Metsantan

GEOLOGICAL, GEOCHEMICAL, AND PROSPECTING REPORT on the METSANTAN 1 to 9 Claims

N.T.S. 94-E/6 W
Latitude 57°25′ North
Longitude 127°20′ West
Omineca/Liard Mining Divisions
British Columbia

October 16, 1990

on behalf of
SKEENA RESOURCES LIMITED
Vancouver, British Columbia

by
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ABSTRACT

The Metsantan claims, located in the Toodoggone gold camp of north-central British Columbia, were explored during a brief field program. This evaluation consisted of grid-controlled soil geochemical sampling and prospecting directed at investigating soil geochemical trends as well as silt and lithogeochemical anomalous results outlined by previous exploration programs.

Numerous quartz-breccia zones have been identified on the Metsantan property and there is evidence of additional zones based on geochemical results obtained during the previous and current exploration programs. Additional exploration consisting of prospecting, trenching, and geochemical (soil and lithogeochemical) sampling, followed by another 3000 feet of diamond drilling is recommended to further evaluate the property.

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INTRODUCTION

Taiga Consultants Ltd. was contracted by Skeena Resources Limited to undertake a brief exploration program on the Metsantan claims located in the Toodoggone gold camp of north-central British Columbia. The objective of this program was to locate and evaluate the potential of epithermal gold mineralization in quartz-breccia systems on this property.

Exploration of these claims included prospecting, geological mapping, and geochemical sampling. Geochemical sampling consisted of grid-controlled soil sampling, and lithogeochemical sampling.

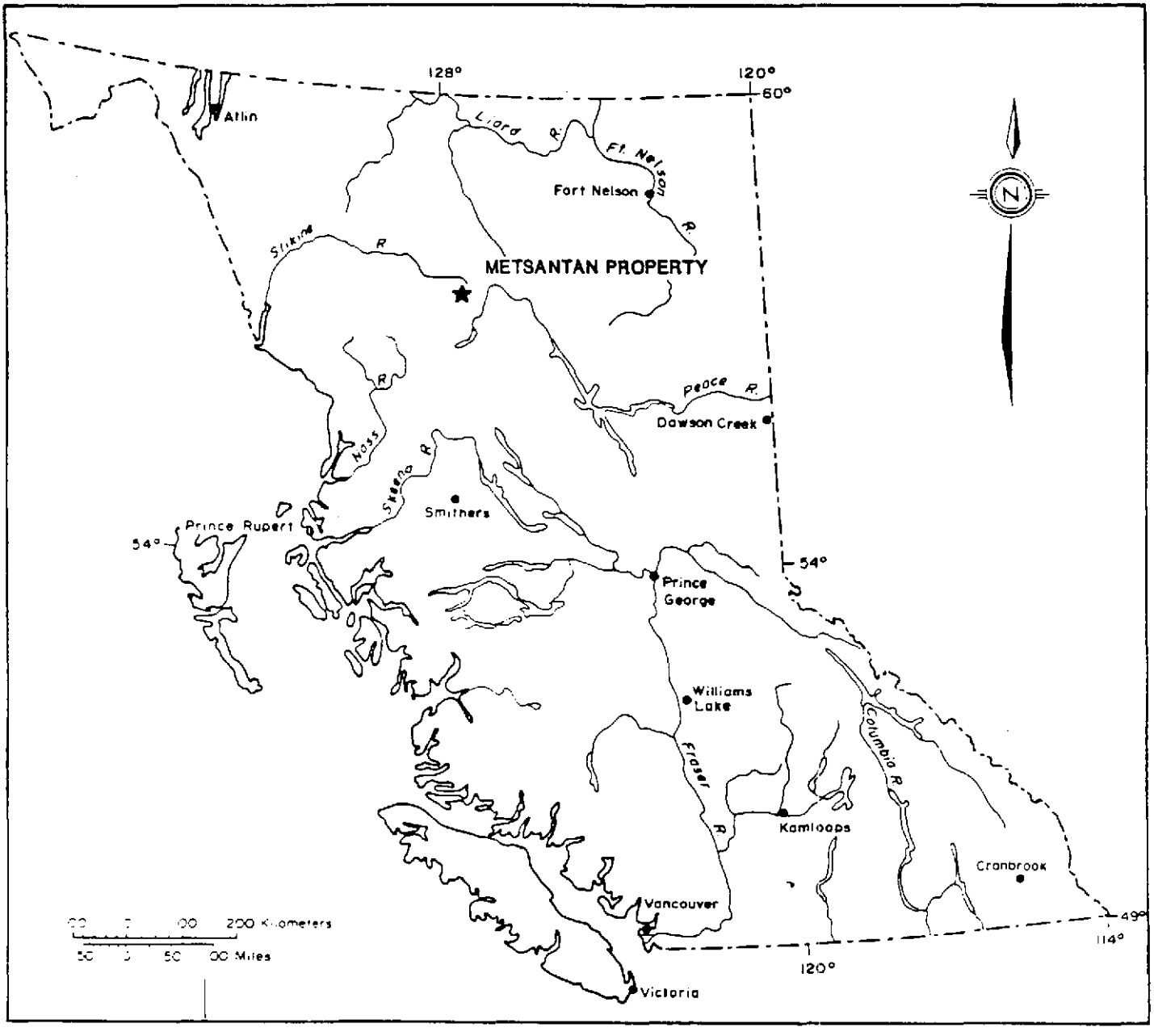
Location and Access

The Metsantan property (Figure 1) is located approximately 300 km north of Smithers, British Columbia within NTS map-area 94-E/6 W. The approximate geographic coordinates of the claims are 57°25′ North latitude and 127°20′ West longitude.

Access to the property from Smithers is via fixed-wing aircraft to the Sturdee Airstrip 300 km to the north, and then by helicopter for a distance of 27 km. With the completion of the Omar Road Extension, which connects the Omineca Resource Road to the Cheni Mine site, road access is now available to within 12 km at the closest point. A 'cat' trail currently connects the Metsantan property with the Omar Road.

Property Status and Ownership

The Metsantan 1 to 9 mineral claims form a contiguous block of claims which straddles the boundary between the Omineca and Liard Mining Divisions. The Metsantan 2 through 9 claims are currently grouped for purposes of assessment filing. The exact location and configuration of the property are illustrated in Figure 2. Relevant claim data are listed in Table 1.



PROPERTY LOCATION MAP BRITISH COLUMBIA FIGURE 1

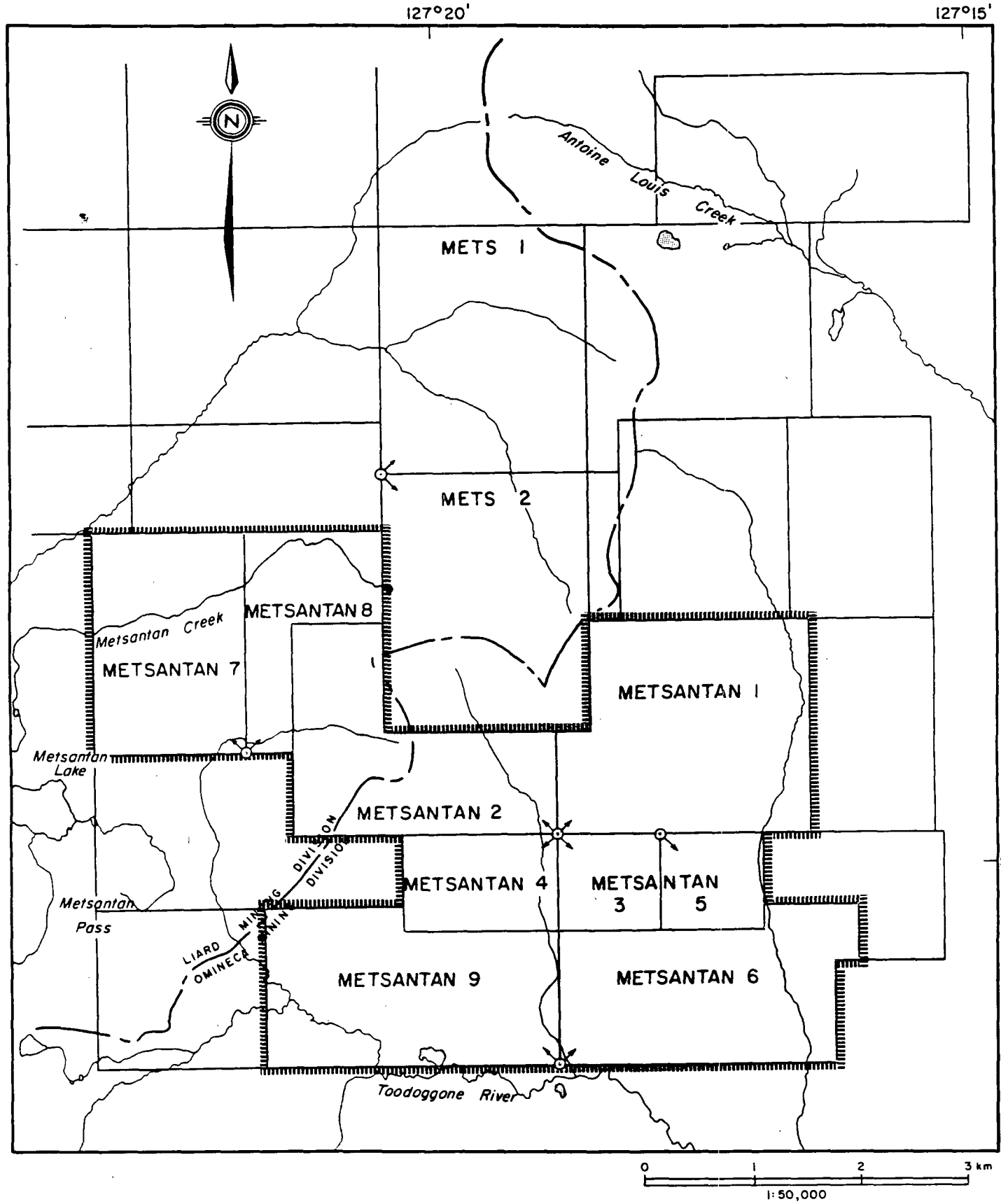


FIGURE 2

CLAIM LOCATION MAP

TABLE 1 - Claims Data

Claim Name	No.of Units	Size (hectares)	Record Number	Mining Division	Assessment Due Date
Metsantan 1	20	500	2623	Omineca	Mar.20,1991
Metsantan 2	20	500	2624	Omineca	Mar.20,1991
Metsantan 3	4	100	2961	Omineca	Aug.01,1991
Metsantan 4	6	150	2960	Omineca	Aug.01,1991
Metsantan 5	4	100	3228	Omineca	Sep.19,1991
Metsantan 6	18	450	3663	Omineca	Mar.31,1991
Metsantan 7	15	375	1815	Liard	Mar.31,1991
Metsantan 8	15	375	1816	Liard	Mar.31,1991
Metsantan 9	18	450	4224	Omineca	Sep.04,1991
TOTAL	120	3,000	(7,413 acres)		

The Metsantan 1 and 2 claims partially overstake the METS 2 claims, which reduces the size of the Metsantan 1 and 2 claims by approximately 8 units. The location of the legal corner posts for the Metsantan 1, 2, 3, and 4 claims and the METS 2 claim have been established with a legal survey by Lacana. The common boundary for the METS 2 and the Metsantan 1 and 2 claims was located by a legal survey completed in 1988 but has not been picketed. By a letter agreement dated June 30, 1988, Skeena Resources Limited is now the operator of the property and has a right to earn a 55% working interest from American Ore and three other companies which hold the remaining interest in the property.

Physiography

The claims lie within the Cassiar Mountains physiographic subdivision of the Interior Plateau. The region is entirely glaciated and is characterized by wide U-shaped drift-filled major valleys and deeply incised V-shaped interior upland valleys. Mountain peaks in the area average 1980 m ASL, rising fairly abruptly from the major valleys. The topography of the areas underlain by Toodoggone volcanic rocks is usually more subdued than in those areas underlain by Takla Group volcanic rocks toward the east.

The Metsantan property covers the southern portion of Metsantan Ridge and the main peak of Metsantan Mountain. Deeply cut streams dissect Metsantan Mountain, giving rise to local relief of 600 m on the property.

HISTORY OF EXPLORATION

The Toodoggone region was initially explored for porphyry copper deposits during the period 1966-1968, most notably by Kennco Exploration (Western) Limited. While Kennco did not locate any significant base metals mineralization, their stream sediment geochemical results did indicate anomalous gold and silver concentrations. In 1969, ore-grade gold and silver values in an exposed quartz vein were discovered by Kennco on what is now the Baker Mine site. In 1973, Kennco entered into an agreement with Conwest Exploration Ltd. to conduct further exploration in the region and to instigate underground testing of the Baker deposit. The results were only marginally encouraging and the agreement lapsed that year.

In 1974, DuPont of Canada Exploration Limited optioned the Chappelle property and subsequently brought the Baker deposit into production. This mine produced some 70,000 tons of gold and silver ore with an equivalent tenor of 0.9 ounces of gold per ton while it was operating.

In 1979, the Lawyers property was optioned by SEREM Ltd., owned by the French government. The property is currently being brought into production by Cheni Mines Inc., a successor company of SEREM. Ore reserves in all categories are estimated at 1,938,000 tons grading 0.198 oz/ton gold and 7.09 oz/ton silver.

