TOTEM 2 CLAIM
REVERSE CIRCULATION DRILLING
ASSESSMENT REPORT

ATLIN MINING DIVISION
NTS 104K/1W

Latitude:58°14'00"N
Longitude:132°19'30"W

Owned and Operated by:

NORTH AMERICAN METALS CORP
1500-700 West Pender Street
Vancouver, B.C.

Christine McPhee, B.Sc.

NORTH AMERICAN METALS CORP.
OCTOBER 1996

Field Work Completed
June 10 to July 20, 1996

SUMMARY

The Totem 2 claim lies within the Tatsamenie gold camp in northwestern British Columbia, 140km west of the town of Dease Lake. During the 1996 field season two reverse circulation drill holes, totalling 300m (984.25 ft), were drilled in the southeast corner of the Totem 2 claim. The holes were drilled to test gold soil geochemical anomalies and a coincident HLEM conductor.

Results showed several possible narrow fault structures in the Permian carbonates. Both holes T96RC339 and T96RC342 intersected discontinuous intervals of low grade gold, not necessarily coincident with interpreted structural zones. The chips returned from RC drilling (averaging < 0.5cm diameter) make it difficult to identify fractured and brecciated zones unless the breccia clasts are very small.

As a result of the anomalous gold values returned near surface in RC342 some trenching was done but a surface expression of this result was not located. It is recommended that a short diamond drill hole be drilled next to this RC hole to confirm this anomaly and provide better geological data for this intersection.

TABLE of CONTENTS

LIST of TABLES

LIST of FIGURES

APPENDICES

INTRODUCTION

The Totem 2 claim is located within the Tatsamenie Gold Camp in northwestern British Columbia. It lies roughly five kilometres north and west of the Bear Main Deposit, which was mined from both open pit and underground workings between startup in 1989 and June 1994, producing 7,475,719 grams of gold from 535,277 tonnes of ore. The project is 100% owned and operated by North American Metals Corp. (NAMC), an 81.4% owned subsidiary of Wheaton River Minerals.

This report presents the results of an exploration program carried out on the Totem 2 Claim between June 10 and July 20 1996. Completed work consists of two reverse circulation drill holes totalling 300m (984.25 ft).

LOCATION, PHYSIOGRAPHY and ACCESS

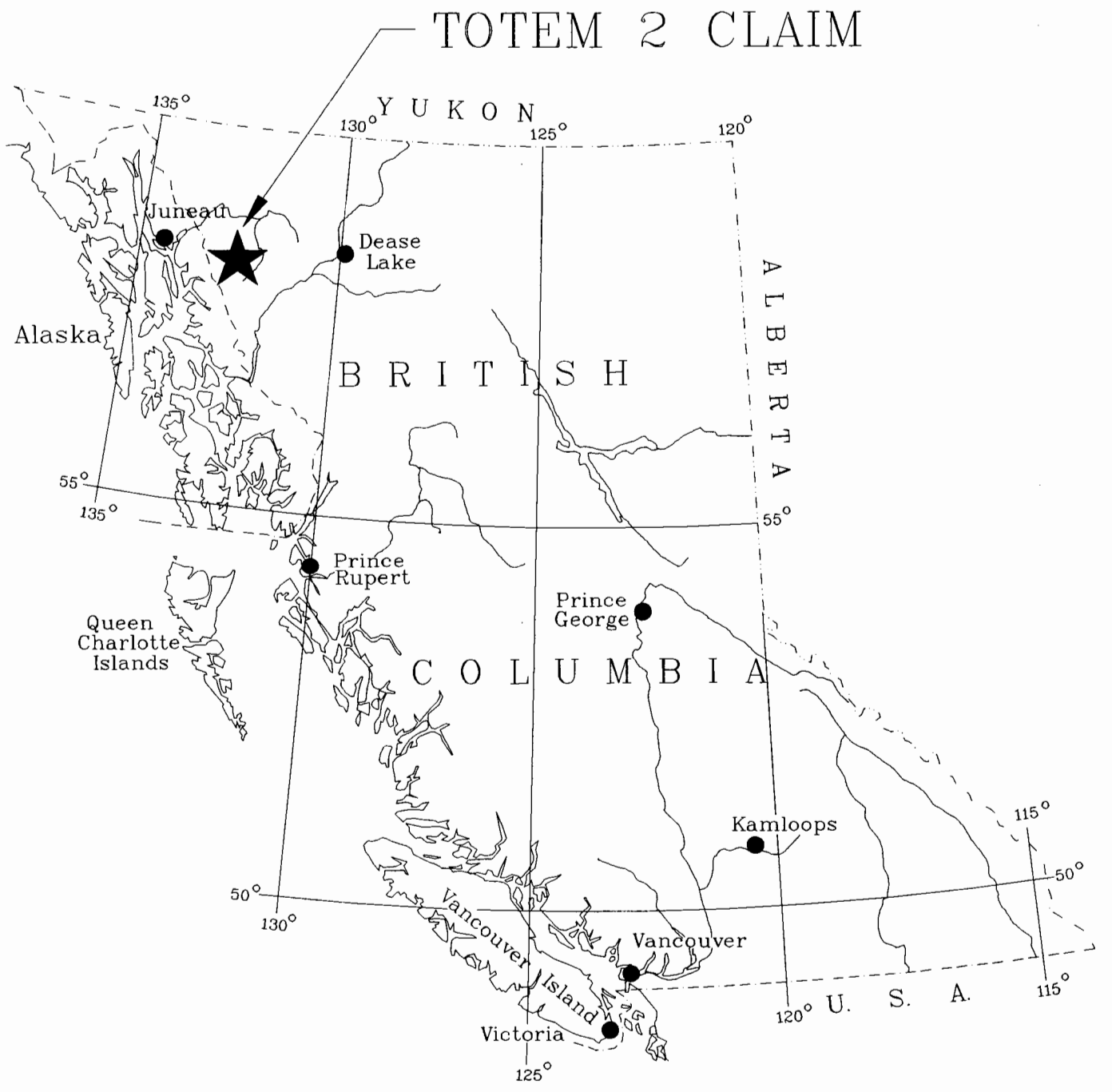
The Totem 2 claim area is located on the Golden Bear Mine property in the Atlin Mining Division at Latitude 58°14'00"N and Longitude 132°19'30"W. The project area occurs on the Tulsequah (104K) and Bearskin Lake (104K/1W) NTS map sheets. The town of Dease Lake lies 140 kilometres to the east, and Juneau, Alaska, lies 100 kilometres to the west (see Figure 1) .

The Golden Bear Mine property is located within moderately rugged terrain on the east side of the Chechidla Range of the Coast Mountains. Elevations on the property range from 600 to 2300 metres with tree line occurring at roughly 1100 metres. Above tree line slopes are primarily talus with little or no vegetation other than grass, moss or lichen. Lower slopes are forested with dense spruce, pine and alder. Glaciers and permanent snow are not abundant, however snow melts slowly on northerly and westerly facing slopes, where surface exploration can only be effectively conducted between July and mid-September. Totem 2 lies at an average elevation of 1900m and the northwest corner of the claim is covered by the Sam glacier.

Access to the Golden Bear Mine property is gained by public road 80 kilometres west from Dease Lake to Telegraph Creek and then by an all weather private access road extending 153 kilometres northwest from Telegraph Creek. The mine site camp also maintains a 1500 metre all weather airstrip suitable for small fixed wing aircraft. For safety reasons use of both the mine access road and the airstrip is restricted. From the camp access to the Totem 2 claim area is achieved by a combination of 11 kilometres of two-wheel drive gravel road and three kilometres of four-wheel drive road that extend to the north and west from the minesite camp and mill area.

LAND TENURE

This report covers work done on the Totem 2 claim (Tenure #201930), which totals 419.0 hectares (see Figures 2 and 3). This claim was converted to Mining Lease 344927 on August 26, 1996, after the above mentioned work was completed. The lease has a primary term of 30 years and is subject to an annual rental fee.



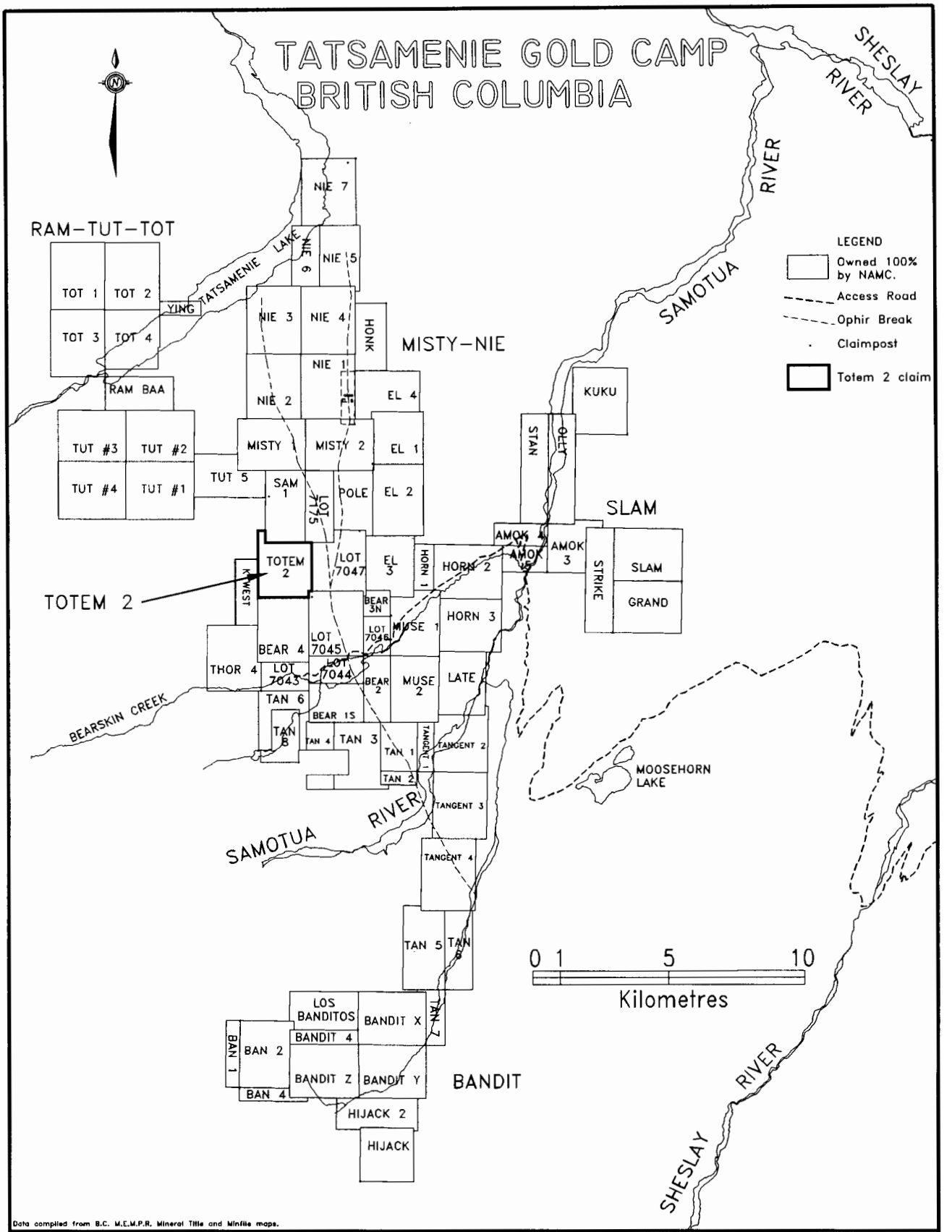
NORTH AMERICAN METALS CORP.

TOTEM 2 CLAIM

LOCATION MAP

N.T.S.: 104 K

Figure 1



Data compiled from B.C. M.E.M.P.R. Mineral Title and Minfile maps.

