

SUB-RECORDER

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DEC 11 1991

**M.R. # _____ \$ _____
VANCOUVER, B.C.**

1991 ASSESSMENT REPORT

ON THE

MISTY NIE PROPERTY

NTS: 104K/8
Lat: 58° 20'N
Long: 132° 18'W

LOG NO: DEC 18 1991 RD.

ACTION:

FILE NO:

OWNER: Chevron Minerals Limited
400 - 815 West Hastings Street
Vancouver, B.C.
V6C 3G9

OPERATOR: North American Metals Corporation
1000 - 700 West Pender Street
Vancouver, B.C.
V6C 1G8

AUTHOR: P. Southam

G E O L O G I C A L B R A N C H
A S S E S S M E N T R E P O R T

DATE: December, 1991

21,947

Distribution

- 2 - Mining Recorder
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- 1 - NAM field

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 92.09.17

ASSESSMENT REPORT 21947

MINING DIVISION: Atlin

PROPERTY: Misty Nie

LOCATION: LAT 58 19 00 LONG 132 18 00
UTM 08 6466928 658163
NTS 104K08W

CLAIM(S): Honk,Nie 1-5

OPERATOR(S): Homestake Min. Dev.

AUTHOR(S): Southam, P.J.

EPORT YEAR: 1991, 65 Pages

COMMODITIES

SEARCHED FOR: Gold,Silver

KEYWORDS: Triassic,Augite porphyry,Lapilli tuffs,Chlorite schists,Argillites
Limestones,Diorites,Quartz monzonites,Ultramafics

WORK

ONE: Geological,Geochemical,Geophysical,Physical

EMGR 6.9 km;VLF
Map(s) - 2; Scale(s) - 1:2000

GEOL 500.0 ha
Map(s) - 4; Scale(s) - 1:2000

MAGG 6.9 km
Map(s) - 2; Scale(s) - 1:2000

ROCK 182 sample(s) ;ME
Map(s) - 1; Scale(s) - 1:10 000

SILT 72 sample(s) ;ME

SOIL 361 sample(s) ;ME
Map(s) - 5; Scale(s) - 1:2000

TREN 65.0 m 8 trench(es)
Map(s) - 1; Scale(s) - 1:200

RELATED

EPORTS: 16726

MINFILE: 104K 081,104K 092

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SUMMARY

Grid-controlled mapping, sampling, trenching and geophysics over the Ultramafic Vein showing, mapping and sampling of the Shoulder Vein showing and mapping and reinterpretation of the Two Ounce Notch zone and northern West Wall Fault area were all part of the 1991 work program on the Misty Nie Property.

The Ultramafic Vein is a north-trending shear-hosted quartz-pyrite vein that contains significant, but not ore-grade, gold over widths of up to 3 m and over a strike length of 70 m. Post-mineralization shearing has disrupted the vein which occurs as pods of solid vein material in a yellow limonitic gouge containing quartz fragments. The zone is open in both directions along strike.

Follow-up work on the Shoulder Vein area traced the original two veins along strike for 40 m and located several more narrow (<30 cm wide) quartz veins up to seven meters apart. Two samples taken from the southern strike extension of the original veins returned grades of 3.642 oz/ton Au, 2.26 oz/ton Ag and 4.17% Pb and 1.101 oz/ton Au, 1.32 oz/ton Ag and 2.59% Pb over widths of 25 and 5 cm respectively. Other grab samples from the area returned up to 0.096 oz/ton Au. The vein system is open along strike to the north.

Mapping and reinterpretation of the West Wall Fault, including the Two Ounce Notch zone, identified the source of the strong VLF conductor as a graphitic argillite unit that has acted as a greasy slip zone for the fault. The area is structurally complex and is strongly altered but it lacks large-scale brittle deformation which would provide openings for movement of ore-bearing fluids.

No further work is recommended on the Misty Nie property at this time.

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1.0 INTRODUCTION

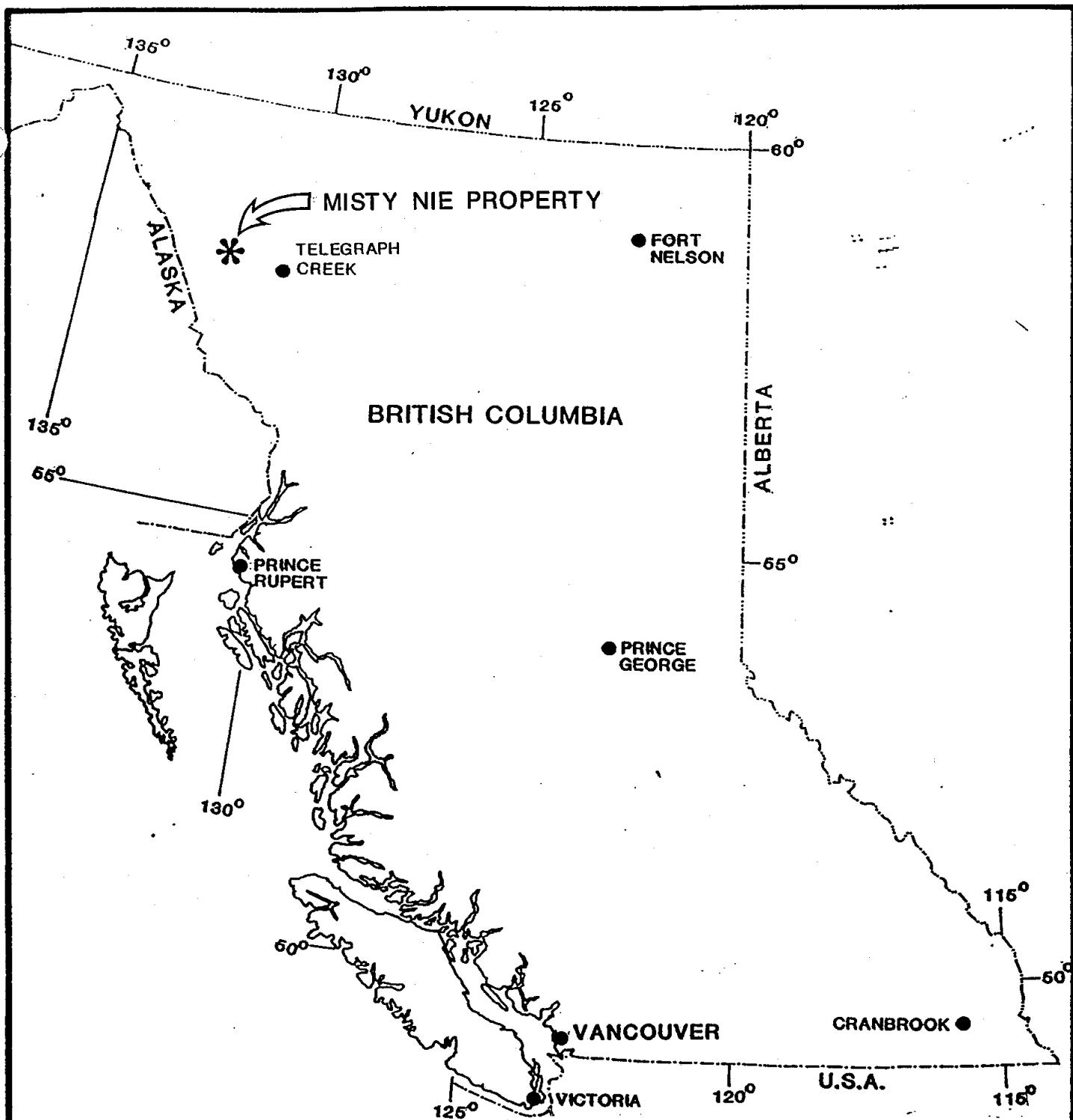
The Misty-Nie group is comprised of the Misty 1 and 2, the Nie 1 to 7, the Honk, and the El 1, El 4 and El 5 claims. The claims comprise a total of 207 units or 5175 hectares. The claims are owned 100% by Chevron Minerals Limited.

1.1 Claim Status

All claims are located in the Atlin Mining Division with the status of each listed in Table 1. North American Metals (NAM) has optioned the property from Chevron and is the operator.

CLAIM	REC. NO	UNITS	RECORDED	EXPIRY*
EL 1	201931	16	Sept. 15, 1982	Sept. 15, 1997
EL 4	201934	20	Sept. 22, 1982	Sept. 22, 1997
EL 5	201935	4	Sept. 22, 1982	Sept. 22, 1997
HONK	202642	18	Oct. 15, 1988	Oct. 15, 1997
MISTY 1	201883	20	Aug. 21, 1981	Aug. 21, 1997
MISTY 2	201884	20	Aug. 21, 1981	Aug. 21, 1997
NIE 1	201903	20	Sept. 18, 1981	Sept. 18, 1997
NIE 2	201904	20	Sept. 18, 1981	Sept. 18, 1998
NIE 3	201905	20	Sept. 18, 1981	Sept. 18, 1998
NIE 4	201906	20	Sept. 18, 1981	Sept. 18, 1997
NIE 5	201907	15	Sept. 18, 1981	Sept. 18, 1996
NIE 6	201908	10	Sept. 18, 1981	Sept. 18, 1998
NIE 7	201909	20	Sept. 18, 1981	Sept. 18, 1995

* Assuming acceptance of this report.
Table 1: Claim Status



NORTH AMERICAN METALS CORP.

MISTY NIE PROPERTY

LOCATION MAP

DRAWN KMc	DATE 12/90	FILE CODE 104K	FIG 1
Revised _____			

1.2 Location, Access, and Physiography

The Misty-Nie Group is located on NTS Map 104K/8W centred at 58° 20' North latitude and 132° 20' West longitude. The claims border the south shoreline of Tatsamenie Lake (elev. 775m) which lies 84 kilometres northwest of Telegraph Creek. The property is on a relatively flat (2000m elev.) alpine plateau except for Nie 3, 5 & 6 which are montane forest descending to the lake shore. Helicopter or float plane access to the property is available from either Dease Lake or Telegraph Creek. The Golden Bear Mine lies approximately 10 kilometers south of the property on the north shore of Bearskin Lake.

1.3 Exploration History

The Misty Nie Group was staked in 1981 by Chevron Minerals Limited and intermittently worked until 1987. In 1990 Homestake Mineral Development Company under contract to NAM performed mapping and sampling on the Nie Group under an option agreement with Chevron to earn a 50% interest in the property.

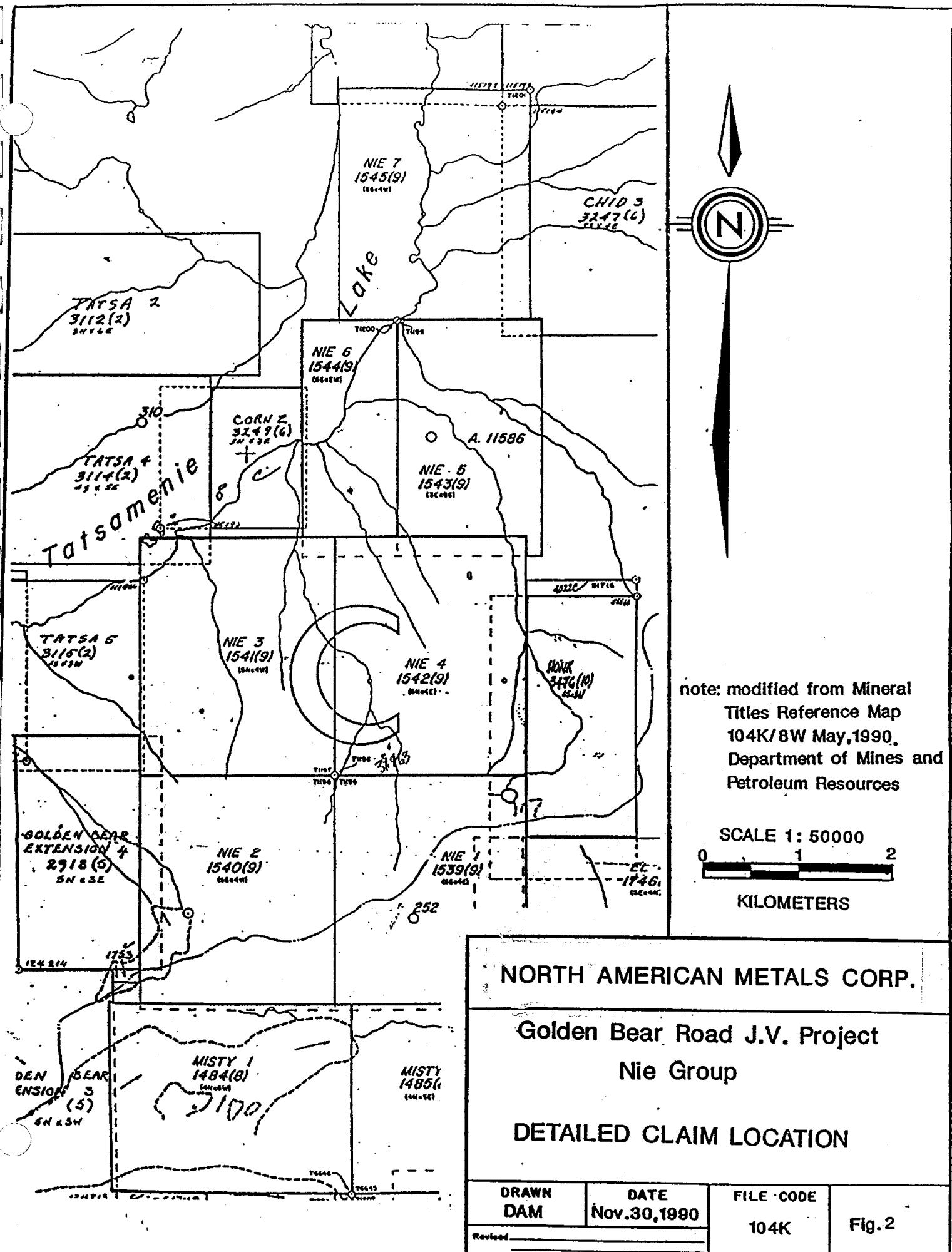
YEAR	WORK DONE
1982	Geology, rock and soil sampling.
1983	Geology, grid line, rock and soil sampling.
1984	Ground electromagnetic survey, geology, grid line, rock and soil sampling, and trenching.
1987	Diamond drilling and sampling.
1990	Geology, detailed mapping, rock and stream silt sampling.

TABLE 2: Previous Work Completed

1.4 1991 Work Program

Work on the Misty-Nie property began in early July with a stream silt sampling program covering seven streams on the property. Detailed work began on the Ultramafic Vein Showing where a 7.8 line km grid was established for conducting mapping, soil sampling and geophysical surveys. The Ultramafic Vein Showing was trenched at six sites in mid-July using a high-pressure water pump and at five additional sites in mid-September by blasting.

A brief mapping and sampling program was carried out on the Shoulder Vein Showing to follow up significant results from the 1990 reconnaissance work.



Detailed mapping (1:2000) was carried out on the Two Ounce Notch zone to the east of the area previously mapped by Chevron. Five of the diamond drill holes in the Two Ounce Notch area were relogged as part of the reinterpretation of the area.

The northwest corner of the Nie 3 claim was remapped at a scale of 1:10,000 to determine the source of a strong VLF conductor trending north-northwest along strike from the Two Ounce Notch zone.

