.39	2.5	31	428	55	4.71	1.65	1.15
109048	205 226	40	0.4	5.51	230	1.5	2	5.06	14.0	20	144	30	4.13	1.99	0.94
109049	205 226	40	< 0.2	5.87	250	1.5	4	4.92	< 0.5	24	199	30	3.99	2.35	1.04
109050	205 226	< 5	1.4	5.06	290	0.5	< 2	1.36	29.0	15	303	18	3.44	1.98	0.92
109051	205 226	< 5	0.4	7.13	570	2.0	< 2	0.74	2.5	16	269	26	2.64	2.74	0.52
109052	205 226	< 5	1.8	4.88	270	1.0	< 2	2.11	14.0	16	237	20	3.37	1.73	0.84
109053	205 226	30	9.0	3.01	170	0.5	< 2	5.90	46.5	12	293	53	3.51	1.01	0.52
109054	205 226	30	10.0	0.25	60	< 0.5	2	15.95	106.0	8	89	24	2.44	0.04	0.37
109055	205 226	20	7.2	0.45	40	< 0.5	6	6.61	60.0	10	183	15	4.13	0.12	0.99
109056	205 226	10	11.4	0.74	90	< 0.5	4	4.12	58.5	11	268	19	1.91	0.26	0.82
109057	205 226	15	20.0	1.77	240	< 0.5	14	13.80	84.5	25	160	88	5.34	0.51	1.36
109058	205 226	< 5	0.8	3.99	580	1.0	12	12.95	0.5	27	585	55	5.58	1.79	2.96

CERTIFICATION:

Heath Buchler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
 PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN 96-01
 Comments: ATTN:MARK E.BAKNES CC:RICK KEMP

Page Number :1-B
 Total Pages :1
 Certificate Date: 12-AUG-96
 Invoice No. :I9626380
 P.O. Number :
 Account :EIA

CERTIFICATE OF ANALYSIS A9626380

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)			
109046	205 226	2330	1	0.24	75	1500	40	220	0.72	161	< 10	372			
109047	205 226	1905	1	0.29	121	1320	150	213	0.41	129	< 10	1365			
109048	205 226	1720	2	0.90	22	1940	44	174	0.65	125	< 10	5380			
109049	205 226	1700	3	0.87	30	1830	74	169	0.65	127	< 10	126			
109050	205 226	1020	1	0.44	25	270	420	104	0.08	55	< 10	>10000			
109051	205 226	420	1	0.60	45	280	196	87	0.11	58	< 10	1405			
109052	205 226	1790	2	0.23	21	590	350	71	0.20	94	< 10	8140			
109053	205 226	1360	1	0.13	24	440	>10000	194	0.05	25	< 10	>10000			
109054	205 226	1785	< 1	0.03	9	580	7700	175	< 0.01	6	< 10	>10000			
109055	205 226	2700	1	0.03	15	1810	2700	137	0.01	11	< 10	>10000			
109056	205 226	1335	2	0.03	18	2380	490	83	0.03	14	< 10	>10000			
109057	205 226	4160	< 1	0.07	43	950	>10000	298	0.12	38	< 10	>10000			
109058	205 226	2150	1	0.18	115	1570	64	293	0.49	182	< 10	276			

CERTIFICATION: Harold Paschler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: EQUITY ENGINEERING LTD.

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VANCOUVER, BC
V6B 1N2

A9629180

Comments: ATTN: MARK BAKNES CC: RICK KEMP

CERTIFICATE

A9629180

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN-96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 2-SEP-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	23	Geochem ring to approx 150 mesh
226	23	0-3 Kg crush and split
285	23	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
96	23	Au ppm: Fuse 10 g sample	FA-AAS	0.005	10.00
578	23	Ag ppm: 24 element, rock & core	AAS	0.2	200
573	23	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	23	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	23	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	23	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	23	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	23	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	23	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	23	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	23	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	23	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	23	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	23	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	23	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	23	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	23	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	23	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	23	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	23	Pb ppm: 24 element, rock & core	AAS	2	10000
582	23	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	23	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	23	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	23	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	23	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.
 VANCOUVER, BC
 V6B 1N2

Project : ATN-96-01
 Comments: ATTN: MARK BAKNES CC: RICK KEMP

Page Number : 1-A
 Total Pages : 1
 Certificate Date: 02-SEP-96
 Invoice No. : I9629180
 P.O. Number :
 Account : EIA

CERTIFICATE OF ANALYSIS A9629180

SAMPLE	PREP CODE	Au ppm 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)
109059	205 226	< 0.005	< 0.2	7.86	500	2.0	2	5.21	0.5	15	155	33	5.72	3.15	0.41
109060	205 226	< 0.005	7.8	3.38	200	0.5	< 2	3.77	84.5	14	180	43	4.63	1.29	0.61
109061	205 226	< 0.005	7.2	3.11	260	0.5	< 2	7.75	19.0	11	235	43	4.83	1.24	0.80
109062	205 226	< 0.005	12.6	0.61	80	< 0.5	< 2	11.50	161.5	10	98	49	1.49	0.23	0.48
109063	205 226	< 0.005	19.2	0.50	60	< 0.5	< 2	3.71	80.0	9	237	39	1.49	0.17	0.42
109064	205 226	< 0.005	45.2	0.56	50	< 0.5	< 2	6.03	119.5	20	151	42	1.81	0.21	0.58
109065	205 226	< 0.005	0.2	0.43	40	< 0.5	8	22.8	4.0	4	98	9	4.06	0.18	2.63
109066	205 226	< 0.005	0.8	0.68	40	< 0.5	4	16.35	1.5	4	62	11	2.91	0.28	1.71
109067	205 226	< 0.005	1.8	1.01	50	< 0.5	4	17.55	8.5	10	73	16	9.29	0.41	3.35
109068	205 226	< 0.005	< 0.2	1.20	90	< 0.5	6	17.80	1.5	13	82	5	8.57	0.52	3.25
109069	205 226	< 0.005	< 0.2	1.44	80	< 0.5	2	11.25	4.0	10	104	10	10.35	0.52	2.18
109070	205 226	< 0.005	< 0.2	1.39	120	< 0.5	< 2	19.55	2.5	13	96	9	7.95	0.61	2.86
109071	205 226	< 0.005	2.6	2.60	200	< 0.5	< 2	10.30	11.0	21	178	35	11.20	1.06	2.21
109072	205 226	< 0.005	< 0.2	0.78	70	< 0.5	< 2	21.7	2.5	9	91	10	5.90	0.38	2.54
109073	205 226	< 0.005	0.4	1.77	140	< 0.5	< 2	18.85	1.0	16	104	8	6.02	0.83	3.32
109074	205 226	0.015	< 0.2	2.71	130	0.5	< 2	12.05	< 0.5	25	244	34	4.37	1.23	1.16
109075	205 226	< 0.005	< 0.2	4.82	230	0.5	< 2	6.81	< 0.5	38	337	89	5.88	2.31	1.74
109076	205 226	< 0.005	< 0.2	11.70	820	3.0	< 2	0.80	< 0.5	17	123	55	3.18	5.08	0.66
109077	205 226	< 0.005	2.4	2.05	130	< 0.5	< 2	3.05	24.5	10	214	33	2.85	0.82	0.75
109078	205 226	< 0.005	0.8	0.78	60	< 0.5	< 2	6.73	21.5	6	107	22	3.17	0.30	1.67
109079	205 226	< 0.005	0.8	0.61	50	< 0.5	2	6.22	12.0	5	123	14	2.58	0.25	1.46
109080	205 226	< 0.005	1.6	0.61	50	< 0.5	2	12.30	20.0	9	121	20	3.62	0.24	1.97
109081	205 226	< 0.005	0.4	2.71	330	0.5	< 2	7.00	25.5	13	148	35	3.04	0.85	0.98

CERTIFICATION:

Hart Buchler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
 PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN-96-01
 Comments: ATTN: MARK BAKNES CC: RICK KEMP

Page Number : 1-B
 Total Pages : 1
 Certificate Date: 02-SEP-96
 Invoice No. : 19629180
 P.O. Number :
 Account : EIA