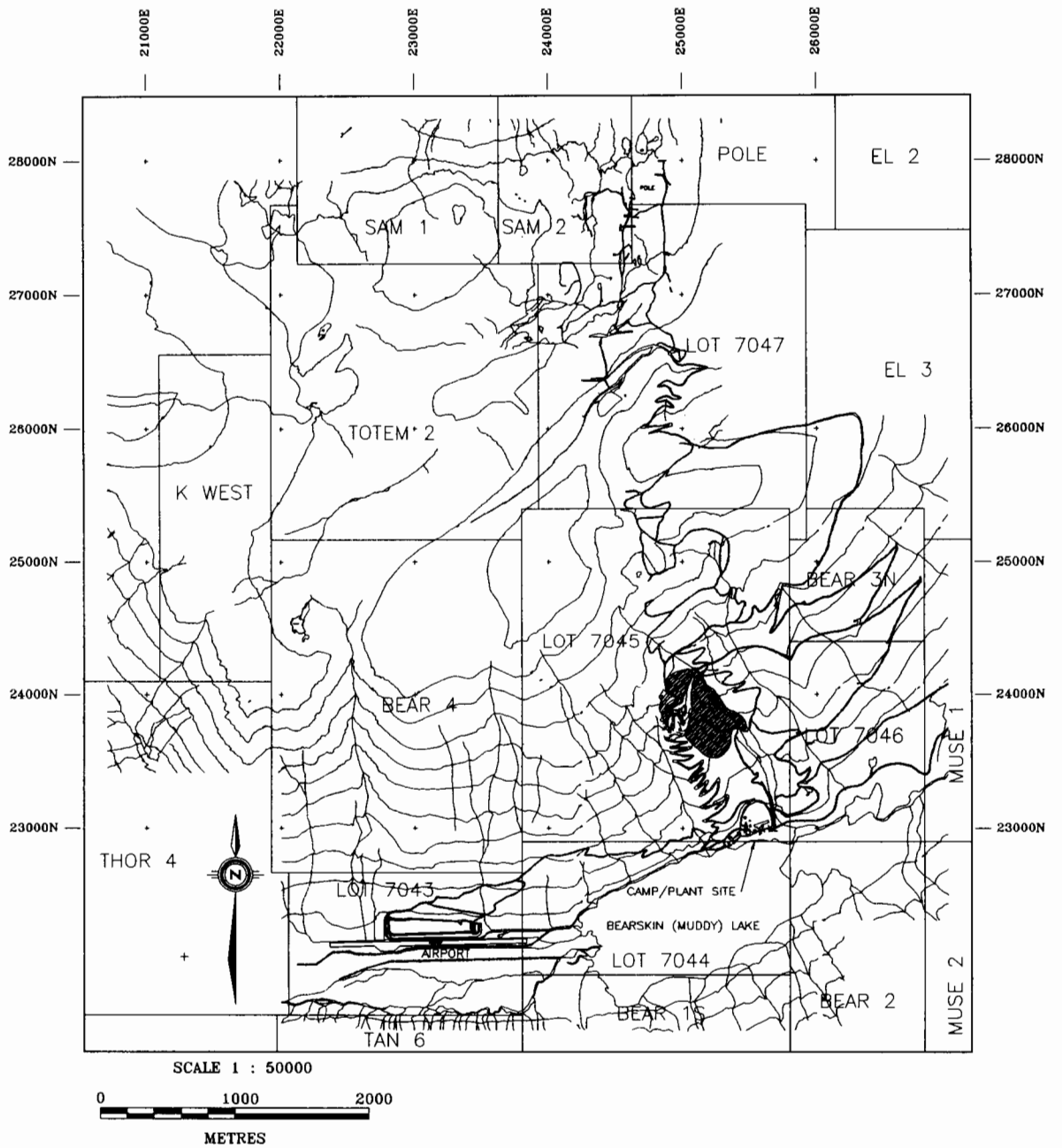
NORTH AMERICAN METALS CORP.

GOLDEN BEAR PROPERTY

CLAIM MAP

N.T.S.: 104 K

Figure 2



NORTH AMERICAN METALS CORP.

TOTEM 2 PROPERTY

CLAIM MAP

N.T.S.: 104 K\1W

Figure 3

EXPLORATION HISTORY

The ground covered by the Totem 2 claim was staked in 1982 by Chevron Canada Minerals Ltd. during the original staking over the Bear Main deposit. In the early eighties Chevron carried out extensive surface geological mapping in the Golden Bear area. The northwest corner of the Totem 2 claim was covered by this early work but no sampling was done and no other work was done on the claim until 1994. In 1994 North American Metals ran a soil geochemistry grid over the claim area and in 1995 this grid was extended and an HLEM geophysical survey was carried out in the area. Both gold and pathfinder element (most notably As, Sb, Hg) anomalies were found as a result of the soil sampling, in addition several HLEM conductors were located.

REGIONAL GEOLOGY

Regional stratigraphy and structure for the area was first described by Souther (1971) and more recently by Oliver (Oliver and Hodgson, 1989, 1990: Oliver, 1993, 1995) and Bradford and Brown (1993a, 1993b). Property geology and economic mineralization for selected mineral occurrences have been reported by Schroeter (1985, 1986, 1987). The work of these authors was summarized by Pigage (1994) and the following description of the regional geology is largely drawn from his report.

The Totem 2 claim occurs within the Intermontaine Belt immediately east of the Coast Belt (Souther, 1971) where the lowermost stratigraphic sequence exposed consists of the Stikine Assemblage. The lowest exposed unit in the Stikine Assemblage is an unfossiliferous, presumed Carboniferous, massive to thin bedded, recrystallized limestone. This limestone is conformably overlain by a sequence of foliated chlorotic metavolcanic rocks dominated by andesitic ash to lapilli tuff, feldspar and augite phyric tuffs and flows, massive andesitic flows with rare pillow basalts. Minor grey limestone interbeds of up to 25 metres thick occur throughout the sequence. Argillites and conglomerate also occur as interbeds. The age of the Stikine Assemblage is poorly constrained: recent zircon dates by Oliver and Gabites (1993) of felsic volcanics within the Assemblage indicate ages as old as Pennsylvanian (316 MA).

A thick, fossiliferous, Permian limestone unit forms a distinctive marker within the Stikine Assemblage. The unit ranges from massive to thin bedded, includes calcitic and dolomitic members, and has been estimated to have a thickness in excess of 200 metres (McBean and Reddy, 1993). Poorly preserved fusilinids and rugosan corals confirm an Early Permian date for the unit (Souther, 1971; Bradford and Brown, 1993b). Detailed mapping by several geologists has further refined the internal stratigraphy of the Permian limestone unit (Oliver and Hodgson, 1989, 1990; McBean and Reddy, 1993; Jaworski and Reddy, 1993; Pigage, 1994).

Unconformably overlying the Stikine Assemblage is a thick package of volcanic and sedimentary rocks comprising the Upper Triassic Stuhini Group. This group consists mainly of red-brown weathering, plagioclase and augite bearing volcaniclastic rocks with lesser pillow basalts and epiclastic rocks. A continuous section near the Bandit claims (see Figure 2) has a thickness of near

2000 metres. The Stuhini Group rocks are typically much less deformed than those of the Stikine Assemblage with a pervasive chloritic foliation typically only locally developed adjacent to major shear zones.

The Stuhini Group is unconformably overlain by subhorizontal, columnar jointed basalts of the Miocene Level Mountain Group (Souther, 1971).

Most of the intrusive rocks in the immediate Bearskin Lake area consist of compositionally heterogeneous, variably foliated, hornblende diorite to quartz monzodiorite. These rocks, dated to the Late Triassic intrude both Stikine Assemblage and Stuhini Group rocks. The voluminous Eocene plutons comprising the Coast Belt occur west of Totem 2.

Structural interpretation of the Golden Bear area is difficult because of the lack of stratigraphic control in the Stikine Assemblage rocks. The extensive foliation in the Stikine assemblage is consistent with at least one and perhaps two pre-Late Triassic phases of folding followed by an erosional interval before deposition of the Stuhini Group. D1 folds are tight to isoclinal and trend dominantly north-south. D2 folds trend either northeast or northwest. Unequivocal D2 folds were not observed in Stuhini group rocks by Bradford and Brown (1993). Folding interpreted as occurring during D3 and D4 deformation events are considered to be latest Triassic to middle Jurassic and Middle Jurassic events, respectively.

PROPERTY GEOLOGY

The internal stratigraphy and structure on the Golden Bear property has been mapped by Pigage (1994) and by Cooley (1996). Property geology with a description of all the rock units as they are currently understood is shown on Figure 3. Descriptions of units pertinent to the Totem 2 claim are given below.

The claim is cut by the Limestone Creek Fault in the southwest corner. This fault separates the Permian Limestone package, which was mapped in detail by Pigage (1994) and Cooley (1996) to the east from a volcanic and sedimentary package on the west. The Permian stratigraphy outlined below is from Cooley (1996).

LMGT (2)- Limestone +/- Dolomite, Graphitic and Thinly Bedded - graphitic, mm-dm bedded dark grey to black. Contains interbeds of tan weathering calcareous quartz siltstone and local cherty beds.

LMST (2)- Limestone - massive to medium bedded, calcitic limestone distinctive creamy white to pale grey with local bioclastic debris , locally contains dm-thick tan weathering siliceous and or cherty and/or dolomitic beds.

LMCH- Limestone with Chert - light grey, calcitic limestone with light to dark grey chert

lenses, nodules and beds.

DOCH- Dolomite with Chert - thick bedded to massive, tan weathering dolomite with light to dark grey chert lenses, nodules and beds. Commonly fossiliferous.

LMBC- Limestone Banded and Crinoidal - dark to medium grey, locally containing crinoidal bioclastic debris, banding is not from bedding but is D3 foliation.

LMST (1)- Limestone - massive to medium bedded, calcitic limestone. Distinctive creamy white to pale grey. Uppermost section immediately below LMBC is bioclastic, is locally pyritic or weathers to a distinctive orange colour.

LMGT (1)- Limestone Graphitic and Thinly Bedded - mm-dm bedded dark grey, calcitic limestone. Contains interbeds of tan weathering, calcareous quartz siltstone.

On the west side of the fault is an interbedded volcanic, epiclastic and clastic package containing the following units (not in stratigraphic order) (Cooley, 1996).

QTZT- Quartzite - black to dark grey finely bedded quartzite. Often has thin argillaceous interbeds. Locally buff weathering.

PHYL- Phyllite - fine grained, dark, clastic sedimentary rock with secondary fine grained mica development forming a platy phyllitic texture and lustrous sheen. Typically intercalated with volcanic rocks which have been largely converted to greenstone and chlorite-amphibole schist. Primary bedding and textural features are preserved.

MFCA- Carbonate Altered Mafic Volcanics - basaltic flow, pyroclastic or epiclastic rock bleached medium brown to light grey or cream. Coloured by carbonatization. May contain pyrite.

MFEP- Epiclastic Ash Tuff - extremely fine grain finely laminated light greyish brown tuff. Considered to be reworked tuffs. Commonly contain discontinuous cm-dm qtz+feldspar lenses.

MFAS- Mafic Ash Tuff - basaltic pyroclastic rock comprised of at least 50% vitric and lithic clasts less than 2mm across. Variants include crystal tuff where at least some of the clastic components include crystal fragments. Rock may be well bedded to poorly bedded and is typically dark green.

MFLP- Mafic Lapilli Tuff - basaltic pyroclastic rock comprised of vitric and lithic clasts 2mm to 64mm across which occupy greater than 50% of the rock by volume. Rock may be massive or poorly bedded and is typically dark green.

Within the Permian package there is evidence of two major deformation events. Along the northern edge of the claim northwest trending folds with 50 to 250 m wavelengths were mapped by Cooley (1996). The folding mapped by Pigage (1994) in the southeastern corner of the claim is likely a related folding event due to its similar orientation. In the northwestern corner of the claim is a different deformation event consisting of tightly spaced north trending overturned folds (Cooley, 1996). Which event is earlier is uncertain.

1996 WORK PROGRAM

In the 1996 field season two reverse circulation drill holes, totalling 300m, were drilled in the southeast corner of the Totem 2 claim. The purpose of these holes was to test geochemical anomalies with a coincident HLEM conductor.