2.0 REGIONAL GEOLOGY

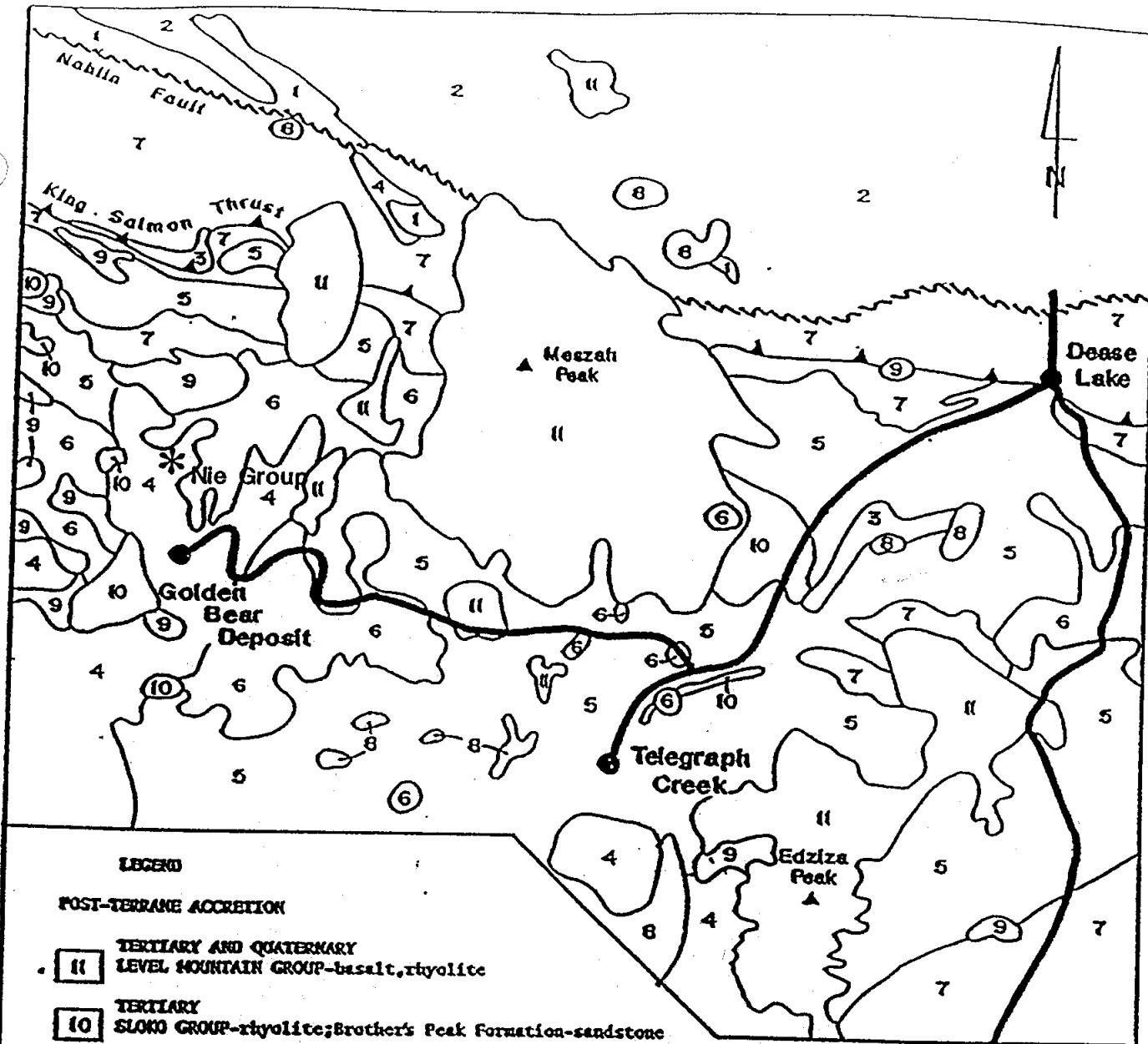
The Misty-Nie Group lies on the eastern margin of the Coast Plutonic Complex and the western margin of the Intermontane Belt within rocks of the Stikine Terrane. The Terrane consists of island arc rocks of Paleozoic, Triassic and Jurassic age; not all of these are exposed in the property area. Stikine Assemblage rocks are basal to the Terrane and are composed of Devonian to Permian limestones, argillites, cherts, and epiclastic volcanic rocks. These lithologies are distinct from similar lithologies of the younger Cache Creek Group exposed north of the Nahlin Fault, a northwest trending, steeply dipping fault located north of the property. The Stikine Assemblage is overlain by oceanic arc rocks of the Upper Triassic Stuhini Group and further to the south, the Jurassic Hazelton Group. All lithologies are crosscut by Triassic and/or Jurassic intrusions of intermediate to felsic composition.

Cretaceous and Tertiary units include felsic volcanic rocks, volcaniclastic rocks and their intrusive equivalents (Souther, 1971). Basalt to rhyolite flows make up the youngest rocks in the area (Level Mountain Basalt flows and Hearts Peak felsic flows). Three major deformation phases are present and include; Eocene extensional faults, a mid-Jurassic accretionary event (the King Salmon southwest verging thrust fault) and a pre-Middle Triassic accretionary event.

Both the Cache Creek Group and the Stikine Terrane have been subjected to low grade greenschist metamorphism in the western portion of the map area (Souther, 1971). This area has also been subjected to a regional hydrothermal alteration which has produced bright orange, red, and brown carbonate zones that are found along major structural breaks (Walton, 1990).

3.0 PROPERTY GEOLOGY

The Misty Nie property is predominantly underlain by Pre-Upper Triassic volcanic and sedimentary rocks including augite and plagioclase porphyries, massive flows, lapilli tuff, chlorite schist, argillite and limestone. These units are best exposed on the Nie 2 and Nie 3 claims in the west-central part of the property.



Modified from G.S.C.
map 1418A-Souther,
Brew and Okulitch (1979)

Scale 1:1,000,000

0 25 50 Km

NORTH AMERICAN METALS CORP.

ROAD PROJECT, B.C.

REGIONAL GEOLOGY

DRAWN DAM	DATE Nov. 30, 1990	FILE CODE 104J/4 104K/1	FIGURE 3
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The volcanic-sedimentary stratigraphy has been intruded by several intermediate intrusions of probable Upper Triassic to Jurassic age. The intrusions vary in composition from diorite to quartz monzonite and outcrop in the eastern and northern part of the property.

The Triassic and Jurassic rocks have been deformed by a series of north-south deep crustal faults, known as the Ophir Break, which hosts the Golden Bear deposit to the south. This structural zone is bound on the west side by the West Wall Fault, covered by the Misty 1, Nie 2 and 3 claims, and on the east side by the Ultramafic Fault, covered by the Honk, Nie 6 and El 1 and 4 claims. Several other major faults occurring within the structural zone are expressed as deeply incised gullies in the east-west valley in the southern part of the Nie 1 and 2 and El 4 and 5 claims.

An chain of ultramafic bodies outcrops on the western side of the Ultramafic Fault and extends from the south end of the Honk claim to the east side of Tatsamenie Lake. A second body of ultramafic rock outcrops in the southeastern part of the Nie 2 claim. It appears to have been faulted into place where the West Wall Fault splits into a series of narrow anastamosing faults.

Level Mountain basalt forms a horizontal cap on top of Pre-Upper Triassic volcanics and Jurassic diorite in the northeast corner of the Nie 1 claim. The basalt is dark grey and vesicular.

3.1 Ultramafic Grid Geology

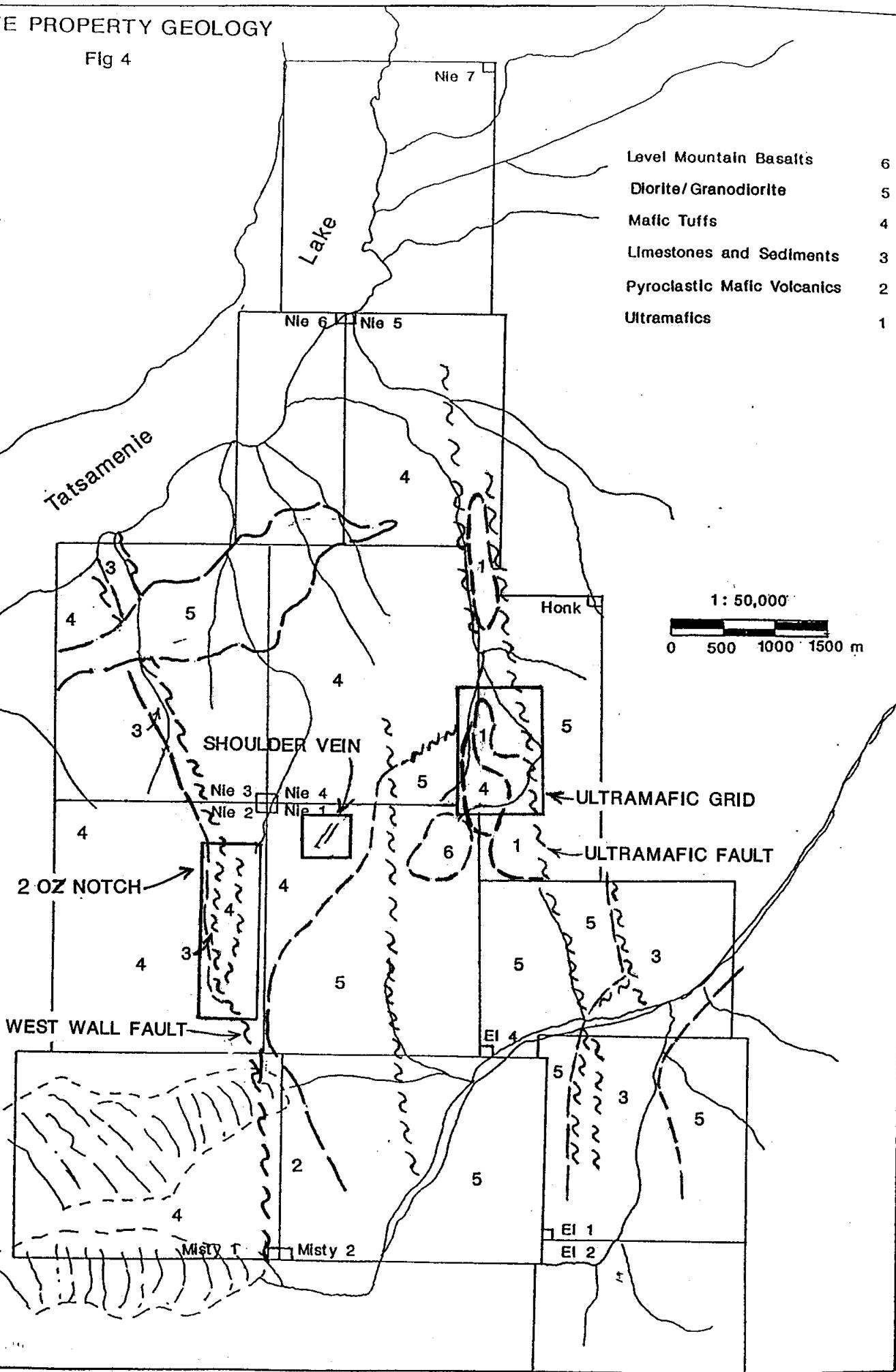
A flagged grid was established on the Honk claim over part of the Ultramafic Fault and consisted of a 1.1 km baseline striking 360° and 200 to 650m long crosslines which extended up to 300m west and 450m east. The grid was used to control soil sampling, mapping, and geophysical surveys including magnetometer and VLF. A total of 343 soil samples were collected from the grid area. All data from the grid was plotted at a scale of 1:2000 (figures 6a, b and e to p).

Mafic volcanic rocks in the southern part of the grid have been intruded by a large stock of monzonite to monzodiorite and smaller ultramafic lenses bordering the stock. The mafic volcanics consist of augite porphyroblastic mafic flows (Oliver, 1990) and are locally sheared and folded. They have been intruded by pink to white intermediate dykes related to the nearby monzonite underlying the central area of the grid. The monzonite is strongly carbonate altered near the ultramafic contact and hosts minor sulphide mineralization in local pockets. To the west, the monzonite grades into a monzodiorite with strong chlorite alteration of mafic minerals that gives it a dark grey appearance.

A field and petrographic study of the Honk claim by Oliver in 1990 determined that the

MISTY NIE PROPERTY GEOLOGY

Fig 4



ultramafic is an olivine clinopyroxenite of an Alaskan type intrusive affinity and that the eastern contact of the ultramafic is at least partly fault bounded against the adjacent intermediate intrusive. The western contact of the ultramafic is obscured by talus and moraine cover.

3.1.1 Trench Geology

Trenching started at the top of the slope near the original discovery of the gold-rich quartz-pyrite vein rubble, line 1+00S, 0+53W, and worked across the slope to the north-northeast following patches of limonitic weathering in the talus to 0+33S, 0+28W. Eight trenches of up to a maximum size of 6m long and 3m wide (figure 6c) were made with a high pressure water pump. Each trench encountered quartz veining or quartz vein fragments in a limonitic gouge hosted by sheared to massive mafic volcanic rock. The shear system appears to twist from 350°/74° east in the southern-most trench to 023°/42° east in the northern most trench.

An additional five trenches were blasted on the Ultramafic Grid (figures 6a to d). Blast trenches 1 and 4 tested leached-out rusty carbonate altered zones at the crest of the ridge near line 3+00N. Neither of these trenches reached solid bedrock. Blast trench 3 was made at the same location as the washed trench #3 and exposed massive pyrite vein material. Blast trenches 2 and 5 tested a strong VLF conductor on strike with the Ultramafic Vein, but failed to reach bedrock.

3.1.2 Mineralization

The Ultramafic Vein is a shear-hosted quartz-pyrite vein with local chalcopyrite mineralization in sheared mafic volcanic rock originally thought to be an ultramafic. The fragmented vein and limonite alteration is up to 3 m wide, can be traced along strike for 70 m and is open in all directions. Post-mineralization shearing has produced pods of solid vein material surrounded by limonitic gouge containing quartz fragments and bounded by sheared and chloritized mafic volcanic.

3.1.3 Results

Twenty-nine samples were taken from trenches on the Ultramafic Grid. The best sample, No. 3591, returned 0.382 oz/ton Au, 4.56 oz/ton Ag and 2.37% Cu in a grab sample of a 40 cm wide vein pod of quartz, 15% pyrite and 10% chalcopyrite. However, two follow-up samples (3827 and 3828) of the same vein returned very low gold and similar silver and copper grades. Chip samples across the vein and alteration zone returned from less than 1 to up to 7.9 gm/tonne Au over widths of up to 2.0m (see figures 6c and d for detailed sample locations and results).

3.2 Two Ounce Notch Geology

The Two Ounce Notch zone is underlain by the Pre-Upper Triassic mafic volcanics and sediments. The stratigraphy appears to trend north-south and dip steeply to the east based on a narrow band of sediments interbedded in the volcanics. The orientation is consistent in a series of layered, plagioclase and augite porphyritic volcanic flows to the east of the sediments that also strike north-northwest and dip to the east. The sediment package consists of graphitic argillite and minor limestone that is intensely faulted and locally silicified and brecciated around the Two Ounce Notch (figure 7).

A ultramafic body outcrops in the southeastern part of the Nie 2 claim due east of Chevron's diamond drill hole 87-35. It appears to have been faulted into place where the West Wall Fault splits into a series of narrow anastamosing faults. The age of the ultramafic body is of probable Permian age.

Mapping and reinterpretation of the West Wall Fault, including the Two Ounce Notch zone, indentified the source of the strong VLF conductor as a graphitic argillite unit that has acted as a greasy slip zone for movement on the West Wall Fault. The area is structurally complex but lacks brittle openings, due to the soft nature of the graphite, to allow the flow of mineralizing fluids.

3.3 Shoulder Vein Geology

This area consists of several subparallel quartz veins up to seven meters apart (see inset, figure 5), trending northeast and dipping to the southeast, hosted within a chloritized feldspar porphyritic mafic volcanic. Follow-up work to the 1990 results traced the original two veins along strike for 40 m and located several other narrow veins in the area. The veins are massive white quartz up to 30cm wide with iron carbonate alteration and local zones of massive sulphides, mainly pyrite and galena. Alteration of the host rock is limited to within a few centimeters of the veins.

3.1.1 Results

The quartz veins contain significant to ore-grade gold with significant silver and lead credits. The best results are tabulated in Table 3.

4.0 GEOCHEMICAL PROGRAM

Soil samples were taken from the B horizon at depths of 10 to 40 cm. Stream silt samples were collected from silt and fine sand deposits in the active flow of creeks. All

soil and stream silt samples were collected in kraft high-wet-strength paper bags and hung to dry prior to being shipped to Acme Analytical Labs for analysis. Each sample was analyzed for 30 elements, including gold, done by the ICP method. Samples anomalous in gold were reanalyzed by fire assay and samples anomalous in silver, copper, lead and zinc were reanalyzed by normal assay procedures.

Gold, silver, copper and arsenic soil data was plotted on grid maps and contoured at intervals of a) the mean, b) the mean plus one standard deviation and c) the mean plus two standard deviations.

Sample	Au (opt)	Ag (opt)	Pb (%)
3554	-	1.55	-
3556	-	1.32	-
3557	.096	-	2.43
3559	1.101	1.32	2.59
3560	3.642	2.26	4.17
3561	-	5.87	8.81
3563	.033	-	-
3565	.029	-	-
3567	-	1.05	-
3570	.057	4.09	1.91
3572	.037	-	-
3573	.073	-	-

Table 3: Shoulder Vein Showing Assay Results

4.1 Grid Soil Sample Results

Contoured soil results for gold and arsenic identified two coincident anomalies (figures 6 and j). The largest of the two anomalies occurs on line 5N between 1+00W and 2+40E and is underlain by moderately carbonate altered monzonite in contact with ultramafic rock. Rock samples from the monzonite returned low gold but very high arsenic values. The second anomaly is found 50 m north of the Ultramafic Vein showing on line 0 between 1+00W and 0+40E. It lies near the crest of the ridge on the west slope and is

underlain by moraine and talus.

Copper soil results form a broad anomaly that covers the southwest quarter of the grid. A small high-grade core of the anomaly is coincident with the Au-As anomaly on line 0.

There are no anomalous silver results from soil data on the Ultramafic Grid.

4.2 Reconnaissance Stream Silt Sample Results

The reconnaissance stream silt data was plotted on a 1:10,000 scale topographic map (figure 5). None of the seven creeks sampled during the reconnaissance work returned significant results.

5.0 GEOPHYSICAL PROGRAM

A total of 6.9 line kms of magnetometer and VLF surveys were carried out on the Ultramafic Grid using Scintrex IGS-2 units for field and base magnetometer stations. The data for both surveys was plotted as line profile and contour maps at 1:2000 scale (figures 6k, m, n and p).

The VLF contours form a strong linear arcuate anomaly extending from line 2+00S, 0+10W, over the Ultramafic Vein showing on line 1+00S at 0+25W, up to line 3+00N at 0+10W. The anomaly bifurcates at 1+00N, 1+60W to form a second, weaker anomaly trending northwest. A second VLF anomaly occurs between lines 5+00N and 7+00N at 1+50W and corresponds with an outcrop of unaltered ultramafic.