CERTIFICATE OF ANALYSIS	A9629180
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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)			
109059	205 226	2700	4	0.40	37	610	120	69	0.15	59	20	404			
109060	205 226	3170	< 1	0.18	43	2330	3200	90	0.05	31	< 10	>10000			
109061	205 226	3280	2	0.17	35	1880	2700	121	0.08	31	20	9310			
109062	205 226	1655	< 1	0.06	14	800	7200	180	0.01	10	< 10	>10000			
109063	205 226	1160	< 1	0.05	15	1840	>10000	45	0.01	11	< 10	>10000			
109064	205 226	1245	< 1	0.05	17	2030	>10000	77	0.02	13	< 10	>10000			
109065	205 226	3290	1	0.03	13	1400	230	396	0.03	16	20	1340			
109066	205 226	2070	< 1	0.05	16	370	270	312	0.01	10	10	736			
109067	205 226	5850	< 1	0.05	41	720	1240	202	0.10	32	50	7030			
109068	205 226	6300	< 1	0.05	45	740	76	247	0.12	38	50	250			
109069	205 226	7580	< 1	0.12	39	760	120	151	0.17	42	40	1960			
109070	205 226	5420	< 1	0.05	51	850	250	342	0.18	46	40	1020			
109071	205 226	8030	< 1	0.08	63	1030	1400	167	0.26	85	50	5960			
109072	205 226	4700	< 1	0.03	33	540	72	468	0.10	34	30	794			
109073	205 226	4020	< 1	0.06	52	1100	232	355	0.20	57	30	378			
109074	205 226	3570	< 1	0.12	91	990	86	189	0.32	138	20	170			
109075	205 226	3630	1	0.17	108	1620	80	128	0.57	231	30	132			
109076	205 226	595	< 1	0.38	42	590	22	55	0.32	85	< 10	88			
109077	205 226	1710	1	0.11	23	2020	540	74	0.09	35	< 10	>10000			
109078	205 226	3110	1	0.04	13	1090	148	129	0.03	20	10	>10000			
109079	205 226	2300	1	0.03	15	1340	660	111	0.01	12	< 10	7010			
109080	205 226	3210	< 1	0.03	21	3460	780	216	0.06	20	10	>10000			
109081	205 226	2340	< 1	0.06	37	800	680	143	0.10	54	10	7300			

CERTIFICATION:

Handwritten signature



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Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

A9624864

Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

CERTIFICATE

A9624864

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-JUL-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %; Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
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Project : ATN 96-01
Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

Page Number :1
Total Pages :1
Certificate Date: 24-JUL-96
Invoice No. : I9624864
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS

A9624864

SAMPLE	PREP CODE	Zn %									
4664	244 --	1.73									

CERTIFICATION:



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To: EQUITY ENGINEERING LTD.

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

A9626590

Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

CERTIFICATE

A9626590

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 5-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	16	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	2	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	16	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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V6B 1N2

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Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

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Invoice No. : I9626590
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Account : EIA

CERTIFICATE OF ANALYSIS

A9626590

SAMPLE	PREP CODE	Pb %	Zn %									
109017	244 --	-----	9.69									
109018	244 --	-----	3.41									
109023	244 --	6.87	2.55									
109024	244 --	-----	2.07									
109027	244 --	-----	2.76									
109030	244 --	-----	2.46									
109032	244 --	-----	1.10									
109033	244 --	2.16	9.50									
109036	244 --	-----	9.67									
109037	244 --	-----	3.58									
109038	244 --	-----	1.37									
109039	244 --	-----	1.20									
109041	244 --	-----	0.95									
109042	244 --	-----	6.77									
109043	244 --	-----	1.15									
109044	244 --	-----	2.10									

CERTIFICATION:



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A9626591

Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

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Project: ATN 96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 5-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	3	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	3	Zn %; Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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Invoice No. : I9626591
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS

A9626591

SAMPLE	PREP CODE	Zn %									
109016	244 --	1.18									
109019	244 --	2.53									
109021	244 --	1.37									

CERTIFICATION:



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To: EQUITY ENGINEERING LTD.

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A9626853

Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

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A9626853

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Project: ATN96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	9	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	9	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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Project : ATN96-01
Comments: ATTN:MARK E. BAKNES CC:RICK KEMP

Page Number : 1
Total Pages : 1
Certificate Date: 07-AUG-96
Invoice No. : I9626853
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS A9626853

SAMPLE	PREP CODE	Pb %	Zn %							
109001	244 --	-----	1.80							
109002	244 --	-----	2.78							
109003	244 --	-----	3.36							
109004	244 --	-----	1.53							
109005	244 --	-----	6.19							
109010	244 --	1.38	3.52							
109011	244 --	-----	3.35							
109012	244 --	-----	3.24							
109013	244 --	-----	1.48							

CERTIFICATION: *Sara Teina*



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To: EQUITY ENGINEERING LTD.

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

A9628094

Comments: ATTN:MARK E.BAKNES CC:RICK KEMP

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A9628094

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-AUG-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	6	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	2	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	6	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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To: EQUITY ENGINEERING LTD.

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VANCOUVER, BC
V6B 1N2

Project : ATN 96-01
Comments: ATTN:MARK E.BAKNES CC:RICK KEMP

Page Number : 1
Total Pages : 1
Certificate Date: 15-AUG-96
Invoice No. : 19628094
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS

A9628094

SAMPLE	PREP CODE	Pb %	Zn %								
109050	244 --	-----	1.16								
109053	244 --	1.11	1.93								
109054	244 --	-----	3.97								
109055	244 --	-----	2.84								
109056	244 --	-----	3.29								
109057	244 --	1.59	3.87								

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

A9631987

Comments: ATTN: MARK BAKNES CC: RICK KEMP

CERTIFICATE

A9631987

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Project: ATN-96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 13-SEP-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	7	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	2	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	7	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN-96-01
Comments: ATTN: MARK BAKNES CC: RICK KEMP

Page Number : 1
Total Pages : 1
Certificate Date: 13-SEP-96
Invoice No. : I9631987
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS

A9631987

SAMPLE	PREP CODE	Pb %	Zn %								
109060	244 --	-----	3.33								
109062	244 --	-----	4.49								
109063	244 --	1.44	2.85								
109064	244 --	1.50	4.63								
109077	244 --	-----	1.50								
109078	244 --	-----	1.52								
109080	244 --	-----	1.27								

CERTIFICATION: *[Signature]*



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To: EQUITY ENGINEERING LTD.

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

A9623534

Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

CERTIFICATE

A9623534

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
P.O. #:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-JUL-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	5	Geochem ring to approx 150 mesh
226	5	0-3 Kg crush and split
3202	5	Rock - save entire reject
285	5	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	5	Au ppb: Fuse 10 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



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 PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN 96-01
 Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

Page Number : 1-B
 Total Pages : 1
 Certificate Date: 16-JUL-96
 Invoice No. : I9623534
 P.O. Number :
 Account : EIA

CERTIFICATE OF ANALYSIS

A9623534

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)			
4662	205 226	95	1	0.10	96	240	< 2	10	0.07	35	< 10	38			
4663	205 226	175	1	0.14	12	320	180	36	0.09	31	< 10	128			
4664	205 226	230	1	0.08	18	310	940	38	0.05	24	< 10	>10000			
4665	205 226	20	< 1	0.16	10	220	20	15	0.08	36	< 10	96			
4666	205 226	215	2	1.82	4	480	26	49	0.20	19	< 10	172			

CERTIFICATION: Mark E. Baknes



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PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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V6B 1N2

Project : ATN 96-01
Comments: ATTN: MARK E. BAKNES CC: RICK KEMP

Page Number : 1-A
Total Pages : 1
Certificate Date: 16-JUL-96
Invoice No. : I9623534
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS A9623534

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)
4662	205 226	40	< 0.2	3.40	40	< 0.5	< 2	0.06	< 0.5	65	286	199	10.20	1.34	0.30
4663	205 226	< 5	< 0.2	4.51	960	1.0	4	0.51	0.5	6	154	7	0.78	1.96	0.18
4664	205 226	10	0.8	2.96	160	0.5	8	1.12	110.5	13	220	16	1.22	1.32	0.12
4665	205 226	5	1.4	4.29	2940	1.0	4	0.04	1.5	3	110	4	0.44	1.79	0.17
4666	205 226	10	< 0.2	6.77	630	2.5	2	0.17	1.0	5	95	9	2.09	4.27	0.24

CERTIFICATION: Mark Baknes



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
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A9623535

Comments: ATTN: MARK BAKNES CC: RICK KEMP

CERTIFICATE

A9623535

(EIA) - EQUITY ENGINEERING LTD.