Commencing in 1980 until the present, over 60 different companies have been involved in gold exploration in the Toodoggone camp. Significant reserves have been developed by Energex Minerals Ltd. on various zones on Albert's Hump, on the Shasta property, and on the METS property to date. Thus, the Toodoggone district is rapidly developing into an important new gold camp.

The Metsantan property was staked in 1980 and explored by Lacana Mining Corporation on behalf of the Canadian Minerals Joint Venture. The early discovery of precious metals bearing epithermal vein systems on Metsantan Ridge led to exploration being concentrated on this sector of the property. From 1981

to 1984, prospecting, geological mapping, soil geochemical sampling, trenching, and diamond drilling were conducted by Lacana.

In 1985, Bart Resources Ltd. optioned the property and conducted trench re-sampling, backhoe trenching, soil geochemical sampling, and geological mapping. Re-sampling of Lacana's trenches confirmed previous results. The structural trend hosting the "Ridge" Zone was traced for at least 600 m on strike. Soil geochemical sampling defined new target areas, while new trenching yielded several high-grade values.

In August 1986, Lacana completed 615.7 m of diamond drilling in five holes near the north boundary of the Metsantan 8 claim. The "Patti" Zone (massive silica flooding and weak to intense argillic alteration) was the prime exploration target. Drilling encountered local spotty precious metals values and anomalous arsenic and antimony results. It appears the "Patti" Zone represents a barren silica cap overlying a precious metals bearing "bonanza" vein system.

In 1987, Taiga Consultants Ltd., on behalf of American Ore Limited, conducted trenching, prospecting, geological mapping, soil geochemical sampling, and one diamond drill hole. The program delineated several new mineralized zones, which were not fully evaluated because the program was terminated prematurely due to adverse weather conditions.

In 1988, Taiga Consultants Ltd., on behalf of Prolific Resources Ltd., undertook extensive exploration work consisting of geological mapping, soil and silt geochemical sampling, prospecting, backhoe trenching, and 1098 m (3601 feet) of diamond drilling in seven locations. This work identified a number of quartz-breccia systems with associated intense argillic alteration haloes. The soil geochemical sampling clearly identified known mineralized zones and outlined areas requiring further detailed evaluation.

REGIONAL GEOLOGY

The initial geological mapping of the Toodoggone area was completed during the period 1971-1975 by H. Gabrielse of the Geological Survey of Canada. The results of this undertaking were published in 1977 at a map scale of 1:250,000 as G.S.C. Open File 483.

The British Columbia Ministry of Energy, Mines and Petroleum Resources completed geological mapping within the area from 1971 to 1984 under the direction of T. G. Schroeter. These data have been published at a scale of 1:50,000 as Preliminary Map 61 (1985). The table of formations presented as Table 2 of this report is excerpted from this publication. The following description of the regional geology is excerpted from Schroeter's 1981 report:

> The Toodoggone area lies within the eastern margin in the Intermontane Belt. The oldest rock exposed are wedges of crystalline limestone more than 150 metres thick that have been correlated with the Asitka Group of Permian age. The next oldest rocks consist of andesitic flows and pyroclastic rocks including augite-tremolite andesite porphyries and crystal and lapilli tuffs that belong to the Takla Group of Late Triassic age. The Omineca intrusions of Jurassic and Cretaceous age (potassium-argon age of 186 to 200 Ma obtained by the Geological Survey of Canada) range in composition from granodiorite to quartz monzonite. Some syenomonzonite bodies and quartz feldspar porphyry dykes may be feeders to the Toodoggone rocks which unconformably overlie the Takla Group. The 'Toodoggone' volcanic rocks (named informally by Carter, 1971) are complexly intercalated volcanic and volcanic-sedimentary rocks of Early and Middle Jurassic age, 500 metres or more in thickness, along the west flank of a northwest trending belt of 'basement' rocks at least 90 km in length by 15 km in width. A potassium-argon age of 186 ± 6 Ma was obtained by Carter (1971) for a hornblende separate from a sample collected from a volcanic sequence 14 km southeast of Drybrough Peak. Four principal subdivisions of the 'Toodoggone' rocks have been recognized:
>
> (1) Lower Volcanic Division -- dominantly pyroclastic assemblage including purple agglomerate and grey to green to purple dacitic tuffs.
>
> (2) Middle Volcanic Division -- an acidic assemblage including rhyolites, dacites, 'orange' crystal to lithic tuffs, and quartz feldspar porphyries; includes welded tuff. The 'orange' colour of the tuffs resulted from oxidation of the fine-grained matrix while the rock was still hot. A coeval period of explosive volcanism included the formation of 'laharic' units and intrusion of syenomonzonite bodies and dykes. This event was accompanied by explosive brecciation along zones of weakness, predominantly large-scale faults and attendant

TABLE 2

TABLE OF FORMATIONS

QUATERNARY

PLEISTOCENE AND RECENT

UNCONSOLIDATED GLACIAL, FLUVIOGLACIAL, ALLUVIAL, AND COLLUVIAL DEPOSITS

CRETACEOUS

UPPER CRETACEOUS

SUSTUT GROUP *(TANGO CREEK FORMATION)*

K — POLYMICTIC CONGLOMERATE, SANDSTONE, SHALE, CARBONACEOUS MUDSTONE

JURASSIC

LOWER AND (?) MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" + (?) HAZELTON GROUP

9 — UNDIVIDED; PREDOMINANTLY GREY, GREEN, PURPLE AND ORANGE-BROWN HORNBLENDE PLAGIOCLASE AND PLAGIOCLASE PHYRIC ANDESITE PORPHYRY FLOWS, TUFFS, BRECCIA, SOME LAHAR CONGLOMERATE, GREYWACKE, SILTSTONE, RARE RHYOLITE-PERLITE. INCLUDES SOME DYKES AND SILLS

LOWER TO MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" (CARTER, 1972)

"GREY DACITE"

8 — DARK TO PALE GREY OR GREEN QUARTZOSE BIOTITE HORNBLENDE PLAGIOCLASE ASH FLOWS OF ANDESITIC AND RARELY DACITIC COMPOSITION. VARIABLY WELDED WITH LOCALLY WELL-DEVELOPED COMPACTION LAYERING. CONTAINS ABUNDANT GREY DACITE AND RARE GRANITIC CLASTS. OUTCROPS ARE COMMONLY BLOCKY AND STRONGLY JOINTED

8A — POLYMICTIC CONGLOMERATE WITH ABUNDANT TAKLA AND GREY DACITE CLASTS IN A QUARTZOSE SANDSTONE MATRIX

8B — GREYWACKE, CONGLOMERATE DERIVED ENTIRELY FROM GREY DACITE

TOODOGGONE CRYSTAL ASH TUFFS AND FLOWS

7 — RECESSIVE, GREY, MAUVE, PURPLE QUARTZOSE PLAGIOCLASE CRYSTAL TUFF, LAPILLI TUFF AND BRECCIA WITH LESSER AGGLOMERATE, LAHAR, AND EPICLASTIC BEDS. INCLUDES SOME WELDED TUFFS AND PYROXENE HORNBLENDE FELDSPAR PORPHYRY FLOWS WHICH ARE LOCALLY DOMINANT. SOME MEMBERS CONTAIN NO QUARTZ. PINK WEATHERING WHERE LAUMONTITE IS ABUNDANT

7A — *EPICLASTIC RED BEDS* — ARKOSIC SANDSTONE, SILTSTONE, CONGLOMERATE, AND SLIDE DEBRIS. CONTAINS SOME CRYSTAL TUFF

TUFF PEAK FORMATION

6 — PALE PURPLE, GREY AND GREEN BIOTITE AUGITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS. SOME AUTOBRECCIATED FLOWS. MINOR SILLS AND PLUGS. SOME CRYSTAL AND LAPILLI TUFF

6A — CONGLOMERATE OR LAHAR DERIVED FROM UNITS 6 AND 6B, WITH GRADED AND CROSSLAMINATED MUDSTONE AND SANDSTONE INTERBEDS; DEBRIS FLOWS, LAPILLI AND CRYSTAL TUFFS

6B — FLOWS SIMILAR TO UNIT 6 BUT CONTAINING SPARSE ORTHOCLASE MEGACRYSTS

McCLAIR CREEK FORMATION

5 — PURPLE, LAVENDER GREY RARELY GREY-GREEN 'CROWDED' FINE TO MEDIUM-GRAINED PLAGIOCLASE PORPHYRITIC FLOWS. INCLUDES SOME LAPILLI TUFF, BRECCIA AND MINOR EPICLASTIC BEDS

5A — INTRUSIVE DOME WITH AUTOBRECCIATED CARAPACE AND FLANKING BRECCIA

MAFIC FLOW AND TUFF UNIT

4 — *BASALT FLOWS*—THIN BEDDED, PURPLE TO DARK GREEN, COMMONLY EPIDOTIZED, FINE-GRAINED PYROXENE BASALT FLOWS AND TUFFS. INCLUDES SOME SILLS AND DYKES

4A — PURPLE TO MAUVE, MEDIUM-GRAINED PORPHYRITIC BASALT, LOCALLY MAUVE TO PINK, ZEOLITIZED WITH LAUMONTITE. POSSIBLE INTRUSIVE (LACCOLITH)

4B — LAPILLI CRYSTAL AND ASH TUFF, WELL BEDDED. INCLUDES MINOR THINLY BEDDED SANDSTONE AND RARE CALCAREOUS SILTSTONE (MARL). TOTALLY OR IN PART EQUIVALENT TO UNIT 7

4C — PYROXENE BIOTITE HORNBLENDE PORPHYRY FLOWS WITH TRACES OF QUARTZ AND K-FELDSPAR. INTERBEDDED MINOR BRECCIA AND LAPILLI TUFF. TOTALLY OR IN PART EQUIVALENT TO UNIT 6

JURASSIC *(CONTINUED)*

LOWER TO MIDDLE JURASSIC *(CONTINUED)*

"TOODOGGONE VOLCANICS" (CARTER, 1972) *(CONTINUED)*

LAWYERS—METSANTAN QUARTZOSE ANDESITE

3 — GREEN TO GREY QUARTZOSE PYROXENE (?) BIOTITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS AND TUFFS. QUARTZ CONTENT RANGES FROM NEGLIGIBLE TO ABOUT 3 PER CENT. IN THE NORTH FLOWS PREDOMINATE WITH LOCAL FLOW BRECCIA, LAPILLI TUFF, AND RARE WELDED TUFF UNITS; TOWARD THE SOUTH ASH FLOWS ARE COMMON, INCLUDING RARE SURGE DEPOSITS. THE UNIT CONTAINS *EXTENSIVE ZONES OF EPIDOTIZED, PYRITIC ROCK* WITH CHARACTERISTIC SALMON, PINK, AND ORANGE PLAGIOCLASE CRYSTALS

MOYEZ CREEK VOLCANICLASTICS

2 — CONGLOMERATE WITH SOME GRANITIC CLASTS, GRADED, CROSS-BEDDED GREYWACKE, WELL-BEDDED CRYSTAL TUFF, EPICLASTIC SEDIMENTS. LOCAL LAMINATED CALCAREOUS SILT (MARL). RARE THIN LIMESTONE AND CHERT. LOCAL *COARSE LANDSLIDE DEBRIS AND LAHAR, IN PART OR TOTALLY EQUIVALENT TO UNIT 6A*

2A — CRYSTAL TUFFS IN THIN, WELL-LAYERED UNITS. SOME EPICLASTIC SANDSTONE AND MUDSTONE; RARE PLANT FRAGMENTS IN SOME BEDS; MINOR LAPILLI TUFF

ADDOOGATCHO CREEK FORMATION

1 — PALE REDDISH GREY TO DARK RED-BROWN QUARTZOSE BIOTITE HORNBLENDE *PHYRIC ASH FLOWS. THE ROCKS CONTAIN* MINOR SANIDINE AND RARE AUGITE. WELDING IS WIDESPREAD AND RANGES FROM INCIPIENT TO EUTAXITIC. LOCALLY ORANGE TO BROWN VITROPHYRIC CLASTS ARE COMMON. INCLUDES LAPILLI TUFF AND BRECCIA UNITS AS WELL AS MINOR LAYERED GROUND SURGE DEPOSITS

1A — CRYSTAL ASH TUFF, LAPILLI TUFF AND RARE AGGLOMERATE WITH INTERSPERSED EPICLASTIC BEDS. TUFFACEOUS SEDIMENTS AND MINOR CONGLOMERATE THAT LOCALLY CONTAINS GRANITIC CLASTS; MINOR HORNBLENDE PLAGIOCLASE PHYRIC FLOWS FORMING SINGLE OR THIN COMPOSITE FLOW UNITS

1B — *QUARTZOSE PLAGIOCLASE PORPHYRY*— JOINTED, DOMAL INTRUSION (?) OF HOMOGENOUS-APPEARING GREY TO GREEN, CHLORITIZED AND EPIDOTE-ALTERED ROCK CONTAINING ABUNDANT INCLUSIONS OF TAKLA VOLCANICS AND RARE METAMORPHIC ROCK CLASTS

TRIASSIC

UPPER TRIASSIC

TAKLA GROUP

T — DARK GREEN AUGITE PORPHYRY BASALT FLOWS AND BRECCIAS WITH LESSER FINE-GRAINED ANDESITE TO BASALT FLOWS AND MINOR INTERBEDDED SILTSTONE, TUFFACEOUS SEDIMENTS, AND CHERT. CONTAINS LIMESTONE LENSES THAT MAY BE PART OF THE "ASITKA GROUP"

PALEOZOIC

PERMIAN

P — **ASITKA GROUP?**

PREDOMINANTLY LIMESTONE (INCLUDING MARBLE AND MINOR SKARN) WITH SOME ARGILLITE, BLACK SHALE, AND CHERT UNITS COMPOSED OF LIMESTONE, CHERT ARGILLITE, AND BASALT (*Pv, c*) MAY BE, IN PART OR TOTALLY TAKLA GROUP

INTRUSIVE ROCKS

JURASSIC

LOWER JURASSIC (DYKES, SILLS, AND SMALL PLUGS)

A — BASALT

B — AUGITE HORNBLENDE PORPHYRY — BASALTIC STOCK. DOMAL INTRUSION (OR TAKLA INLIER)

C — BIOTITE HORNBLENDE DIORITE GABBRO

D — PYROXENE PLAGIOCLASE PORPHYRY

LOWER TO MIDDLE JURASSIC (DYKES AND STOCKS)

E — QUARTZ MONZONITE, GRANODIORITE—MEGACRYSTIC IN PART. MINOR SYENITE OR QUARTZOSE SYENITE ALONG CONTACTS

E1 — GRANODIORITE, QUARTZ DIORITE — MEDIUM GRAINED, PORPHYRITIC, FOLIATED IN PART

F — FELDSPAR PORPHYRY, HORNBLENDE FELDSPAR PORPHYRY — DYKES AND PLUGS. RARE QUARTZ FELDSPAR PORPHYRY

after L.J. Diakow et al 1985

splays, followed by silicification and deposition of precious and base metals to varying degrees in the breccias.