The magnetics survey produced a strong magnetic response from the ultramafic body and clearly defined the contact of the unit with the adjacent intrusive rocks. Other mag highs on line 0, 0+50W and line 2, 2+25W are coincident with VLF conductors. There is no outcrop exposure in those areas.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The main purpose of the 1991 program was to determine the extent of mineralization at the Ultramafic Vein and Shoulder Vein showings and reinterpret the geology and mineral potential of the Two Ounce Notch zone and northern West Wall Fault. No further work is recommended on the Ultramafic and Shoulder veins because of the low grade or narrow widths of the vein systems. Reinterpretation and mapping of the Two Ounce Notch and the northern extension of the West Wall Fault did not locate any new zones of mineralization.

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APPENDIX I
STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

SALARIES AND WAGES	40,040
GEOCHEMISTRY AND ASSAYING	7,183
CONSULTING AND TECHNICAL	1,749
MISCELLANEOUS GEOLOGICAL	
Travel, Lodging and Meals	5,693
Communications	328
Maps, Publications, Photos	187
	6,208
CLAIM COSTS	6,060
SURFACE WORK	
Field Materials	631
Trenching	4,817
Air Support	42,191
	47,639
MACHINERY AND EQUIPMENT	383
ADMINISTRATION FEE (12%)	<u>13,112</u>
NET PROJECT EXPENDITURES	122,374

APPENDIX II

ROCK SAMPLE DESCRIPTIONS

ROCK SAMPLE DESCRIPTIONS

Sample	Type	Description
3501	grab	Sil gndrt, gossan, tr py.
3502	grab	Alt gndrt, gossan vn material, NVS.
3503	float	Qtz vn breccia, gossan, NVS.
3504	float	Qtz ser vn wi minor alt, py wi possible ga.
3505	grab	Alt gndrt, gossan, mal stain, tr py.
3506	grab	Qtz cbt vn material, 1% py.
3507	grab	Alt gndrt, qtz, cbt veinlets, gossan, NVS.
3508	grab	Ultramafic(?), mal and lim staining.
3509	grab	Fe cbt alt, NVS.
3512	grab	Qtz vn 4-6cm in syenite dike, py, mal stain, tr ga(?)
3513	grab	Qtz hem vn 2-4cm in ultramafic host, chl, talc, fuchsite, NVS.
3514	grab	Moderately alt ultramafic, Fe cbt & vuggy calcite vns, NVS, minor hem.
3515	grab	Talc and chl shear breccia 0.2m wide, NVS.
3516	grab	Msv ultramafic, no mineralization.
3523	grab	Sil vlc, rusty brown wx, 2-3% py.
3524	grab	Fe-cbt alt ultramafic(?), coarse cbt vn wi qtz strngr.
3525	grab	Sil, Fe cbt alt gndrt plug(?), contact wi ultramafic, 1-3% of fine grained diss and euh py.
3526	grab	Cbt vn (10cm) wi fuchsite, follows joint set, NVS
3527	grab	Pink to orange gndrt-granite, msv, hem and Fe cbt, NVS.
3528	grab	Vn material, sid, sil, tr py, slight mal stain, vfg ga(?)
3529	grab	Sid qtz vn in gndrt, vfg py, tr ga (?)
3530	grab	Qtz ser alt gndrt, tr diss py & ga(?)
3541	grab	Gossan zone, py, minor kspar.
3542	grab	Mvlc wi diss py, rep sample.

3543	grab	Highly wx gossan, orange to brown, qtz vn, euh py.
3544	grab	Gossan adjacent to small fract, NVS
3545	grab	Fspar porph mvlc wi minor qtz.cbt vns, py, mal.
3546	float	Qtz vn, ribboned, in felsic host, minor py
3551	float	Spire grid, qtz vn in lim strongly fractd boulder, tr-1% cpy.
3552	grab	Fspar rich intrusive, monzonite, cbt strngr, tr-1% py in strngr.
3553	grab	Qtz vn in kspar rich intrusive, 30cm wide wi 20cm qtz stringer zone, tr-4% in strngr
3554	grab	15cm shear wi white qtz, tr -1% py and ga.
3555	grab	40cm white shear zone wi cbt vn, tr py.
3556	grab	30cm sheared qtz, 2% py and ga.
3557	grab	Yellow clay gouge, 50cm, to 5% ga in qtz bands
3558	grab	Strongly lim 50cm gouge wi goethite strngr, chl, ser schist.
3559	grab	5cm shear wi qtz vn, tr py, 5% ga.
3560	grab	25cm shear wi banded qtz vns, to 4% ga, 2% py.
3561	grab	10cm shear, lim, wi qtz vns to 5-8% ga, tr py.
3562	grab	5cm white qtz vns 5% black organics in vugs.
3563	grab	10cm white qtz vn tr py-cpy-ga.
3564	grab	15cm qtz vn wi tr-1% diss ga-cpy-py.
3565	grab	Big John vn, 10-30cm wide,5% ga,tr cpy,2% py
3566	grab	50cm sheared chl schist, tr cpy, good mal.
3567	grab	10cm white qtz vn, 5% ga, tr cpy, py.
3568	grab	High sulfide in small podiform zone, shear, 30% py, 50% chl.
3569	grab	Fe cbt vn alt zone 1.5m, in augite porph vlc.
3570	grab	30cm shear wi qtz vn 1-2% ga and tr py.
3571	grab	2m qtz-ser-chl-py shear in mvlc, py is diss wi up to 10-15% locally.
3572	grab	Shear zone 20cm wide, qtz vns wi up to 5% cubic py.
3573	grab	Qtz along 25cm shear, 15% fg semi msv py.
3574	grab	Sheared drt wi tr-2% diss py, strong gossan.

3575	grab	Fe cbt alt and brx wi diss py.
3576	grab	Alt gndrt, brx, ferricrete(?) abundant wx. magnesite and hem, NVS
3577	grab	Sheared gndrt, int Fe gossan, some clay gouge adjacent, tr py & mal
3578	grab	Sheared gndrt, rusty wx, 4cm qtz vn, tr. py and ga(?)
3579	grab	Rusty yellow/orange wx qtz vn in sheared gndrt, tr py & ga(?).
3580	grab	Sheared cbt gndrt, NVS.
3581	grab	Rusty qtz vn, 2-3% diss py.
3582	grab	Qtz vn, tr to 2% py.
3583	grab	Completely oxidized wx sulfide vn.
3584	grab	Foliated vlc, 3-5% mal, minor azurite
3585	grab	Sheared gndrt, gossanous, NVS.
3586	grab	Zone of sil drt, 1-2% py strngr, xcut by 10cm syenite dikes.
3587	grab	Qtz vn 50cm in mvlc, chl, 1-2% clotty py.
3588	grab	Bright orange gossan, totally alt to lim wi goethite strngr stockwork, very light weight and punky.
3589	grab	Lim shear zone, 20cm wide, in mvlc.
3590	grab	Rubbly orange crushed gndrt, near soil.
3591	grab	Resample 35481, Sept 90, Qtz vn 40cm, light to dark grey, 15% semi msv to msv clotty py and 10% msv cpy, cpy occurs in discrete bands approx 2cm wide.
3601	grab	Slight gossan, sheared gndrt, 1% black semi-metallic nonmagnetic xtals.
3602	grab	Argillite black, weakly bedded, rusty wx, 5-7% py, diss and as strngr, py very white.
3603	grab	Cooked mvlc, int cbt alt, tr py.
3604	grab	Qtz vn, rusty stain, tr py.
3605	grab	White qtz vn, rusty wx, NVS.
3606	grab	Sil felsic rock,pinkish brown, 2% diss py
3607	grab	Gossanous sil felsic as above.

3608	grab	Yellow fault gouge, NVS
3609	grab	Mvlc dark green aphanitic, rusty gossan, tr py
3610	grab	Sil sediment dark rusty brown 1% diss py.
3616	grab	Cbt alt contact between mvlc and argillite 2% py in clots.
3618	grab	Int cbt alt ultramafic, fuchsite, tr diss py.
3619	grab	Cbt alt mvlc, tr vfg py.
3620	grab	Cbt alt mvlc tr py from small shear.
3621	chip	5m sample of bleached sil mvlc, 1-2% py
3622	grab	Mvlc black aphanitic, foliated qtz vn 10cm wide, tr py.
3623	grab	Potassic alt, 1% py along fract, in fresh drt.
3624	grab	Cbt vn in small shear in fresh drt, minor euh py.
3625	grab	Cbt alt drt shear wi trace mal.
3626	grab	Foliated Fe cbt alt mvlc tr py.
3627	grab	Mvlc, sil qtz vn in 10cm shear, tr py
3628	chip	1m in gossanous qtz vn and mvlc, tr to 2% py
3629	grab	Rusty drt up to 5% py, diss and as fine strngr.
3630	chip	0.5m across small fault zone, mvlc, 3-5% diss py, 1% unident other metallic mineral.
3641	grab	Cbt alt mvlc wi tr py.
3642	grab	Qtz vn 1m wide, tr py & mal.
3643	grab	Qtz vn in mafic vlc gossan, NVS.
3644	grab	Msv py in sil mvlc, gossan, py to 4%.
3645	grab	Sil argillite, qtz strngr, py to 4%.
3646	grab	Thin section.
3647	grab	Mvlc, tr py.
3648	chip	5m interval of sil mvlc, py 1-2%.
3649	grab	Schistose mvlc gouge zone, NVS.
3650	grab	Qtz vn in mvlc, py to 10%.
3661	chip	Narrow qtz vns in int sheared vlc tw 30-35cm. chl, int lim pervasive, up to 50% py, possible tr cpy.

3662	chip	1M wide. Int sheared & fractd mvlc, no py seen - may be smeared out, Int lim on fract, rusty to orange wx, chl, py only in narrow qtz, vns.
3663	chip	25cm tw. Smoky grey to milky white qtz orange discoloration along fract, chl, euh py diss to 10%
3664	grab	Gouge, from trench 2
3665	chip	1m tw Qtz vn, 2-3% py minor Fe stain on fract.
3666	chip	0.5m tw Qtz vn, orange to rusty qtz tr py, tr cpy, tr po.
3667	grab	High grade grab, sheared, fg, chl mvlc, int fractd, calcite vn and fract fill, azurite 2-3%, mal 5%, no primary sulphides noted.
3668	grab	Rubbly, unknown protolith, jar, NVS.
3669	grab	Wacke pelite, aphanitic, py to 1%.
3670	float	Argillite hosting qtz vn, cbt vn, NVS.
3671	grab	Shear in gndrt, jar, lim, py.
3672	grab	Shear brx in gndrt, sid, NVS.
3673	grab	Sil qtz cbt vn 30cm in mvlc, py and specular hem.
3674	grab	Carbonaceous lmst shear gouge 20cm wide, NVS
3675	grab	Sil zone in mvlc, cbt alt, tr py, lim, goethite.
3676	float	Sil vn in mvlc, 20cm clot of msv py.
3677	grab	20 -30 bed in chl vlc, py gossan, some wad, py diss occsnl msv, jar & lim.
3678	grab	Pyritic gossan in layered vlc, lim, goethite, diss py.
3679	grab	Rusty brown wx sil vlc,cbt alt, diss vfg py
3680	grab	Sil zone in drt, diss py.
3681	grab	Lim gossan in sil drt, diss py.
3682	grab	Shear infill, lim, NVS.
3686	grab	Qtz vn 4-6cm wide in sheared (mafic) drt, 5% msv and euh py.
3691	chip	1m tw int sheared mvlc, alt to chl & cbt, friable, lim, py to 50%, Py,cpy,po in mvlc.

3692	chip	20cm. Chl mvlc, relatively unaltered, lim, locally msv py to 50%.
3693	chip	30cm through clay-ser between sheared mvlc and qtz vns, int calcite vnl, gritty py.
3694	chip	1m tw of qtz vn material, minor chl and alt mvlc, lim stain on fract, msv and diss py up to 20%
3695	chip	Green msv volc, unaltered or sheared. NVS
3696	chip	1m int sheared and cbt alt, friable and rubbly mvlc, py strngr and semi msv.
3697	chip	2m of extremely fractd qtz material, smoky white to orange, white py
3698	chip	0.5m chl unaltered msv mvlc, minor lim, tr py
3699	grab	Highly fractd qtz vn, 1-2% diss py, mal on fract surface
3700	grab	Int sheared and chl-ser-cbt alt mvlc, minor Fe stain, tr diss py, mal stain
3701	grab	Qtz vn, milky, fe stain, NVS
3702	grab	Same as 3703.
3703	chip	1.0m tw of qtz vn, int fe stain, sulfides wx out, mal on fract, 2-3% py on margins
3704	chip	1m tw, unaltered mvlc in vn zone, msv, chl, tr diss py.
3705	chip	30cm tw, qtz vn, minor mvlc, mal on fract 2.5% py, diss and msv.
3706	chip	Int sheared mvlc in clay gouge, int chl, NVS
3707	ddh core	Argillic to wacke, variable amounts of graphite, tr py.
3708	grab	Qtz vn in int sheared mvlc, NVS.
3811	chip	Int sheared lim, jar in fract, tr py, diss and as strngr.
3812	chip	30cm channel in qtz vein, lim, mal, azurite, jar, msv py to 10%.
3813	talus	Py, mal, azurite in bedrock.
3814	grab	Msv sulfide pod in sandstone, 10x20cm, 20% white py.
3815	grab	20cm qtz vn in shear zone, chl clay gouge in H-wall, py pods to 3cm, mal, azurite, 1% sulfides overall.

3816	float	Banded qtz-plag intrusive wi azurite,po, tetrahedrite, mal, lim coating on surface.
3817	grab	30cm tw qtz cbt vn between brx qtz, NVS.
3818	grab	Higrade of mal in pink intrusive, 1% tetrahedrite, tr mal, tr diss py.
3819	grab	Gossan in sed, lim, alt, 4% diss py.
3820	grab	White qtz vn wi strngr of black sulfide,py 5%
3826	grab	Int sil of mvlc, 1m brx wi 2m cbt flood adjacent both sides, lim, NVS.
3827	grab	Resample of south Trench 1, sheared qtz vn, cbt strngr, py to 50%, int jar.
3828	chip	Same location as 3827, qtz vn, py to 10%, tr cpy.
3841	grab	Rep sample of fissile Fe cbt alt sediments and mvlc in shear zone, lim, jar, NVS.
3842	grab	Qtz vn in monzodiorite, weak cbt alt, NVS.
3843	grab	0.5m qtz cbt vn in monzodiorite, NVS.
3844	chip	Qtz vn 2cm wide in net veined mvlc, lim, jar, py to 30%.
3845	grab	Siliceous qtz ser schist, fuchsite, 10% clotty py.
3846	grab	30cm along 3cm wide cbt vn in pyroclastic mvlc, lim and jar staining pervasive, 1% diss py.
3986	grab	2-4cm qtz vn in mvlc, 20-30% euh py.
3987	grab	Chl alt shear in mvlc, NVS
3988	float	Brx shear zone in mvlc, NVS.
3989	float	Ribboned sid/cbt vn in gouge/brx, diss py.
3990	grab	Mvlc wi euh cbt vn 2-4cm, diss euh py.
3991	float	Laumontite/Zeolite vn brx, NVS.
3992	grab	Hem sid vn brx, 2m wide, sheared, NVS.
3993	grab	Sid vn 2-3m wide in gndrt, NVS.
3994	grab	Cbt alt gndrt, alt 10cm wide, diss and msv py, lim stain, rusty gossan.
3995	grab	Rusty wx hem gndrt, NVS.

3996	grab	Sil vuggy qtz/cbt vn, diss euh py 3-5%.
3997	grab	Vuggy qtz/cbt vn 2-4cm, 8-10% py.
3998	grab	Qtz cbt vn 2-4cm euh rhombs, py, ga, cpy(?), lim.
3999	grab	Clay wx from sulfide vn, ser, lim, goethite, NVS.
4000	grab	Py gossan vns 4-6cm over 3m tw, monzodiorite host, ser, lim, py, ga, cpy(?)
35008	grab	Drt, yellow wx, tr-1% po, hem, scordodite(?)

Abbreviations Used

alt	Altered		
assoc	Associated	mvlc	Mafic Volcanic
brx	Brecciated	NVS	No visible sulfides
cbt	Carbonate	o/c	Outcrop
cg	Coarse grained	po	Pyrrhotite
chl	Chlorite	porph	Porphyry
cpy	Chalcopyrite	py	Pyrite
ddh	Diamond Drill Hole	qtz	Quartz
diss	Disseminated	rep	Representative
drt	Diorite	sed	Sediment
euh	Euhedral	ser	Sericite
fg	Fine grained	sid	Siderite
fract	Fracture	sil	silicified
fspar	Feldspar	silc	silicious
fw	Foot Wall	strngr	Stringer
ga	Galena	tw	Total width
gndit	Granodiorite	vfg	Very fine grained
hb	Hornblend	vlc	Volcanic
hem	Hematite	vn	Vein
int	Intense	vnlt	Veinlet
jar	Jarosite	vns	veins
lim	Limonite	wi	With
mal	Malachite	wx	Weathered
mod	Moderate	xcut	Cross cut
msv	Massive	xtals	Crystals

APPENDIX III

ANALYTICAL METHOD

ACME ANALYTICAL LABORATORIES LTD.