Project: ATN 96-01
 P.O. #:

Samples submitted to our lab in Vancouver, BC.
 This report was printed on 23-JUL-96.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	2	Pulp; prepped on other workorder

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
902	2	Al2O3 %: XRF	XRF	0.01	100.00
906	2	CaO %: XRF	XRF	0.01	100.00
2590	2	Cr2O3 %: XRF	XRF	0.01	100.00
903	2	Fe2O3 %: XRF	XRF	0.01	100.00
908	2	K2O %: XRF	XRF	0.01	100.00
905	2	MgO %: XRF	XRF	0.01	100.00
1989	2	MnO %: XRF	XRF	0.01	100.00
907	2	Na2O %: XRF	XRF	0.01	100.00
909	2	P2O5 %: XRF	XRF	0.01	100.00
901	2	SiO2 %: XRF	XRF	0.01	100.00
904	2	TiO2 %: XRF	XRF	0.01	100.00
910	2	LOI %: XRF	XRF	0.01	100.00
2540	2	Total %	CALCULATION	0.01	105.00
2891	2	Ba ppm: XRF	XRF	5	50000
2067	2	Rb ppm: XRF	XRF	2	50000
2898	2	Sr ppm: XRF	XRF	2	50000
2973	2	Nb ppm: XRF	XRF	2	50000
2978	2	Zr ppm: XRF	XRF	3	50000
2974	2	Y ppm: XRF	XRF	2	50000



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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

Project : ATN 96-01
Comments: ATTN: MARK BAKNES CC: RICK KEMP

Page Number : 1
Total Pages : 1
Certificate Date: 23-JUL-96
Invoice No. : I9623535
P.O. Number :
Account : EIA

CERTIFICATE OF ANALYSIS

A9623535

SAMPLE	PREP CODE	Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm
		XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	%					
4663	299 --	8.52	0.66	< 0.01	1.10	2.53	0.31	0.03	0.14	0.06	84.01	0.34	1.89	99.59	1005	100	22	10	246	16
4665	299 --	8.45	0.10	0.01	0.64	2.33	0.30	0.01	0.15	0.04	86.06	0.33	1.47	99.89	3280	96	2	12	174	14

CERTIFICATION: Mark Baknes



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Project : ATN 96-01
Comments: ATTN: MARK BAKNES CC: RICK KEMP

Page Number :1
Total Pages :1
Certificate Date: 23-JUL-96
Invoice No. :19623535
P.O. Number :
Account :EIA

CERTIFICATE OF ANALYSIS A9623535

SAMPLE	PREP CODE	Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm
		XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	XRF	%					
4663	299 --	8.52	0.66	< 0.01	1.10	2.53	0.31	0.03	0.14	0.06	84.01	0.34	1.89	99.59	1005	100	22	10	246	16
4665	299 --	8.45	0.10	0.01	0.64	2.33	0.30	0.01	0.15	0.04	86.06	0.33	1.47	99.89	3280	96	2	12	174	14

CERTIFICATION: Mark Baknes

APPENDIX G

LIST OF PERSONNEL

LIST OF PERSONNEL

Field Crew

Mark Baknes (Geologist)
207-675 West Hastings St.
Vancouver, B.C.
V6B 1N2

Rob Blusson (Sampler/Technician)
470 West 37th Avenue
Vancouver, B.C.
V5Y 2N3

Matt Henry (Sampler/Technician)
RR#1, Mt. Sicker Road
Chemainus, B.C.
V0R 1K0

Chris Hope (Sampler/Technician)
4472 Tremblay Drive
Victoria, B.C.
V8N 4W5

Carol Krismer (Cook)
336 South Governor St.
Iowa City, Iowa
52240

Dirk Moraal (Camp builder/Labourer)
General Delivery
Tagish, Yukon
Y0B 1T0

APPENDIX H

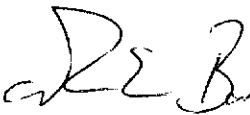

GEOLOGIST'S CERTIFICATE

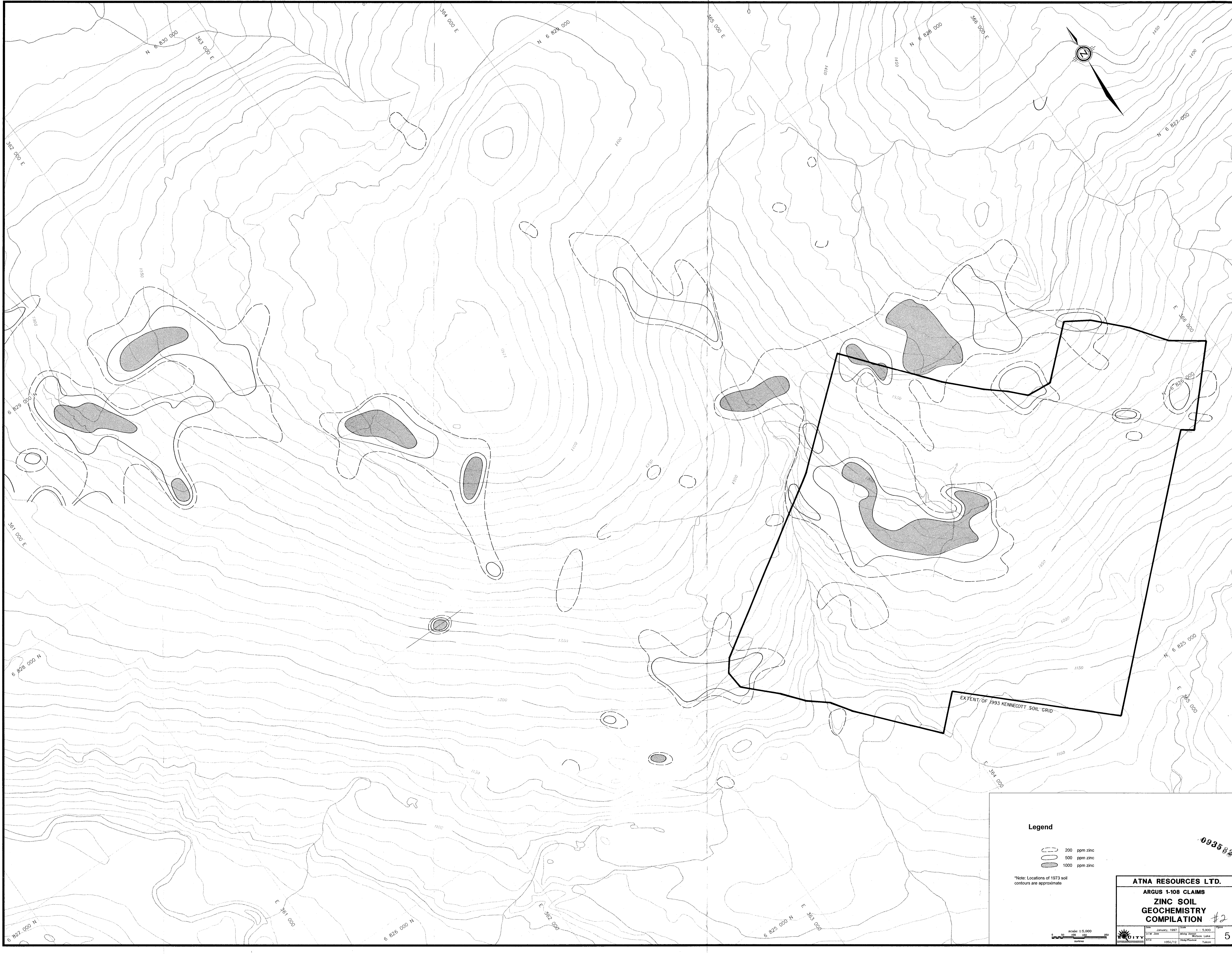
GEOLOGIST'S CERTIFICATE

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



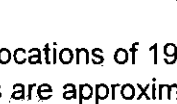
1. THAT I am a Consulting Geologist with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology and a Master of Science degree in Geology from McMaster University.
3. THAT 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 June 11 and August 9, 1996, government publications and assessment reports filed with the Yukon.