The collar location and orientation of each drill hole was surveyed using mine grid coordinates. Depth down the drill hole is measured from the top of the casing.

The RC chips were logged for lithology at the exploration trailer at the minesite camp using custom field logging forms. Some information such as structural and geotechnical data cannot be gathered from the rock chips (avg <0.5cm diameter) collected by reverse circulation drilling. Each meter was sampled using a Jones splitter with the reject for any samples grading over 0.5 g/t being stored at the airstrip situated immediately west of the minesite camp. Assaying was done at the minesite assay lab for gold (see Appendix III for analytical procedures). One blank and one gram standard were inserted in every 20 samples to monitor for contamination in the lab.

Appendix IV contains the logging codes and conventions utilized for logging core on the Golden Bear property. The drill hole logs and their assay sheets are also located in Appendix IV.

Work done on the Totem 2 claim is being applied to both the KWest claim (tenure # 338827) and the Tangent 4 claim (tenure # 312604).

RESULTS

Two reverse circulation drill holes were drilled on the Totem 2 claim totalling 300m. Collar locations are shown on Figure 4 and down hole geology and assay results (greater than 0.2 g/t) are summarized on Figures 5 and 6. Hole number T96RC339 was drilled to test a coincident gold geochemical anomaly and HLEM conductor and T96RC342 was drilled on gold geochemistry alone. Some evidence of brecciation could be seen in the RC chips and these possible fault structures have been outlined on the sections. These structures are assumed to be vertical to subvertical conforming to fault orientations observed elsewhere on the Golden Bear Property. Both holes intersected anomalous gold values as summarized below. No system of mineralization was identified.

Table 1: Diamond Drill Summary

Drill Hole #	From (m)	To (m)	Interval (m)	Grade g/t
T96RC339	56	57	1	1.06
T96RC342	1	8	7	1.28
	13	14	1	0.79
	31	33	2	1.27
	61	62	1	1.99
	85	86	1	2.64

CONCLUSIONS AND RECCOMENDATIONS

The Totem 2 claim lies within the Tatsamenie gold camp in northwestern British Columbia, 140km west of the town of Dease Lake. During the 1996 field season two reverse circulation drill holes, totalling 300m (984.25 ft), were drilled in the southeast corner of the Totem 2 claim. The holes were drilled to test gold soil geochemical anomalies and a coincident HLEM conductor.

Results showed several possible narrow fault structures in the Permian carbonates. Both holes T96RC339 and T96RC342 intersected discontinuous intervals of low grade gold, not necessarily coincident with interpreted structural zones. The chips returned from RC drilling (averaging < 0.5cm diameter) make it difficult to identify fractured and brecciated zones unless the breccia clasts are very small.

As a result of the anomalous gold values returned near surface in RC342 some trenching was done but a surface expression of this result was not located. It is recommended that a short diamond drill hole be drilled next to this RC hole to confirm this anomaly and provide better geological data for this intersection.

SELECTED REFERENCES

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APPENDIX I

Statement of Qualifications

Statement of Qualifications

I, Christine E. M^{c}Phee, do hereby certify that:

1. I am a graduate of the University of British Columbia at Vancouver, B.C., with a Bachelor of Science Degree, Major Geological Sciences.

2. I have practised my profession as a Geologist in British Columbia since 1995.

3. I am presently employed as a geologist with North American Metals Corp. of #1500-700 West Pender Street, Vancouver, B.C.

4. The work described in this report is based on fieldwork conducted from June 10 to July 20 1996, in which I participated.

5. I have no direct or indirect financial interest in any company known by me to have an interest in the mineral properties described in this report, nor do I expect to receive any such interest.

6. I am the author of this report.

Dated at Vancouver, B.C., this 25 day of October, 1996.

Respectfully submitted,

Christine E. M^{c}Phee

Statement of Qualifications

I, Dunham L. Craig, with a residence of #504 - 2020 Belleview Ave, West Vancouver, B.C. do hereby certify that:

i. I am a registered Professional Geologist with the Association of Professional Engineers and Geoscientists of British Columbia.

ii. I have continuously practised my profession as a Geologist since 1988.

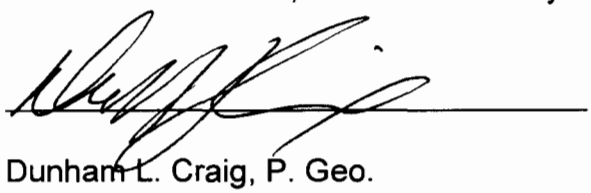
iii. I am a graduate of the University of British Columbia at Vancouver, B.C. with a B.Sc. In Geology.

iv. I am presently employed as Vice President, Exploration with North American Metals Corp., #1500-700 West Pender, Vancouver, B.C.

v. The work described in this report is based on fieldwork conducted from June 10 to July 20, 1996 which I supervised.

vi. I have a direct financial interest in Wheaton River Minerals Ltd, an 87% owner of North American Metals Corp.

Dated at Vancouver, B.C. this 25th day of October, 1996.



Dunham L. Craig, P. Geo.
Vice President, Exploration
North American Metals Corp.

APPENDIX II

Statement of Costs

Statement of Expenditures

Totem 2 Claim

June 10 - July 20, 1996

Staff:	
Christine McPhee - Geologist - 4 days @ $283/day	$ 1132
Cameron Tashoots - Assistant - 2 days @$230/day	$ 460
Pelly Constuction; Snow Removal - D9 - 6 hours @ $165/hour	$ 870
Pelly Constuction; Road Construction - D9 - 6 hours @ $165/hour	$ 990
Midnite Sun; Reverse Circulation Drilling - 300 meters @ $159.06/meter $ 47,718	
Camp - 20 man days @ 42/ day	$ 840
Mine site laboratory analysis - 300 samples @ $7.00/ sample	$ 2100
Total expenditures	$ 54,110

APPENDIX III

Golden Bear Mine Lab Fire Assay Procedures

GOLDEN BEAR MINE ASSAY LAB - ANALYTICAL PROCEDURES

All rock samples assayed at the minesite assay lab were assayed for gold using standard fire assay techniques:

- samples are dried, crushed, and ring milled to 85% -200 mesh,
- one assay ton is fused at 1980°C and the resulting lead button is cupelled at 1760°C,
- dore bead is then parted in 20% HNO_3,
- parted bead is washed, dried, annealed, and weighed,
- final weight is recorded, multiplied by 34.286, and reported as grams/tonne.

APPENDIX IV

NAMC Logging Codes and Conventions
Reverse Circulation Drill Logs
Assay Sheets

LOGGING CODES
for
PC-XPLOR DRILL HOLE DATABASE

G:\DATA\WP51\LOGCODEWPD

TABLE 1 Drill Hole Name and Location

Hole-ID

Surface drill holes in the Golden Bear area are numbered sequentially from the first hole drilled on the property in 1983. The hole-id consists of an 8 character code. The first letter refers to the claim name (all Kodiak A holes start with the letter T because they were drilled on the former Totem claim). The next two numbers indicate the year the hole was drilled. The next two characters are DH for surface hole or UG for underground hole. The final three characters refer to the sequential hole number. Underground and surface holes have separate sequential numbering systems.

Collar Location

Collar locations of the drill holes are measured from the top of the casing. Coordinates are most generally referenced using the Mine Grid coordinate system.

Length of Drill Hole

The total depth of the hole is recorded in metres to 2 decimal places.

Project Area

The general project area is defined using this alphanumeric variable. This variable is useful for defining subsets of drill holes based on mineralized horizons or areas intersected. All Kodiak A drill holes were assigned the variable name KODIAK.

TABLE 2 Downhole Deviation Data

Depth

Depth of the downhole deviation measurement. Collar surveyed orientations have a depth of 0.00.

Azimuth

Azimuth of the downhole deviation or collar measurement reported in decimal degrees in a clockwise direction from North. North corresponds to 0.0 degrees and angles up to 360 degrees are allowed.

Dip

Dip of the downhole deviation or collar measurement reported in decimal degrees. A vertical upright drill hole has a dip of +90.0 degrees, and a vertical downward hole has a dip of -90.0 degrees.

Test Type

A brief description of the test type is recorded with this variable. Acid dip tests are recorded as ACID. Sperry-Sun single shot tests are recorded as SPERRY. Surveyed orientations (collar) are reported as SURVEY.

TABLE 3 General Drill Hole Information

Drill Hole Type

Core diamond drill holes are assigned the type DH. Reverse circulation drill holes are assigned the type RC.

Size of Core

The size of core is recorded as HQ, NQ, or BQ. If reduction had to occur during drilling, all the different sizes are indicated sequentially, i.e. HQNQ.

Start Date

This variable records the day the drill hole was collared. It is recorded using the format DD/MM/YYYY. Collaring of a hole during the morning hours of a night shift is still recorded as being for the previous day.

Stop Date

The date the hole was shut down is indicated in format DD/MM/YYYY. As with the start date, early morning night shift shutdowns are recorded as being for the previous day.

Logged By

This variable contains the initials of the geologist logging the drill hole. Up to three characters may be used.

Edited By

This variable records the initials of the person who edited the drill log.

Surveyed By

The initials of the surveyor for the collar coordinates are entered here.

Contractor

This variable records the drilling contractor for the drill hole.

Rig Type

The type of rig used to drill the hole is indicated here.

Units

By default the drill holes are logged in metres. Feet may be used in special situations.

TABLE 4 Lithology Information

From

The start of a lithologic interval is recorded to two decimal places. The top of the hole is assigned the From of 0.00. The FROM variable for the next unit must correspond to the TO variable for the present unit. Current practice does not allow for nested intervals; the lithological units are reported sequentially starting from the top of the drill hole.

To

The end of a lithologic interval is recorded to two decimal places. Please note the above discussion concerning nested lithologic intervals.

Flag

Key flags are utilized to mark geologic intervals of specific structural importance. Generally these are reserved for key fault zones which may be mineralized.

CUB	Cub Fault
BF	Bear Fault
FWF	Footwall Fault
ISH	Internal Sliver Hangingwall Fault
ISF	Internal Sliver Footwall Fault
ISL	Internal Sliver Fault
FOF	Foster's Fault
WWF	West Wall Fault
BLF	Black Fault
FLF	Fleece Fault
FWT	Footwall Fault
CNF	Central Fault
BLS	Base of Landslide

Rock Code

Rock types encountered in the different Golden Bear drilling programs have been assigned a 4 letter code as defined below:

CASE Casing - used at the top of a hole where the casing was drilled into bedrock or firm ground.

CAVE Material which has been recovered with an interval of core but which has fallen into the recovered position from higher up the hole. If labelled as cave by the drill crew, this code and interval is generally skipped as it is not included within their footage tags.

OVER Overburden - Core recovery through unconsolidated soil or gravel over bedrock.

TRIC Triconed - Interval where the hole was advanced using a tricone bit. No recovery for this interval.

LOST An interval through which no recovery of core has occurred. This code should be used sparingly; it is not intended for zones of poor recovery.

VNQZ Quartz vein of substantial size (i.e. greater than 10 cm).

VNCA Calcite vein of substantial size.

BSDY Basaltic Dyke - Fine grained, dark green to black, equigranular "basalt" dyke. Locally may be vesicular or amygdaloidal. Correlates with Miocene Level Mountain Basalt.

ANDY Andesite Dyke - Fine grained, dark green-grey, intermediate intrusive dyke. Contains up to 20% feldspar phenocrysts up to 2 mm across enclosed in an aphanitic groundmass.

RHDY Rhyolite dyke.

DIDY Diorite Dyke - Dark green, medium grained intrusive containing euhedral pyroxene and feldspar crystals up to 4mm across.

GRDI Granodiorite - Coarse to medium grained granodiorite with hornblende as the chief mafic constituent. Biotite is usually present. Plagioclase forms light grey, white, or greenish subhedral crystals. Plagioclase is commonly surrounded by anhedral grains of flesh coloured K-feldspar. Clear, colourless or smoky quartz occurs as interstitial grains and subhedral crystals lining miarolitic cavities.