ICP - .500 gram sample is digested with 3 ml 3-1-2 HCl-HNO₃-H₂O at 95 degrees Celcius for one hour and is diluted to 10 ml with water. This leach is partial for Mn, Fe, Sr, Ca, P, La, Cr, Mg, Ba, Ti, B, W and limited for Na, K and Al. Au detection limit by ICP is 3 ppm. Au** analysis by FA/ICP from 10 gram sample. Au* by wet acid leach(10gm)

Au** and Ag** by fire assay from 1 assay ton sample type is rock pulp

For %Cu, %Pb and %Zn a one gram sample was digested in 50ml of aqua regia for one hour to 100mL and run by ICP.

APPENDIX IV

GEOCHEMICAL RESULTS



Homestake Canada Limited PROJECT 3128 FILE # 91-2952

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ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** pb
MN-HK-2 6+00N 1+80E	1	32	4	74	.2	132	25	675	3.97	16	5	ND	1	17	.2	2	2	62	.19	.076	3	207	2.12	142	.02	3	1.80	.01	.03	1	2	2
MN-HK-2 6+00N 2+00E	1	29	2	62	.2	154	25	768	3.90	9	5	ND	1	17	.2	2	2	57	.36	.056	6	160	2.43	239	.02	4	1.28	.01	.07	1	2	5
MN-HK-2 6+00N 2+20E	1	34	3	57	.2	200	18	324	3.76	20	5	ND	1	31	.2	2	2	59	.38	.046	3	210	2.92	177	.03	5	1.44	.01	.04	1	2	3
MN-HK-2 6+00N 2+40E	1	49	4	58	.2	334	35	595	4.61	20	5	ND	1	32	.3	2	2	62	.43	.054	2	267	4.60	165	.02	8	1.87	.01	.04	1	2	8
MN-HK-2 6+00N 2+60E	1	61	2	55	.2	201	22	446	3.87	18	5	ND	1	37	.2	2	2	63	.48	.060	4	197	3.04	148	.03	5	1.95	.02	.03	1	2	1
MN-HK-2 6+00N 2+80E	1	50	6	74	.2	89	17	695	3.98	14	5	ND	1	53	.2	2	2	75	.53	.090	3	118	1.72	191	.03	2	2.36	.02	.04	1	2	18
MN-HK-2 6+00N 3+00E	2	71	3	65	.3	80	22	1361	4.36	10	5	ND	1	56	.2	2	2	89	.49	.103	2	100	1.69	167	.05	2	2.33	.02	.04	1	2	8
MN-HK-2 6+00N 3+20E	1	76	2	68	.3	90	20	736	3.87	9	5	ND	1	63	.2	2	2	76	.55	.098	2	112	2.16	91	.06	2	2.41	.02	.05	1	2	5
MN-HK-2 6+00N 3+40E	1	49	3	62	.2	60	16	919	3.69	10	5	ND	1	46	.2	2	2	62	.49	.073	9	63	1.87	183	.03	3	1.88	.01	.05	1	2	1
MN-HK-2 6+00N 3+80E	1	30	2	73	.3	43	15	1127	4.13	9	5	ND	1	44	.2	2	2	66	.56	.069	13	48	1.85	337	.01	3	2.38	.01	.08	1	2	1
MN-HK-2 6+00N 4+00E	1	42	2	79	.2	50	17	949	4.62	11	5	ND	1	53	.4	2	2	84	1.45	.101	10	52	2.11	157	.03	3	2.49	.01	.05	1	2	1
MN-HK-2 BL 9+00N	1	39	3	49	.2	111	20	486	4.08	15	5	ND	1	19	.2	2	2	66	.30	.041	2	184	1.67	54	.07	2	1.58	.02	.03	1	2	3
MN-HK-2 BL 8+75N	1	56	2	60	.2	264	50	765	4.12	16	5	ND	1	22	.2	2	2	66	.56	.032	2	226	4.63	51	.08	5	1.83	.03	.03	1	2	3
MN-HK-2 BL 8+50N	1	48	4	76	.2	120	22	659	3.95	20	5	ND	1	22	.2	2	2	66	.31	.095	2	191	2.21	72	.04	2	1.68	.02	.03	1	2	3
MN-HK-2 BL 8+25N	1	67	2	77	.2	141	23	548	3.89	23	5	ND	1	24	.2	2	2	76	.36	.072	2	200	2.60	79	.04	3	1.96	.03	.03	1	2	8
MN-HK-2 BL 8+00N	1	175	3	47	.3	247	40	532	3.84	22	5	ND	1	19	.2	2	2	73	.56	.024	2	216	3.82	61	.10	6	1.58	.04	.02	1	2	16
MN-HK-2 BL 7+75N	1	166	2	55	.3	248	47	515	4.15	13	5	ND	1	16	.2	2	2	76	.58	.015	2	241	4.44	32	.12	9	1.65	.04	.03	1	2	2
MN-HK-2 BL 7+50N	1	153	2	37	.3	164	31	384	3.18	18	5	ND	1	29	.2	2	2	88	1.08	.015	2	176	3.66	31	.17	4	2.09	.07	.05	1	2	1
MN-HK-2 BL 7+25N	1	145	2	35	.3	135	28	314	3.08	14	5	ND	1	28	.2	2	3	68	.71	.025	2	128	3.01	34	.13	2	1.63	.05	.03	1	2	1
MN-HK-2 BL 7+00N	1	188	2	27	.3	85	20	368	2.55	16	5	ND	1	41	.2	2	3	92	.94	.011	2	143	2.47	65	.24	2	1.89	.13	.05	1	2	21
MN-HK-2 BL 6+75N	1	123	6	71	.3	204	28	566	3.91	28	5	ND	1	64	.2	2	3	81	.56	.038	2	201	3.19	92	.11	3	1.99	.05	.04	1	2	18
MN-HK-2 BL 6+50N	1	54	2	73	.3	198	27	589	4.50	27	5	ND	1	27	.2	2	2	70	.36	.067	2	240	2.99	128	.04	3	1.87	.02	.03	1	2	26
MN-HK-2 BL 6+25N	1	112	4	62	.3	275	58	770	5.00	17	5	ND	1	16	.4	3	2	90	.41	.024	2	268	9.42	58	.10	7	2.35	.02	.03	1	2	25
MN-HK-2 BL 6+00N	1	52	3	79	.3	289	61	857	5.58	28	5	ND	1	20	.6	3	3	90	.31	.034	3	305	8.99	90	.06	10	1.57	.01	.02	1	2	25
STANDARD C/AU-S	19	58	38	133	6.9	71	31	1054	4.02	43	20	7	38	52	17.2	16	22	56	.46	.087	39	56	.80	178	.08	32	1.95	.06	.14	12	2	49

GEOCHEMICAL ANALYSIS CERTIFICATE

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1000 - 700 W. Pender St., Vancouver BC V6C 1G8

MSLR - Misty Hill

AA

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
M-1-2 BL 4+00N	1	22	2	52	.2	1159	110	1792	5.76	.50	5	ND	1	10	.2	2	2	15	.13	.008	3	587	17.92	50	.04	62	1.85	.01	.02	1	2	4
M-1-2 BL 3+75N	1	52	5	61	.7	392	55	1025	4.97	.22	5	ND	1	20	.2	37	2	64	.37	.055	3	396	5.36	60	.06	11	2.08	.01	.04	1	2	16
M-1-2 BL 3+50N	1	51	2	47	.6	635	62	832	5.14	.10	5	ND	1	48	.2	26	2	62	1.50	.044	4	400	9.65	56	.03	16	2.53	.01	.03	1	2	1
M-1-2 BL 3+25N	1	539	5	48	.2	154	53	896	5.94	.12	5	ND	1	44	.2	2	2	114	1.23	.115	9	309	2.89	82	.01	6	2.61	.01	.08	1	2	11
M-1-2 BL 3+00N	1	109	3	35	.1	222	33	474	3.54	.7	5	ND	1	15	.2	2	2	58	.61	.046	3	325	2.77	48	.10	4	1.69	.02	.07	1	2	10
M-1-2 BL 2+75N	1	134	2	35	.1	245	36	490	3.72	.12	5	ND	1	25	.2	2	2	67	.74	.129	4	367	3.41	57	.11	2	2.17	.02	.06	1	2	1
M-1-2 BL 2+50N	1	145	5	34	.1	212	36	413	3.92	.11	5	ND	1	20	.2	2	2	74	.50	.094	2	435	3.31	30	.13	2	2.22	.02	.04	1	2	4
M-1-2 BL 2+25N	1	487	9	53	.4	218	42	539	4.68	.41	5	ND	1	20	.2	2	5	106	.87	.059	3	253	3.26	51	.24	2	2.70	.03	.08	1	4	11
M-1-2 BL 2+00N	1	114	2	33	.1	328	45	459	3.70	.12	5	ND	1	7	.2	2	2	65	.33	.023	2	466	4.43	20	.10	4	2.22	.01	.02	1	2	5
M-1-2 BL 1+75N	1	60	4	29	.1	229	39	484	3.86	.14	5	ND	1	8	.2	2	2	64	.41	.041	2	392	3.77	40	.14	4	2.26	.01	.03	1	2	1
M-1-2 BL 1+50N	1	287	4	51	.9	342	49	662	5.10	.14	5	ND	1	28	.2	38	3	83	.62	.053	3	422	5.22	49	.17	5	3.01	.02	.03	1	3	15
M-1-2 BL 1+25N	1	101	2	32	.1	321	43	514	3.78	.10	5	ND	1	7	.2	2	2	56	.64	.031	5	484	4.01	26	.11	4	2.09	.01	.02	1	2	8
M-1-2 BL 1+00N	1	184	3	45	.1	407	54	625	4.26	.19	5	ND	1	10	.2	2	3	63	.48	.043	3	409	4.44	29	.16	4	2.48	.01	.03	1	2	3
M-1-2 BL 0+75N	1	62	3	47	.1	302	38	650	3.58	.10	5	ND	1	12	.2	2	2	57	.74	.034	2	312	4.27	43	.15	4	2.62	.02	.06	1	2	3
M-1-2 BL 0+50N	1	73	2	52	.7	558	85	1058	5.22	.15	5	ND	1	8	.2	31	2	72	.59	.037	3	513	7.35	22	.11	7	2.43	.01	.03	1	2	5
M-1-2 BL 0+25N	1	1306	4	58	.5	486	108	610	4.73	.101	5	ND	1	6	.4	2	8	58	.58	.031	5	494	4.56	19	.13	4	2.33	.01	.02	1	2	146
M-1-2 BL 0+00N	1	750	2	72	.2	354	77	739	4.96	.21	5	ND	1	11	.2	2	5	65	.64	.102	5	258	3.92	51	.21	2	2.63	.01	.09	1	3	35
STANDARD C/AU-S	19	56	41	131	6.9	69	33	1033	3.96	.37	21	7	36	53	18.4	18	20	57	.48	.088	36	59	.87	175	.09	34	1.87	.06	.15	12	2	47

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: P1 SOIL P2-3 STREAM SED P4-6 ROCK AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 29 1991 DATE REPORT MAILED: Aug 3/91 SIGNED BY.....D.TOE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ASSAY IN PROGRESS



Homestake Canada Limited PROJECT 3128 FILE # 91-2954

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ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl ppm	B %	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
MN-1-3 BJ-16	2 105	5 45	.1	150 25	464 3.78	4	5	ND	1	67	.4	2	2	69	.94	.092	3 198	3.27	102	.11	3 1.89	.02	.07	1	2	3						
MN-1-3 BJ-17	2 117	2 50	.1	179 30	528 3.99	4	5	ND	1	74	.6	2	2	73	1.02	.100	4 213	3.60	118	.12	4 2.25	.03	.09	2	2	6						
MN-1-3 BJ-18	1 100	5 49	.1	158 26	496 3.80	6	5	ND	1	70	.4	2	2	69	1.01	.099	3 190	3.37	113	.11	2 2.02	.03	.09	1	2	4						
MN-1-3 BJ-19	2 99	8 53	.1	168 27	483 3.85	3	5	ND	1	67	.6	2	2	68	.97	.098	3 207	3.61	107	.11	3 1.95	.03	.08	1	2	19						
MN-1-3 BJ-20	2 99	3 54	.1	165 27	498 3.94	3	5	ND	1	70	.8	2	2	70	1.01	.108	4 207	3.52	112	.11	3 2.00	.03	.07	1	2	4						
MN-03-3 DJ-1	11 230	32 232	.5	51 24	976 5.70	227	5	ND	1	65	1.7	5	2	101	.86	.122	13 46	1.62	241	.05	3 2.40	.02	.18	2	2	15						
MN-03-3 DJ-2	4 173	23 206	.3	153 32	715 5.22	189	5	ND	1	53	1.5	2	2	91	.97	.125	8 192	3.12	166	.14	2 2.89	.04	.19	1	2	9						
MN-03-3 DJ-3	4 139	16 151	.2	117 24	625 4.57	120	5	ND	1	53	1.4	2	2	85	.92	.132	8 150	2.73	170	.13	2 2.51	.04	.18	1	2	5						
MN-03-3 DJ-4	5 191	22 182	.2	95 24	980 4.50	179	5	ND	1	103	1.5	2	3	79	1.54	.133	18 118	2.24	248	.07	7 2.28	.03	.19	1	2	5						
MN-03-3 DJ-5	6 233	19 145	.1	41 20	1172 4.66	171	5	ND	1	95	1.3	4	3	85	1.49	.132	13 54	1.57	264	.05	8 2.04	.02	.13	1	2	10						
MN-03-3 DJ-6	5 164	28 167	.4	118 27	695 5.15	177	5	ND	1	58	1.6	3	2	95	1.00	.135	10 156	2.65	180	.11	2 2.43	.04	.15	1	2	7						
MN-03-3 DJ-7	8 104	12 195	.2	40 17	1099 4.53	148	5	ND	1	94	1.3	4	2	79	1.54	.135	10 46	1.14	292	.03	3 1.51	.02	.11	1	2	12						
MN-03-3 DJ-8	4 139	19 161	.2	109 24	709 4.65	123	5	ND	1	63	1.1	2	2	87	1.07	.123	9 146	2.57	204	.11	4 2.40	.04	.18	1	2	4						
MN-03-3 DJ-9	6 150	16 189	.4	103 27	690 5.36	263	5	ND	1	58	1.1	4	2	92	1.17	.129	9 132	2.33	188	.09	2 2.05	.03	.14	1	2	11						
MN-03-3 DJ-10	7 161	16 194	.4	100 27	803 5.60	337	5	ND	1	64	1.6	5	2	92	1.41	.124	7 120	2.16	176	.08	2 1.94	.03	.14	1	2	16						
STANDARD C/AU-S	18 56	36 133	7.4	69 31	1046 3.99	39	19	7	38	52	17.0	16	21	54	.49	.097	36 59	.89	179	.08	33 1.94	.06	.14	11	2	48						



Homestake Canada Limited PROJECT 3128 FILE # 91-2954

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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Tl	Au**
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	%	%	%	ppm	ppm	ppb
MN N2-1 3610	4	29	5	30	.4	5	3	143	2.15	.22	5	ND	1	6	.5	2	2	19	.03	.013	3	11	.65	64	.01	4	.65	.03	.06	1	4	3
MN HK-1 3991	1	52	2	6	.1	5	2	76	1.01	.2	5	ND	1	110	.2	2	2	26	1.26	.026	2	10	.28	12	.06	2	1.81	.02	.07	1	2	4
MN HK-1 3992	1	37	2	53	.2	21	15	957	3.97	.9	5	ND	1	111	.6	2	2	119	8.53	.071	2	43	2.04	443	.02	6	1.16	.01	.12	2	2	1
MN HK-1 3993	1	4	5	64	.2	29	12	833	2.61	.7	5	ND	2	145	.6	2	2	15	18.99	.003	2	2	11.57	498	.01	4	.19	.01	.04	1	2	1
MN HK-1 3994	2	24	570	443	.9	12	7	385	2.28	.86	5	ND	1	27	8.0	2	2	18	1.41	.024	2	6	.51	69	.01	3	.50	.01	.14	1	2	63
MN HK-1 3995	1	18	6	50	.2	16	8	586	2.12	.7	5	ND	2	43	.4	2	3	19	3.18	.046	5	20	.89	263	.01	5	1.46	.04	.28	1	2	4
MN HK-1 3996	6	180	279	875	1.7	16	11	4200	8.11	199	5	ND	1	55	6.8	40	2	38	8.21	.016	2	8	2.89	89	.01	2	.25	.01	.06	1	2	119
MN HK-1 3997	2	697	22	583	.9	41	20	2817	8.93	.16	5	ND	1	61	4.3	2	2	72	6.49	.023	4	32	3.04	40	.01	2	.50	.03	.08	1	2	50
MN HK-1 3998	1	125	94	3536	1.7	22	9	4328	4.39	167	5	ND	2	73	37.6	2	2	46	8.70	.027	3	4	3.32	87	.01	3	.60	.03	.33	1	3	119
MN HK-1 3999	3	100	536	693	5.3	11	4	140	3.91	294	5	ND	1	85	5.8	9	2	30	.19	.031	5	13	.12	264	.01	5	.89	.02	.47	1	2	426
MN HK-1 4000	2	302	46	1801	3.4	37	19	1290	5.42	201	5	ND	1	56	29.7	63	3	59	3.17	.047	2	22	1.05	62	.01	8	.66	.03	.26	1	2	147
MN N2-1 35008	1	759	37	56	1.6	90	179	257	10.35	71	5	ND	1	34	.5	2	4	68	.86	.043	3	67	.59	53	.09	4	.82	.09	.12	1	2	10
STANDARD C/AU-R	19	57	42	130	7.0	69	29	1022	3.90	41	17	6	36	47	19.0	16	20	57	.47	.089	35	57	.88	175	.09	34	1.84	.06	.14	11	2	472

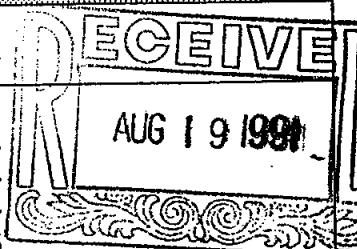
ASSAY CERTIFICATE MSTR- UISHY

Homestake Canada Limited PROJECT 3128 FILE # 91-2954R

SAMPLE#

Cu %	Pb %	AG** oz/t	Au** oz/t
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MN HK-1 3502	-	-	.116
MN HK-1 3508	1.65	-	-
MN N4-1 3554	-	-	1.55
MN N4-1 3556	-	-	1.32
MN N4-1 3557	-	2.43	-
MN N4-1 3559	-	2.59	1.101
MN N4-1 3560	-	4.17	2.26 3.642
MN N4-1 3561	-	8.81	5.87
MN N4-1 3563	-	-	-
MN N4-1 3565	-	-	.033
MN N4-1 3567	-	-	1.05
MN N4-1 3570	-	1.91	4.09 .057
MN N4-1 3572	-	-	-
MN N4-1 3573	-	-	-
MN HK-1 3583	-	-	1.79 .063
MN HK-1 3588	-	-	2.23 .055
MN HK-1 3591	2.37	-	4.65 .382
STANDARD R-1/AG-1/AU-1	.83	1.36	.98 .097



- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP. AG** & AU** BY FIRE ASSAY FROM 1 A.T.
 - SAMPLE TYPE: ROCK PULP

DATE RECEIVED: AUG 7 1991

DATE REPORT MAILED: Aug 14/91

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE (604) 253-3158 FAX (604) 253-1716

ASSAY CERTIFICATE

Homestake Canada Limited PROJECT 3128 FILE # 91-2954R2

SAMPLE#	SAMPLE AU-100 NATIVE AVG.			
	wt. gm	oz/t	Au mg	oz/t
MN-HK-1 3591	1000	.401	.01	.401

-100 MESH AU BY FIRE ASSAY FROM 1 A.T. SAMPLE.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: OCT 8 1991

DATE REPORT MAILED: Oct 15/91.