DATED at Vancouver, British Columbia, this 31 day of January 1997.

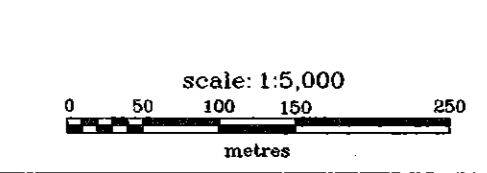


Mark E. Baknes, P. Geo.



Legend

-  200 ppm zinc
-  500 ppm zinc
-  1000 ppm zinc

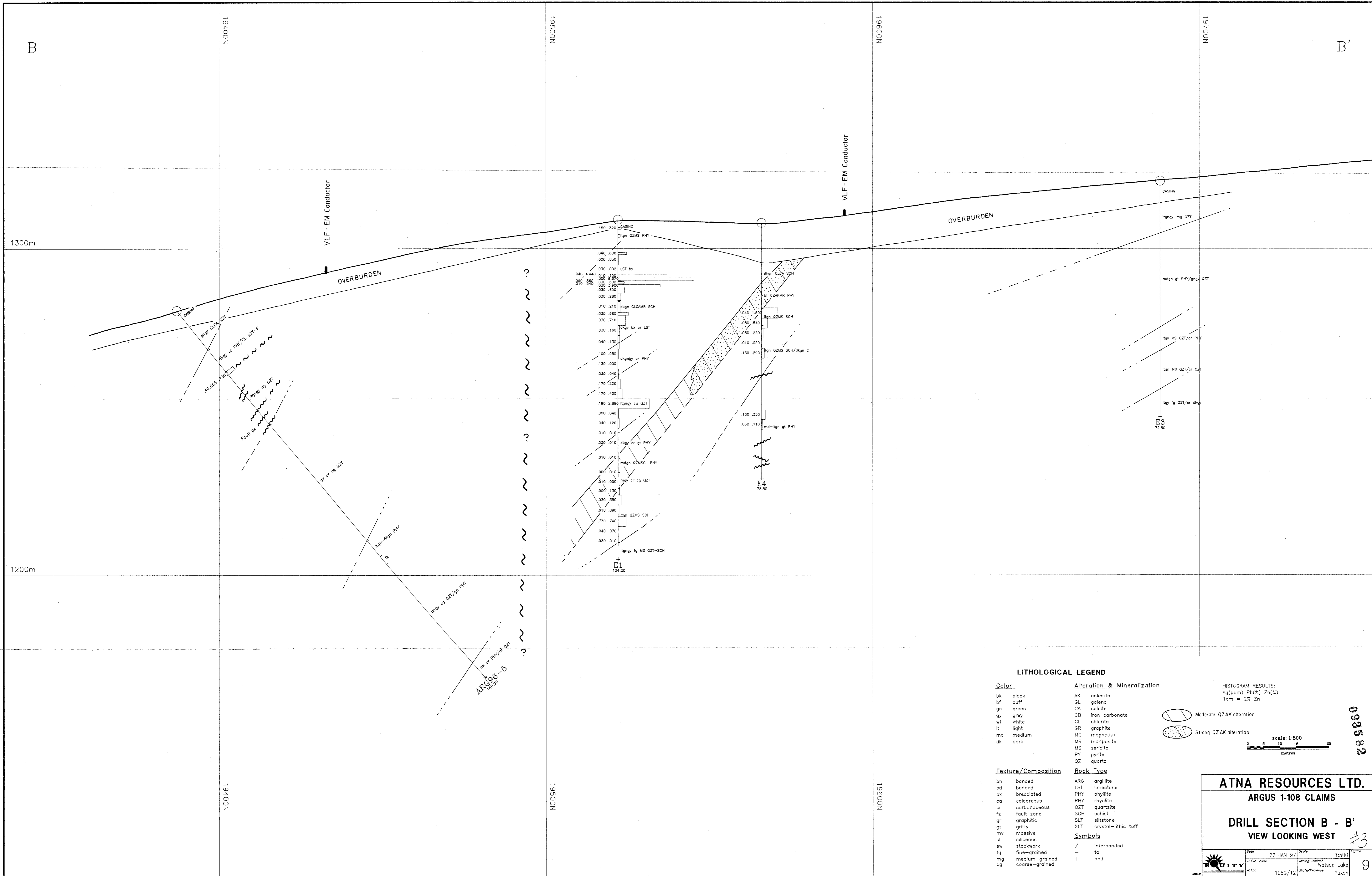
*Note: Locations of 1973 soil contours are approximate



093582

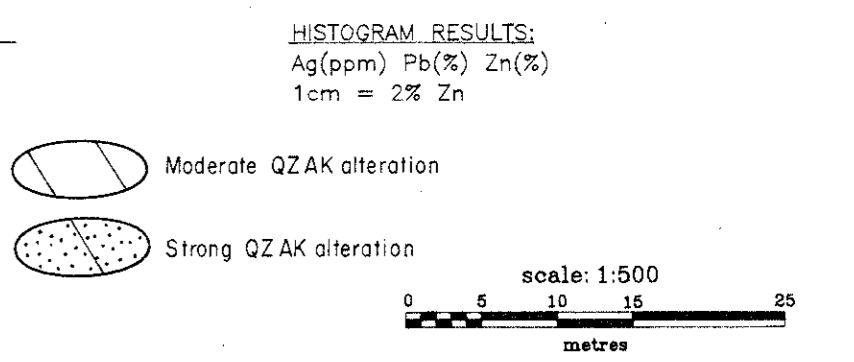
ATNA RESOURCES LTD.	
ARGUS 1-108 CLAIMS	
ZINC SOIL	
GEOCHEMISTRY	
COMPILATION #2	
1997 1/24/97	1:5,000 1/24/97
1/24/97	1/24/97
1/24/97	1/24/97
1/24/97	1/24/97

5



LITHOLOGICAL LEGEND

Color	Alteration & Mineralization
bk black	AK arkerite
bf buff	GL galena
gn green	CA calcite
gy grey	CB iron carbonate
wt white	CL chlorite
lt light	GR graphite
md medium	MG magnetite
dk dark	MR mariposite
	MS sericite
	PY pyrite
	QZ quartz
Texture/Composition	Rock Type
bn banded	ARG argillite
bd bedded	LST limestone
bx brecciated	PHY phyllite
ca calcareous	RHY rhyolite
cr carbonaceous	QZT quartzite
fz fault zone	SCH schist
gr graphitic	SLT siltstone
gt gritty	SLT crystal-lithic tuff
mv massive	
sl siliceous	
sw stockwork	/ interbanded
fg fine-grained	- to
mg medium-grained	+ and
cg coarse-grained	