GRDF Foliated Granodiorite - Fine to medium grained diorite to quartz monzonite. Chlorite-altered hornblende is the most abundant mafic constituent. Feldspars are opaque, chalky white or tinted pink. Characteristically shows a strong mineral alignment, both planar and linear.

GOUG Highly sheared, "punky", extremely soft clay material from an unidentifiable protolith. Assumed to be a sheared variant of the wallrock lithology.

PYTF Pyritic shear developed in mafic volcanic rocks. Rock is highly sheared, dark grey to black. It is silicified and competent to clay-rich and soft. It contains abundant fine to medium grained sulphides, mainly pyrite. Invariably anomalous in gold and silver.

PGTF Same original lithology as PYTF but entirely broken down to soft clay fault gouge by post mineral fault motion. No

original texture preserved. The gouge is dark grey, locally limonitic. Invariably anomalous in gold and silver; grade is variable.

GBRO Gabbro - Medium green, massive, porphyritic gabbro containing 1 to 4 mm crystals of plagioclase and pyroxene.

MFTF Mafic Volcanic Rock - Underground use only. Undifferentiated basaltic pyroclastic and flow rocks. Generally massive to poorly bedded. Lithologies include MFAS, MFEP, MFLP. All are dark grey to dark green in colour.

MFAS Mafic Ash Tuff - Basaltic pyroclastic rock comprised of at least 50% vitric and lithic clasts less than 2 mm across. Variants include crystal tuff where at least some of the clastic components include crystal fragments. Rock may be well bedded to poorly bedded and is typically dark green.

MFEP Mafic Epiclastic Volcanic Rock - Dark grey to green clastic sedimentary rock formed through erosion and reworking of mafic volcanic rocks. Typically well bedded with normal grading of moderately sorted clasts.

MFLP Mafic Lapilli Tuff - Basaltic pyroclastic rock comprised of vitric and lithic clasts 2mm to 64mm across which occupy greater than 50% of the rock by volume. Rock may be massive or poorly bedded and is typically dark green.

MFFL Mafic Volcanic Flow - Basaltic volcanic flow rock. Typically dark green with plagioclase and pyroxene phenocrysts 2mm to 4mm across. Commonly massive in appearance but may display pillow structures in outcrop.

MFCA Mafic Volcanic Rock, Carbonate Altered - Basaltic pyroclastic, flow, or epiclastic rocks bleached medium brown to light grey or cream. Coloured by carbonatization including development of silica, ankerite, dolomite, calcite, sericite, "mariposite", and clay enrichment. May contain up to 10% pyrite developed as patches, veinlets and envelopes. Most commonly anomalous in gold and silver; rarely ore grade.

ARGI Argillite - Fine grained, dark grey to black, massive to finely bedded, pelitic rock which is commonly graphitic. Where tectonized it may develop distinct graphitic slip planes.

CHSB Chert, Silicified and Brecciated - Matrix supported, brecciated chert with angular chert and minor dolomite or silicified dolomite clasts in a light to medium grey matrix of secondary silica. Clasts are rotated. There is commonly a heterogeneous component including minor volcanic fragments. Trace sulphides may be present. May contain anomalous gold and silver grades.

CHXB Chert, Silicified, Brecciated, and Sulphidized - Matrix supported, brecciated chert with angular primary quartz and minor dolomite or silicified dolomite clasts in a dark grey matrix of secondary silica and fine grained sulphides. Clasts are rotated. There is commonly a heterogeneous component including up to 30% tuff and pyritic tuff fragments. Commonly ore grade.

CHRT Chert - Massive to finely laminated, white to dark grey cryptocrystalline, primary quartz. May be interbedded with up to 20% limey particulate beds. May be crackled or form jigsaw breccias with a silica or ankeritic matrix. May contain minor veinlets or replaced limy layers of silica with trace pyrite. May contain anomalous gold and silver.

DOSB Dolomite, Silicified and Brecciated - Matrix supported, brecciated dolomite with angular primary chert and dolomite or silicified dolomite clasts in a matrix of secondary silica. Commonly light grey but may locally be dark grey. clasts are rotated. There may be a heterogeneous component, including minor tuff fragments. Trace sulphides may be present. May contain anomalous gold and silver grades.

DOXB Dolomite, Silicified, Brecciated, and Sulphidized - Matrix supported, brecciated dolomite with angular clasts of primary chert, dolomite, or silicified dolomite in a dark grey matrix of secondary silica and fine grained sulphides. Clasts are rotated. There is commonly a heterogeneous component including up to 30% tuff and pyritic tuff fragments. Commonly has anomalous gold and silver grades.

DOCH Dolomite with Chert Interbeds - Thick bedded to massive, tan to light brown, fine to medium grained dolomite with primary fossiliferous chert as narrow discontinuous lenses, layers, or beds. Primary chert forms greater than 20% of the unit. Chert occurs as white to medium grey to dark grey, massive to finely laminated layers or lenses (nodules) in the dolomite. No sulphides are present in this lithology unless silicified. Where tectonized, this rock is extensively fragmental with abundant, angular to rounded, large fragments of chert up to 8cm across and smaller fragments of dolomite up to 3cm across.

DOLO Dolomite - Massive to thick bedded, tan to light brown, fine to medium grained dolomite. Contains up to 20% discontinuous primary chert layers. Where tectonized this rock appears extensively fragmental with angular to rounded dolomite and chert fragments up to 5cm across.

LMBC Limestone, Banded and Crinoidal - Buff to tan or grey coloured, thin bedded limestone locally containing crinoidal bioclastic debris. May contain cherty layers.

LMST Limestone - Massive or thick to medium bedded, calcitic limestone. White to pale grey in colour with local bioclastic debris or argillaceous components.

KRST Karst Breccia Zone: used either for karst-related textures or for lost zones caused by karst holes within the rocks being drilled. Breccias consist of limestone and chert clasts in a fine grained, orange brown, limonitic sand to silt matrix. Matrix may contain some sedimentary textures. The karst breccias typically contain late, anastamosing, translucent grey, calcite veinlets which crosscut all other features.

PHYL Phyllite - Fine grained, dark, clastic sedimentary rock with secondary fine grained mica development forming a platy phyllitic texture and lustrous sheen. Typically intercalated with volcanic rocks which have been largely converted to greenstone and chlorite-amphibole schist. Primary bedding and textural features are preserved.

LMSL Silicified Limestone - Rock is severely silicified, but may retain some features described under LMST or LMBC (*i.e.*

bedding, laminae, bioclastic debris). Rock cannot be scratched with a steel blade. Rock does not effervesce in 10% HCl.

SLST Siltstone - Generally greyish to orange-brown in colour. Contains greater than 50% silt size material and less than 50% carbonate minerals. Massived to bedded and/or laminated. Locally interbedded with LMBC, LMST, and/or LMSL. Pyrite may be present as disseminated cubes or aggregates. Locally fossiliferous.

HLBX Heterolithic Breccia - Breccia containing more than one lithology type among the clasts.

LMBX Limestone Breccia - Breccia containing limestone and silicified limestone as the dominant clast lithology. It is suggested that this code be discontinued; instead use the appropriate limestone code with BX as the first texture.

LMCH Limestone with Chert - Texturally identical to DOCH. Fine to medium grained, off white to light grey, calcitic limestone with primary chert lenses or layers. Chert bands are typically pale grey.

LMGT Limestone, Graphitic and Thin Bedded - Thinly bedded, medium dark to dark grey, calcitic limestone. Bedding occurs on a scale of 5cm to 30cm. The unit appears to be nonfossiliferous. Surface weathering results in a strong ribbed appearance with dark grey limestone weathering recessively and calcareous quartz siltstone weathering in relief. Incipient black chert lenses are developed preferentially in the siltstone interbeds.

Colour

Two alphanumeric characters are used to describe the colour of the rock type. If two colours are listed together, the dominant colour is the second entry. RU, for example, is reddish brown. Colours such as pink can be described as 7R = light red.

Lightness Scale	
9	palest
8	pale
7	light
6	light-ish
5	medium (50% light)
4	dark-ish
3	dark
2	very dark
1	darkest

Colour Scale	
A	grey
B	blue
G	green
L	lime (YG)
M	mauve
N	black
O	orange
P	purple
Q	aqua (BP)
R	red
T	tan (khaki)
U	brown (umber)
V	violet (BP)
W	white
Y	yellow

Texture

Four different textures may be described by these two letter codes. The dominant texture should be listed first and the most poorly developed texture should be listed last.

AM	amygdaloidal
BD	bedded
BN	banded
BW	boxworked
BX	brecciated
CR	crackled
FO	foliated
GO	gouged
GN	gneissic
GR	graded
LM	laminated
MS	massive
PH	phyllitic
PL	plutonic
PP	porphyritic
RB	rebrecciated
SC	schistose
SH	sheared
SK	stockworked
VG	vuggy
VN	veined
VS	vesicular

Structural Intensity

This two character code indicates the degree of fracturing, brecciation, or gouge present in the geologic interval. The first character indicates the type of structural disturbance using the definitions below:

0 no brecciation, no shearing, no gouge. Minor fracturing.(no structural intensity modifier is required, ie. No second character)
1 fracturing, only minor gouge and brecciation
2 brecciation and gouge

The second character indicates the degree of intensity of the structural disturbance using the following definitions:

2 very weak
4 fairly weak
6 fairly strong
8 very strong
9 completely

Alteration Facies/Intensity

This two character code indicates the alteration facies and the alteration intensity of the geologic interval. The codes are defined below:

Carbonate Package

0 very weak to unaltered limestone

12 weakly dolomitized
14 moderately dolomitized — less than 15% quartz
16 strongly dolomitized
18 very strongly dolomitized

19 totally dolomitized

22 weakly silicified — may be dolomitized
24 moderately silicified
26 strongly silicified
28 very strongly silicified

29 totally silicified

Greenstone Package

0	very weak to unaltered greenstone	
12	weakly veined, bleached	less than 1%
14	moderately veined, bleached	pyrite and/or
16	strongly veined, bleached	fine sulphides
18	very strongly veined, bleached	
19	totally bleached	
22	weakly bleached, pyritized	
24	moderately bleached, pyritized	greater than 1%
26	strongly pyritized, possibly bleached	pyrite and/or
28	very strongly pyritized, possibly bleached	fine sulphides
29	intensely pyritized, possibly bleached	

Structural Identity

Distance: enter the depth at which the structure occurs.

A two letter code describes structural features observed in the geologic interval. Any number of structures may be defined.

BD	bedding	QA	quartz-Fe carbonate vein
BN	banding	QC	quartz-calcite vein
CD	calcite-dolomite vein	QD	quartz-dolomite vein
CM	chilled margin	QV	quartz vein
CV	calcite vein	SH	shear
DV	dolomite vein	SS	slickensides
FC	fault contact	SV	sulphide vein
FR	fracture	UC	upper contact
FO	foliation	VN	vein
FZ	fault/fracture zone	$$	sheeting
LC	lower contact	FS	flame structure
LM	lamination		

Thickness of Structure

The thickness scale is used to indicate the thickness of the structural feature described immediately above.

9	extremely thick	greater than 20m
8	very thick	20m
7	thick	6m
6	medium thick	2m
5	medium	60cm
4	medium thin	20cm
3	thin	6cm
2	very thin	2cm
1	laminated	0.6cm
0	thinly laminated	0.2cm

Angle of Structure

The angle of the above structural feature relative to the core axis. Structures going straight down the core axis have an angle of 0.

Mineral

Certain alteration and/or ore minerals are noted during the core logging. The following abbreviations are used for the different minerals:

QZ	quartz	PY	pyrite
CA	calcite	CP	chalcopyrite
AK	ankerite	LI	limonite
CL	chlorite	HE	hematite
GY	gypsum	JA	jarosite
MU	muscovite-sericite	SC	scorodite
CY	clay	FS	fine sulphides
FU	"mariposite"		
DO	dolomite		

Mineral - How

The following two letter code indicates how the alteration and ore minerals occur.