SIGNED BY... C.H. D.TOE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



Homestake Canada Limited PROJECT 3128 FILE # 91-3140

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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	U	Tl	Au**
	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppb																		
MN-HK-3 1+00N 3+60E	1	170	3	51	.2	164	35	432	4.09	7	5	ND	1	57	.2	2	2	67	.57	.051	5	229	2.82	80	.14	3	2.12	.03	.09	1	7	8
MN-HK-3 1+00N 3+70E	1	83	4	63		152	30	435	3.83	35	5	ND	1	110	.2	2	2	73	.63	.056	6	221	2.48	116	.10	7	1.91	.03	.08	1	14	11

ASSAY CERTIFICATE

Homestake Canada Limited PROJECT 3128 FILE # 91-3569R

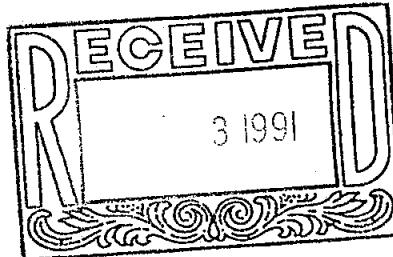
SAMPLE#	Cu %	Ag** oz/t	Au** oz/t
MN-HK-1 3661	.69	3.05	.285
MN-HK-1 3662	.04	.79	.173
MN-HK-1 3663	.17	1.34	.121
MN-HK-1 3664	.02	.22	.025
MN-HK-1 3691	.04	.33	.085
MN-HK-1 3692	.13	.32	.027
MN-HK-1 3694	.06	2.97	.242
MN-HK-1 3696	.24	.63	.060
MN-HK-1 3697	.11	.43	.053
MN-HK-1 3701	.03	.96	.096
MN-HK-1 3703	.07	.09	.031
STANDARD R-1/AG-1/AU-1	.89	.98	.098

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.
 - SAMPLE TYPE: ROCK PULP
 AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

DATE RECEIVED: SEP 27 1991

DATE REPORT MAILED: Oct 2/91

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3159 FAX (604) 253-1716

ASSAY CERTIFICATE

Homestake Canada Limited PROJECT 3128 FILE # 91-3569R2

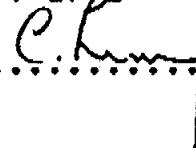
SAMPLE#	SAMPLE AU-100 NATIVE AVG.			
	wt. gm	oz/t	Au mg	oz/t
MN-HK-1 3661	800	.272	ND	.272
MN-HK-1 3662	550	.280	ND	.280
MN-HK-1 3663	700	.150	ND	.150
MN-HK-1 3691	700	.091	ND	.091
MN-HK-1 3694	650	.161	ND	.161
MN-HK-1 3696	650	.057	ND	.057
MN-HK-1 3697	800	.060	ND	.060
MN-HK-1 3701	650	.166	ND	.166

-100 MESH AU BY FIRE ASSAY FROM 1 A.T. SAMPLE.

- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: OCT 8 1991

DATE REPORT MAILED: Oct 15/91.

SIGNED BY...  D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE

HSTR - HUSTY MI

Homestake Canada Limited PROJECT 3128 File # 91-3585

1000 - 700 W. Pender St., Vancouver BC V6C 1G8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl ppm	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** pb	
MN-N3-2 3813	10 543	19 169	1.6	89 87	1020 23.83	97	5 ND	3 22	1.6	2 7	111	.35	.082	17	16	.62	49	.01	7 1.12	.01	.05	1	4	7									
MN-N1-3 JL26-P2	3 271	10 111	.2	145 67	703 4.35	27	5 ND	1 102	.8	2 2	84	1.58	.059	4 202	2.38	143	.15	4 3.19	.03	.07	1	2	7										
MN-N1-3 JL26-P4	1 61	2 47	.1	43 20	542 3.14	6	5 ND	1 44	.2	2 2	66	.51	.048	7 82	1.17	108	.09	2 1.37	.01	.05	1	2	2										
MN-N1-3 JL26-P7	1 66	3 57	.1	44 19	601 3.29	12	5 ND	1 42	.3	2 2	65	.53	.051	7 74	1.15	109	.09	4 1.52	.01	.06	1	2	2										
MN-N3-3 AAR-1	9 271	5 99	.3	217 38	896 4.42	24	7 ND	2 86	.4	2 2	83	1.47	.108	15 344	4.25	234	.10	5 2.48	.03	.41	1	2	10										
RE MN-N3-3 AAR-5	11 201	7 106	.2	127 33	807 4.88	144	5 ND	1 163	.4	2 2	93	1.45	.104	12 202	2.98	220	.10	7 2.06	.03	.16	1	3	13										
MN-N3-3 AAR-2	9 262	6 91	.2	202 38	905 4.10	22	7 ND	1 180	.5	2 3	76	1.17	.095	13 287	4.07	175	.12	8 2.34	.04	.22	1	2	5										
MN-N3-3 AAR-3	11 378	5 97	.3	165 32	629 3.67	13	9 ND	1 269	.5	2 2	70	1.64	.103	13 239	3.79	154	.12	10 2.12	.03	.26	1	2	11										
MN-N3-3 AAR-4	13 243	8 96	.3	141 35	831 4.48	20	5 ND	1 196	.2	2 2	76	1.33	.115	18 234	2.83	218	.07	7 1.98	.03	.23	1	2	19										
MN-N3-3 AAR-5	11 200	5 106	.3	130 33	797 4.87	148	5 ND	1 167	.4	2 2	94	1.42	.104	12 199	2.93	218	.10	5 2.05	.03	.16	1	3	19										
MN-N3-3 AAR-6	12 199	15 118	.3	129 36	755 5.01	253	5 ND	1 145	.5	2 4	91	1.41	.103	11 167	2.66	186	.08	6 1.90	.03	.15	2	2	9										
MN-N3-3 L20+00S 14+00W	19 102	45 305	.9	80 29	1270 7.63	243	5 ND	1 45	2.7	8 2	125	.52	.100	7 67	.33	613	.01	2 1.24	.01	.09	1	2	56										
MN-N3-3 L20+00S 13+75W	6 204	36 224	.9	216 58	978 12.75	314	5 ND	1 12	.9	8 10	158	.08	.089	10 294	.34	282	.01	2 1.48	.01	.05	1	6	10										
MN-N3-3 L20+00S 13+50W	5 283	28 263	5.4	269 67	3141 14.51	1487	5 ND	1 38	1.8	32 3	201	1.46	.064	7 382	.56	813	.01	2	.58	.01	.05	1	5	63									
MN-N3-3 L20+00S 13+40W	13 272	29 295	3.0	146 34	2417 8.94	398	5 ND	1 49	3.5	19 3	69	.43	.168	23 42	.06	1668	.01	2	.82	.01	.06	1	4	36									
STANDARD C/AU-S	19 57	37 132	7.4	70 32	1052 3.96	44	24	7 40	52	18.7	15 21	56	.48	.090	40 57	.88	176	.09	33 1.88	.06	.15	11	2	46									

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: SOIL AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 16 1991 DATE REPORT MAILED: Aug 22/91 SIGNED BY: D.TOEY, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ACNE ANALYTICAL



ACNE ANALYTICAL

Homestake Canada Limited PROJECT 3130-BANDIT FILE # 91-3970

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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca ppm	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	H ppm	Tl ppm	Au** ppb
BN-N2-1 3869	2	9	5	19	.1	9	8	788	2.23	6	5	ND	1	237	.3	2	2	4	3.56	.034	2	8	.21	38	.01	2	.29	.02	.06	1	2	8
BN-N2-1 3870	3	11	2793	20	313.9	8	9	106	7.36	2	5	249	1	10	.2	2	38	5	.07	.027	2	7	.04	70	.01	2	.21	.02	.06	112	2	99999
BN-N2-1 3871	22	5	21	22	1.4	3	2	109	2.71	22	5	ND	19	4	.2	2	2	4	.04	.004	38	3	.03	30	.02	2	.34	.06	.01	1	2	1298
BN-N2-1 3872	7	9	15	79	1.4	2	3	716	3.23	2	5	ND	8	59	.2	2	2	6	1.14	.011	35	4	.02	23	.01	3	.16	.05	.07	1	2	171
BN-N2-1 3873	6	13	16	6	1.4	7	1	1025	1.24	2	5	ND	1	186	.2	2	2	14.20	.002	2	6	.02	37	.01	2	.04	.01	.01	1	2	921	
BN-N2-1 3874	3	3	11	84	.1	4	4	1191	3.42	4	8	ND	8	16	.3	2	2	3	.76	.018	65	2	.09	13	.01	2	.31	.05	.09	1	2	35
BN-N2-1 3875	58	2013	20	14	2.1	9	5	198	1.72	11	5	ND	1	4	.2	9	12	1	.16	.003	2	10	.01	37	.01	2	.03	.01	.01	2	2	126
RE BN-N2-1 3874	4	2	9	96	.1	3	4	1346	3.91	2	5	ND	8	15	.3	2	2	4	.80	.02	75	2	.10	12	.01	2	.36	.05	.11	1	2	24
MN-N3-1 3668	11	152	28	44	3.0	47	10	234	3.87	493	5	ND	39	13	34	2	45	52	113	22	24	10	360	.01	5	.29	.01	.12	1	2	84	
STANDARD C/AU-R	19	57	37	133	7.5	73	31	1050	4.00	41	18	7	39	52	18.6	14	22	55	.48	.091	38	59	.88	179	.09	36	1.90	.06	.15	12	2	478

Samples beginning 'RE' are duplicate samples.



ACRE ANALYTICAL

Homestake Canada Limited PROJECT 3130-BANDIT FILE # 91-3970

Page 3



ACRE ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	U	Tl	Au**
	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppb																		
MN-N3-3 L16+00S 12+00W	1	76	4	94	1	49	25	737	6.48	19	5	ND	2	14	4	2	2	149	.23	.064	6	132	1.78	123	.07	2	2.74	.01	.04	1	2	3

GEOCHEMICAL ANALYSIS CERTIFICATE

Homestake Canada Limited PROJECT 3128 File # 91-4475

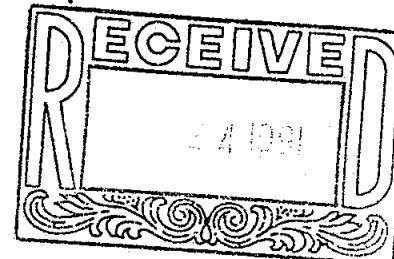
1000 - 700 W. Pender St., Vancouver BC V6C 1C8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg ppm	Ba %	Ti ppm	B %	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
MN-HK-1 3826	9	37	10	27	1.1	418	36	797	2.99	17379	5	ND	1	294	.7	3096	2	13	11.36	.003	2	98	6.12	185	.01	2	.06	.01	.01	1	2	2
MN-HK-1 3827	45	10083	46	157	57.0	152	20	127	9.12	49	5	ND	2	3	2.8	3	1435	64	.05	.005	2	632	1.50	5	.06	2	.79	.01	.01	1	2	78
MN-HK-1 3828	28	41465	77	618	123.6	309	30	136	13.41	46	5	ND	2	2	11.2	2	1809	46	.04	.001	2	364	1.41	3	.03	2	.88	.01	.01	1	2	163
RE MN-HK-1 3826	10	42	13	30	9	449	38	821	3.13	17859	6	ND	1	295	.5	3166	2	13	12.17	.002	2	103	6.66	182	.01	2	.06	.01	.01	1	2	3

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: ROCK AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 16 1991 DATE REPORT MAILED: Sept 20/91. SIGNED BY...: C.H. D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST., VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716

ASSAY CERTIFICATE

Homestake Canada Limited PROJECT 3128 FILE # 91-4475R

SAMPLE#	Cu %	Ag** oz/t	Au** oz/t
MN-HK-1 3827	1.07	1.57	.003
MN-HK-1 3828	4.67	3.43	.004
RE MN-HK-1 3828	4.72	3.54	.004

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.

- SAMPLE TYPE: ROCK PULP

AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 27 1991

DATE REPORT MAILED:

SIGNED BY... C. LEONG, D.TOEY, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ACME ANALYTICAL LABORATORIES LTD., 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE (604) 253-3158 FAX (604) 253-1716

ASSAY CERTIFICATE

Homestake Canada Limited PROJECT 3128 FILE # 91-4475R2

SAMPLE#	SAMPLE AU-100 NATIVE AVG.			
	wt. gm	oz/t	Au mg	oz/t
MN-HK-1 3827	900	.003	ND	.003
MN-HK-1 3828	1050	.003	ND	.003

-100 MESH AU BY FIRE ASSAY FROM 1 A.T. SAMPLE.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: OCT 8 1991

DATE REPORT MAILED: Oct 15/91

SIGNED BY...: C.H.WANG D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

100 mesh screened Au.