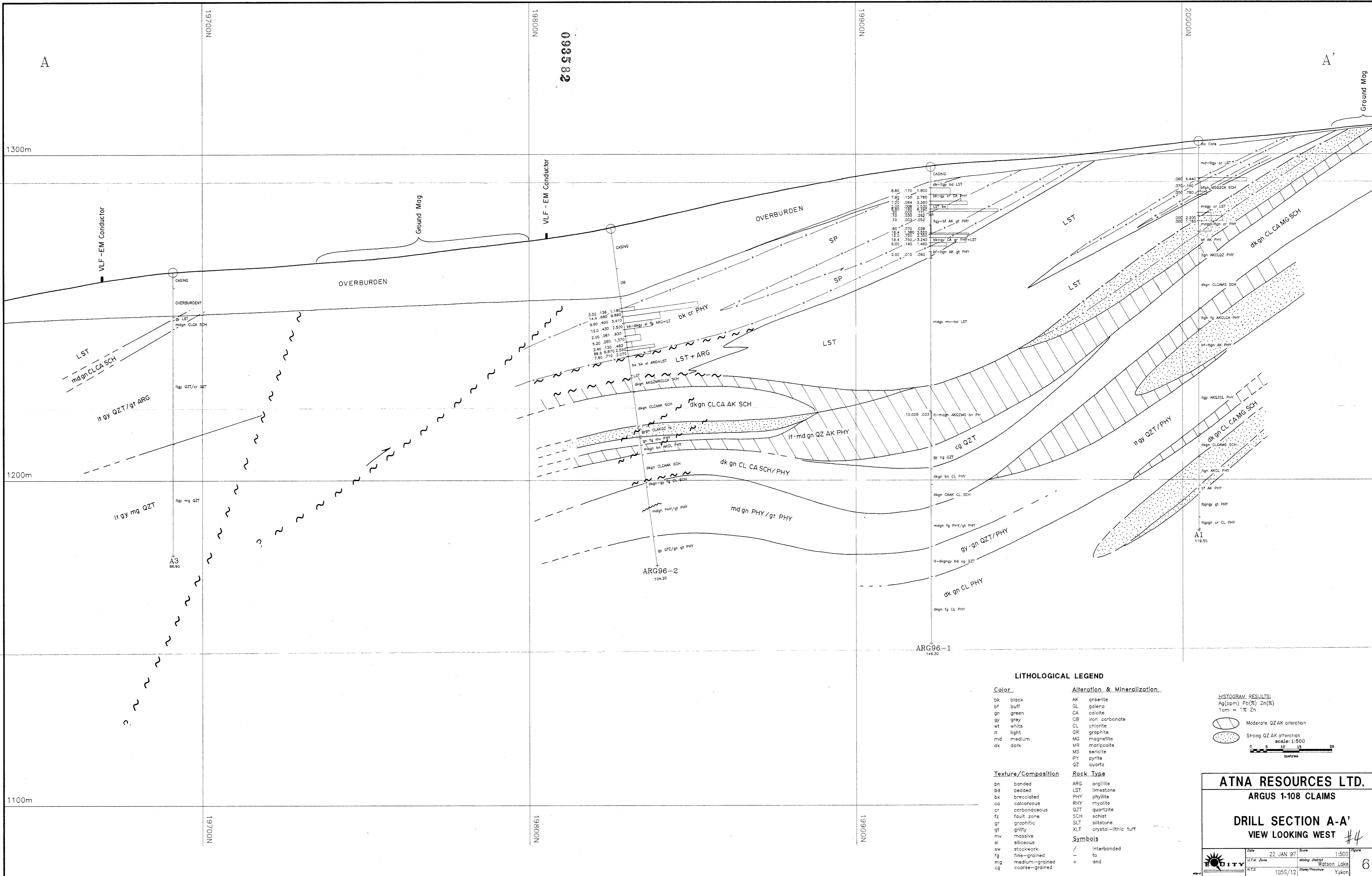


ATNA RESOURCES LTD.
ARGUS 1-108 CLAIMS

DRILL SECTION B - B'
VIEW LOOKING WEST #3

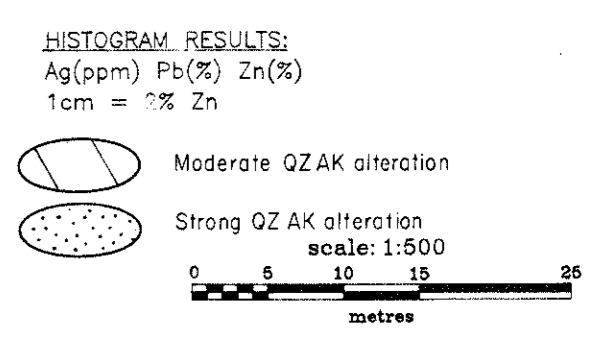
Date	22 JAN 97	Scale	1:500
U.T.M. Zone	105G/12	Mining District	Watson Lake
N.T.S.	105G/12	State/Province	Yukon

093582



LITHOLOGICAL LEGEND

Color	bk black	bd beaded	bx brecciated	ca calcareous	cr carbonaceous	fz fault zone	gr graphitic	gt gritty	mv massive	sl siliceous	sw stockwork	fg fine-grained	mg medium-grained	sq coarse-grained
	AK ankerite	GL galena	CA calcite	CB iron carbonate	CL chlorite	GR graphite	MG magnetite	MR mariposite	MS sericite	PY pyrite	QZ quartz			
Texture/Composition														
	ARG argillite	LST limestone	PHY phyllite	RHY rhyolite	QZT quartzite	SCH schist	SLT siltstone	XLT crystal-lithic tuff						
Symbols	/	-	+											
	interbedded	to	and											

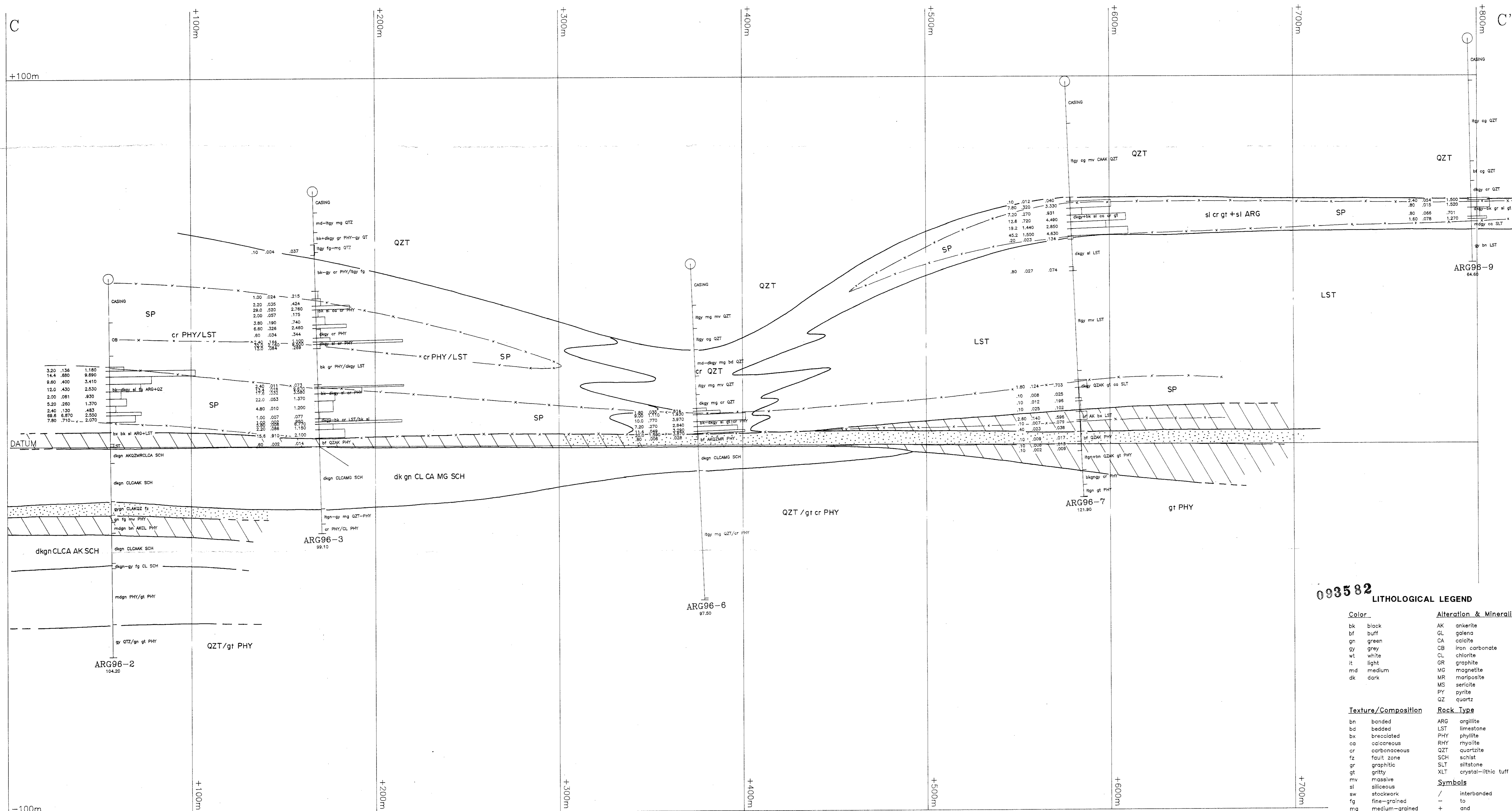


ATNA RESOURCES LTD.
ARGUS 1-108 CLAIMS

DRILL SECTION A-A'
VIEW LOOKING WEST #4

Date	22 JAN 97	Scale	1:500
U.T.M. Zone		Mining District	Watson Lake
N.T.S.	1056/12	State/Province	Yukon

6



093582 LITHOLOGICAL LEGEND

Color	Alteration & Mineralization
bk	black
bf	buff
gn	green
gy	grey
wt	white
lt	light
md	medium
dk	dark
AK	ankerite
CL	galena
CA	calcite
CB	iron carbonate
CL	chlorite
GR	graphite
MG	magnetite
MR	mariposite
MS	sericite
PY	pyrite
QZ	quartz

Texture/Composition	Rock Type
bn	banded argillite
bd	bedded limestone
bx	brecciated phyllite
ca	calcareous rhyolite
cr	carbonaceous quartzite
fz	fault zone schist
gr	graphitic siltstone
gt	gritty crystal-lithic tuff
mv	massive siliceous
sw	stockwork / interbanded
fg	fine-grained - to
mg	medium-grained + and
cg	coarse-grained

LEGEND

Moderate QZAK alteration

Strong QZAK alteration

HISTOGRAM RESULTS:
 Ag(ppm) Pb(%) Zn(%)
 1cm = 2% Zn

NB: VERTICAL EXAGGERATION OF 200% AND ARBITRARY COORDINATES.