AM	amygdules	SP	spots
BL	blebs	PR	pervasive
BM	breccia matrix	PT	patches (as in quilts)
CO	coatings	CC	rosettes and crystal clusters
CL	clasts	SL	selvages
DS	disseminated	$$	sheeting
EN	envelopes	ST	staining (as in tarnish)
FC	framework crystals	EU	euhedral crystals
GO	gouge	VN	veins, macroveins, microveins
RP	replaced, phenocrysts	BW	boxwork
EY	eyes, augen	DA	dalmationite
IN	interstitial		
SK	stockwork		
LM	laminations - bedded		
MS	massive		
ND	nodules		

Mineral - Amount

The two character numeric code indicates the amount of the alteration or ore mineral present. Enter the estimated % from 0 to 99.

TABLE 5 - Assay Information

From

The start of an assay interval is recorded to two decimal places. Assay intervals should not cross lithologic interval boundaries. The assay intervals are reported sequentially starting from the top of the drill hole. Intervals without assays are not entered into the PC-XPLOR database.

To

The end of an assay interval is recorded to two decimal places.

Sample Tag Number

The sample tag number for a particular assay interval is reported. This field is alphanumeric. In the Golden Bear drill hole database the sample tag numbers are not unique; therefore assay values cannot be merged into the the database.

Recovery

The length of core present within an assay interval is recorded to two decimal places in the recovery column. This variable is reported as metres. It is converted to a % within the database using data manipulation.

Au g/t

Gold assay values in grams/tonne are recorded to two decimal places.

Ag g/t

Silver assay values in grams/tonne are recorded to one decimal place. This value is not always present.

TABLE 6 - Geotechnical Data

All geotechnical information is collected between footage tags present in the core box. Each intervals between footage tags represents a single drill run where the core tube is retrieved and core is placed in the core box.

From

The start of a geotechnical interval is recorded to two decimal places. Geotechnical intervals are between drill runs and will cross lithologic and assay interval boundaries. The geotechnical intervals are reported sequentially starting from the top of the drill hole.

NORTH AMERICAN METALS CORP.
DRILL LOG COVER SHEET

DATE: _____ PAGE : OF

DRILL HOLE # TQ06RC339 PROJECT AREA: Tolan 2 SECTION: ✓

DRILL HOLE LOCATION DATA

EASTING: 23795.239
NORTHING: 25550.012
ELEVATION: 1923.949
HOLE LENGTH (M): 150

DRILL DIARY

STARTING DATE: 06/07/06 (DD/MM/YYYY)
COMPLETION DATE: 08/07/06 (DD/MM/YYYY)
LOGGED BY: CLT RIG: _____
CONTRACTOR: Midnight Sun Drilling CORE SIZE: RC
SURVEYED BY: GP EDITED BY: _____

DOWN HOLE SURVEY DATA

SURVEY LEVEL	DEPTH	AZIMUTH	DIP (+/-)	TEST TYPE
COLLAR				
1 0	0	65.075	-42.051	SURVEY
2				
3				
4				
5				

PURPOSE:

LITHOLOGY SUMMARY

FROM	TO	ROCK CODE	REMARKS	FROM	TO	ROCK CODE	REMARKS
0	3	OVBN					
3	13	CLAY					
13	19	SAND					
19	35	BOUL					
35	49	LIMS					
49	69	LIMST					
69	77	LIMS					
77	96	LIMST					
96	150	BOUL					

COMMENTS:

CHECK LIST: ASSAY REPORT ✓ CORE PHOTOS _____

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

18-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
27084	0.03			RECIRC DRILL
27085	0.03			
27086	0.03			
27087	0.07			
27088	0.03			
27089	0.10			
27090	0.03			
27091	0.07			
27092	0.10			
27093	0.31			
27094	0.03			
27095	0.93			
27096	0.21			
27097	0.07			
27098	0.07			
27099	0.07			
27100	0.03			
27556	0.03			
27557	0.07			
27558	0.17			
27559	0.07			
27560	0.07			
27561	0.10			
27562	0.07			
27563	0.03			
27564	0.07			
27565	0.07			
28401	0.03			
28402	0.10			
28403	0.03			
28404	0.07			
28405	0.10			
28406	0.07			
28407	0.03			
28408	0.03			
28409	tr			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

18-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28410	0.03			RECIRC DRILL
28411	tr			
28412	0.03			
28413	0.03			
28414	0.03			
28415	0.10			
28416	0.07			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

19-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28417	0.10			RECIRC DRILL
28418	0.03			
28419	0.45			
28420	0.21			
28421	tr		BLANK	
28422	0.93		1 gram	
28423	0.07			
28424	0.10			
28425	0.07			
28426	0.07			
28427	0.03			
28428	0.03			
28429	0.03			
28430	0.07			
28431	0.03			
28432	0.03			
28433	0.07			
28434	0.03			
28435	0.07			
28436	0.07			
28437	0.21			
28438	0.14			
28439	0.07			
28440	0.03	BLANK		
28441	1.03	1 gram		
28442	0.07			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

20-Jul-96

ASSAYER: D

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28443	0.34			RECIRC DRILL
28444	0.14			
28445	0.10			
28446	0.14			
28447	0.10			
28448	0.10			
28449	0.07			
28450	0.07			
28451	0.03			
28452	0.03			
28453	0.07			
28454	0.03			
28455	0.03			
28456	0.07			
28457	0.03			
28458	0.07			
28459	0.03			
28460	0.03	BLANK		
28461	0.99	1 gram		
28462	0.24			
28463	1.06			
28464	0.24			
28465	0.07			
28466	0.72			
28467	0.14			
28468	0.07			
28469	0.21			
28470	0.41			
28471	0.34			
28472	0.41			
28473	0.17			
28474	0.27			
28475	0.27			
28476	0.07			
28477	0.07			
28478	0.10			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

20-Jul-96

ASSAYER: D

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28479	0.24			RECIRC DRILL
28480	TR	BLANK		
28481	0.96	1 gram		
28482	0.07			
28483	0.21			
28484	0.27			
28485	0.27			
28486	0.17			
28487	0.14			
28488	0.17			
28489	0.51			
28490	0.62			
28491	0.07			
28492	0.07			
28493	0.03			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

21-Jul-96

ASSAYER

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28494	0.21			RECIRC DRILL
28495	0.34			
28496	0.14			
28497	0.10			
28498	0.10			
28499	0.07			
28500	0.10			
28501	0.07			
28502	TR		BLANK	
28503	0.89		100PPM	
28504	0.07			
28505	0.07			
28506	0.14			
28507	0.24			
28508	0.10			
28509	0.07			
28510	0.07			
28511	0.07			
28512	0.10			
28513	0.07			
28514	0.10			
28515	0.10			
28516	1.92			
28517	0.07			
28518	0.07			
28519	0.07			
28520	0.03		BLANK	
28521	0.89		100PPM	
28522	0.07			
28523	0.07			
28524	0.03			
28525	0.07			
28526	0.07			
28527	0.07			
28528	0.07			
28529	0.03			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

21-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28530	0.07			RECIRC DRILL
28531	0.03			
28532	0.03			
28533	0.03			
28534	0.07			
28535	0.03			
28536	0.07			
28537	0.03			
28538	0.10			
28539	0.03			
28540	0.10			
28541	0.07			
28542	0.00	BLANK		
28543	1.03	[illegible]		
28544	0.07			
28545	0.07			
28546	0.03			
28547	0.07			
28548	0.03			
28549	0.03			
28550	0.03			
28551	0.07			
28552	0.03			
28553	0.07			
28554	0.07			
28555	0.07			
28556	0.03			
28557	0.07			
28558	0.24			
28559	0.07			
28562	0.07			
28563	0.17			
28564	0.14			
28565	0.07			
28566	0.07			
31007	0.07			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

26-Jul-96

ASSAYER:C. Craft

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION	
33865	0.55		0-1	RECIRC DRILL	
33866	0.14		1-2	ELG 13	
33867	0.10		2-3		
33868	0.17		3-4		
33869	0.14		4-5		
33870	0.10		5-6		
33871	0.10		6-7		
33872	0.07		7-8		
33873	0.10		8-9		
33874	0.03		9-10		
33875	0.03		10-11		
33876	0.03		11-12		
30844	0.99		?	DUPLICATES of 28463	1.06
30845	0.41		?	of 28490	0.62
30870	0.03			of 28516	1.92

339

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 8

DDH T96RC 339

PAGE 1 OF 8

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
0	3.		OVBD										
		Large pebbles + mud											
3	13		MBC	SA	BN						LI/CO/S /H E/FR/2		
		medium grey - banded + veined limestone. Calcite veining. calcite chips compose ~10% limonite staining as coatings; hematite staining along fractures. not silfied											
13	17		LMST	BA	MS								
		pale grey massive limestone. calcite veining. not silfied											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
0	1	28401		0.03	
1	2	28402		0.10	
2	3	28403		0.03	
3	4	28404		0.07	
4	5	28405		0.10	
5	6	28406		0.07	
6	7	28407		0.03	
7	8	28408		0.03	
8	9	28409		tr	
9	10	28410		0.03	
10	11	28411		tr	
11	12	28412		0.03	
12	13	28413		0.03	
13	14	28414		0.03	
14	15	28415		0.10	
15	16	28416		0.07	
16	17	28417		0.10	

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 8

DDH T9URC339

PAGE 2 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN	FROM	TO	SAMPLE#	RECOV	AU G/T	S%
17	19		LMST	YA	MS					22	LI/CO/5			17	18	28418		0.03	
		yellow-grey, weakly silicified massive limestone limonite staining as coatings												18	19	28419		0.45	
19	26		DOCH	GA	CR					24				19	20	28420		0.21	
		light grey cracked DOCH. moderately silicified chert is grey + translucent. does not effervesce in HCl. Calcite veining.												20	21	28423		0.07	
														21	22	28424		0.10	
														22	23	28425		0.07	
		interval 25-26 has few bx clasts												23	24	28426		0.07	
														24	25	28427		0.03	
														25	26	28428		0.03	
26	29		DOCH	YA	BX	CR			22	22	LI/BX/5			26	27	28429		0.03	
		yellow grey brecciated + cracked DOCH. limonitic matrix - not calcareous. angular clasts. weakly silicified.												27	28	28430		0.07	
														28	29	28431		0.03	

tv

Blank
1 GM STAND
0.93

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 8

DDH TYLORC 339

PAGE 3 OF 8

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
29	35		DOCH	SA	CL	VN							
			medium grey mottled DOCH. does not effervesce in HCl. calcite veined chert is light grey + translucent. 5% calcite chips.										
35	49		LIME	AT	BN	UN							
			tan-grey banded and veined limestone. limonite staining as coatings calcite chips ~10%. limonite staining variable. intense 42-43 limonite staining weakly silified										

FROM	TO	SAMPLE#	RECOV	AU G/T	S%	
29	30	28432		0.03		
30	31	28433		0.07		
31	32	28434		0.03		
32	33	28435		0.07		
33	34	28436		0.07		
34	35	28437		0.21		
35	36	28438		0.14		
36	37	28439		0.07		
37	38	28442		0.07		← 0.03 Blank Standard 103
38	39	28443		0.34		
39	40	28444		0.14		
40	41	28445		0.10		
41	42	28446		0.14		
42	43	28447		0.10		
43	44	28448		0.10		
44	45	28449		0.07		
45	46	28450		0.07		
46	47	28451		0.03		
47	48	28452		0.03		
48	49	28453		0.07		

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 8

DDH T96RC339

PAGE 4 OF 6

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/ITH/AN
49	52		LMST	LIA	BX	MS					LI/CO/S /HE/FE/2		
		brown-grey massive limestone. mainly bx chips w some competent areas. limonite staining as coatings; hematite staining along fractures. 5% of chips calcite.											
52	69		LMST	AW	MS	VN				22	LI/CO/10/HE/SR/2		
		grey-cream massive limestone. limonite staining as coatings intervals 55-57 are hematitic. as well as 58-59 interval 60-62 minor hematite staining. minor calcite veining. variable wisk silicification.											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
49	50	28454		0.03	
50	51	28455		0.03	
51	52	28456		0.07	
52	53	28457		0.03	
53	54	28458		0.07	
54	55	28459		0.03	
55	56	28462		0.24	
56	57	28463		1.06	
57	58	28464		0.24	
58	59	28465		0.07	
59	60	28466		0.72	
60	61	28467		0.14	
61	62	28468		0.07	
62	63	28469		0.21	
63	64	28470		0.41	
64	65	28471		0.54	
65	66	28472		0.41	
66	67	28473		0.07	
67	68	28474		0.21	
68	69	28475		0.27	