GEOCHEMICAL ANALYSIS CERTIFICATE

Wolverine JV

Homestake Canada Limited PROJECT 3132 File # 91-4900

1000 - 700 W. Pender St., Vancouver BC V6C 1G8

Phil

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg ppm	Ba ppm	Tl %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
MN-HK-1 TRENCH 1	5	1539	5	37	.3	152	121	473	4.87	9	5	ND	1	62	.2	2	9	77	1.05	.123	8	313	3.43	38	.20	2	2.30	.04	.10	1	2	10
MN-HK-1 TRENCH 3 #1-1	2	3487	23	26	27.1	28	24	82	18.90	171	5	2	1	4	1.0	5	127	5	.63	.001	2	48	.09	6	.01	2	.08	.01	.01	1	2	755
MN-HK-1 TRENCH 3 #1-2	3	1694	22	36	51.0	38	13	84	8.15	175	5	7	1	3	1.0	2	80	7	.48	.001	2	57	.15	6	.01	2	.12	.01	.01	1	2	5687
MN-HK-1 TRENCH 3 #1-3	8	19869	6	46	1.5	328	156	553	7.31	19	5	ND	1	23	1.7	2	27	123	.61	.099	3	324	4.46	45	.12	7	3.37	.02	.06	1	4	91
MN-HK-1 TRENCH 4	9	5436	8	21	2.4	87	54	317	4.76	74	5	ND	1	41	.6	2	19	52	.97	.251	5	120	1.52	37	.21	2	1.38	.06	.09	1	3	147
RE MN-HK-1 TRENCH 3 #1-1	1	3666	29	28	27.6	28	24	83	19.01	173	5	3	1	3	1.0	4	132	5	.46	.002	2	48	.09	5	.01	2	.07	.01	.01	1	2	731
STANDARD C/AU-R	19	56	42	133	7.0	70	33	1044	3.99	41	19	7	37	51	18.4	16	19	55	.48	.091	38	58	.88	178	.09	31	1.89	.06	.15	13	2	475

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 3 1991 DATE REPORT MAILED: Oct 10/91 SIGNED BY: C. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX V
STATEMENT OF QUALIFICATIONS

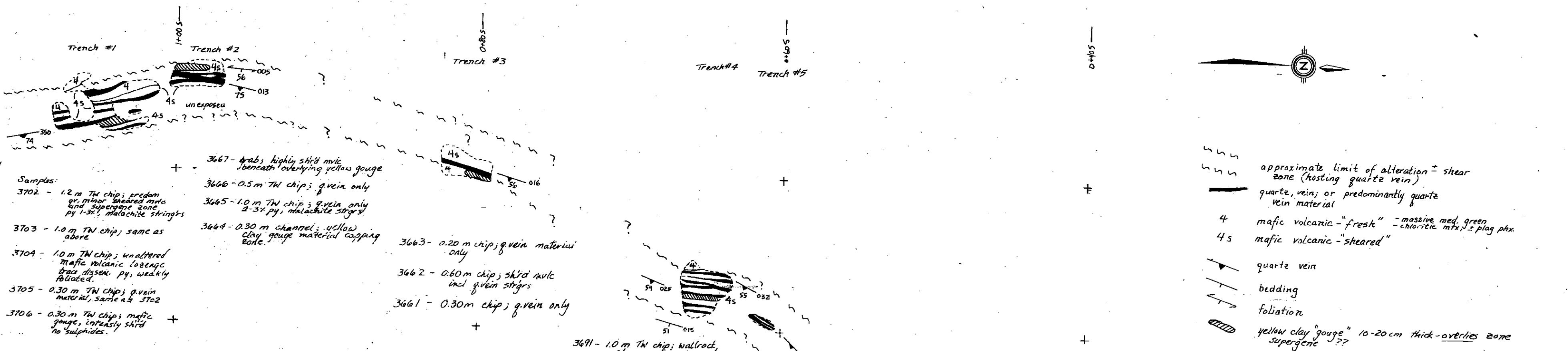
STATEMENT OF QUALIFICATIONS

I, Philip James Southam, of #106 - 8675 Laurel Street, Vancouver, British Columbia, Canada, hereby certify that:

1. I am a graduate of Brandon University, Brandon, Manitoba, Canada, having been granted the degree of Bachelor of Sciences - Specialist in Geology in 1987.
2. I have practiced my profession as a geologist in mineral exploration since 1987.
3. I am presently employed as a geologist with Homestake Canada Ltd. of #1000 - 700 West Pender Street, Vancouver, British Columbia.
4. I supervised and participated in the work that was completed on this property and have reviewed all previous available information.



PHILIP SOUTHAM

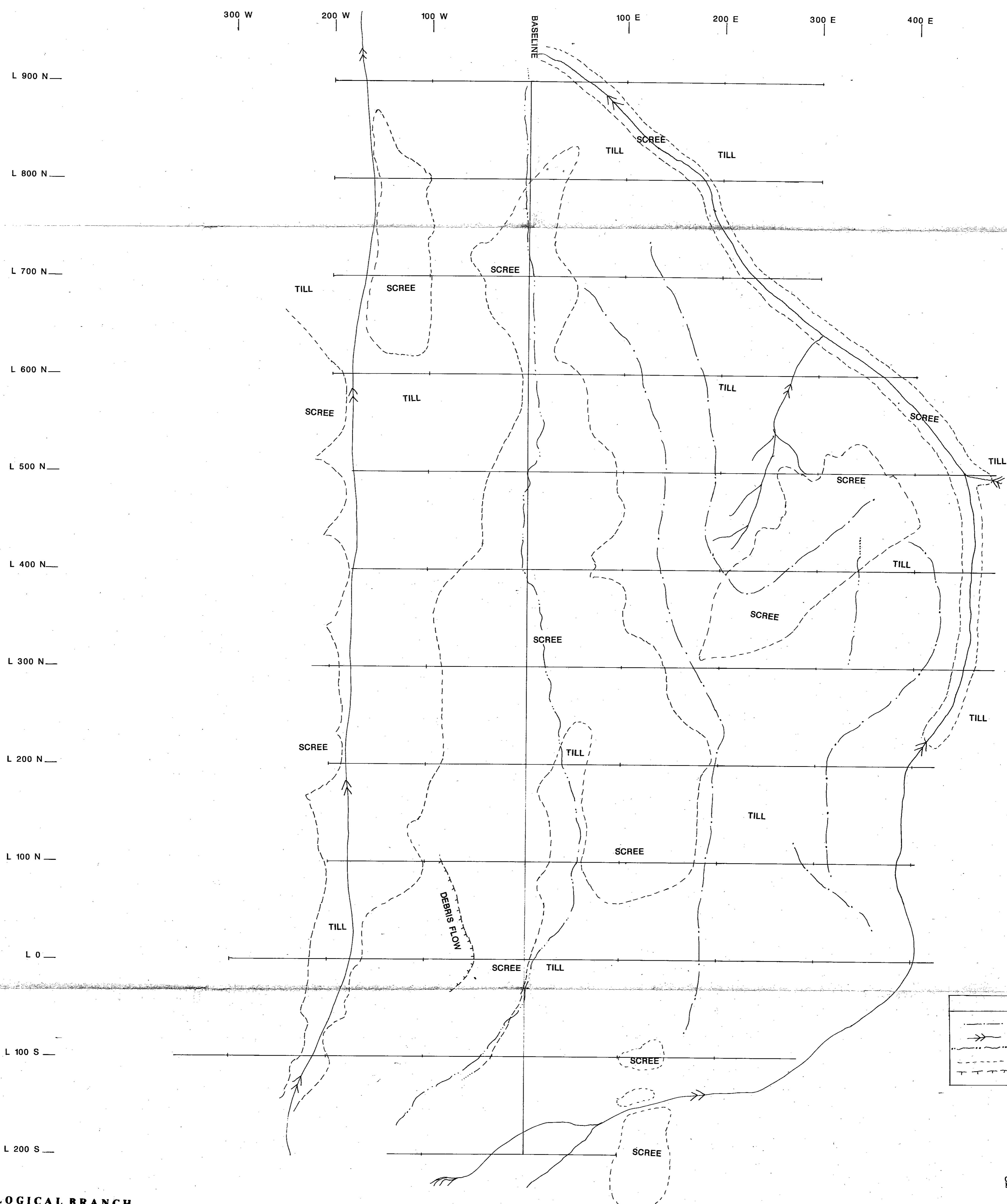


Sample #	Au (ppm)	Ag (ppm)	Cu (ppm)	As (ppm)
3591	14542	175.5	23921	511
3661	7676	107.9	7137	406
3662	4852	28.1	448	248
3663	3178	49.1	1844	323
3664	707	8.9	195	75
3665	201	7.4	910	165
3666	153	11.9	2763	132
3667	63	0.9	6715	42
3691	2036	12.0	421	278
3692	545	11.9	1312	137
3693	83	1.2	1033	99
3694	5339	98.4	567	386
3695	53	1.9	548	64
3696	1644	21.8	2402	224
3697	1003	16.3	1195	201
3698	74	1.6	136	16
3699	234	27.6	4072	65
3700	13	0.9	347	28
3701	2274	35.3	282	161
3702	234	6.7	1045	151
3703	843	3.8	756	118
3704	32	0.7	354	22
3705	44	2.2	2265	105
3706	15	0.5	186	146
3627	78	57.0	10083	49
3628	163	183.6	41465	46
3707	755	27.1	3487	171
3629	5687	51.0	1694	175
3708	91	1.5	19869	19

GEOLOGICAL BRANCH ASSESSMENT REPORT

21,947

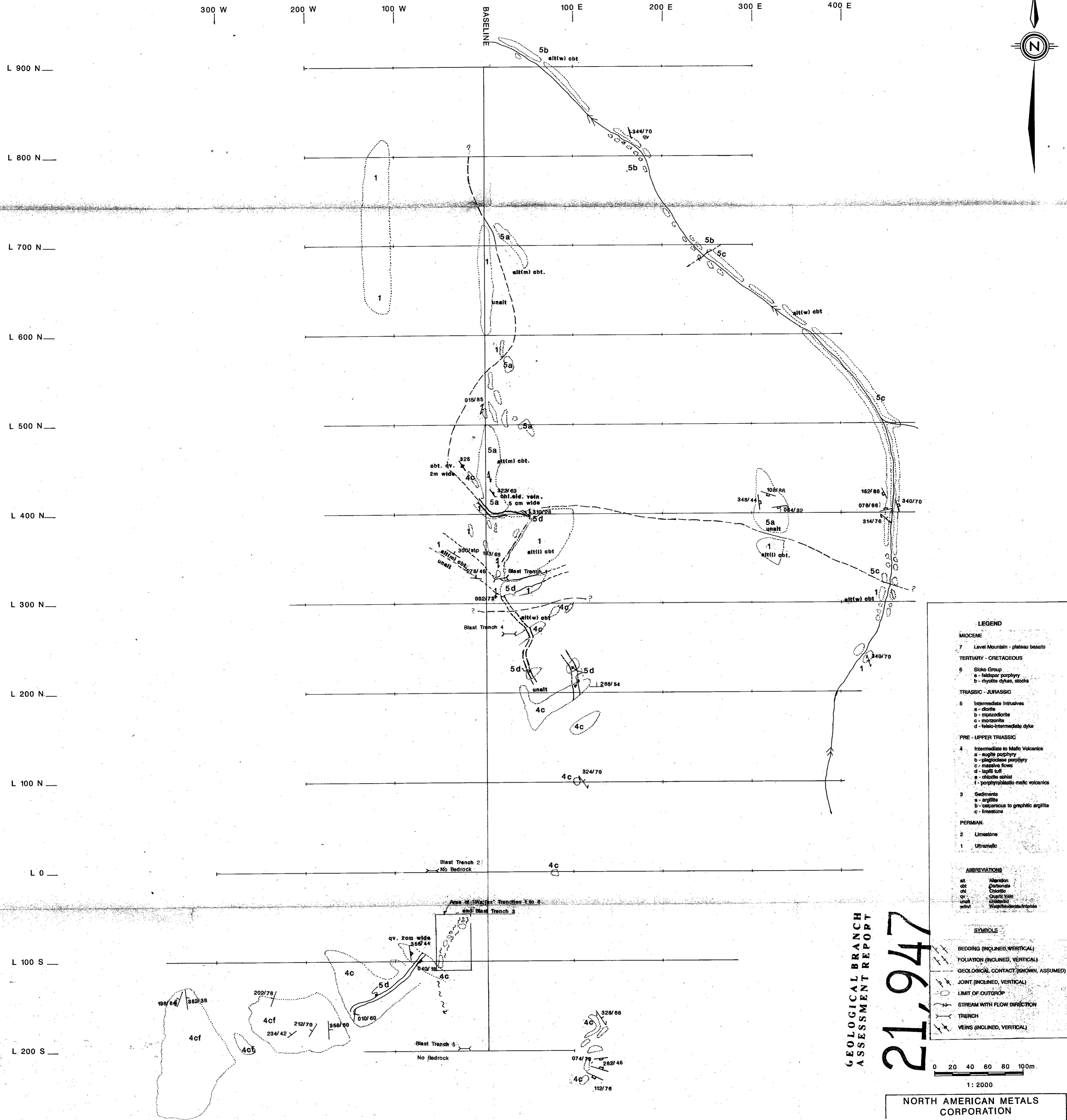
SCALE 1:200'			
NORTH AMERICAN METALS CORPORATION			
MISTY NIE PROPERTY			
ULTRAMAFIC GRID			
TRENCH MAP			
GEOLOGY			
Atlin Mining Division			
Drawn JMH	Date AUG 91	File Code 104/K8	FIGURE 6c



GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,947

NORTH AMERICAN METALS
CORPORATION
MISTY NIE PROPERTY, B.C.
ULTRAMAFIC GRID
GEOMORPHOLOGY
ATLIN MINING DIVISION
Drawn
DBM
Date
OCT 81
Reviewed
File Code
104K/8
FIGURE 6a



GEOLOGICAL BRANCH
ASSESSMENT REPORT

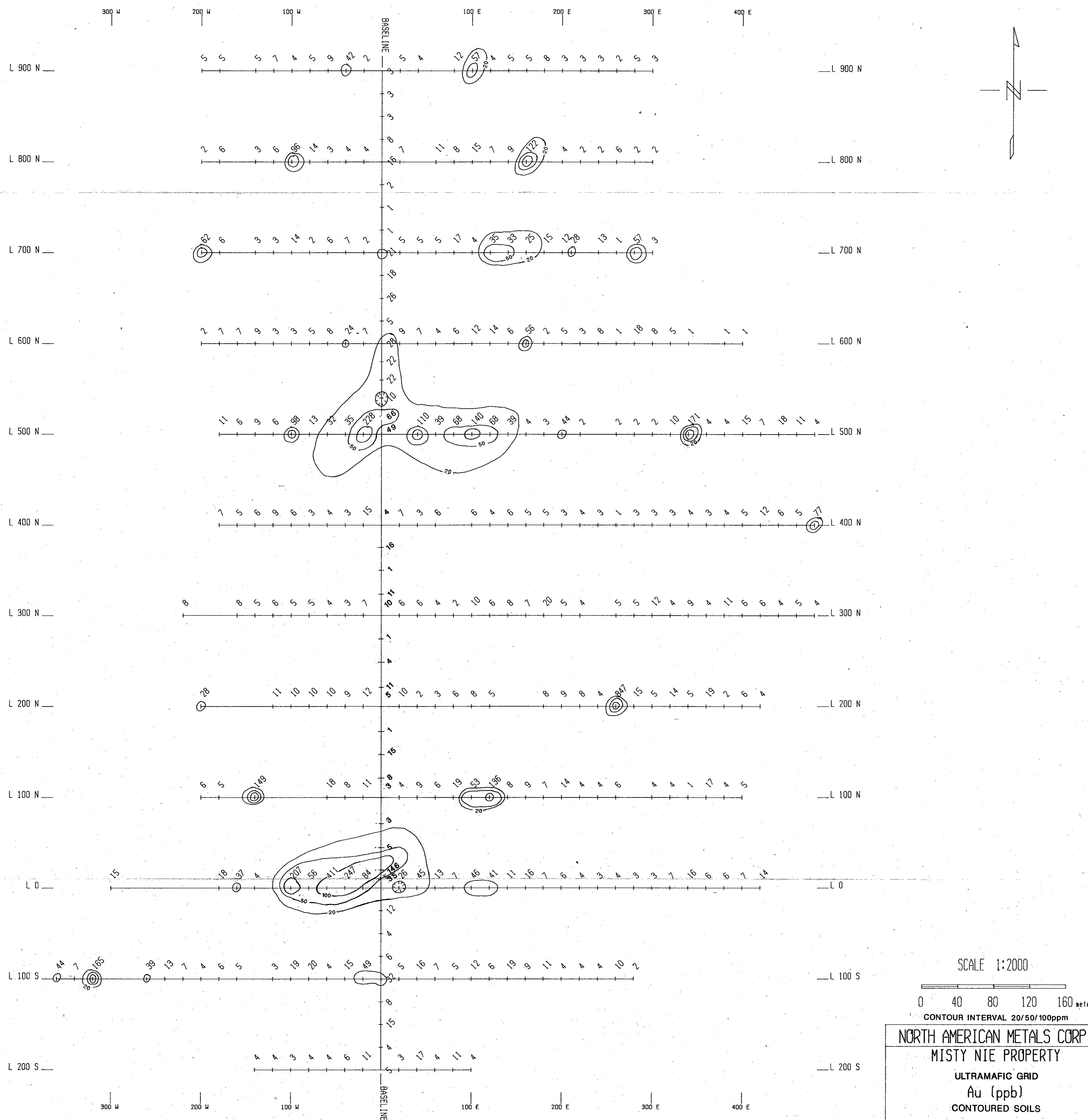
21,947

NORTH AMERICAN METALS CORPORATION		
MISTY NIE PROPERTY, B.C.		
ULTRAMAFIC GRID		
GEOLOGY		
ATLIN MINING DIVISION		
DRAWN DBM	DATE OCT 91	FILE CODE 104K/8
FIGURE 6a		

LEGEND	
MIocene	
7 Level Mountain - plateau basements	
Tertiary - Cretaceous	
6 Stock Group	
a - feldspar porphyry	
b - mafic dykes, stocks	
c - monzonite	
d - felsic-intermediate dyke	
TRIASSIC - JURASSIC	
5 Intermediate Intrusives	
a - diorite	
b - mafic-diorite	
c - monzonite	
d - felsic-intermediate dyke	
PRE - UPPER TRIASSIC	
4 Intermediate to Mafic Volcanics	
a - augite porphyry	
b - mafic porphyry	
c - massive flows	
d - lahar tuff	
e - chlorite schist	
f - porphyroblastic metavolcanics	
3 Sediments	
a - argillite	
b - calcareous to graphitic argillite	
c - limestone	
PERMIAN	
2 Limestone	
1 Ultramafic	
ABBREVIATIONS	
alt	Altarion
cbt	Carbonate
ct	Carbonate
cv	Chalcocite Vein
unit	Unit
wmt	Welded Moderate Intense
SYMBOLS	
BEDDING (INCLINED, VERTICAL)	
FOLIATION (INCLINED, VERTICAL)	
GEOLOGICAL CONTACT (KNOWN, ASSUMED)	
JOINT (INCLINED, VERTICAL)	
LIMIT OF OUTCROP	
STREAM WITH FLOW DIRECTION	
TRENCH	
VEINS (INCLINED, VERTICAL)	