ATNA RESOURCES LTD.
ARGUS 1-108 CLAIMS
LONG SECTION C - C'
VIEW LOOKING NORTH #5

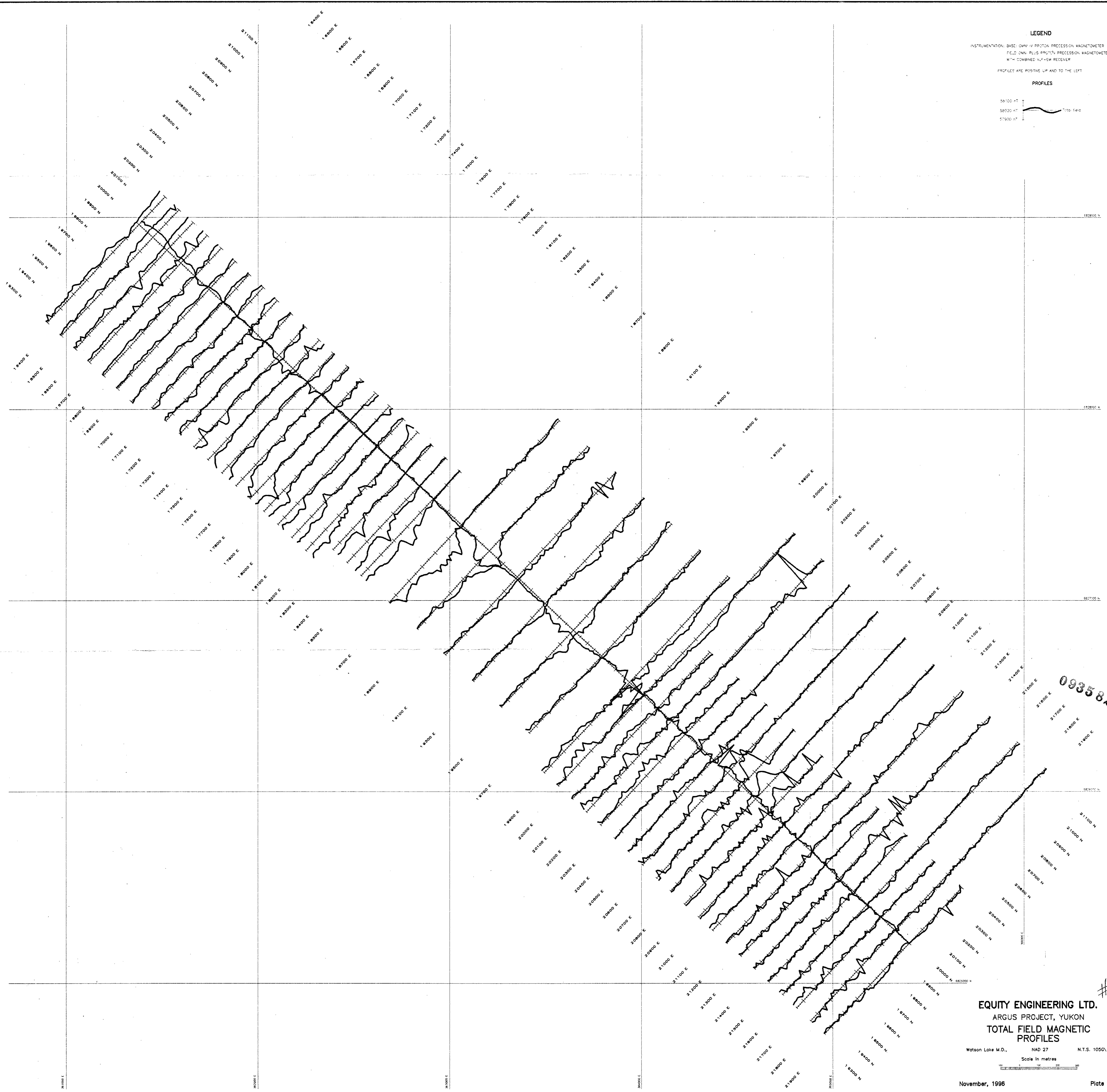
Date	22 JAN 97	Scale	vert = 1:500
U.T.M. Zone		Mining District	Watson Lake
N.T.S.	1056/12	State/Province	Yukon

13

LEGEND
 INSTRUMENTATION: BASELINE PROTON PRECESSION MAGNETOMETER
 FIELD: OMNIPOLUS PROTON PRECESSION MAGNETOMETER
 WITH COMBINED VLF-EM RECEIVER
 PROFILES ARE POSITIVE UP AND TO THE LEFT