(3) Upper Volcanic-Intrusive Division -- grey to green to maroon crystal tuffs and quartz-eye feldspar porphyries.

(4) Upper Volcanic-Sedimentary Division -- lacustrine sedimentary rocks (sometimes varved), stream bed deposits, and possible local fanglomerate deposits and interbedded tuff beds.

Many Toodoggone rocks have a matrix clouded with fine hematite dust implying a subaerial origin, however, some varieties may have accumulated in shallow water. The host rock for mineralization (division 2) is an orange to chocolate brown coloured crystal tuff with varying minor amounts of lithic and vitric ash. Broken crystals of plagioclase and quartz are set in a fine-grained 'hematized' matrix of quartz and feldspar. The exact chemical composition(s) and rock name(s) await chemical analyses. Carter (1971) determined the composition of a suite of rocks collected from the Toodoggone area to range from latites to dacite.

To the west, Upper Cretaceous to Tertiary pebble conglomerates and sandstones of the Lower Tango Creek Formation of the Sustut Group unconformably overlie both Takla Group volcanic rocks and Toodoggone volcanic rocks.

The structural setting was probably the most significant factor in allowing mineralizing solutions and vapours to migrate through the thick volcanic pile in the Toodoggone area. The entire area has been subjected to repeated and extensive normal block faulting from Jurassic to Tertiary time. It is postulated that a northwesterly trending line of volcanic centres along a gold/silver-rich 'province' marks major structural breaks, some extending for 60 km or more (for example, McClair Creek system, Lawyers system). Prominent gossans are often associated with structural zones but many contain only pyrite; sulphides occur as disseminations and fracture fillings in Toodoggone and Takla Group rocks. Thrusting of Asitka Group limestones over Takla Group rocks probably occurred during Middle Jurassic time.

Today Toodoggone rocks display broad open folds with dips less than 25°. The Sustut Group sedimentary rocks have relatively flat dips and do not appear to have any major structural disruptions.

PROPERTY GEOLOGY

The Metsantan property is underlain by a succession of Lower to Middle Jurassic subaerial volcanics and volcaniclastic sediments. This succession has been collectively termed the "Toodoggone Volcanics" by Carter (1971). These rocks have been extensively faulted and locally folded. During this volcanic event, hydrothermal activity led to the development of epithermal gold deposits.

The property geology is illustrated on Figure 3, which is based on mapping by Diakow et al. (1985) and data compiled from various company reports. The property is underlain by a lobate body of "Toodoggone Volcanics" which is overlain toward the south by a blanket of Quaternary alluvium that begins at approximately 1600 m ASL and thickens downslope. The area is disrupted by a conjugate set of northwest and northeast trending faults which appear to have significant vertical and/or horizontal displacements.

All of the rock units exposed on the property belong to the Lower to Middle Jurassic Toodoggone volcanic sequence. Within the property, the volcanics consist of porphyritic trachy-andesite, andesite, and dacite along with lithic tuff, lapilli tuff, and agglomerate of similar composition.

These lithologies commonly exhibit weak to intense alteration. Weak propylitic alteration is widespread throughout the property, consisting of fracture infilling with seams of chlorite and epidote. Proximal to the epithermal vein systems, alteration varies from intense propylitic adjacent to the veins to intense argillic within the vein systems.

Epithermal veins are often strongly brecciated and consist predominantly of quartz ± barite. The quartz varies in colour from white to dark grey and exhibits a chalcedonic to coarsely crystalline texture. Barite, where present in the breccias, varies in colour from white to light pink and is medium- to fine-grained. Where mineralized, native gold, electrum, argentite, and tetrahedrite can be found in various concentrations. Characteristically, these quartz-barite breccias show evidence of multiple stages of brecciation.

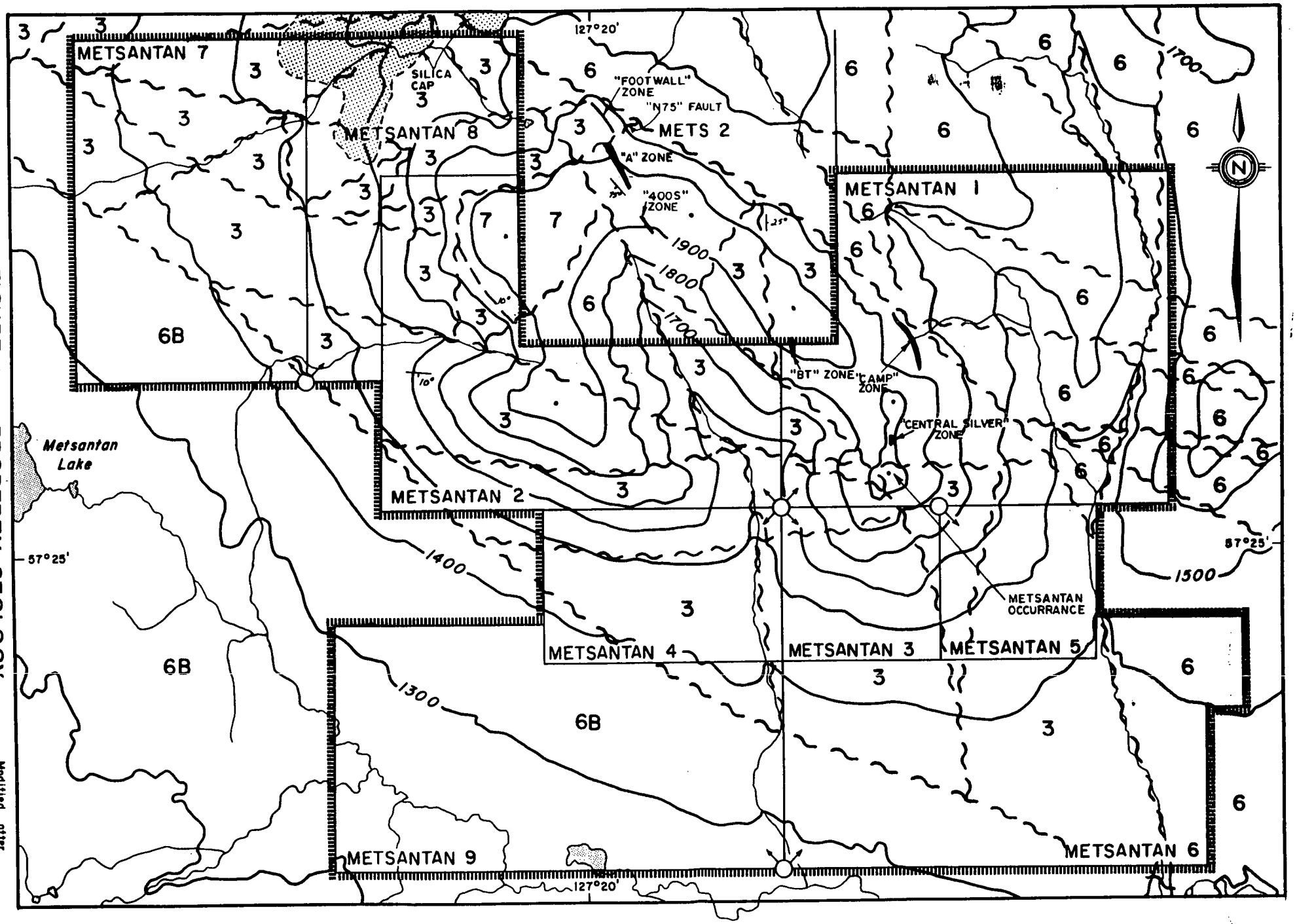


FIGURE 3 PROPERTY GEOLOGY

Modified after Diakow et al 1985

SILICA CAP

ECONOMIC GEOLOGY

The focus of exploration in the Toodoggone district to date has been epithermal gold/silver mineralization associated with subaerial Lower to Middle Jurassic volcanism (Toodoggone Volcanics). Gold mineralization is also found within Late Triassic alkaline andesitic rocks (Takla Group). However, this latter mineralization is viewed as occurring in the "root zone" of the epithermal event related to Toodoggone volcanism (e.g., Baker Mine).

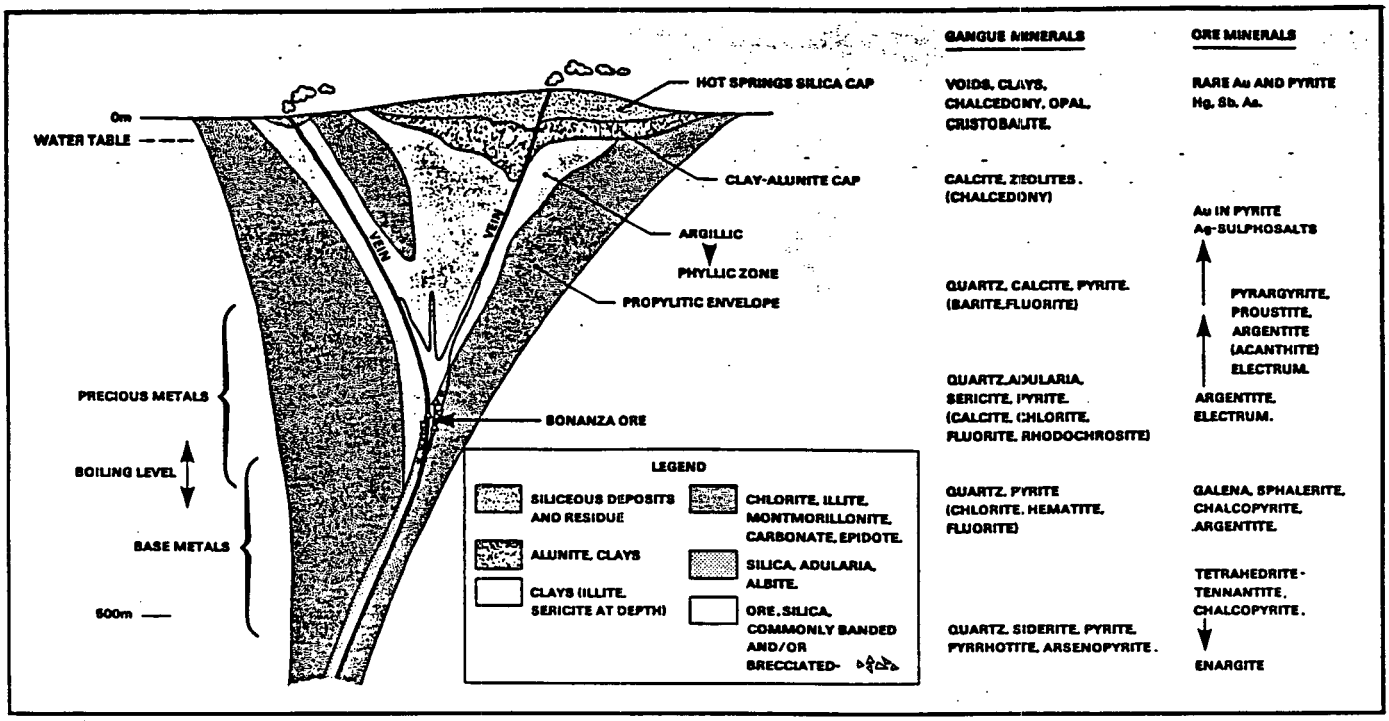
The structural settings of these epithermal vein systems is of primary importance in the development of gold mineralization within the Toodoggone Volcanics. Faulting and concomitant brecciation form the conduits for ascending hydrothermal solutions and vapours. It is often secondary tensional fractures in crudely concentric fracture systems related to collapse structures, major faults, or dilatant zones within major fault systems, which supply the necessary plumbing system for gold mineralization in this camp. It is also necessary that repeated fault movement and brecciation occur, allowing hydrothermal solutions to continue to circulate. If only a single brecciation event occurs, the ascending solutions carrying silica will eventually heal the fractures and restrict passage of additional gold-bearing solutions. Only by recurrent faulting and brecciation can the process of mineralization be carried to the stage where economic concentrations of gold can be anticipated.