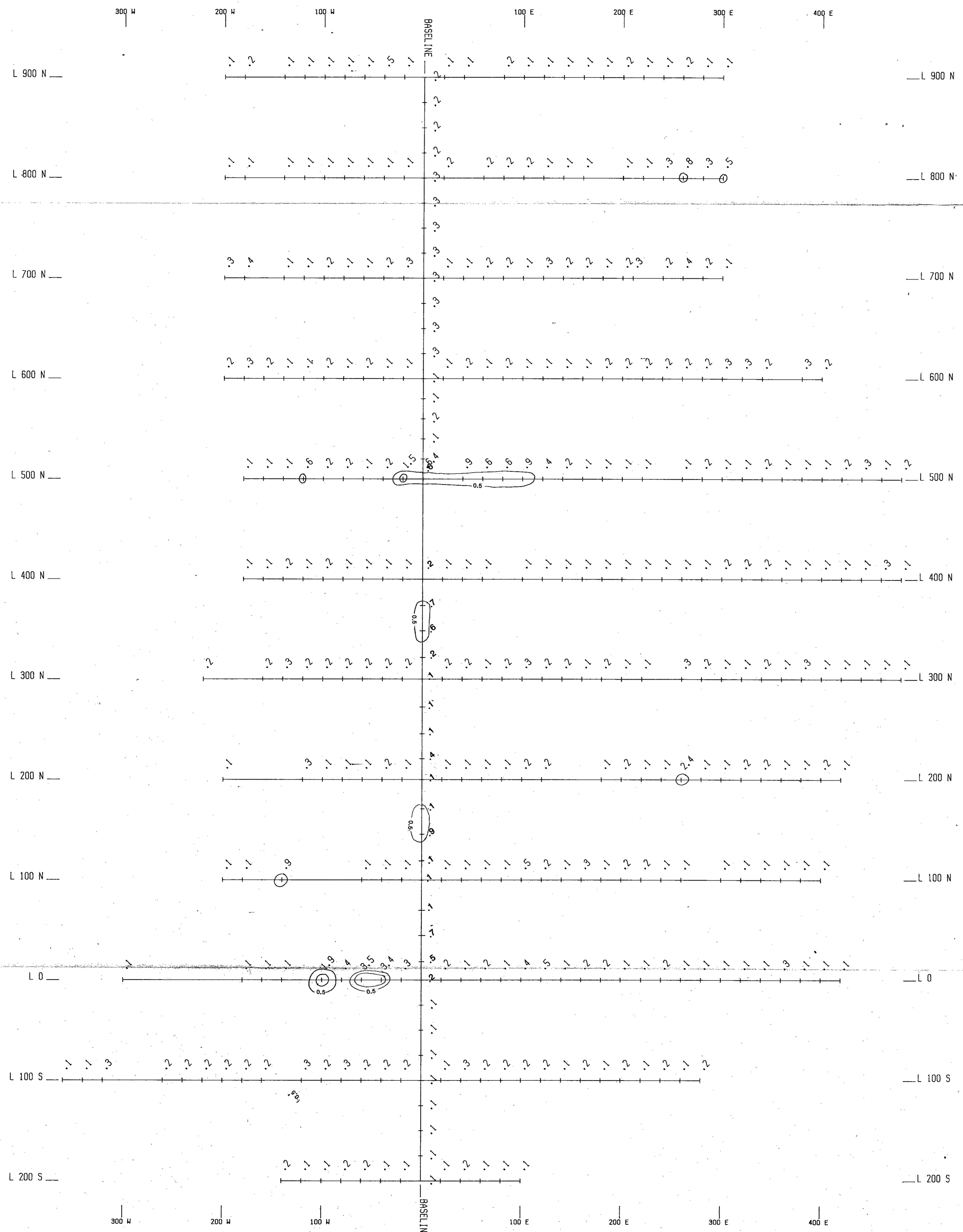
0 20 40 60 80 100m

1:2000



GEOLoGICAL BRANCH
ASSESSMENT REPORT

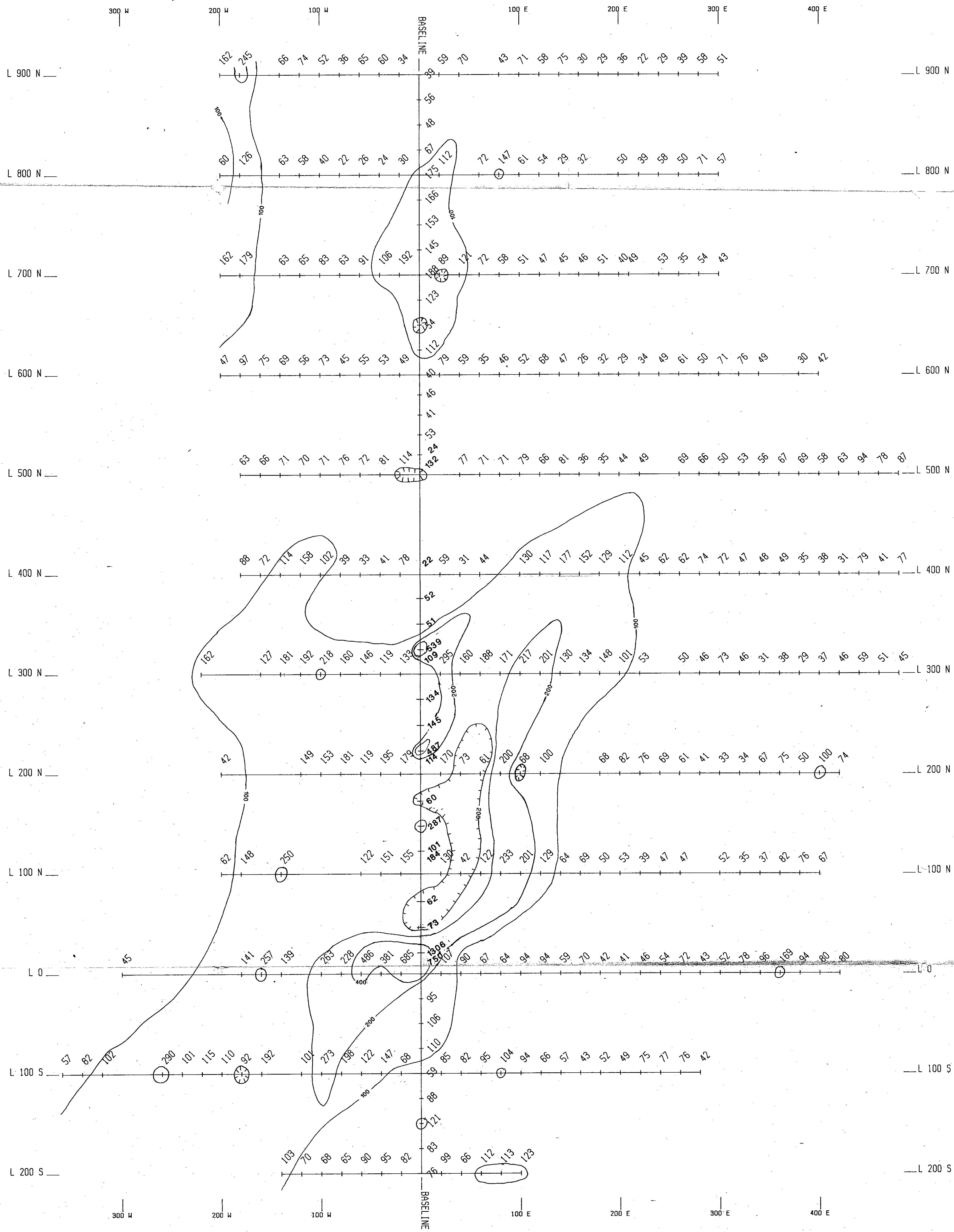
21,947



NORTH AMERICAN METALS CORP.
MISTY NIE PROPERTY
ULTRAMAFIC GRID
Ag (ppm)
CONTOURED SOILS

REVISIONS		
By	Date	Approved By

To accompany a report by: DIREC. DEPT.
Project No.: 104K/8
Mining Area: Atlan
Date: 08/91
FIGURE 6g
QUEST CANADA EXPLORATION SERVICES INC.



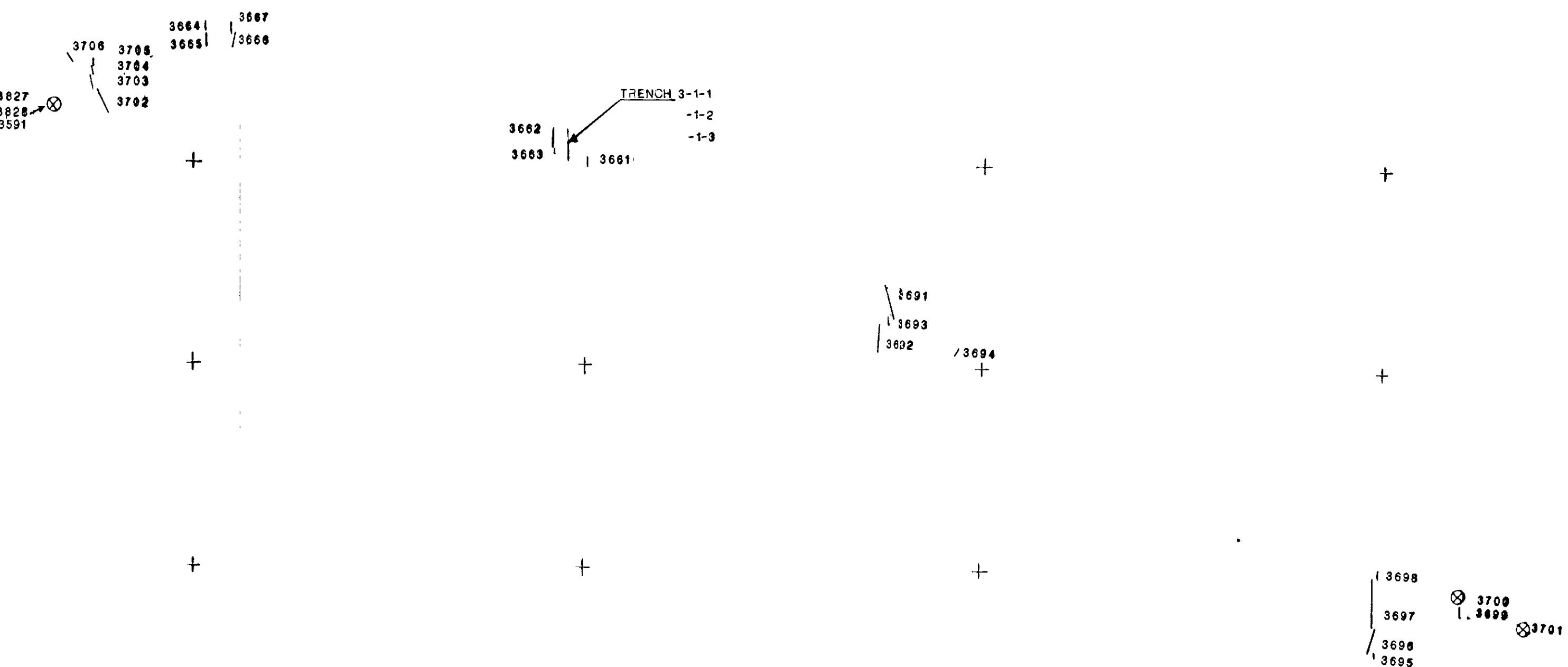
SCALE 1:2000
CONTOUR INTERVAL 100/200/400ppm
NORTH AMERICAN METALS CORP.
MISTY NIE PROPERTY
ULTRAMAFIC GRID
Cu (ppm)
CONTOURED SOILS

REVISIONS

By	Date	Approved By

EXCELSIOR MINE
ASBESTOS PROPERTY

21,947



0 2' 4' 6' 8' 10'

11200.

NORTH AMERICAN METALS
CORPORATION

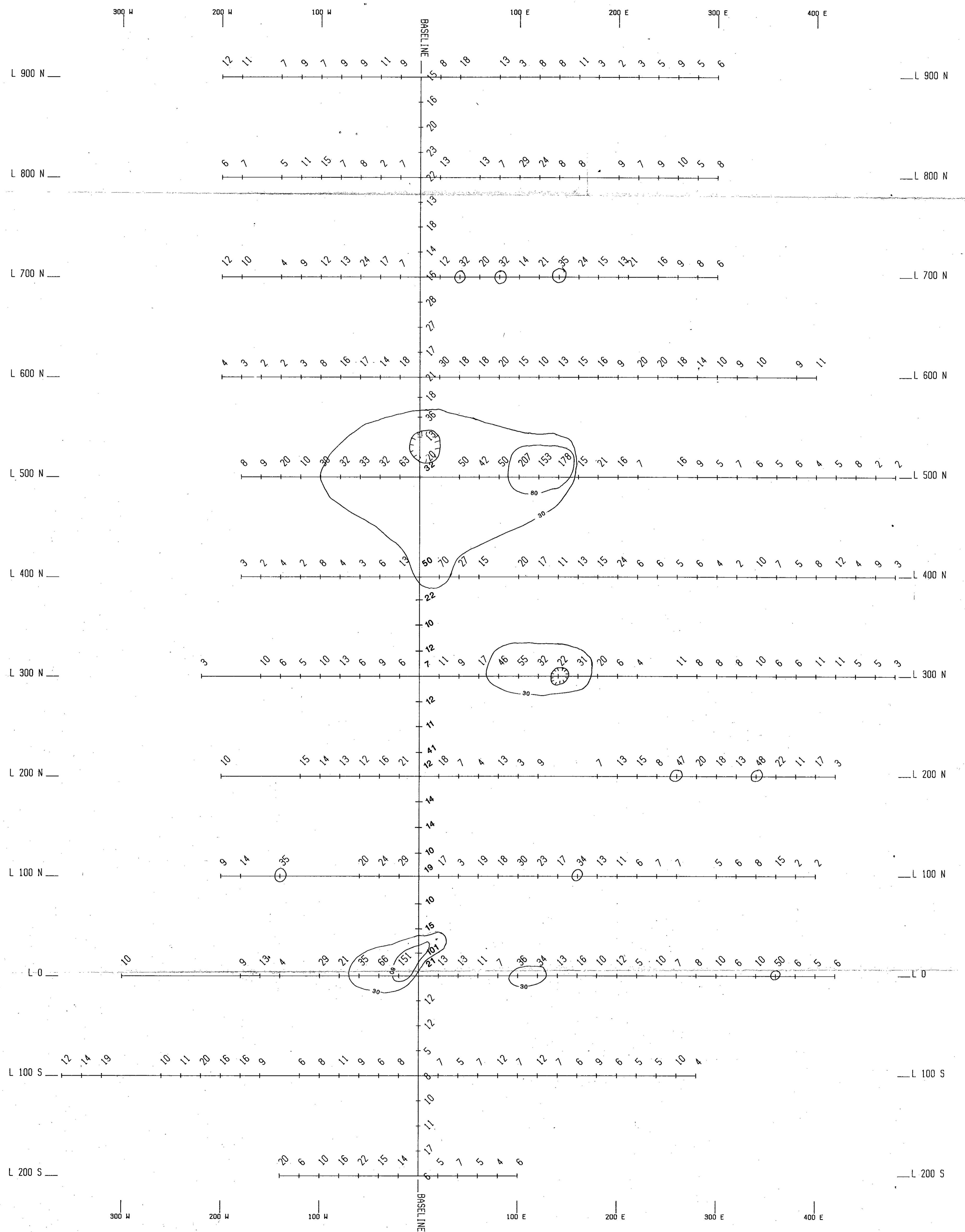
MISTY NIE PROPERTY

TRENCH MAP

SAMPLE LOCATION OVERLAY

ATLIN MINING DIVISION

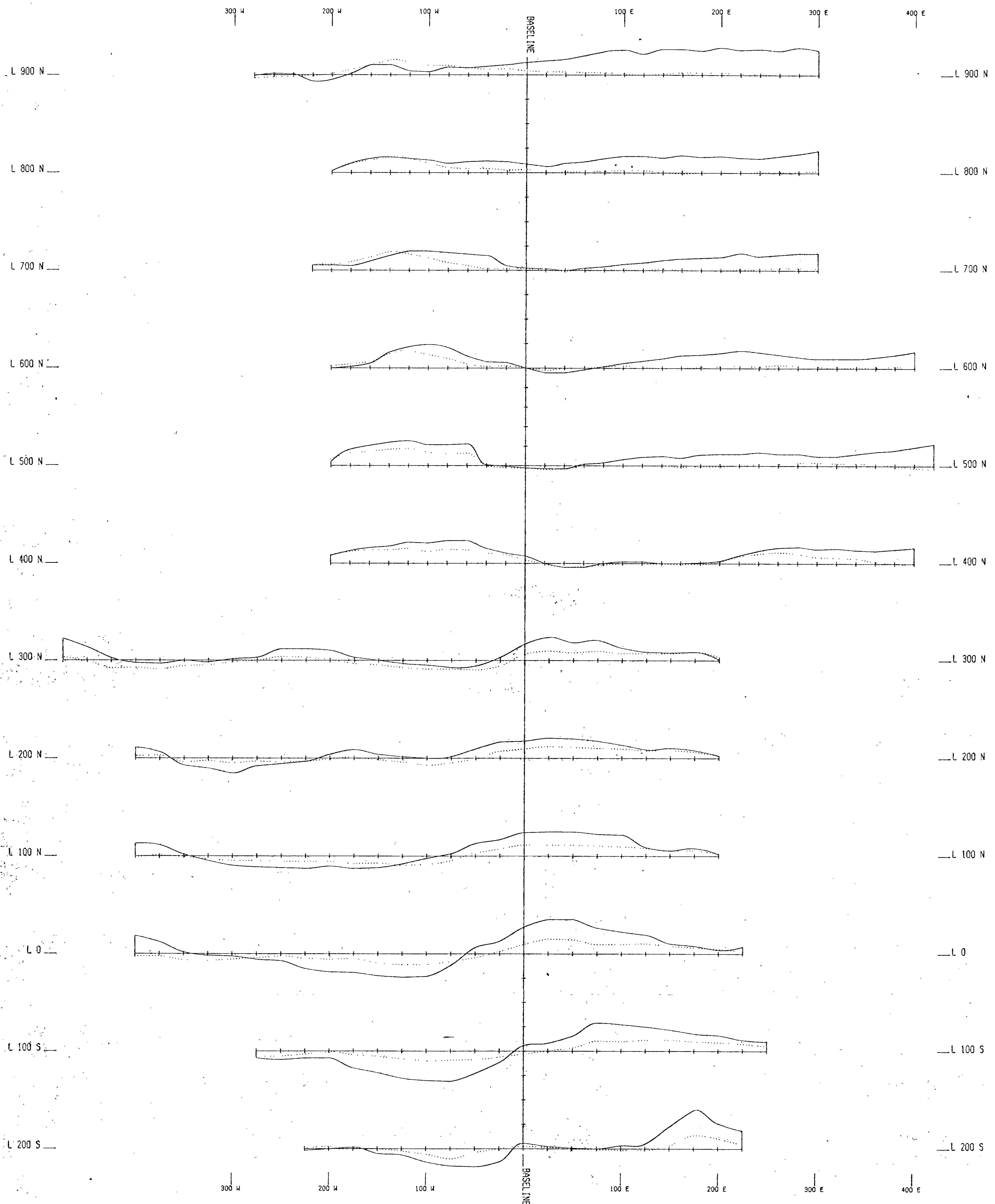
Drawn DBM	Date OCT 91	File Code 104/K8	FIGURE 6d
Revised			