PROFILES

58100 FT
 58000 FT
 57900 FT



093582

EQUITY ENGINEERING LTD.
 ARGUS PROJECT, YUKON
 TOTAL FIELD MAGNETIC
 PROFILES

Watson Lake M.D., NAD 27 N.T.S. 1050/12
 Scale in metres

November, 1995 Plate G1A

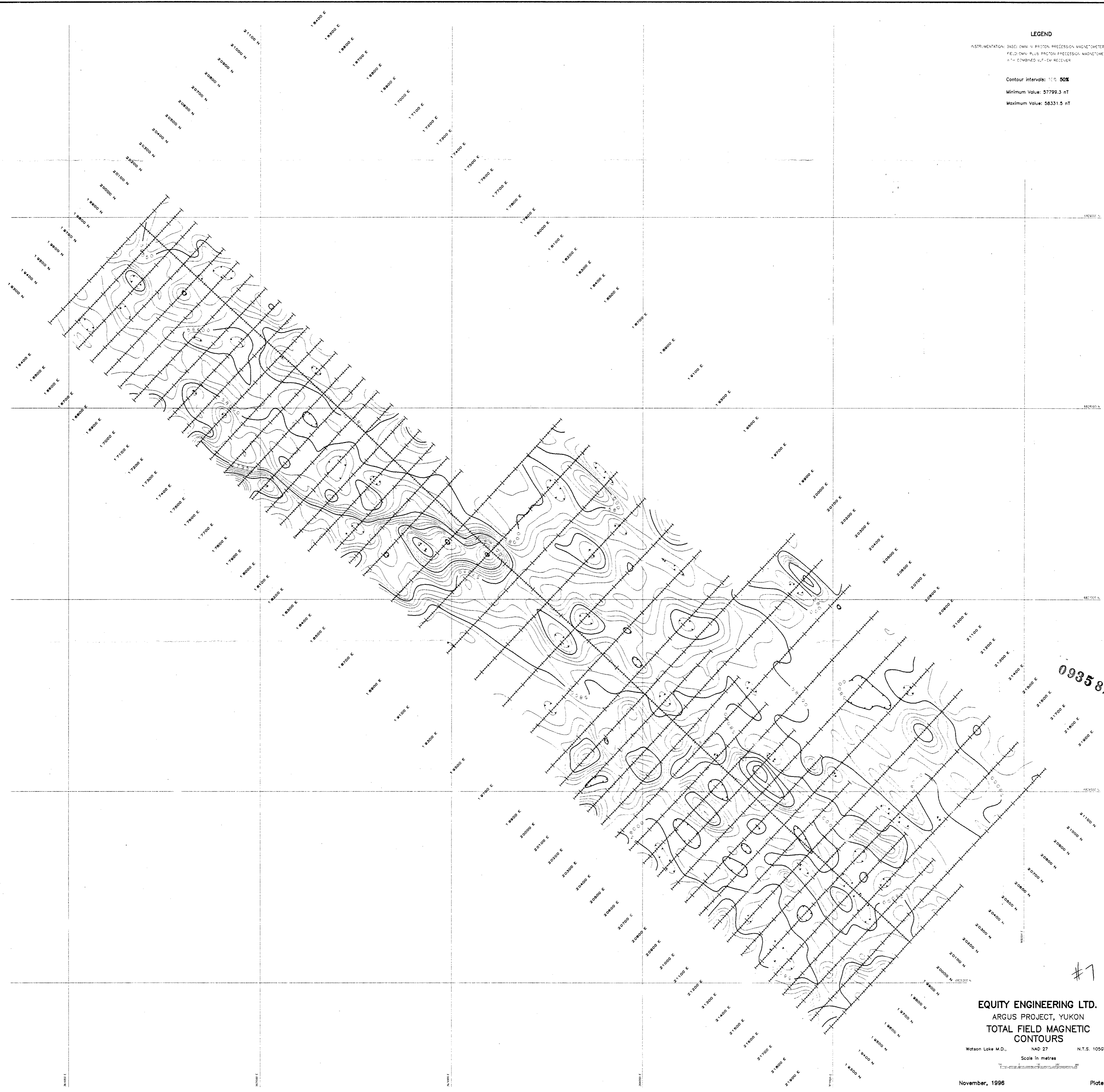
#6

Sr. Geophysics Ltd.

LEGEND

INSTRUMENTATION: BASE: OMNI-V PROTON PRECESSION MAGNETOMETER
FIELD: OMNI-PLUS PROTON PRECESSION MAGNETOMETER
A-14 COMBINED VLF-EM RECEIVER

Contour intervals: 10% 50%
Minimum Value: 57799.3 nT
Maximum Value: 58331.5 nT



093582

#1

EQUITY ENGINEERING LTD.
ARGUS PROJECT, YUKON
**TOTAL FIELD MAGNETIC
CONTOURS**

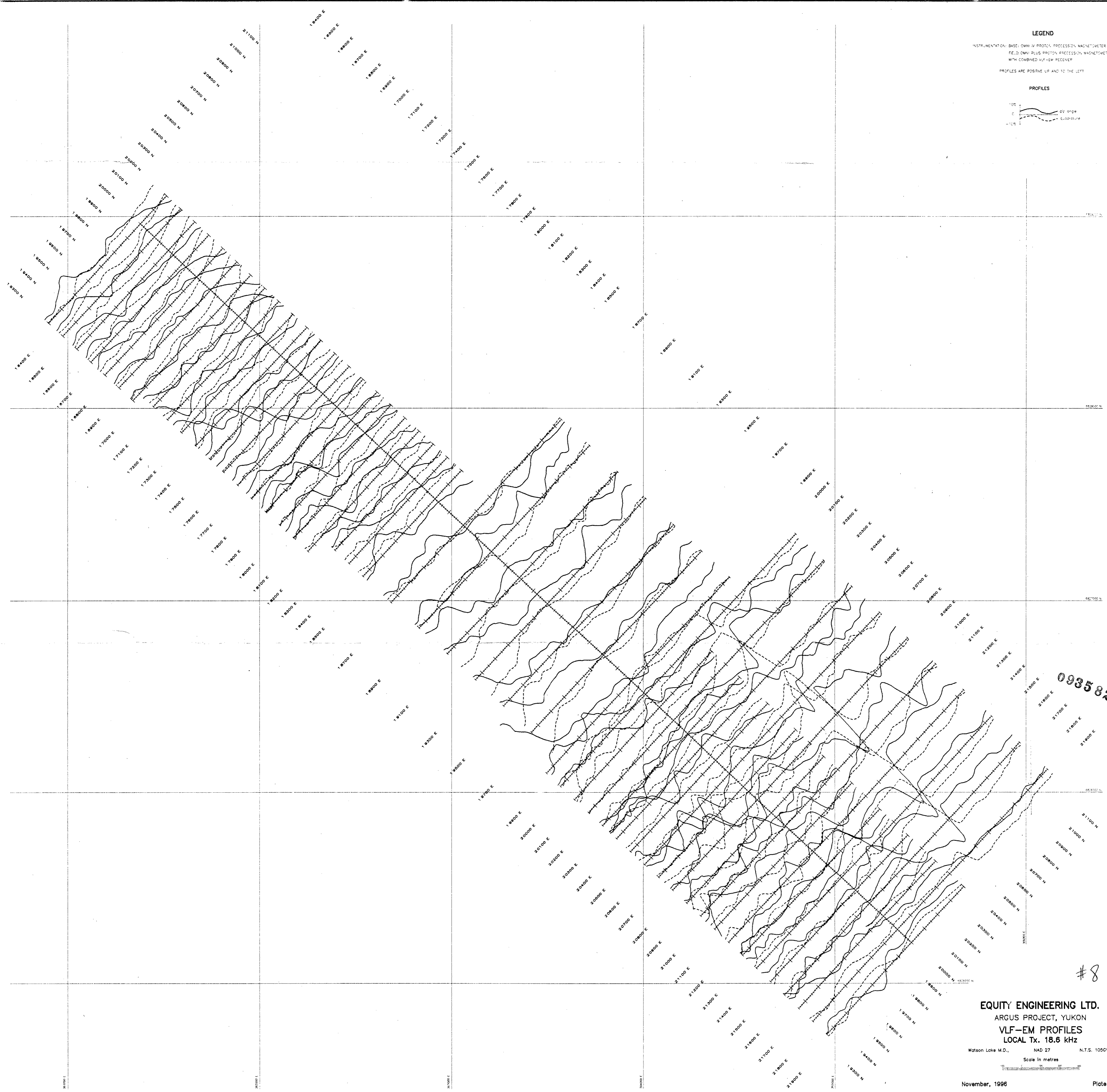
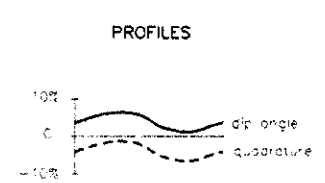
Watson Lake M.D., NAD 27 N.T.S. 1050/12
Scale in metres

November, 1996

Plate G1B

SJ Geophysics Ltd.

LEGEND
 INSTRUMENTATION: BASED OMNI-V PROTON PRECESSION MAGNETOMETER
 FIELD OMNI-PLUS PROTON PRECESSION MAGNETOMETER
 WITH COMBINED VLF-EM RECEIVER
 PROFILES ARE POSITIVE UP AND TO THE LEFT