Adjacent to these epithermal deposits, lateral and vertical alteration patterns have been noted. The outer 'propylitic' zone consists of chlorite, epidote, calcite, and pyrite. This grades inward to an 'argillic/phyllic' zone characterized by sericite, montmorillonite, illite, and silica. Finally, there is the silicified core zone consisting dominantly of silica, adularia, and/or albite, immediately adjacent to the vein system.

Hematite and manganese oxides are normally abundant in the precious metal rich occurrences. Native gold, electrum, barite, and minor pyrite have been found within these silica-rich zones along with amethystine quartz. Anomalous silver, lead, zinc, and copper values are commonly associated with the epi-

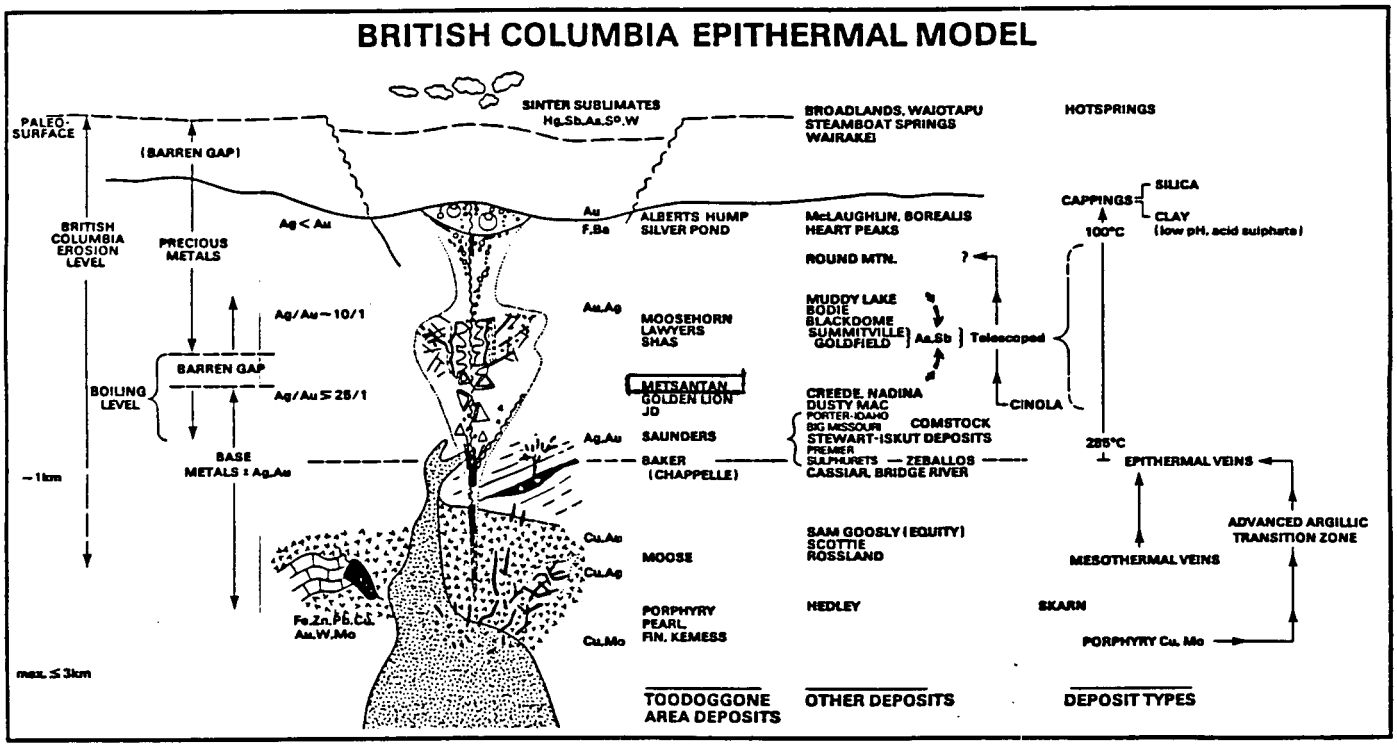
thermal vein systems. However, such systems appear to be relatively free of contaminants such as arsenic and antimony.

The pattern of gold mineralization also exhibits both vertical and lateral zonation. These variations are controlled by temperature and pressure conditions within the breccia zones which in turn control the boiling point levels for the mineralizing solutions. The upper levels of these systems are characterized by a barren silica cap, thus displaying increasing gold values with depth. This simple model is complicated by re-brecciation (which changes the physical characteristics of the system) and the changing chemical composition of hydrothermal solutions during the various pulses of mineralization. Figures 4 and 5 illustrate the epithermal model utilized in exploration for precious metals within the Toodoggone gold camp.



after Buchanan (1981)

FIGURE 4. IDEALIZED SECTION OF EPITHERMAL DEPOSIT



after T.G. Schroeter and A. Panteleyev

FIGURE 5. BRITISH COLUMBIA EPITHERMAL MODEL

1990 EXPLORATION PROGRAM

The 1990 property exploration consisted of grid-controlled soil geochemical sampling and prospecting, directed at investigating previously established geochemical trends. All of the samples collected were forwarded to TerraMin Research Labs Ltd. in Calgary, Alberta, for gold and silver analyses.

SOIL GEOCHEMICAL SURVEYS

Detailed "Main" Grid

Previous soil sampling surveys delineated gold anomalies at the base of Metsantan Mountain, in the central portion of the property. A flag-and-compass grid with 50 m line spacing and 25 m station intervals was emplaced over the area, and soil samples were collected to more accurately define previously located Au and Ag-in-soil geochemical anomaly trends and to cover potentially mineralized areas. A total of 413 soil samples were collected. The results are presented in the Appendix, and are plotted and contoured on Maps 2 and 3 along with the results from previous surveys.

The survey confirmed the results of earlier work, outlining drainages in which the anomalies are probably caused by downslope dispersion from known mineralized zones, and outlining areas requiring further detailed evaluations. Letter designations have been given to the anomalies delineated. A brief evaluation of these follows.

Anomaly "A" This anomaly is characterized by high gold values with elevated silver responses. The previous sample site (Anomaly "I", 964 ppb Au) was resampled and yielded 4280 ppb Au. The area is talus covered and occurs at a scree slope composed of massive trachy-andesite porphyry. The cause of the anomaly was not discovered, possibly by unexposed gold mineralization. The

anomaly is open to the north. Additional fill-in soil geochemical sampling as well as backhoe trenching should be completed in this area.

Anomaly "B" This anomaly contains anomalous Au and Ag values (previously Anomaly "E"), and occurs along a major draw. Fragments of quartz breccia with minor amethystine quartz were located in the area. This anomaly is probably caused by downslope dispersion from the "BT" Zone or the Metsantan occurrence. Overburden thickness within this draw is excessive for trenching.

Anomaly "C" This anomaly contains anomalous Au values with elevated silver responses (previously Anomaly "D"), located in a draw which drains the Metsantan occurrence and the "Central Silver" Zone, and is probably due to downslope dispersion from these areas.

Anomaly "D" This sample site (L.11+00S 11+25W; 866 ppb Au) occurs at the base of a small scree composed of weakly to moderately propylitically and argillically altered trachy-andesite porphyry and downslope from the "BT" Zone. Resampling of the site yielded 534 ppb Au and 6.9 ppm Ag. The anomaly may be caused by downslope dispersion from the "BT" Zone.

Anomaly "E" This anomaly centers on L.5+00S 4+75E with high gold values without corresponding silver responses. Prospecting should be completed in this area to determine the source, and closer spaced grid coverage should be completed to delineate the extent of this anomaly.

In addition to these lettered anomalies, there are a number of isolated gold anomalies scattered throughout the grid, as well as a large area adjacent to Anomalies "A" and "B" yielding gold responses greater than 100 ppb, which delineates the main drainages in the central portion of the grid. It is recommended that all isolated gold responses in excess of 100 ppb and any silver responses in excess of 5 ppm should be evaluated further. The central portion of the grid should be extensively prospected and geologically mapped to determine the significance of the elevated gold response in this area.

"P" Grid Extension

Previous exploration in the area separating the "P" Grid from the "Main" Grid encountered numerous talus boulders with extensive secondary copper mineralization, sampling of which yielded highly anomalous silver values (up to 11.08 oz/ton) with coincident elevated Au analyses (up to 554 ppb). The existing grid was extended to provide complete coverage of the Metsantan 2 claim in this area. Grid lines were emplaced at 100 m intervals with soil samples collected at 25 m stations along these lines.

A total of 254 soil samples were collected from this grid. The results are presented in the Appendix, and are plotted and contoured on Maps 4 and 5 along with the results from previous soil geochemical surveys.

Only four isolated soil samples yielded geochemical results greater than 100 ppb Au. There were no anomalous Ag values.

The geochemical survey delineated a narrow Au-in-soil anomaly extending from L.4+00S 1+00W to L.6+00S 2+25W, yielding values up to 288 ppb Au and 1.1 ppm Ag. A number of north-northeast trending silica vents up to 3 m wide were located in the immediate area. These vents were briefly examined, and grab samples were collected. However, no gold mineralization associated with these systems was identified. Additional ground investigation in this area will be required.

The remaining three soil samples occur at L.1+00S 1+50W (114 ppb); at L.1+00S 6+50W (212 ppb); and at L.5+00S 10+00W (272 ppb). These areas were not investigated during this program.

PROSPECTING AND LITHOGEOCHEMICAL SAMPLING

A limited amount of prospecting was completed over portions of the claims directed at investigating gold anomalies delineated by previous exploration programs. Map 1 depicts the property geology (modified after Diakow et al., 1985) along with previous exploration results, and 1990 sample locations and analytical results. Lithogeochemical samples collected from the "P" Grid Extension are presented on Map 4. These results are also presented in the Appendix along with rock sample descriptions. A total of 24 rock samples were collected from the property.

During emplacement of the "P" Grid Extension, secondary copper mineralization was noted in numerous talus boulders. Samples collected from this area yielded anomalous silver values of up to 2.02 oz/ton (69.258 g/t) with coincident elevated Au analyses of up to 0.10 oz/ton (3.429 g/t). A prominent bench marks the upper extent of the mineralized float. Trenching may be warranted along this bench as the possible source area of the mineralized talus. A number of north-northeast trending silica vents up to 3 m wide were located in the immediate area; however, no mineralization was located associated with these vents.

Stream silt samples were collected from all the creeks draining the property as part of prior exploration programs. One silt sample containing 96 ppb Au was obtained from the eastern corner of the Metsantan 6 claim. Ground follow-up work was completed along the entire length of the drainage but did not located any mineralization.

Elevated gold values were obtained from the creek draining the "Patti" Zone. Ground follow-up work was also completed along this drainage. One sample of chalcedonic quartz collected near Lacana's 1986 drilling, yielded 0.408 oz/ton Au (13.989 g/t) and 0.516 oz/ton Ag (17.692 g/t). The concentration of anomalous gold-in-stream silt values along this creek may be caused by drainage from the "Patti" Zone and from weakly elevated gold values in an argillically altered zone at the headwaters of the drainage. Samples collected in 1988 from this argillically altered zone did not yield any significant geochemical values.

SUMMARY AND RECOMMENDATIONS

The Metsantan property consists of nine contiguous mineral claims totalling 3,000 hectares (7,413 acres), located approximately 300 km north of Smithers, British Columbia, directly east of Metsantan Lake. Access to the property from Smithers is via fixed-wing aircraft to the Sturdee Airstrip and then by helicopter for a distance of 27 km. With the completion of the Omar Road Extension, which connects the Omineca Resource Road to the Cheni Mine site, road access is now available to within 12 km at the closest point.

The property lies within the Toodoggone district which is one of the most active exploration camps in British Columbia. The Toodoggone camp encompasses an area of Lower to Middle Jurassic subaerial felsic to intermediate volcanics. This "Toodoggone" sequence is transected by a series of fault structures, some of which have been discovered to be the locus of epithermal gold/silver mineralization. The district hosts the past-producing Baker Mine and the new Cheni Mine, currently being brought into production. Previous exploration on the property has consisted of geological mapping, soil and silt geochemical sampling, trenching, and diamond drilling. A number of quartz-breccia and argillic alteration zones have been delineated on the property, some of which contain gold mineralization.

The 1990 exploration work consisted of grid-controlled soil geochemical sampling and prospecting directed at investigating soil geochemical trends and silt or lithogeochemical anomalous results outlined by previous exploration programs.

Previous soil sampling surveys delineated gold anomalies at the base of Metsantan Mountain, in the central portion of the property. A detailed grid was emplaced over the area and previous anomalous sample sites were relocated and investigated to determine the cause of the anomaly. The survey confirmed the results from previous surveys, outlining drainages in which the anomalies are probably caused by downslope dispersion from known mineralized zones, and outlining areas requiring further detailed evaluations.