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1GMSTANDARD 0.99

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: QT
Date: July 3

DDH T96RC339
PAGE 5 OF 8

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
69	75		LMBC	AT	BN	VN			0	0	HE/FR/S / LI/CO/2		
		tan-grey banded + veined limestone. hematite staining along fractures. limonite staining as coatings. not silified											
75	77		LMBC	RO	GO	BX			26	22	HE/GO/2 / LI/GO/S		
		orang-red hematite + limonitic limestone. mostly gouge and some bx fragments. gouge is not calcareous. fragments are calcareous + silicified.											
77	86		LMST	TA	MS	VN	BX				LI/FR/2 / HE/FR/1		
		light grey massive veined limestone. minor bx fragments. not silified. limonite staining along fractures minor hematite along fractures also.											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
69	70	28476		0.07	
70	71	28477		0.07	
71	72	28478		0.10	
72	73	28479		0.24	
73	74	28482		0.07	
74	75	28483		0.21	
75	76	28484		0.27	
76	77	28485		0.27	
77	78	28486		0.17	
78	79	28487		0.14	
79	80	28488		0.17	
80	81	28489		0.51	
81	82	28490		0.62	
82	83	28491		0.07	
83	84	28492		0.07	
84	85	28493		0.03	
85	86	28494		0.21	

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IGMSTAND
0.96

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 9

DDH T96RC339

PAGE 6 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
86	139		DOCH	YA	CR	BX			22	22	21 FR 5		

yellow grey crackled DOCH. Chert is dark grey & translucent. limonite staining intwin fractures not calcareous. variable weak silicification. weak brecciation calcite chips ~ 10%. increase in calcite content ~110–113. limonite staining more intense 118–119.

Interval 125–126 has 20% chips of dyke? -> orange in colour & mariposite + sulphides.

Interval 131–132 has limonite gouge chips ~ 5%.

FROM	TO	SAMPLE#	RECOV	AU G/T	S%	
86	87	28495		0.34		
87	88	28496		0.14		
88	89	28497		0.10		
89	90	28498		0.10		
90	91	28499		0.07		
91	92	28500		0.10		
92	93	28501		0.07		Blank TR IGM ST. 0.89
93	94	28504		0.07		
94	95	28505		0.07		
95	96	28506		0.14		
96	97	28507		0.24		
97	98	28508		0.10		
98	99	28509		0.07		
99	100	28510		0.07		
100	101	28511		0.07		
101	102	28512		0.10		
102	103	28513		0.07		
103	104	28514		0.10		
104	105	28515		0.10		
105	106	28516		1.92		
106	107	28517		0.07		
107	108	28518		0.07		
108	109	28519		0.07		Blank 0.03 IGM ST. 0.89
109	110	28522		0.07		

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 9

DDH T96RC339

PAGE 7 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN	FROM	TO	SAMPLE#	RECOV	AU G/T	S%
			DDH											110	111	28523		0.07	
		Cont												111	112	28524		0.03	
														112	113	28525		0.07	
														113	114	28526		0.07	
														114	115	28527		0.07	
														115	116	28528		0.07	
														116	117	28529		0.03	
														117	118	28530		0.07	
														118	119	28531		0.03	
														119	120	28532		0.03	
														120	121	28533		0.03	
														121	122	28534		0.07	
														122	123	28535		0.03	
														123	124	28536		0.07	
														124	125	28537		0.03	
														125	126	28538		0.10	
														126	127	28539		0.03	
														127	128	28540		0.10	
														128	129	28541		0.07	
														129	130	28544		0.07	
														130	131	28545		0.07	
														131	132	28546		0.03	
														132	133	28547		0.07	
														133	134	28548		0.03	

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IGM ST.
1.03

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CLT

Date: July 9

DDH T9(0RC339

PAGE 8 OF 8

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT
			DOCH								
			cont								
139	145		DOCH	YA	BX	CR			24	22	LI/BM15
			yellow-grey brecciated + cracked DOCH. limonite calcareous matrix. Interval 143-144 has hematitic gouge. Weakly silicified Breccia has angular clasts.								
145	150		DOCH	YA	CR						LIKR12 / HEHR11
	EOH		yellow-grey cracked DOCH. limonite staining along fractures. Interval 146-147 increase in chert content as bands dark grey. Minor hematite staining along fractures. Calcite chips ~5%								

STRUCTURE DIST	STRUCTURE FT/TH/AN	FROM	TO	SAMPLE#	RECOV	AU G/T	S%
		134	135	28549		0.03	
		135	136	28550		0.03	
		136	137	28551		0.07	
		137	138	28552		0.03	
		138	139	28553		0.07	
		139	140	28554		0.07	
		140	141	28555		0.07	
		141	142	28556		0.03	
		142	143	28557		0.07	
		143	144	28558		0.24	
		144	145	28559		0.07	
		145	146	28562		0.07	
		146	147	28563		0.17	
		147	148	28564		0.14	
		148	149	28565		0.07	
		149	150	28566		0.07	

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NORTH AMERICAN METALS CORP
DRILL LOG COVER SHEET

DATE: _____ PAGE 1 OF

DRILL HOLE # T96RC342 PROJECT AREA: Totem 2 SECTION: ✓

DRILL HOLE LOCATION DATA

EASTING: 23905.456
NORTHING: 25788.337
ELEVATION: 1915.671
HOLE LENGTH (M): 150

DRILL DIARY

STARTING DATE: 09/07/96 (DD/MM/YYYY)
COMPLETION DATE: 10/07/96 (DD/MM/YYYY)
LOGGED BY: CMC RIG: RC
CONTRACTOR: Midnight Sun CORE SIZE: _____
SURVEYED BY: AP EDITED BY: _____

DOWN HOLE SURVEY DATA

SURVEY LEVEL	DEPTH	AZIMUTH	DIP (+/-)	TEST TYPE
COLLAR	0	65.011	-43.039	SURVEY
1				
2				
3				
4				
5				

PURPOSE:

LITHOLOGY SUMMARY

FROM	TO	ROCK CODE	REMARKS	FROM	TO	ROCK CODE	REMARKS
1	2	OVER					
2	13	LMST					
13	18	SLST					
18	32	LMCH					
32	139	DOCH					
139	150	LMST					

COMMENTS:

CHECK LIST: ASSAY REPORT ✓ CORE PHOTOS _____

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

13-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28228	29.21			HOLE 341 RECIRC DRILL
28231	7.17			
28232	3.94			
28233	3.94			
28234	2.64			
28235	2.61			
28236	1.68			
28237				
28238	1.47			
28239	4.53			
28240	5.31			
28241	2.23			
28242	0.58			
28243	0.45			
28244	0.21			
28245	0.69			
28246	0.48			
28247	0.24			
28248	0.45			← HOLE 341 - EOH
28249	2.19			
28250	0.72			
28251	0.82			
28252	2.85			
28253	0.48			
28254	0.75			
28255	1.13			
28256	0.38			
28257	0.45			
28258	0.31			
28259	0.34			
28299	1.13			
28300	0.96			

342

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

14-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28260	0.34			RECIRC DRILL
28261	0.79			
28262	0.07			
28263	0.14			
28264	0.10			
28265	0.07			
28266	0.10			
28267	0.03			
28268	0.07			
28269	0.93			
28270	0.38			
28271	0.34			
28272	0.34			
28273	0.24			
28274	0.34			
28275	0.99			
28276	0.24			
28277	0.31			
28278	0.27			
28279	0.31			
28280	0.21			
28281	1.82			
28282	0.72			
28283	0.45			
28284	0.45			
28285	0.38			
28286	0.41			
28287	0.38			
28288	0.34			
28289	0.38			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

14-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28290	0.41			RECIRC DRILL
28291	0.27			
28292	0.38			
28293	0.45			
28294	0.41			
28295	0.58			
28296	0.48			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

15-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
28297	0.51			RECIRC DRILL
28298	0.45			
30901	0.69			
30902	0.14			
30903	0.07			
30904	0.07			
30905	0.10			
30906	0.07			
30907	0.34			
30908	0.10			
30909	0.10			
30910	0.10			
30911	0.10			
30912	0.14			
30913	1.99			
30914	0.21			
30915	0.10			
30916	0.17			
30917	0.03			
30918	0.10			
30919	0.10			
30920	0.10			
30921	0.03			
30922	0.10			
30923	0.07			
30924	0.07			
30925	0.14			
30926	0.10			
30927	0.10			
30928	0.17			
30929	0.14			
30930	0.17			
30931	0.62			
30932	0.45			
30933	0.31			
30934	0.21			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

15-Jul-96

ASSAYER: D

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
30935	0.24			RECIRC DRILL
30936	0.24			
30937	2.64			
30938	0.34			
30939	0.38			
30940	0.17			
30941	0.96			
30942	0.21			
30943	0.27			
30944	0.21			
30945	0.48			
30946	0.27			
30947	0.27			
30948	0.14			
30949	0.14			
30950	0.03			
30951	0.07			
30952	0.14			
30953	0.21			
30954	0.31			
30955	0.17			
30956	0.41			
30957	0.10			
30958	0.10			
30959	0.03			
30960	0.10			
30961	0.07			
30962	0.03			
30963	0.14			
30964	0.10			
30965	0.03			
30966	0.14			
30967	0.03			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

16-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
30968	0.10			RECIRC DRILL
30969	0.03			
30970	0.07			
30971	0.07			
30972	0.07			
30973	0.10			
30974	0.14			
30975	0.10			
30976	0.14			
30977	0.07			
30978	0.07			
30979	0.07			
30980	0.03			
30981	0.96			
30982	0.03			
30983	0.10			
30984	0.07			
30985	0.07			
30986	0.03			
30987	0.07			
30988	0.21			
30989	0.07			
30990	0.03			
30991	0.07			
30992	0.07			
30993	0.03			
30994	0.03			
30995	0.07			
30996	0.07			
30997	0.10			
30998	0.07			
30999	0.07			

NAM METALS CORP

NORTH AMF
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

16-Jul-96

ASSAYER:

TAG NUMBER	Au (g/t)	Ag (g/t)	S= (%)	SAMPLE DESCRIPTION
31000	0.10			RECIRC DRILL
31001	0.07			
31002	0.03			
31003	0.03			
31004	0.10			
31005	0.14			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

16-Jul-96

CHECK ASSAYS ASSAYER:

TAG NUMBER	CHECK (g/t)		ORIGINAL (g/t)	SAMPLE DETAILS
29902	2.40			
29903	0.45			
26974	20.91			

Dupo

340

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATION ASSAY REPORT

17-Jul-96

CHECK ASSAYS ASSAYER:

TAG NUMBER	CHECK (g/t)		ORIGINAL (g/t)	SAMPLE DETAILS
27212	2.47			

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

EXPLORATIONN ASSAY REPORT

19-Aug-96

RECIRC DRILL

ASSAYER:

TAG NUMBER	Au (g/t)	HOLE #	M	SAMPLE DESCRIPTION
		342	0-1	
			1-2	
34506	0.62		2-3	
34507	0.48		3-4	
34508	1.95		4-5	
34509	1.65		5-6	
34510	0.45		6-7	
34511	0.38		7-8	

Checks.