093582

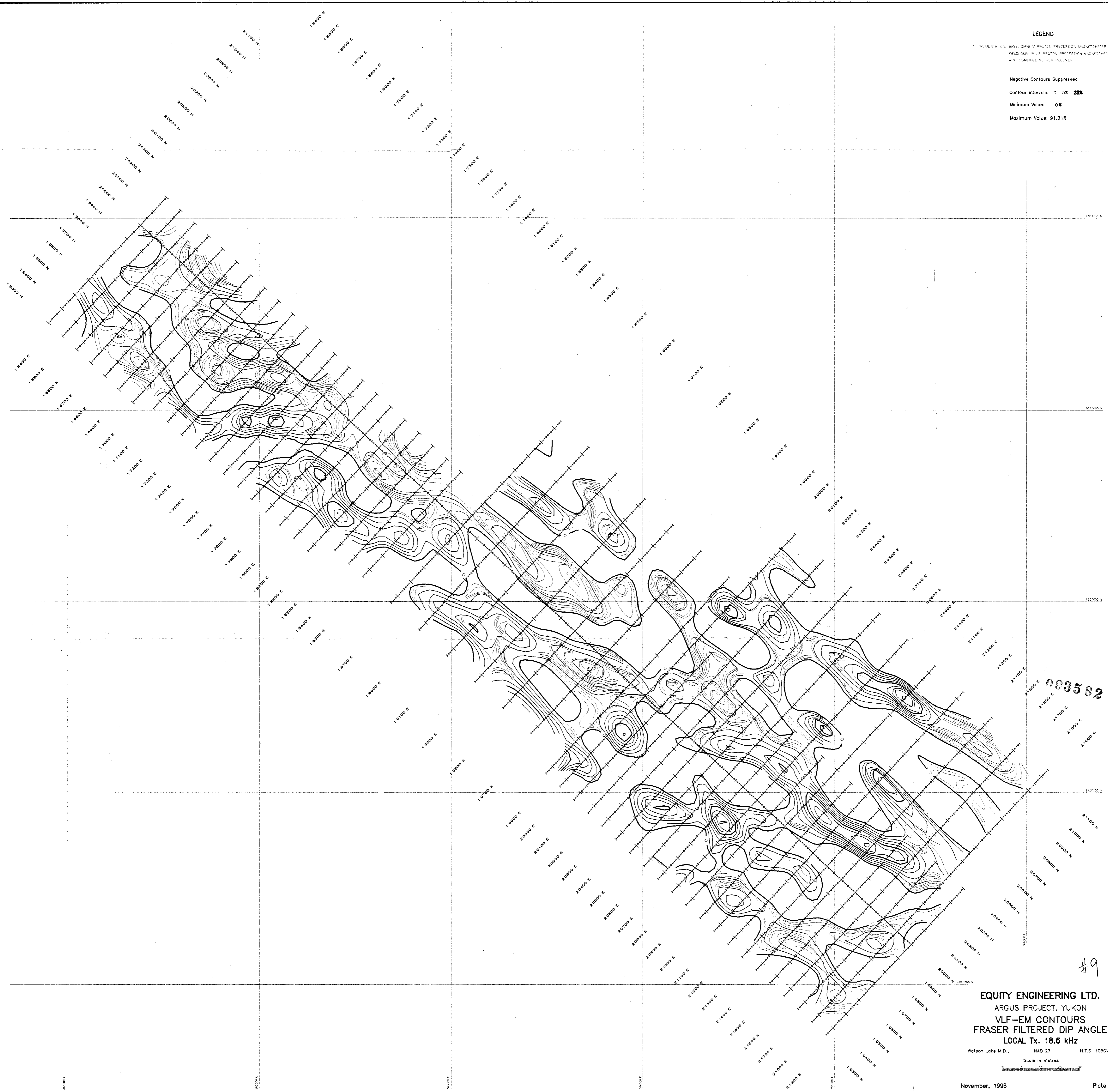
#8

EQUITY ENGINEERING LTD.
 ARGUS PROJECT, YUKON
 VLF-EM PROFILES
 LOCAL Tx. 18.6 kHz

Watson Lake M.D., NAD 27 N.T.S. 105G/12
 Scale in metres

LEGEND
 TO: MENTATION, BASE: OMNI-V PRION, PRECESSION MAGNETOMETER
 FIELD: OMNI-PLUS PRION, PRECESSION MAGNETOMETER
 WITH COMBINEE VLF-EM RECEIVER

Negative Contours Suppressed
 Contour Intervals: 5% **20%**
 Minimum Value: 0%
 Maximum Value: 91.21%



003582

#9




EQUITY ENGINEERING LTD.
 ARGUS PROJECT, YUKON
 VLF-EM CONTOURS
 FRASER FILTERED DIP ANGLE
 LOCAL Tx. 18.6 kHz

Watson Lake M.D., NAD 27 N.T.S. 1050/12
 Scale in metres

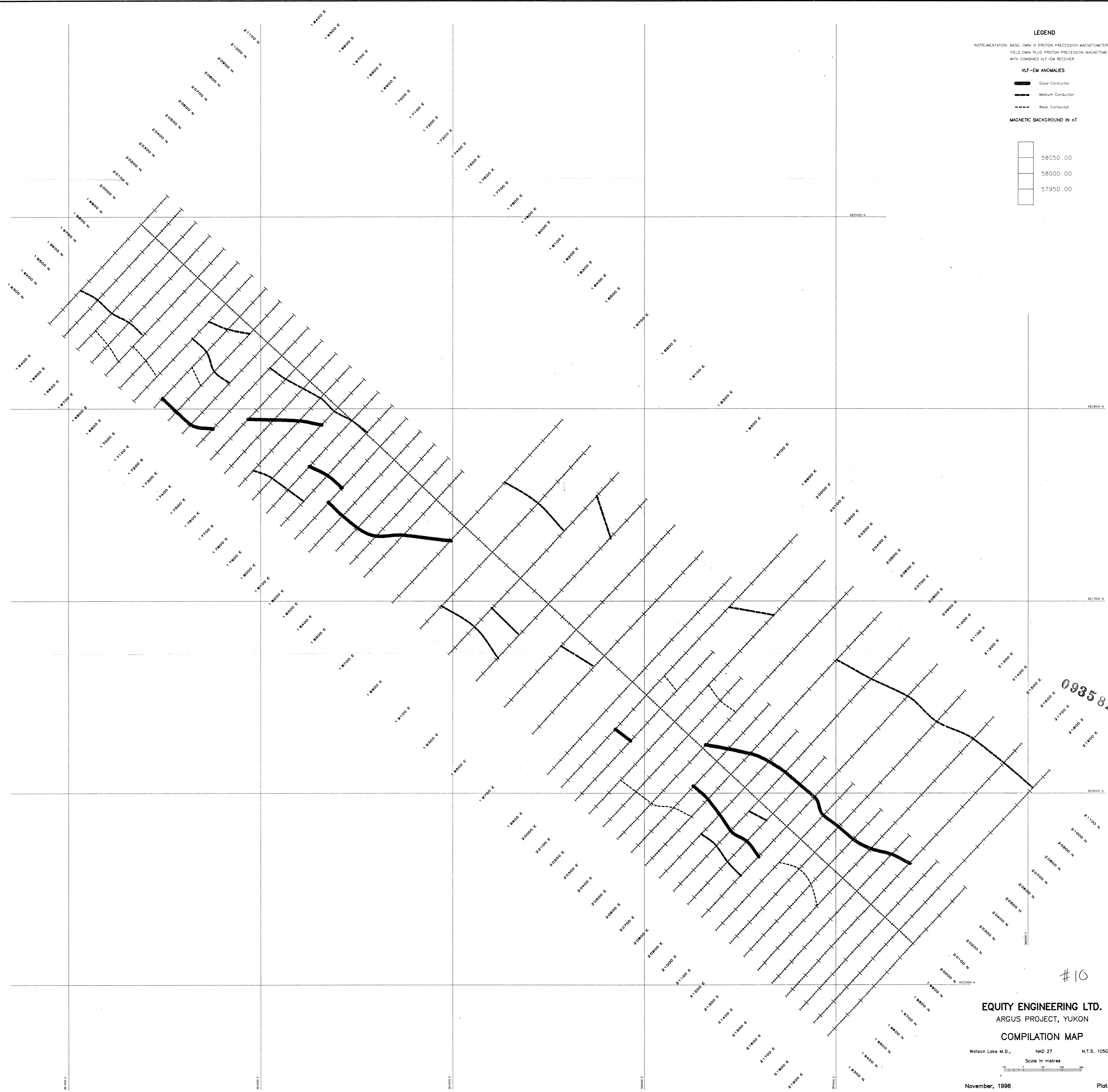
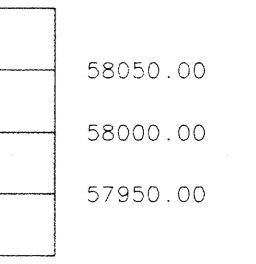
INSTRUMENTATION: BASE: OMNI IV PROTON PRESSION MAGNETOMETER
 FIELD: OMNI PLUS PROTON PRESSION MAGNETOMETER
 WITH COMBINED VLF-EM RECEIVER

LEGEND

VLF-EM ANOMALIES

-  Good Conductor
-  Medium Conductor
-  Weak Conductor

MAGNETIC BACKGROUND IN nT



093582
 21800 E
 21700 E
 21600 E
 21500 E

#10

EQUITY ENGINEERING LTD.
 ARGUS PROJECT, YUKON

COMPILATION MAP

Watson Lake M.D., NAD 27 N.T.S. 1050/12
 Scale in metres

November, 1996 Plate G3

SJ Geophysics Ltd.