Previous exploration in the area separating the "P" Grid from the "Main" Grid encountered numerous talus boulders with secondary copper mineralization, sampling of which yielded highly anomalous silver values with coincidental elevated gold analyses. The existing grid was extended to provide complete coverage of this area. Only four isolated soil samples yielded results of greater than 100 ppb Au.

During the emplacement of the "P" Grid Extension, secondary copper mineralization was noted in numerous talus boulders. Samples collected yielded anomalous silver values up to 2.02 oz/ton with coincident elevated gold values up to 0.10 oz/ton. A prominent bench marks the upper extent of the mineralized float. Trenching may be warranted along this bench as the possible source area for the mineralized talus. A number of north-northeast trending silica vents up to 3 m wide were located in the immediate area. No mineralization was located associated with these vents.

Stream silt samples were collected from all the creeks draining the property as part of prior exploration programs. One silt sample containing 96 ppb Au was obtained from the eastern corner of the Metsantan 6 claim. Ground follow-up work was completed along the entire length of the drainage, but did not located any mineralization. Elevated gold values were obtained from the creek draining the "Patti" Zone. Ground follow-up work was completed along this drainage. One sample of chalcedonic quartz collected from the "Patti" Zone yielded 0.408 oz/ton Au and 0.516 oz/ton Ag. The concentration of anomalous gold-in-stream silt values occurring along this creek are interpreted as caused by drainage from the "Patti" Zone.

The exploration results are considered moderately encouraging and worthy of additional exploration. Numerous quartz-breccia zones have been identified on the Metsantan property, and there is evidence of additional zones based on geochemical results. Drilling has identified geochemically anomalous to ore-grade intervals within these breccia zones. Given the variations in width and grade of these epithermal vein systems, these initial results are considered encouraging. Further exploration, as previously described, followed by another 3,000 feet of diamond drilling is recommended to further evaluate the property.

CERTIFICATE

I, Claude Henry Aussant, of 31 Templebow Way N.E. in the City of Calgary in the Province of Alberta, do hereby certify that:

1. I am a Consulting Geologist with the firm of Taiga Consultants Ltd. with offices at Suite 400, 534 - 17th Avenue S.W., Calgary, Alberta.

2. I am a graduate of the University of Calgary, B.Sc. Geology (1976), and I have practised my profession continuously since graduation.

3. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and I am a Fellow of the Geological Association of Canada.

4. I am the author of the report entitled "Geological, Geochemical, and Prospecting Report on the Metsantan 1 to 9 Claims, Omineca/Liard Mining Divisions, British Columbia", dated October 16, 1990.

   I personally supervised the exploration work, completed August 1-30, 1990, upon which this report is based.

DATED at Calgary, Alberta, this 16th day of October, A.D. 1990.

Respectfully submitted,

PERMIT TO PRACTICE
TAIGA CONSULTANTS LTD.
Signature
Date Oct 16, 1990
PERMIT NUMBER: P2399
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

C. H. Aussant, B.Sc., P.Geol., F.GAC

GEOLOGICAL ASSOCIATION OF CANADA
C. H. AUSSANT
FELLOW

PROFESSIONAL GEOLOGIST
CLAUDE H. AUSSANT
ALBERTA

BIBLIOGRAPHY

Aussant, C.H.; Davis, J.W. (1988): Geological, Geochemical, Trenching, Prospecting, and Diamond Drilling Report on the Metsantan 1 to 9 Claims, Liard/Omineca Mining Divisions, British Columbia; for Prolific Resources Ltd.

Diakow, L.J.; Panteleyev, A.; Schroeter, T.G. (1985): Geology of the Toodoggone River Area, NTS 94E; B.C.Energy Mines, Prelim.Map 61

DuPré, D.G. (1988): Geological, Geochemical, Trenching, and Drilling Report on the Metsantan 1-9 Claims; for American Ore Limited

Gabrielse, H. (1977): Geology of the Toodoggone and Ware Map-Areas, B.C.; Geol.Surv.Cda., Open File 483

Johnston, R.J. (1986): Diamond Drilling Report; for Lacana Mining Corporation

Netolitzky, R.K. (1985): Geological and Geochemical Evaluation Report of the Metsantan 1-9 Claims; for Bart Resources Ltd.

Schroeter, T.G. (1985): Toodoggone River Area (94E); in Geological Fieldwork 1984; B.C. Energy Mines, Paper 1985-1, pp.291-298

various maps, supplied from Lacana's files:

Mar.'80 - Copper and Molybdenum in Silt and Compilation Map
- Lead and Zinc in Silt and Compilation Map
Oct.'80 - Metsantan Rock Grid, Au and Ag Geochemistry
- Legal Survey Plat
Oct.'81 - North Rock Grid Geochemistry and Geology
- Au and Ag in Rock, Geology, and Alteration (3 sheets)
Nov.'81 - Silt Geochemistry, Au and Ag
Dec.'81 - Toodoggone Gold District Geology, Claim Status, Mineralization
Apr.'82 - Mineral Zones and Cross Sectional Grid
- Cross Section I-J
- Cross Section M-N
Sep.'82 - Geology, Mineral Zones, and Geochemistry
Nov.'86 - Report on Diamond Drilling, Metsantan 8 Mineral Claim

A P P E N D I X

Summary of Personnel
Summary of Expenditures
Rock Sample Descriptions
Analytical Techniques
Certificates of Analysis

SUMMARY OF PERSONNEL

Name / Address	Position	Man Days
Claude H. Aussant, P.Geol. Calgary, Alberta	Project Geologist	12.0 days
Michael D. Jamieson, P.Geol. Calgary, Alberta	Assistant Geologist	10.5 days
Bob Charles Stanley Mission, Sask.	Prospector	11.5 days
Solomon Hardlotte Stanley Mission, Sask.	Prospector	11.5 days
J. Macdougall Hislop Calgary, Alberta	Labourer	10.5 days
	TOTAL MAN DAYS	56.0 days

SUMMARY OF EXPENDITURES

Pre-Field			
Logistics, assembly of personnel and gear (pro rata)			1,148.98
Field Personnel			
Project Geologist	12.0 days @ $400/day	4,800.00	
Assistant Geologist	10.5 days @ $300/day	3,150.00	
Prospectors (2)	23.0 days @ $300/day	6,900.00	
Labourers	10.5 days @ $210/day	2,205.00	17,055.00
Camp and Accommodation			
including helicopter pilot	62 man days @ $55/day		3,410.00
Travel Expenses (mob & demob)			1,787.43
Equipment Rentals			
one-ton van	10.5 days @ $65/day	682.50	
generator	10.5 days @ $10/day	105.00	
FM radio-telephone	10.5 days @ $10/day	105.00	
HF radio-telephone	10.5 days @ $ 9/day	94.50	
chainsaw	10.5 days @ $ 8/day	84.00	1,071.00
Aircraft Support			
Helicopter		23,499.24	
Fixed-Wing		3,972.53	27,471.77
Fuel (pro rata)			506.88
Geochemical Analyses (Au/Ag)			
Rock samples	24 @ $12.00/each	288.00	
Soil samples	667 @ $ 9.50/each	6,336.50	6,624.50
Miscellaneous			
Disposable supplies		468.74	
Communications		75.93	
Maps and reproductions		199.07	
Expediting and freight		483.96	1,227.70
Post-Field			
Data compilation, report writing, drafting, word processing			4,648.53
		TOTAL	$64,951.79

ROCK SAMPLE DESCRIPTIONS

Sample	Description
BR-01	tuff, beige coloured, moderately argillically altered, <1% disseminated pyrite. 4 ppb Au, 1.08 ppm Ag
MH-1	"P" Grid Extension; andesite, pale to medium grey, with quartz eyes, minor small pink feldspar phenocrysts. 4 ppb Au, 0.40 ppm Ag
MH-2	"P" Grid Extension, L.3+96S 4+35W; trachy-andesite porphyry tuff, greenish grey, 0.5 cm tetrahedrite band, malachite stained, mod. argillically altered, <1% disseminated tetrahedrite in the tuff with associated minor malachite staining. 92 ppb Au, 26.0 ppm (0.76 oz/ton) Ag
MH-3	"P" Grid Extension, L.4+00S 5+10W; trachy-andesite porphyry tuff, brecciated, contains blebs and clots of tetrahedrite, malachite stained, moderate propylitic (epidote) alteration, small pink feldspar phenocrysts. 3420 ppb (0.1 oz/ton) Au, 32.0 ppm (0.93 oz/ton) Ag
MH-4	"P" Grid Extension, L.4+00S 6+50W; andesite tuff, beige coloured, small quartz eyes and K-feldspar phenocrysts, weak argillic and propylitic alteration, minor clear quartz stringers. 8 ppb Au, 0.48 ppm Ag
MH-5	"P" Grid Extension, L.4+05S 4+80W; tuff, beige, small quartz eyes, numerous irregular narrow clear quartz and tetrahedrite stringers with associated malachite staining. 38 ppb Au, 50.0 ppm (1.46 oz/ton) Ag
MH-6	"P" Grid Extension, L.4+00S 3+48W; trachy-andesite porphyry tuff, purple; pink feldspar phenocrysts, contains a 2 cm stringer of crystalline calcite with angular trachyte fragments. 12 ppb Au, 0.26 ppm Ag
MH-7	"P" Grid Extension, L.4+00S 1+33W; 4 cm clear quartz veinlet with quartz intergrowths and tuff fragments, minor amethyst. 72 ppm Au, 2.50 ppm Ag
MH-8	"P" Grid Extension, L.8+00S 2+58W; andesite porphyry, strongly argillically altered, beige, rusty weathered. 4 ppb Au, 0.17 ppm Ag
MH-9	"P" Grid Extension, L.8+00S 6+00W; trachy-andesite porphyry tuff, greenish grey, 1-3% disseminated pyrite, pink feldspar phenos. 38 ppb Au, 3.60 ppm Ag

L.4S 0+75W "P" Grid Extension; trachy-andesite porphyry tuff, brecciated, moderately argillically altered, numerous irregular (up to 2 cm) quartz veinlets, minor malachite staining; sample 6 cm wide and contains 50% quartz stockwork.
146 ppb Au, 10.4 ppm Ag

L.4S 4+00W "P" Grid Extension; trachy-andesite porphyry tuff, beige, strongly argillically altered, quartz eyes, feldspar altered to clay.
22 ppb Au, 0.45 ppm Ag

L.6S 2+05W "P" Grid Extension; silica vent, 2 to 3 m wide striking ~230°, moderately argillically altered, extensively fractured, in purple trachy-andesite porphyry.
10 ppb Au, 15.2 ppm Ag

SH-1 "P" Grid Extension, L.2+00S 4+75W; trachy-andesite porphyry tuff, medium chocolate brown, with disseminated malachite, azurite staining, small quartz eyes and pink feldspar phenocrysts.
212 ppb (0.006 oz/ton) Au, 69.2 ppm (2.02 oz/ton) Ag

SH-2 "P" Grid Extension, L.7+00S 3+75W; trachy-andesite porphyry tuff, greenish grey, rusty weathered.
2 ppb Au, 0.19 ppm Ag

SH-3 float; tuff, beige, moderately argillically altered, limonitic, trace disseminated pyrite.
12 ppb Au, 0.44 ppm Ag

SH-4 float; andesite porphyry, pale grey, 1-2% disseminated pyrite.
18 ppb Au, 0.38 ppm Ag

SH-5 float; tuff, pale grey, 1-2% disseminated pyrite, chalcedonic quartz fragments.
114 ppb Au, 1.66 ppm Ag

SH-6 float; chalcedonic quartz, limonite lining fractures.
6 ppb Au, 1.55 ppm Ag

SH-7 tuff?, extensively gossaned, deep rusty brown, vuggy.
14 ppb Au, 0.11 ppm Ag

SH-8 chalcedonic quartz, pale grey, limonite stain on fracture planes.
14,000 ppb (0.408 oz/ton) Au, 17.7 ppm (0.516 oz/ton) Ag

SH-9 trachy-andesite porphyry, beige, strongly argillically altered, 1-2% disseminated pyrite.
48 ppb Au, 2.20 ppm Ag

SH-10 float; trachy-andesite porphyry, greyish green, 1% disseminated pyrite.
2 ppb Au, 0.17 ppm Ag

MJ-1 "P" Grid Extension, L.5+00S 1+88W; five silica vents 0.5 to 2.0 m wide occurring over a width of 30 m, strike 200°, moderately argillically altered.
22 ppb Au, 6.20 ppm Ag

TERRAMIN RESEARCH LABS LTD.
14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8668

SAMPLE PREPARATION

Soil and sediment samples are dried and sieved through 80 mesh nylon screen (maximum particle size 200 microns).

Rock or drill core samples are crushed to approximately 1/8" in a jaw crusher, riffled to obtain a representative sample, and pulverized to 100 mesh (180 micron particle size).

TERRAMIN RESEARCH LABS LTD.
14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8668

FIRE ASSAY/AA METHOD FOR GOLD AND SILVER
PLATINUM AND PALLADIUM

Approximately 1 assay ton of prepared sample is fused with a litharge flux charge to obtain a lead button. The button is cupelled down to a precious metal prill which is then dissolved in aqua regia. The resulting solution is analysed by atomic absorption spectrophotemetry to determine the precious metals.

TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Taiga Consultants Ltd.