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CMC

Date: July 10

DDH T96RC342

PAGE 1 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT
1	2		OVBD								
2	10		LMST	WA	MS				0	0	
		White massive limestone, scratchable; fracture w/ HCl., ~0.5% chips have hematite or limonite staining									
10	13		LMST	BA	MS	LM			0	0	PY/EU/<1%
		massive + locally (~30%) laminated pale grey limestone, <1% pyrite which seems to develop along some laminations									

STRUCTURE DIST	STRUCTURE FT/TH/AN

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
01	2	28249		2.19	
2	3	28250		0.72	
3	4	28251		0.82	
4	5	28252		2.85	
5	6	28253		0.48	
6	7	28254		0.75	
7	8	28255		1.13	
8	9	28256		0.38	
9	10	28257		0.48	
10	11	28258		0.31	
11	12	28259		0.34	
12	13	28260		0.34	

2m 1.28/7m

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CMC
Date: July 10/96

DDH T96RC342

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
13	18		SLST	7T	LM	MS			0	0			
		SLST, some chips massive some chips appear laminated (~10%), reacts w/ HCL & soft (scratchable w/ steel)											
18	32		LMCH	7A	MS	FR			0	22			
		mid grey limestone chips w/ v. pale grey to v. pale tan chert chips. (chert chips fizz only along fractures & are v. hard)											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
13	14	28261		0.79	
14	15	28262		0.07	
15	16	28263		0.14	
16	17	28264		0.10	
17	18	28265		0.07	
18	19	28266		0.10	
19	20	28267		0.03	
20	21	28270		0.38	
21	22	28271		0.34	
22	23	28272		0.34	
23	24	28273		0.24	
24	25	28274		0.34	
25	26	28275		0.99	
26	27	28276		0.24	
27	28	28277		0.31	
28	29	28278		0.27	
29	30	28279		0.31	
30	31	28280		0.21	
31	32	28281		1.82	

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1gm Stan [illegible]

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CMC

Date: July 10/76

DDH T96RC342

PAGE 3 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT
32	51		DOLH	4A	VN	MS			0	16	
		med/dark grey dolomitic chips & pale grey chert chips, reacts w, acid only along fractures, dolomitic chips fizz well when powdered									
		30-37 LMCH(?) more calcitic, reactive w, HCl but looks the same as rest of unit									
		from 35 down, <1% hematite to limonite stained chips of calcite or brecciated calcite (vein materials?)									
		from ~47m down chips are not totally dolomitized.									
51	53	FZ	DOLH	YA	BX				28	16	
		limonite stained Brecciated DOLH, (some) clasts 1-2mm, from 52-53 mostly v. fine powder was received, only ~5% chips in sample, matrix calcitic, fizzy & soft - granular appearance									

STRUCTURE DIST	STRUCTURE FT/TH/AN

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
32	33	28282		0.72	
33	34	28283		0.45	
34	35	28284		0.45	
35	36	28285		0.38	
36	37	28286		0.41	
37	38	28287		0.38	
38	39	28288		0.34	
39	40	28289		0.38	
40	41	28290		0.41	
41	42	28291		0.27	
42	43	28292		0.38	
43	44	28293		0.45	
44	45	28294		0.41	
45	46	28295		0.58	
46	47	28296		0.48	
47	48	28297		0.51	
48	49	28298		0.45	
49	50	30901		0.69	
50	51	30902		0.14	
51	52	30903		0.07	
52	53	30904		0.07	

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CMC

Date: July 11/96

DDH T96RC342

PAGE 4 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN	FROM	TO	SAMPLE#	RECOV	AU G/T	S%
53	66		DOH	SA	MS	LM			0	18				53	54	30905		0.10	
		med grey dk, ~10-15% chert chips, soft,												54	55	30906		0.07	
		reacts w/ HCl along fractures & when powdered.												55	56	30907		0.34	
		~5% overall white calcite vein material												56	57	30908		0.10	
														57	58	30909		0.10	
														58	59	30910		0.10	
														59	60	30911		0.10	
														60	61	30912		0.14	
														61	62	30913		1.99	
														62	63	30914		0.21	
														63	64	30915		0.16	
														64	65	30916		0.17	
														65	66	30917		0.03	
66	68	FZ	DOH	YA	BX				26	18	Li/BM/2%			66	67	30918		0.10	
		grey/pale grey DOH clasts (some as small as												67	68	30919		0.10	
		(~2 mm) in a pale yellow limonitic, weakly																	
		calcitic matrix																	

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

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Date: July 11/96

DDH T96RC342

PAGE 5 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
68	81		DOCH	4A	MS	VN	LM		O	16	92/VN/0.1%		
		med/dark grey DOCH, chert is pale grey-buff veined w/ calcitic microveins ± abso some quartz veining (~0.1% chips overall are white vein quartz (hard, non reactive w/ HCl) abso fractures have calcitic matrix (reacts w/ HCl alone fractures)											
81	108		DOCH	7A	MS				O	16			
		massive light grey DOCH, some DUO is weakly-moderately silicified, massive, chert is pale grey-buff with colour, minor siltstone interbedded and from 89-91, ~5% chips of associated limonitic DOCH ± buff siltstone											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
68	69	30920		0.10	
69	70	30921		0.03	
70	71	30922		0.10	
71	72	30923		0.07	
72	73	30924		0.07	
73	74	30925		0.14	
74	75	30926		0.10	
75	76	30927		0.10	
76	77	30928		0.17	
77	78	30929		0.14	
78	79	30930		0.17	
79	80	30931		0.62	
80	81	30932		0.45	
		275	—		
			—		
81	82	30933		0.31	
82	83	30934		0.21	
83	84	30935		0.24	
84	85	30936		0.24	
85	86	30937		2.64	
86	87	30938		0.34	

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

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DDH T96RC342

PAGE 6 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN	FROM	TO	SAMPLE#	RECOV	AU G/T	S%
														87	88	30939		0.38	
														88	89	30942		0.21	
														89	90	30943		0.27	
														90	91	30944		0.21	
														91	92	30945		0.48	
														92	93	30946		0.27	
														93	94	30947		0.23	
														94	95	30948		0.14	
														95	96	30949		0.14	
														96	97	30950		0.03	
														97	98	30951		0.07	
														98	99	30952		0.14	
														99	100	30953		0.21	
														100	101	30954		0.31	
														101	102	30955		0.17	
														102	103	30956		0.41	
														103	104	30957		0.10	
														104	105	30958		0.10	
														105	106	30959		0.03	
														106	107	30960		0.10	
														107	108	30961		0.07	

0.17
Blank
1Gmstand
0.96

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

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Date: July 15

DDH T96RC342

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
108	109	FZ	DOCH	YA	BX	CR			26	14	Li/BM/5%		
		pale grey DOCH fragments in a pale yellow matrix, matrix is calcite											
109	123		DOCH	8A	CR	MS			14	14			
		pale grey, bleached DOCH, massive to locally fractured & crackled, weakly reactive w HCl, bleaching is strongest at top of interval (next to breccia) & gradually decreases downhole											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
108	109	30962		0.03	
109	110	30963		0.14	
110	111	30964		0.10	
111	112	30965		0.03	
112	113	30966		0.14	
113	114	30967		0 03	
114	115	30968		0.10	
115	116	30969		003	
116	117	30970		007	
117	118	30971		007	
118	119	30972		007	
119	120	30973		0.10	
120	121	30974		0.14	
121	122	30975		0.10	
122	123	30976		0.14	

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

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Date: July 15

DDH T96RC342

PAGE 8 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
123	132		DOCH	4A	MS	VN			0	16	CA/VN/1%		
		med-dark grey DOCH, w/ slightly paler grey chert chips, massive w/ small amt of calcite veining (white calcite chips present ~1%)											
132	139	FZ	DOCH	YA	BX				26	16	Ca/VN/0.1%		
		pale grey DOCH fragments in a pale yellow breccia Matrix, ~30% chips show breccia textures, some chips are cracked, ~0.1% VN calcite chips throughout interval, ↓ from 137-139 ~5% buff limestone chips present											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
123	124	30977		0.07	
124	125	30978		0.07	
125	126	30979		0.09	
126	127	30982		0.03	
127	128	30983		0.10	
128	129	30984		0.07	
129	130	30985		0.07	
130	131	30986		0.03	
131	132	30987		0.07	
132	133	30988		0.21	
133	134	30989		0.07	
134	135	30990		0.03	
135	136	30991		0.07	
136	137	30992		0.07	
137	138	30993		0.03	
138	139	30994		0.03	