NORTH AMERICAN METALS CORP.
MISTY NIE PROPERTY
ULTRAMAFIC GRID
As (ppm)
CONTOURED SOILS

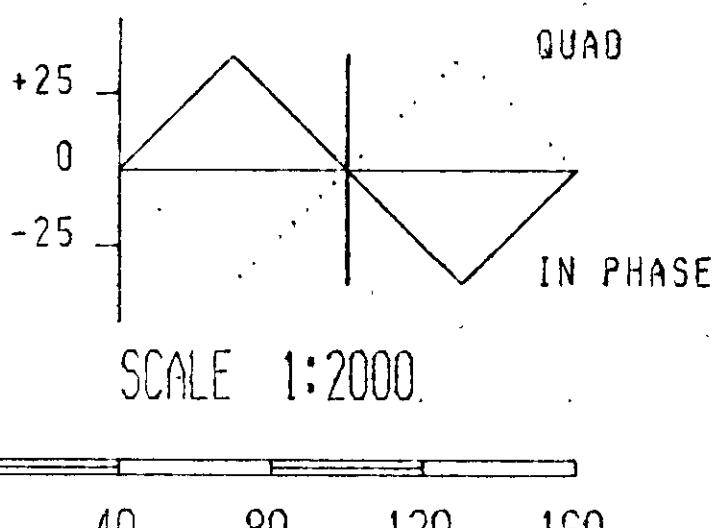
To accompany a report by : **NIOTI**
Project No: **104k/8** Report No:
Billing Ref: **Atlan** I.T.S.: **104k/8**
Date: **08/91** Up To: **FIGURE 6j**
QUEST CANADA EXPLORATION SERVICES INC.

REVISIONS		
By	Date	Approved By



GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,947

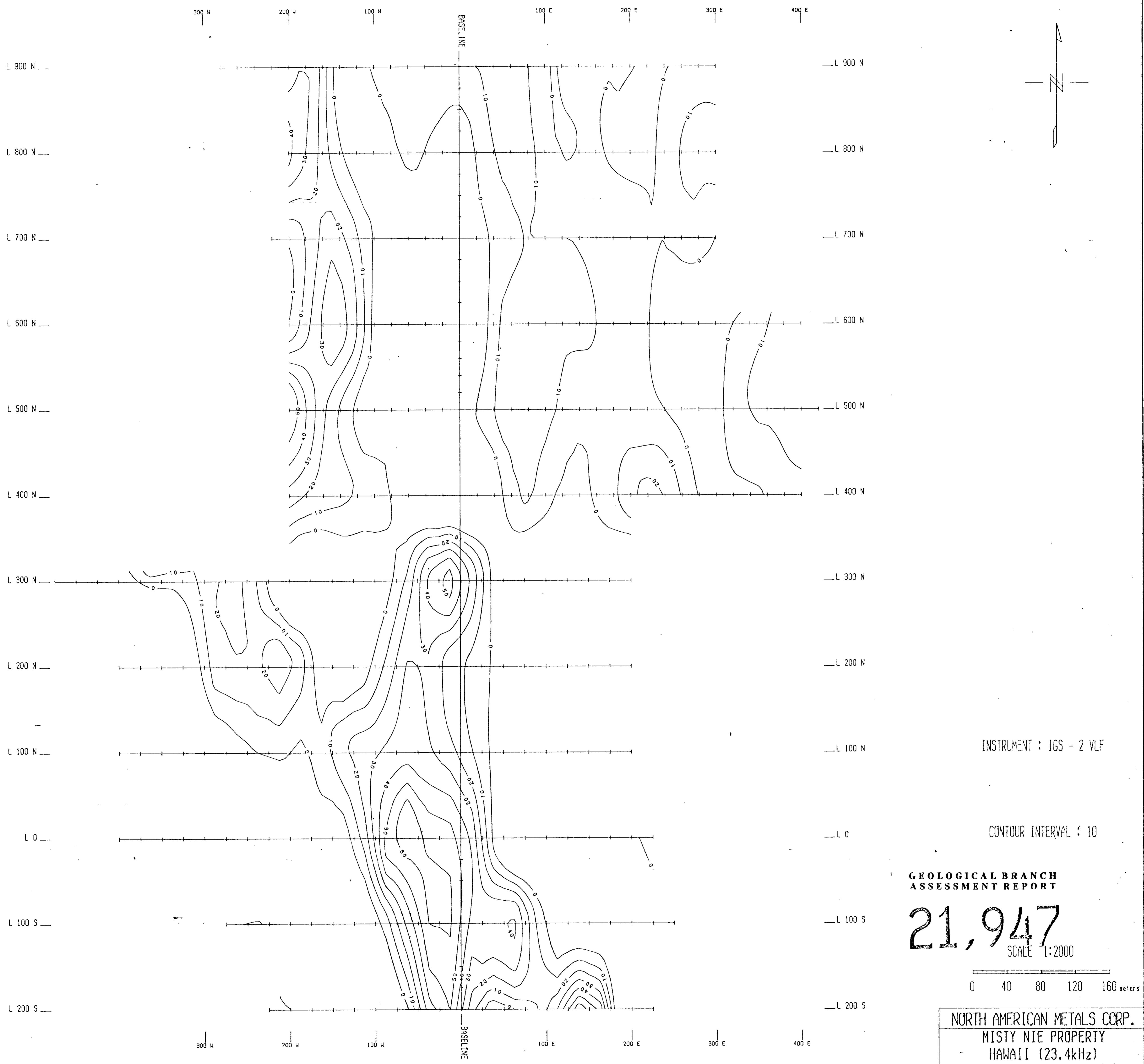


NORTH AMERICAN METALS CORP.
MISTY NIE PROPERTY
ULTRAMAFIC GRID
HAWAII (23.4kHz)
VLF - EM PROFILE MAP

REVISIONS

By	Date	Approv. By

Receiving Company	Project ID	Report ID
Quest Canada Exploration Services Inc.	FIGURE 6A	104K/8
	Date	09/81

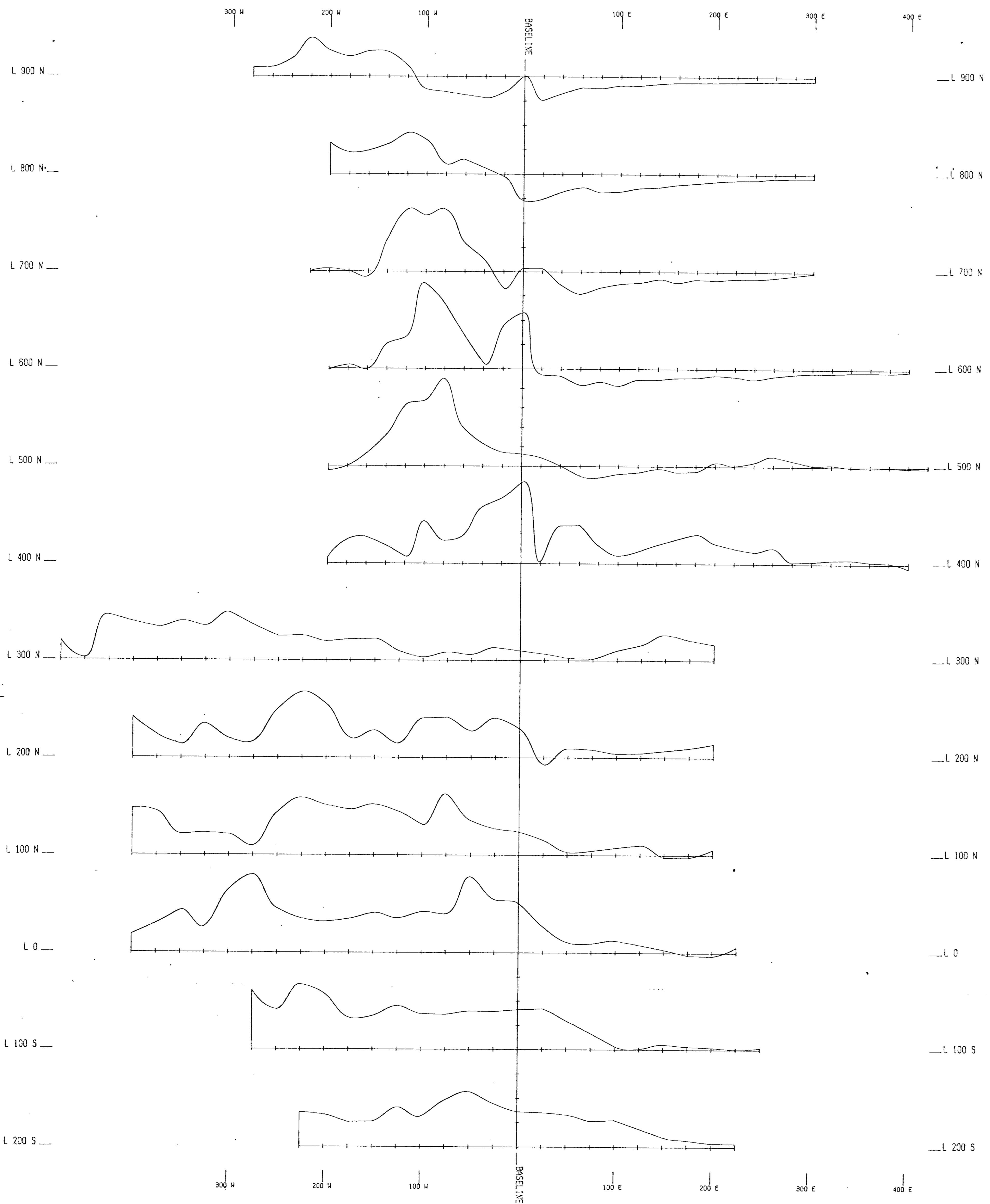


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,947
SCALE 1:2000

0 40 80 120 160 meters

NORTH AMERICAN METALS CORP.		
MISTY NIE PROPERTY HAWAII (23.4kHz)		
VLF - EM CONTOUR MAP		
ULTRAMAFIC GRID		
REVISIONS		
By	Date	Approved By
To accompany a report by: HILL DUNN		
Project No:	Report No:	
Using No:	Allan	11.1.1
Date:	09/91	FIGURE 6a
QUEST CANADA EXPLORATION SERVICES INC.		



INSTRUMENT : IGS - 2 MAG

PROFILE SCALE : 1cm = 1000m

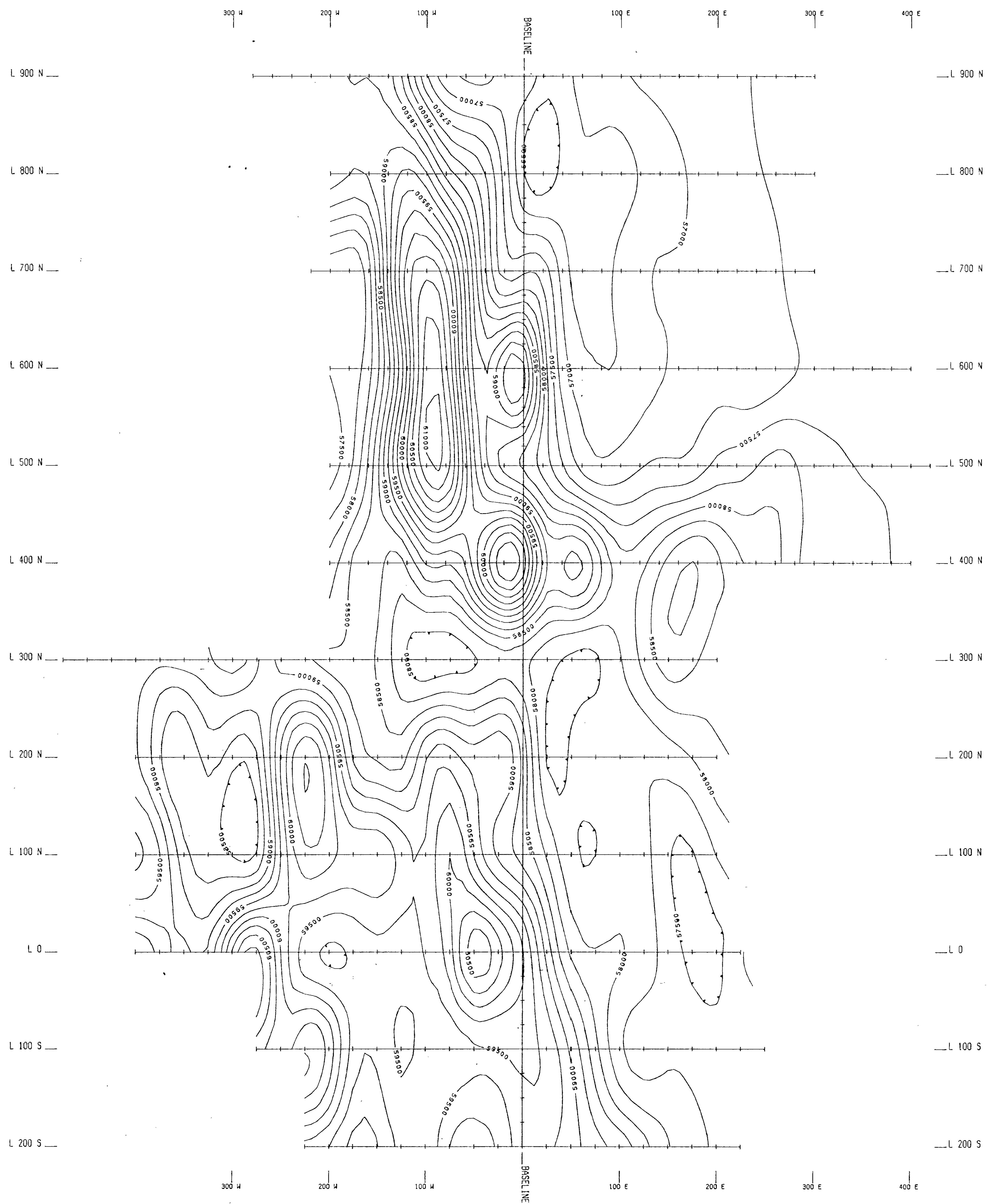
LINE TRACE : 5750m
GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,947
SCALE 1:2000-

0 40 80 120 160 meters

NORTH AMERICAN METALS CORP.		
MISTY NIE PROPERTY		
ULTRAMAFIC GRID		
TOTAL FIELD MAG PROFILE MAP		
REVISIONS		
By	Date	Approved By
Incorporating report by : JERRI HILL		
Project No:	Report No:	
Design No:	Altan	J.C.S. 104K/8
Date:	09/91	To be FIGURE 6a

QUEST CANADA EXPLORATION SERVICES INC.



INSTRUMENT : IGS - 2 MAG

CONTOUR INTERVAL : 250nt

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,947

SCALE 1:2000

0 40 80 120 160 meters

NORTH AMERICAN METALS CORP.		
MISTY NIE PROPERTY		
ULTRAMAFIC GRID		
TOTAL FIELD MAG		
CONTOUR MAP		
Drawing prepared by : DMR 1000		
Project No.: 104K8		
Prepared By:	Date:	Approved By:
Atlan	09/31	FIGURE 6p
QUEST CANADA EXPLORATION SERVICES INC.		

REVISIONS

By	Date	Approved By