Jim Davis

Date: August 20, 1990

Job No: 90-184

Project: BC-88-6

P.O. No:

613 Soil

54 Rock

Signed: _____

14-2235 30th Avenue N.E., Calgary, Alberta,T2E 7C7
Phone (403) 250-9460 Fax (403) 291-7064

Job#: 90-184

Project: BC-88-6

Sample Number		Au ppb	Ag ppm	
BR-	1	4	1.08	✓
	2	24	0.09	
	3 No	34	0.11	✓
CA-	1	20	4.70	
	2	296	61.0	
	3	30	3.70	
	4	16	3.50	
	5	44	4.40	
	6	44	5.10	
	7	248	49.0	
	8	432	43.0	
	9	10	0.41	
MH-	1	4	0.40	ρ
	2	92	26.0	ρ
	3	3420	32.0	ρ
	4	8	0.48	ρ
MR-	5	38	50.0	ρ
MH-	6	12	0.26	ρ
	7	72	2.50	ρ
	8	4	0.17	ρ
	9	38	3.60	ρ
	10	24	10.2	
	11	4	0.09	
	12	30	2.50	
	13	14	0.48	
	14	6	0.20	
	15	8	1.28	
	16	14	1.72	
	17	16	0.82	
	18	8	0.08	
MJ-	1	22	6.20	ρ
	2	324	5.90	
	3	112	3.10	
	4	48	0.10	
	5	26	0.12	
	6	52	0.09	
	7	34	0.17	
SH-	1	212	69.2	'ρ'
	2	2	0.19	ρ
	3	12	0.44	✓

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm	
SH- 4	18	0.38	✔
5	114	1.66	✔
6	6	1.55	✔
7	14	0.11	✔
8	14000	17.7	✔
9	48	2.20	✔
10	2	0.17	✔
11	2	0.10	
12	14	0.49	
13	142	0.84	
14	10	0.06	
1) L 4+00 S 0+75 W	146	10.4	
2) L 4+00 S 4+00 W	22	0.45	
3) L 6+00 S 2+05 W	10	15.2	

Job#: 90-184

Project: BC-88-6

	Sample Number	Au ppb	Ag ppm
BL	0+25 S	4	0.94
	0+50	8	0.39
	0+75	4	0.29
	1+00	4	0.34
	1+25	32	0.96
	1+50	42	0.78
	1+75	40	0.34
	2+00	2	0.17
	2+25	10	0.26
	2+50	4	0.15
	2+75	2	0.13
	3+00	2	0.15
	3+25	8	0.26
	3+50	8	0.38
	3+75	6	0.30
	4+00	6	0.16
	4+25	12	0.11
	4+50	4	0.10
	4+75	4	0.16
	5+00	4	0.09
	5+25	6	0.10
	5+50	22	1.16
	5+75	4	0.12
	6+00	8	0.20
	6+25	8	0.12
	6+50	16	0.34
	6+75	8	0.24
	7+00	32	0.14
L 0+00	0+25 E	432	0.96
	0+50	8	0.45
	0+80	506	0.84
	1+00	1532	1.56
	1+25	130	0.42
	1+50	52	0.50
	1+75	48	1.19
	2+00	60	1.54
	2+25	266	2.70
	2+50	16	0.79
	2+75	148	6.20
	3+00	12	1.64

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 0+00 3+25 E	42	1.83
3+50	10	0.60
3+75	8	0.68
4+00	76	1.70
L 0+50 S 0+25 E	28	1.06
0+50	214	0.62
0+75	656	0.81
1+00	1658	1.70
1+25	1624	1.49
1+50	20	0.98
1+75	14	0.30
2+50	62	0.48
2+75	24	0.98
3+00	16	1.70
3+25	140	6.00
3+50	10	1.08
3+75	20	1.68
3+95	12	0.62
4+25	6	1.92
4+50	8	0.92
4+75	8	0.65
5+00	10	0.84
5+25	16	0.68
5+50	2	0.82
5+75	12	0.33
6+00	2	0.54
6+25	6	0.50
6+50	24	0.63
6+75	6	0.81
7+00	36	2.90
L 1+00 S 10+00 W	4	0.46
9+75	2	0.51
9+50	2	0.32
9+25	4	0.30
9+00	2	0.33
8+75	4	0.22
8+50	2	0.11
8+25	2	0.13
8+00	6	0.23
7+75	44	0.40

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 1+00 S 7+50 W	10	0.80
7+25	4	0.20
7+00	4	0.14
6+75	16	0.20
6+50	212	0.17
6+25	8	0.10
6+00	4	0.14
5+75	6	0.19
5+50	6	0.10
3+25	10	0.63
3+00	2	0.27
2+75	2	0.39
0+25	2	0.33
BL	2	0.49
0+25 E	248	0.96
0+50	408	0.58
0+75	664	0.58
1+00	288	0.60
1+25	1786	2.30
1+50	6	0.15
1+75	40	0.28
2+00	306	7.90
2+25	8	0.40
2+50	36	1.12
2+75	12	0.55
3+00	442	3.30
3+25	20	1.02
3+50	12	0.56
3+75	8	1.32
4+25	436	15.0
4+50	4	0.54
4+75	6	0.66
5+00	8	0.19
5+25	6	0.53
5+50	2	0.31
5+75	2	0.22
6+00	26	0.66
6+25	14	2.20
6+50	10	1.37
6+75	24	0.56

Job#: 90-184

Project: BC-88-6

	Sample Number	Au ppb	Ag ppm
L 1+50 S	0+25 E	150	0.51
	0+50	72	0.78
	0+75	528	0.71
	1+00	60	0.52
	1+25	434	0.43
	1+50	146	0.47
	1+75	8	0.42
	2+00	6	0.14
	2+25	6	0.16
	2+50	94	0.98
	2+75	20	0.86
	3+00	1110	4.20
	3+25	182	14.60
	3+50	420	9.80
	3+75	44	0.82
	4+25	74	0.49
	4+50	84	0.79
	4+75	60	4.10
	5+00	8	0.32
	5+25	122	4.70
	5+50	2	0.48
	5+75	6	0.58
	6+00	4	0.34
	6+25	24	0.35
	6+50	36	1.22
	6+75	56	1.71
	7+00	94	3.20
L 2+00 S	10+00 W	4	0.44
	9+75	2	0.14
	9+50	2	0.25
	9+25	2	0.16
	9+00	2	0.24
	8+75	2	0.21
	8+25	4	0.11
	8+00	2	0.28
	7+75	2	0.34
	7+50	2	0.17
	7+25	2	0.16
	7+00	2	0.16
	6+75	4	0.10

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 2+00 S 6+50 W	6	0.12
6+25	8	0.10
5+75	4	0.22
5+50	18	1.07
5+25	12	1.23
5+00	4	1.38
4+75	4	1.03
4+05	2	0.30
3+25	6	0.21
3+00	2	0.16
2+75	4	0.11
2+50	4	0.30
0+25	2	0.17
BL	6	0.40
0+25 E	2	0.24
0+50	4	0.24
0+75	136	0.36
1+00	310	0.37
1+25	242	0.37
1+50	292	0.47
1+75	160	0.20
2+00	114	6.00
2+25	276	7.20
2+50	220	6.30
3+00	4	0.24
3+25	4	0.33
3+50	2	0.46
3+75	12	0.12
4+25	4	0.09
4+50	38	0.26
4+75	28	0.22
5+00	80	0.35
5+25	132	0.72
5+50	332	4.60
5+75	90	1.13
6+00	138	1.20
6+25	124	1.69
7+00	132	0.82
L 2+50 S 0+25 E	2	0.19
0+50	72	0.28

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 2+50 S 0+75 E	224	0.33
1+00	12	0.22
1+25	6	0.19
1+50	12	0.20
1+75	134	4.10
2+00	268	3.60
2+25	170	0.38
2+50	16	0.56
2+75	4	0.18
3+00	10	0.27
3+25	8	0.23
3+50	46	0.14
3+75	6	0.38
4+25	6	0.17
4+50	48	0.43
4+75	6	0.22
5+00	16	0.12
5+25	4	0.08
5+50	108	0.50
5+75	6	0.13
6+00	556	1.54
6+25	194	2.50
6+50	360	4.40
6+75	770	2.30
7+00	240	3.60
L 2+95 S 0+25 E	4	0.20
0+50	4	0.14
1+00	18	0.06
1+75	228	3.10
2+00	16	0.41
L 3+00 S 10+00 W	4	0.13
9+75	2	0.14
9+50	4	0.24
9+25	2	0.16
9+00	16	0.22
8+50	4	0.33
8+25	2	0.15
8+00	4	0.15
7+75	10	0.11
7+50	16	0.16

Job#: 90-184

Project: BC-88-6

	Sample Number		Au ppb	Ag ppm
L 3+00 S	7+25 W		8	0.20
	7+00		4	0.22
	6+75		4	0.22
	6+45		4	0.10
	6+25		14	0.12
	6+00		12	0.18
	5+75		4	0.10
	5+50		20	0.16
	5+25		16	0.20
	5+00		4	0.20
	4+25		4	0.11
	3+50		4	0.16
	3+25		4	0.17
	3+00		6	0.23
	0+25		2	0.16
	BL		12	0.45
	0+00		4	0.11
	0+25	E	292	4.60
	0+50		100	4.20
	0+75		58	0.98
	1+00		52	0.31
	1+25		24	0.21
	1+50		192	0.68
	1+75		176	0.56
	2+00		8	0.15
	2+25		2	0.16
	2+50		2	0.36
	3+00		8	0.12
	3+25		6	0.11
	3+50		2	0.12
	3+75		8	0.42
	4+00		18	0.25
	4+50		4	0.21
	4+75		4	0.15
	5+00		4	0.16
	5+50		2	0.12
	5+75		8	0.26
	6+00		6	0.12
	6+25		2	0.47
	6+50		4	0.12

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 3+00 S 6+75 E	22	0.16
L 3+50 S 2+25 E	12	0.18
2+50	368	0.85
2+75	288	0.55
3+00	16	0.12
3+50	4	0.14
3+75	8	0.23
L 4+00 S 10+00 W	4	0.10
9+75	6	0.11
9+50	2	0.16
9+25	2	0.12
9+00	4	0.14
8+75	6	0.09
8+50	6	0.41
8+25	12	0.83
8+00	12	0.70
7+75	4	0.50
7+50	18	0.51
7+00	10	0.50
6+75	4	0.26
6+25	4	0.22
6+00	2	0.27
5+75	8	0.28
5+50	16	0.39
5+00	4	0.43
4+75	16	1.32
4+00	16	0.72
2+50	20	0.33
2+25	18	0.56
1+75	2	0.41
1+25	20	0.78
1+00	48	0.74
0+25	4	0.42
BL	34	0.30
0+25 E	50	0.15
0+50	4	0.16
0+75	20	0.36
1+00	80	7.20
1+25	44	0.22
1+50	10	0.20

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 4+00 S 1+75 E	8	0.08
2+00	4	0.09
2+25	2	0.09
2+50	4	0.11
2+75	4	0.19
3+00	10	0.11
3+25	14	0.09
3+50	12	0.11
3+75	4	0.08
4+00	220	0.23
4+25	102	0.17
L 4+50 S 0+25 E	4	0.08
0+50	6	0.15
0+75	2	0.11
1+00	6	0.06
1+25	6	0.15
1+50	4	0.19
1+75	16	0.36
2+00	10	0.13
2+25	2	0.20
2+50	8	0.28
2+75	6	0.19
3+00	4	0.12
3+25	2	0.25
3+50	2	0.10
3+75	8	0.10
4+00	4	0.08
4+25	8	0.09
4+50	4	0.15
L 5+00 S 10+00 W	272	0.28
9+75	4	0.11
9+50	2	0.14
9+25	8	0.36
9+00	6	0.14
8+50	28	0.09
8+25	4	0.16
8+00	6	0.17
7+75	2	0.13
7+25	4	0.08
7+00	2	0.14

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 5+00 S 6+75 W	4	0.14
5+00	6	0.34
4+75	12	0.58
1+75	288	1.11
1+25	8	0.26
0+50	8	0.25
0+25	6	0.11
BL	10	0.12
0+25 E	4	0.10
0+50	4	0.05
1+00	4	0.10
1+25	6	0.17
1+50	6	0.13
1+75	4	0.31
2+00	2	0.20
2+25	8	0.16
2+50	2	0.12
2+75	2	0.16
3+00	4	0.14
3+25	2	0.11
3+50	4	0.13
3+75	2	0.07
4+00	8	0.32
4+50	12	0.16
4+75	652	0.62
L 5+50 S 0+25 E	8	0.10
0+50	2	0.12
0+75	2	0.10
1+00	2	0.08
1+25	8	0.17
1+50	6	0.09
1+75	2	0.14
2+00	8	0.16
2+25	2	0.24
2+50	2	0.13
2+75	2	0.06
3+25	4	0.14
3+75	8	0.16
L 6+00 S 10+00 W	2	0.11
9+75	4	0.12