0.03
Blank
1gm standard
0.96

NORTH AMERICAN METALS CORP
LITHOLOGY LOGGING SHEET

Logged by: CMO

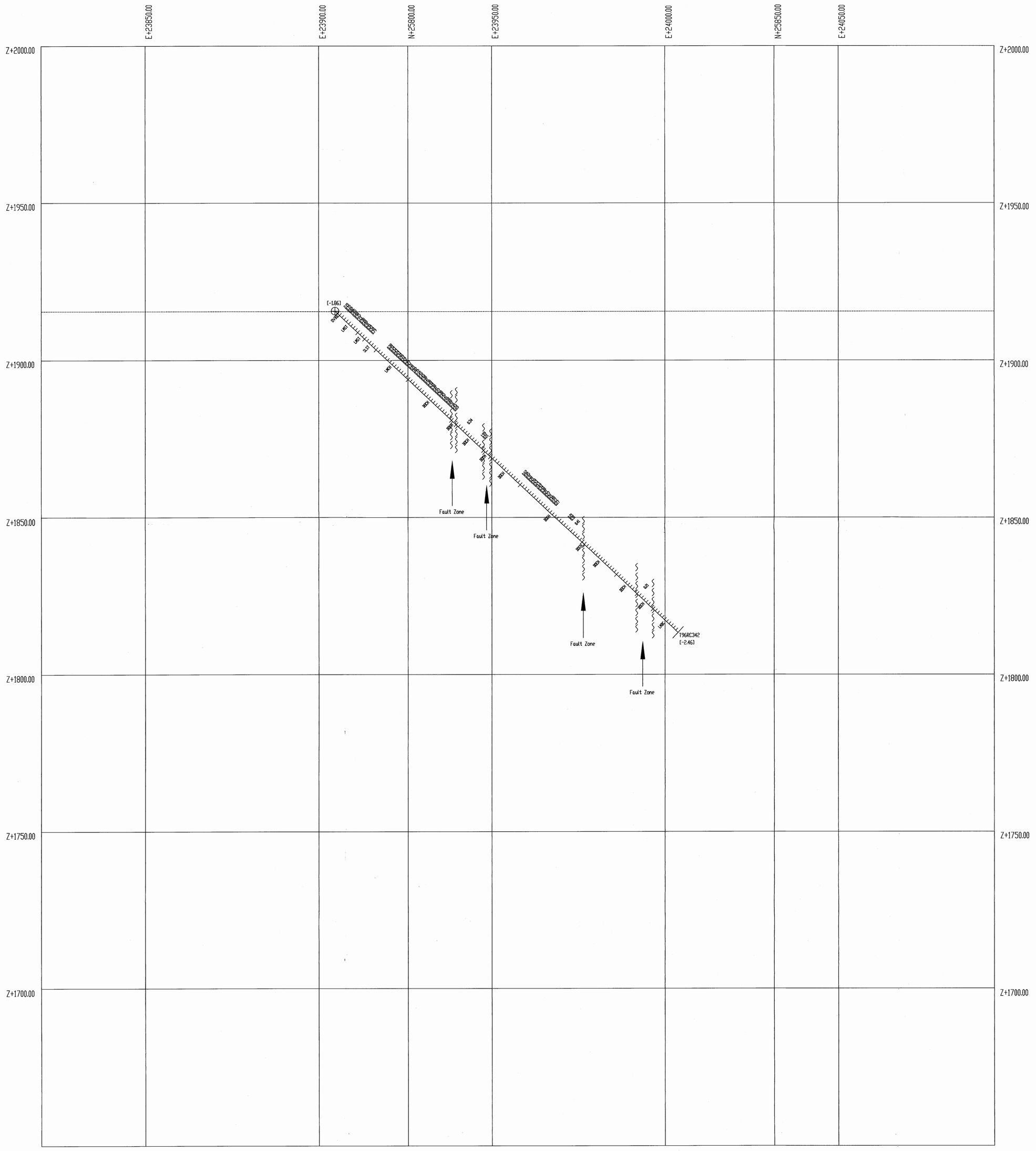
Date: July 15

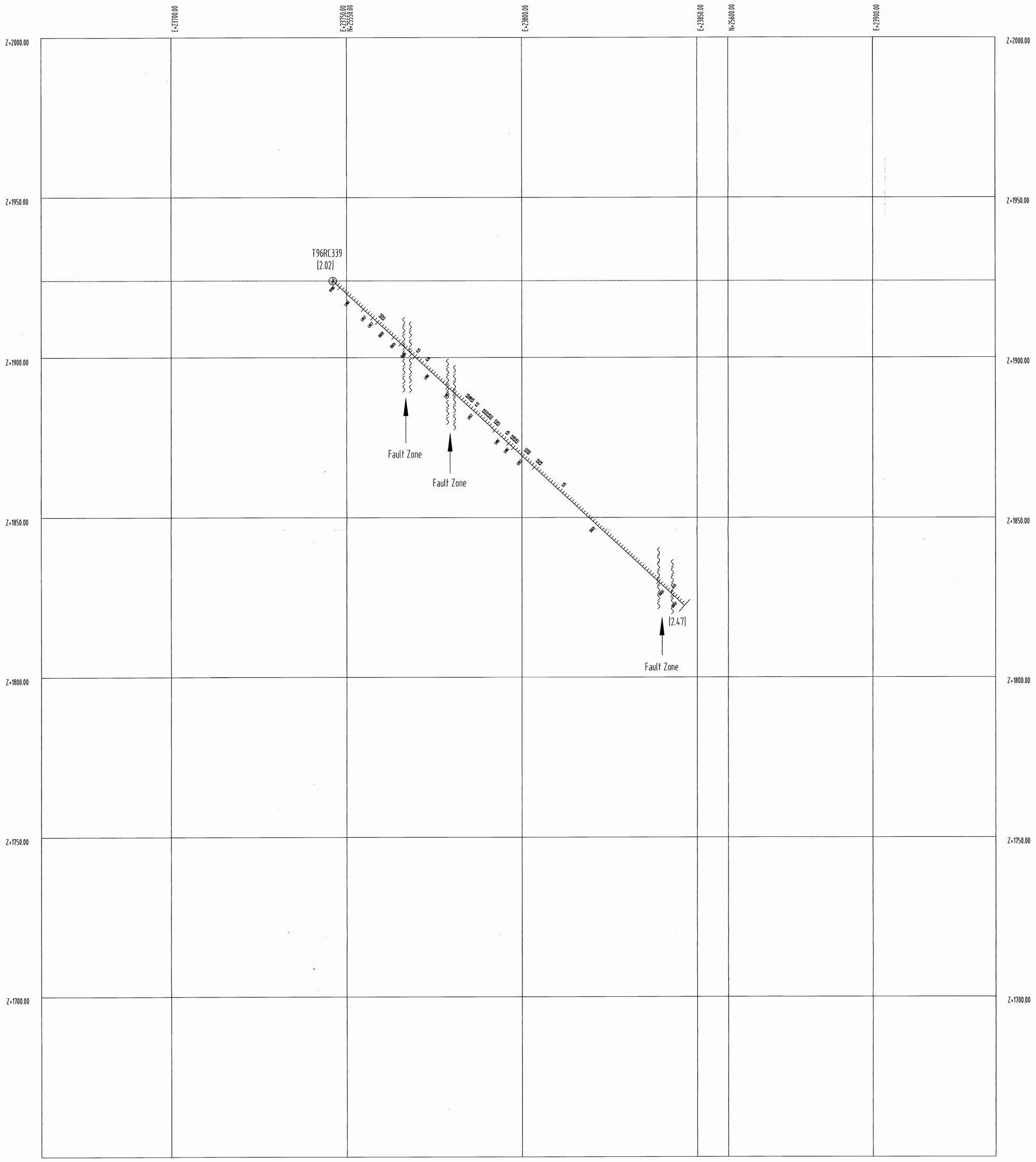
DDH T96RC342

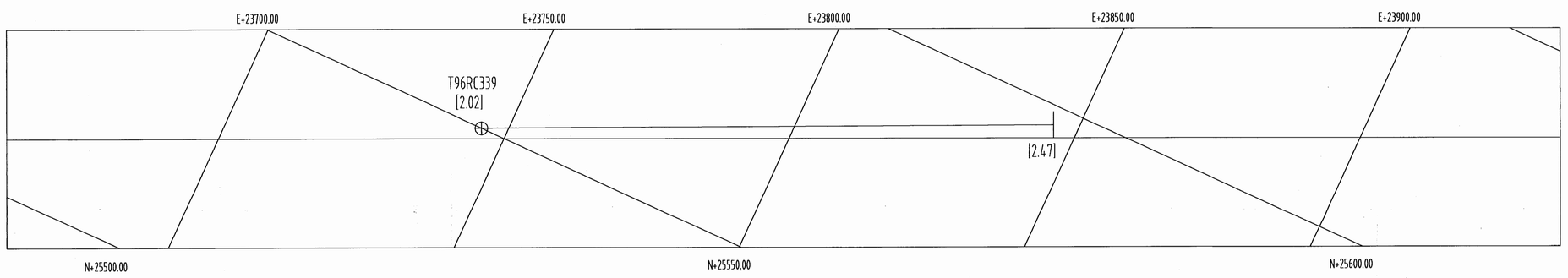
PAGE 9 OF 9

FROM	TO	FLAG	ROCK CODE	COLO	TEXT 1	TEXT 2	TEXT 3	TEXT 4	STRUC INT	ALTN INT	MINERALIZATION MINERAL // HOW // AMOUNT	STRUCTURE DIST	STRUCTURE FT/TH/AN
139	150		LMBC	OA	BN	VN			0	0	Li/ST/1%		
		orange/yellow limonite stained chips and buff/grey banded chips of LMBC. limonite staining pervasive from 139-141 m, 143-144 m, moderately silicified, chips are soft and reactive w/ HCl.											

FROM	TO	SAMPLE#	RECOV	AU G/T	S%
139	140	30995		0.07	
140	141	30996		0.07	
141	142	30997		0.10	
142	143	30998		0.07	
143	144	30999		0.07	
144	145	31000		0.10	
145	146	31001		0.07	
146	147	31002		0.03	
147	148	31003		0.03	
148	149	31004		0.10	
149	150	31005		0.14	


E+23850.00
E+23900.00
N+25800.00
E+23950.00
E+24000.00
N+25850.00
E+24050.00
Z+2000.00
Z+1950.00
Z+1900.00
Z+1850.00
Z+1800.00
Z+1750.00
Z+1700.00
[-1.86]
Fault Zone
Fault Zone
Fault Zone
Fault Zone
T96RC342
[-2.46]
E+23850.00
E+23900.00
E+23950.00
E+24000.00
E+24050.00
[-1.86]
T96RC342
[-2.46]
N+25750.00
N+25800.00
N+25850.00


E+23700.00
E+23750.00
N+25550.00
E+23800.00
E+23850.00
N+25600.00
E+23900.00
Z+2000.00
Z+1950.00
Z+1900.00
Z+1850.00
Z+1800.00
Z+1750.00
Z+1700.00
T96RC339
[2.02]
Fault Zone
Fault Zone
[2.47]
Fault Zone


E+23700.00
E+23750.00
E+23800.00
E+23850.00
E+23900.00
T96RC339
[2.02]
[2.47]
N+25500.00
N+25550.00
N+25600.00

21000E 22000E 23000E 24000E

28000N 27000N 26000N 25000N

SAM

TOTEM 2

K WEST

GLACIER

LIMESTONE CREEK FAULT

T96RC339

T96RC339

LEGEND

Outcrop outline

Geological contact
defined
assumed
approximate

Fault
defined
assumed
arrows indicate direction of apparent displacement

Thrust fault

Bedding – Inclined , Vertical
strike and dip of inclined bedding indicated
right hand rule applies

Foliation – Inclined , Vertical
strike and dip of inclined foliation indicated
right hand rule applies

Foliation2 – cm–spaced non–penetrative crenulations in tuffs, dm–wavelength folding in the carbonates. Both may be related to faulting.

Intersection Lineation – D3 in carbonates D3+? in tuffs.

Stretching lineation – only found in Ursa area

Fault Plane Orientation – Inclined , vertical , with Slickenside Lineation

Anticline – Upright , Overturned

Syncline – Upright , Overturned

Reverse Circulation Drillhole

LITHOLOGIC UNITS

INTRUSIVE UNITS

TERTIARY?

- ANDY – Andesite Dyke – Fine grained, intermediate intrusive dyke with feldspar phenocrysts
- BSDY – Basaltic Dyke – Fine grained, dark green, equigranular, basaltic dyke. Locally vesicular or amygdaloidal.
- RHDY – Rhyolite Dyke – Fine grained, pale grey, felsic dyke.

JURASSIC

- GBRO – Gabbro – Coarse grained plagioclase+pyroxene intrusive.

UPPER TRIASSIC

- GRDI – Granodiorite – GRDF is foliated variety.

VOLCANIC UNITS (UPPER TRIASSIC or older)

- MFAS – Ash Tuff – Dark green finely laminated to massive bedded tuffs. Altered to orange weathering fuchsitic MFCA where faulted. Commonly contains finely disseminated pyrite.
- MFTF – Plagioclase + Pyroxene detrital Ash Tuff. Dark green commonly massive tuff, rarely bedded, contains abundant clasts of detrital plagioclase and pyroxene crystals. Lobate forms and rare graded bedding suggest turbiditic origin for some units.
- BASALT – Vessicular and locally Pillowed Basalt – pillows indicate a subaqueous origin.
- MFEP – Epiclastic Ash Tuff – Extremely fine grained finely laminated light greyish brown tuff. Considered to be reworked tuffs. Commonly contain discontinuous cm–dm quartz+feldspar lenses.
- ARGI – Argillite – Black finely laminated argillaceous unit. Commonly interbedded with MFEP and or/siltstone and/or QTZT
- DOLO – Dolomitic Carbonate – Generally massive, unbedded dolomite. pyroclastic, or epiclastic. Commonly massive to poorly bedded
- LMST – Limestone – Finely bedded grey to light grey limestone. Locally interbedded with MFEP.
- QTZT – Quartzite – Black to dark grey finely bedded quartzite. Often has thin argilaceous interbeds.

PERMIAN LIMESTONE UNITS

- LMGT(2) – Limestone +/– Dolomite, Graphitic, mm–dm bedded dark grey to black. Contains interbeds of tan weathering calcareous quartz siltstone and local cherty beds.
- LMST(2) – Limestone – Massive to medium bedded, calcitic limestone, distinctive creamy white to pale grey with local bioclastic debris, locally contains dm–thick tan weathering siliceous and/or cherty and/or dolomitic beds
- LMCH – Limestone with Chert – Light grey, calcitic limestone with light to dark grey chert lenses, nodules, and beds
- DOCH – Dolomite with Chert – Thick bedded to massive, tan weathering dolomite with light to dark grey chert lenses. nodules, and beds. Commonly fossiliferous.
- LMBC – Limestone, dark to medium grey, Banded and Crinoidal locally containing crinoidal bioclastic debris, Banding is not from bedding but is D3 foliation
- LMST(1) – Limestone – Massive to medium bedded, calcitic limestone. Distinctive creamy white to pale grey. Uppermost section immediately below LMBC is bioclastic, is locally pyritic and weathers to a distinctive orange color.
- LMGT(1) – Limestone, Graphitic and Thin Bedded – Thinly bedded, dark grey, calcitic limestone. Contains interbeds of tan weathering, calcareous quartz siltstone. underlain by dolomite.

SCALE 1 : 5000

0 400

meters

NORTH AMERICAN METALS CORP
GOLDEN BEAR MINE

TOTEM 2 CLAIM

SURFACE GEOLOGY

AND DRILLHOLE LOCATIONS

Drawn By: APH	Date: Oct. 1996
Figure No: 4	
File Name: g:\data\westproj\totem 2\totgeol.dwg	

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,668