Job#: 90-184

Project: BC-88-6

	Sample Number	Au ppb	Ag ppm
L 6+00 S	9+50	4	0.17
	9+25	4	0.12
	9+00	12	0.26
	8+25	2	0.24
	8+00	2	0.12
	7+75	4	0.08
	6+25	6	0.11
	6+00	2	0.16
	4+50	4	0.23
	4+00	4	0.77
	3+50	16	1.20
	3+25	6	1.58
	2+75	2	1.36
	2+50	8	0.78
	2+25	56	0.97
	1+50	6	0.42
	1+25	26	1.84
	1+00	16	0.43
	0+75	12	1.06
	0+25	20	0.82
	0+00	4	0.17
	0+25 E	2	0.14
	0+50	2	0.20
	0+75	10	0.15
	1+00	20	0.07
	1+25	4	0.32
	1+50	6	0.11
	1+75	4	0.17
	2+00	2	0.09
	2+25	2	0.15
	2+50	2	0.14
	2+75	8	0.12
	3+00	8	0.05
	3+25	4	0.08
	3+50	6	0.14
	3+75	6	0.12
	4+00	16	0.18
	4+25	12	0.31
	4+75	4	0.12
L 6+50 S	0+25 E	8	0.08

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 6+50 S 0+50 E	6	0.16
0+75	2	0.16
1+00	8	0.08
1+25	6	0.05
1+50	6	0.07
1+75	88	0.13
2+00	6	0.15
2+25	6	0.12
2+50	6	0.08
2+75	4	0.08
3+00	6	0.07
3+25	2	0.06
3+50	6	0.11
3+75	2	0.08
4+00	6	0.60
4+25	6	0.62
4+50	12	0.24
4+75	134	0.15
L 7+00 S 10+00 W	4	0.18
9+75	6	0.14
9+50	2	0.05
9+25	2	0.10
9+00	4	0.14
8+50	2	0.09
8+25	6	0.24
8+00	6	0.17
7+75	4	0.06
7+50	8	0.13
7+25	32	0.10
7+00	6	0.04
6+75	8	0.07
6+50	4	0.13
6+25	14	0.12
6+00	8	0.16
5+50	2	0.14
4+50	2	0.15
4+25	2	0.25
4+00	2	0.21
3+75	4	0.13
3+50	22	0.11

Job#: 90-184

Project: BC-88-6

	Sample Number	Au ppb	Ag ppm
L 7+00 S	3+25 W	4	0.06
	3+00	14	0.13
	2+75	10	0.14
	2+25	4	0.19
	2+00	4	0.22
	1+75	2	0.08
	0+75	2	0.29
	0+50	12	0.18
	0+25	2	0.41
	0+00	2	0.34
	0+25 E	106	0.15
	0+50	2	0.13
	0+75	2	0.20
	1+00	2	0.12
	1+25	2	0.11
	1+50	2	0.09
	1+75	4	0.11
	2+00	4	0.13
	2+25	2	0.09
	2+50	2	0.14
	2+75	2	0.20
	3+00	2	0.11
	3+25	2	0.10
	3+50	2	0.09
	3+75	4	0.15
	4+00	8	0.26
	4+25	4	0.98
	4+50	28	0.36
	4+75	10	0.20
L 8+00 S	10+00 W	4	0.19
	9+75	4	0.11
	9+50	4	0.13
	9+25	4	0.13
	9+00	4	0.15
	8+75	2	0.15
	8+50	2	0.10
	8+25	4	0.33
	8+00	10	0.19
	7+75	8	0.22
	7+50	4	0.20

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
L 8+00 S 7+00 W	4	0.10
6+75	2	0.09
6+50	12	0.26
6+25	6	0.10
6+00	16	0.11
5+75	8	0.22
5+50	8	0.10
5+25	18	0.15
4+25	2	0.11
3+75	2	0.15
3+25	2	0.18
3+00	2	0.25
2+75	6	0.34
2+50	36	0.23
2+25	6	0.68
2+00	24	0.55
1+75	10	0.54
1+50	4	0.16
0+00	14	0.10
L 9+00 S 10+00 W	4	0.23
9+75	4	0.30
6+75	8	0.20
6+00	6	0.25
5+75	4	0.21
5+50	2	0.23
5+25	12	0.20
5+00	8	0.14
4+50	8	0.70
4+25	2	0.09
3+75	6	0.12
2+00	4	0.50
1+50	8	1.02
0+75	8	0.39
0+25	8	0.13
0+00	10	0.15
L 11+00 S 13+50 W	4280	3.40
11+25	1534	6.90
L 100 S 150 W	114	0.17
100 W	2	0.17
L 200 S 250 W	4	0.32

Job#: 90-184

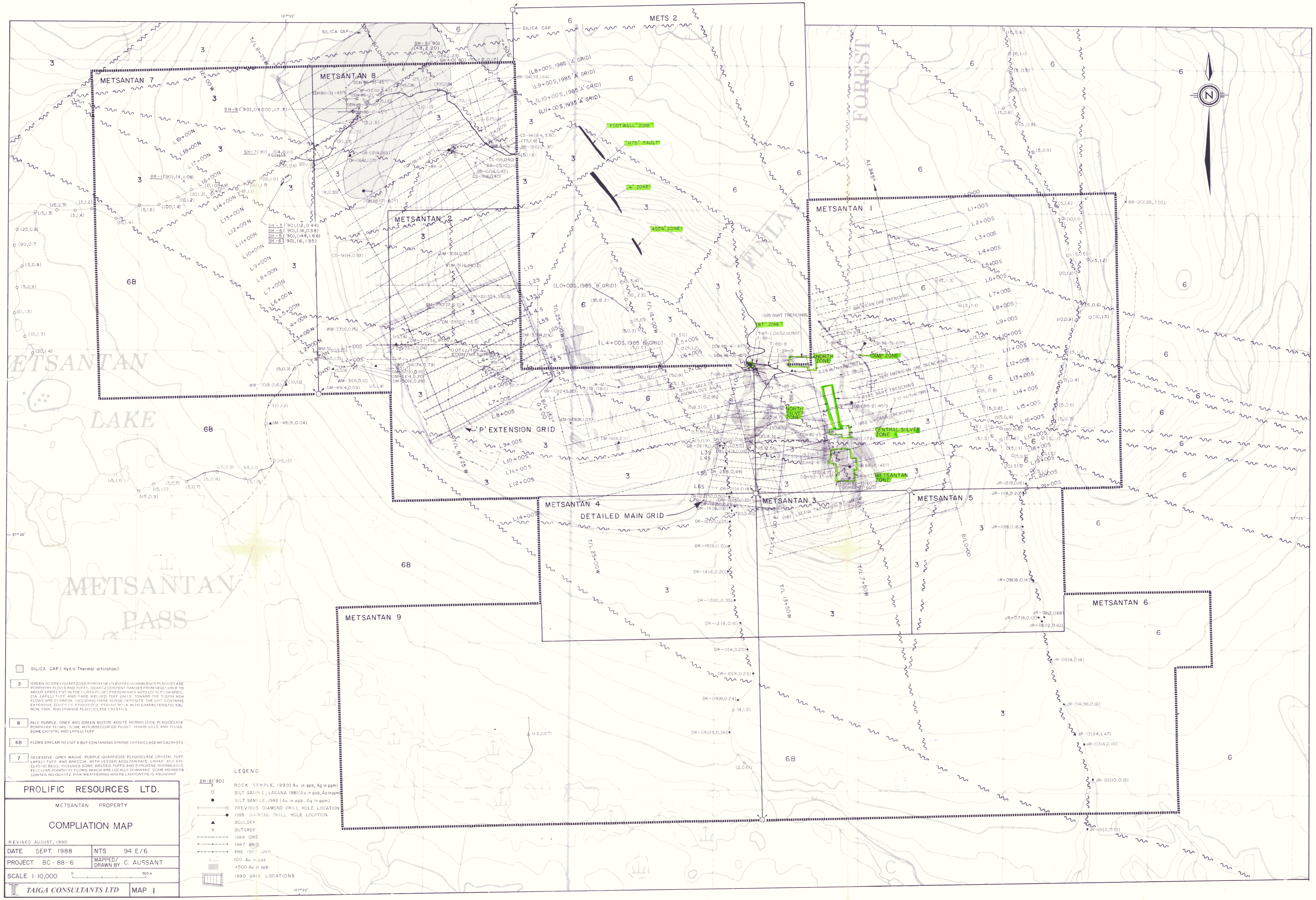
Project: BC-88-6

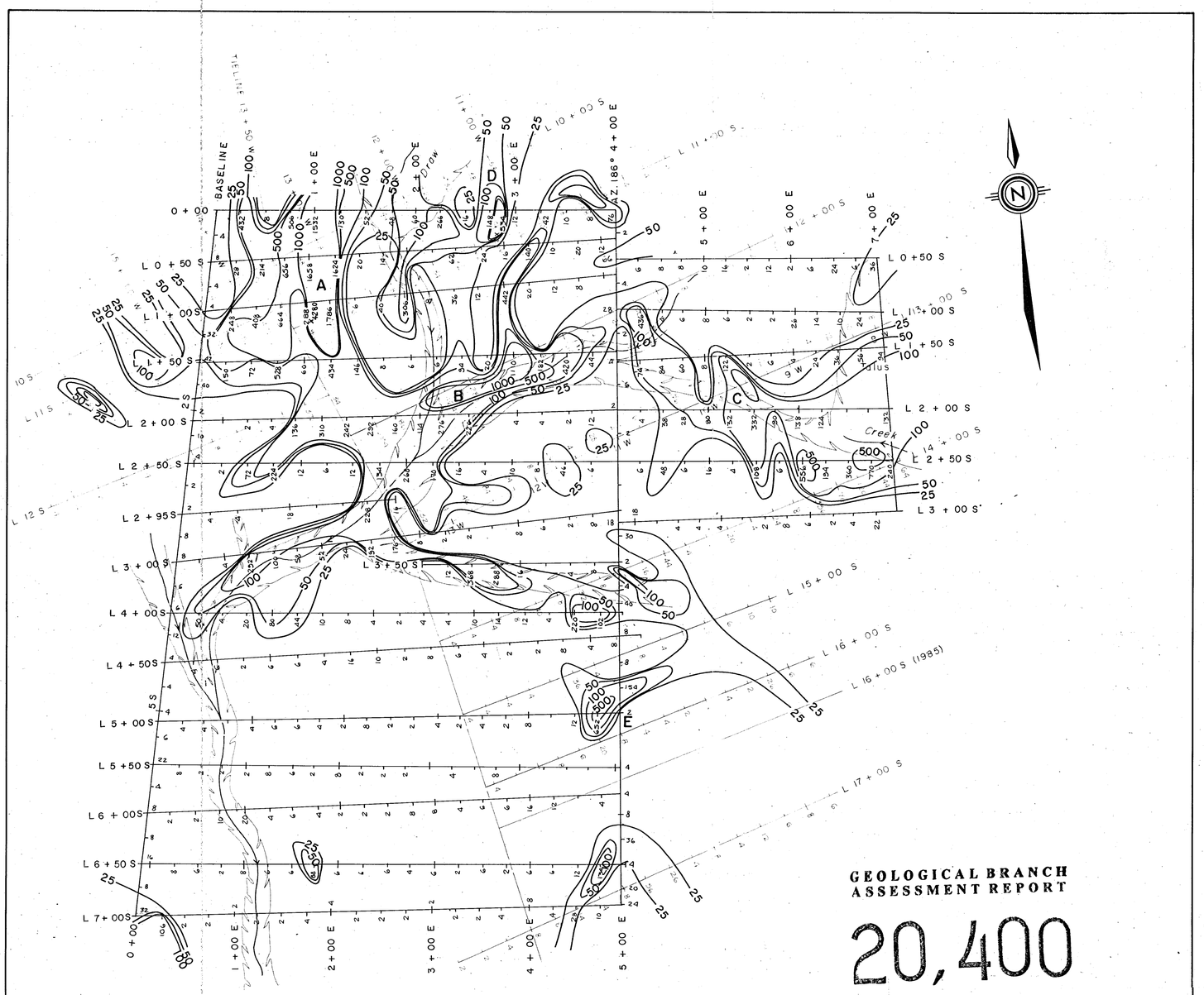
Sample Number	Au ppb	Ag ppm
TL 4 E 0+25 S	2	0.60
0+50	66	0.82
0+75	4	1.51
1+00	28	9.60
1+25	2	0.16
1+50	4	0.37
1+75	6	0.12
2+00	2	0.12
2+25	2	0.15
3+00	18	0.72
3+25	30	0.46
3+50	2	0.20
3+75	4	0.18
4+00	40	0.25
4+25	6	0.24
4+50	8	0.27
4+75	154	0.41
5+00	2	0.28
5+50	4	0.38
5+75	4	0.24
6+10	8	0.17
6+25	36	0.20
6+50	4	0.22
6+75	20	0.26
6+90	24	0.46
TL 8+25 W 0+50 S	12	0.36
0+75	12	0.52
1+00	2	0.20
1+25	2	0.23
1+50	2	0.25
1+75	2	0.18
2+00	2	0.20
2+25	4	0.22
2+50	6	0.64
2+75	6	0.24
3+00	2	0.12
3+25	2	0.10
3+50	2	0.12
3+75	2	0.11
4+50	2	0.09

Job#: 90-184

Project: BC-88-6

Sample Number	Au ppb	Ag ppm
TL 8+25 W 5+00 S	2	0.21
5+25	2	0.13
5+50	2	0.20
5+75	2	0.23
6+00	4	0.14
6+25	6	0.18
6+50	2	0.17
6+75	6	0.14
7+00	2	0.21
7+50	4	0.11
8+00	42	0.12
8+75	2	0.16
9+00	6	0.15





NOTE:

L 12 S 856 2254

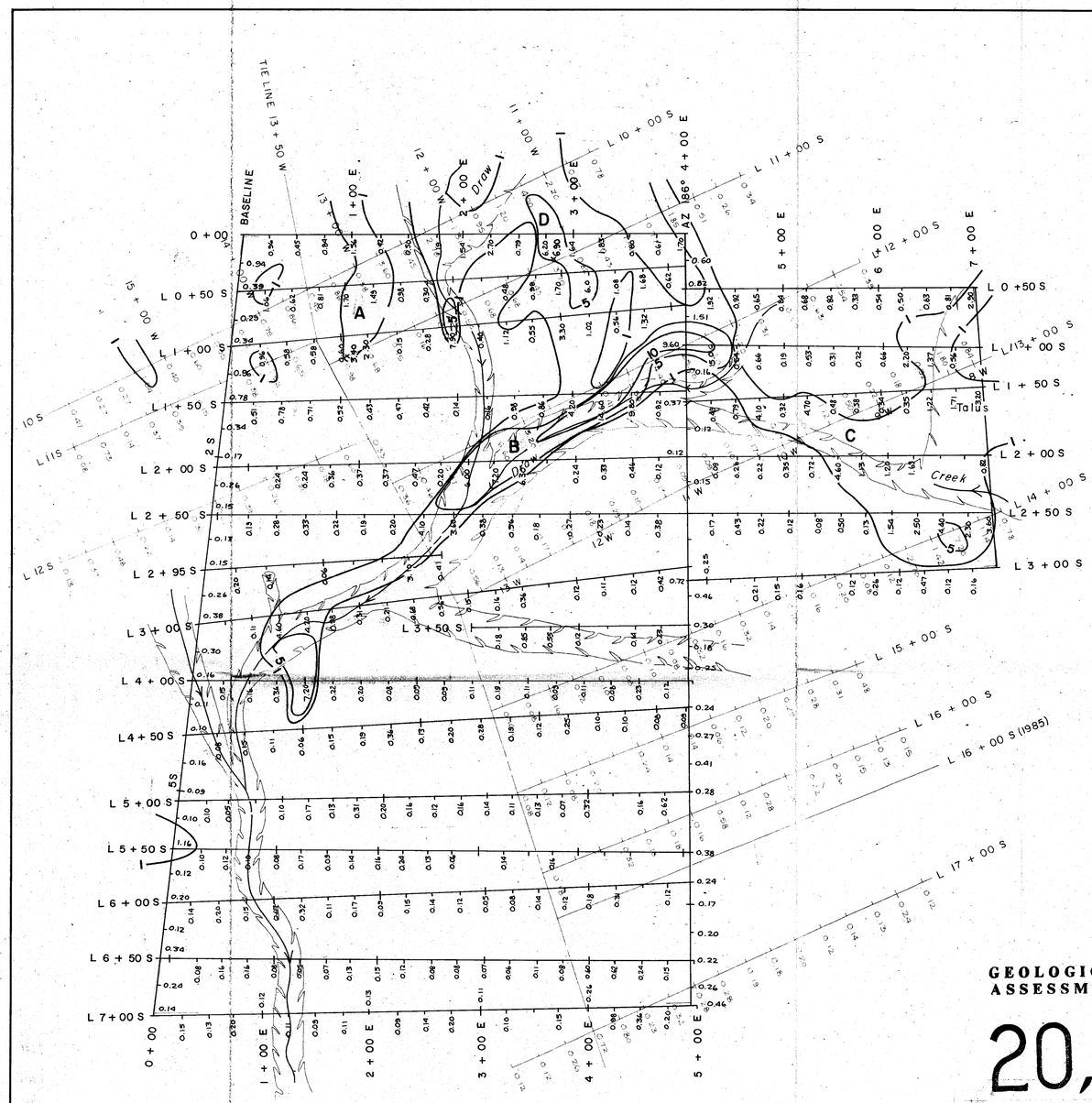
1988 SOIL GEOCHEMICAL RESULTS (Au ppb)

CONTOUR INTERVAL 25, 50, 100, 500, 1000.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,400

SKEENA RESOURCES LTD	
METSANTAN PROPERTY DETAILED MAIN GRID SOIL GEOCHEMICAL SURVEY Au (ppb)	
DATE AUGUST, 1990	NTS 94 E/6
PROJECT BC-88-6	MAPPED/ DRAWN BY C.A./M.A.P.
SCALE 1:2,500	50 0 50 100 m
TAIGA CONSULTANTS LTD	MAP 2



NOTE:

1988 SOIL GEOCHEMICAL RESULTS (Ag ppm)

CONTOUR INTERVAL 1, 5, 10.

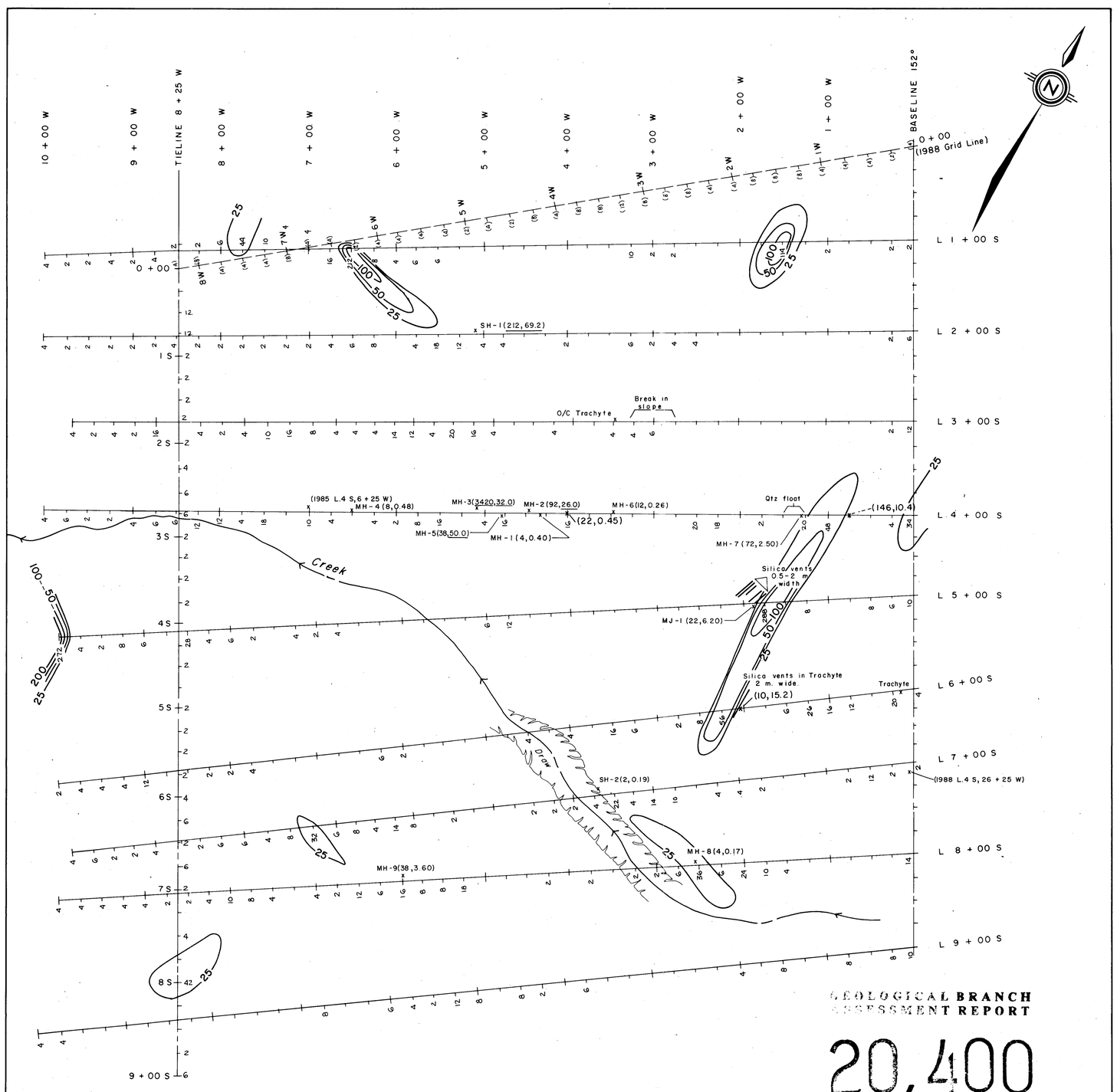
GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,400

SKEENA RESOURCES LTD

METSANTAN PROPERTY
DETAILED MAIN GRID
SOIL GEOCHEMICAL SURVEY
Ag (ppm)

DATE AUGUST, 1990	NTS 94 E/6
PROJECT BC-88-6	MAPPED/DRAWN BY C.A. / M.A.P.
SCALE 1:2,500	50 0 50 100 m
TAIGA CONSULTANTS LTD	MAP 3



NOTES:

VALUES IN ( ) ON LINE 0+00 ARE 1988 SOIL GEOCHEMICAL RESULTS (Au ppb)

SH-1 x(212,69.2) ROCK SAMPLE SITE, ROCK SAMPLE NUMBER (Au ppb, Ag ppm)

CONTOUR INTERVAL 25, 50, 100.

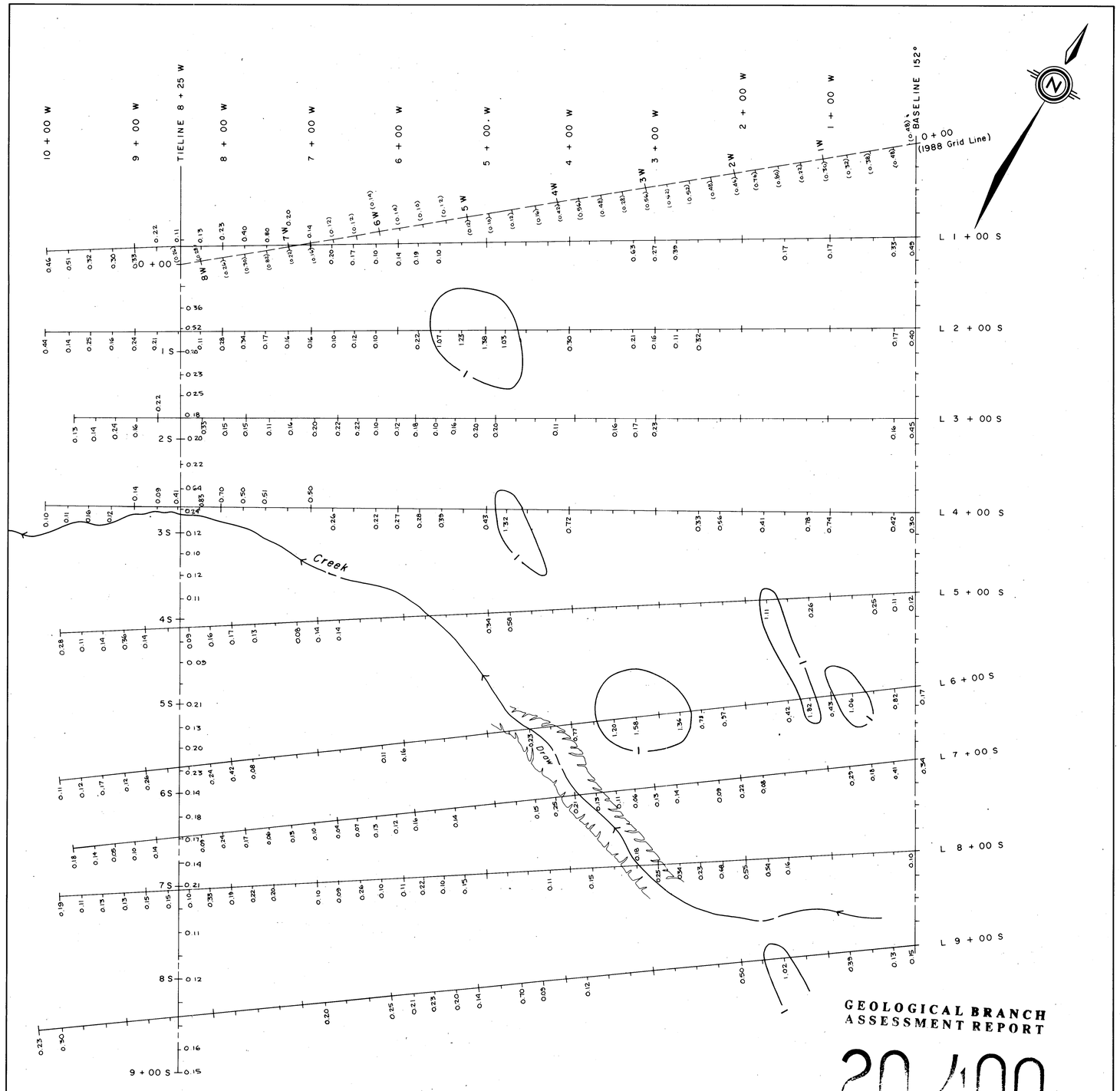
GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,400

SKEENA RESOURCES LTD

METSANTAN PROPERTY
'P' GRID EXTENSION
SOIL GEOCHEMICAL SURVEY
Au (ppb)

DATE AUGUST, 1990	NTS 94 E/6
PROJECT BC-88-6	MAPPED/DRAWN BY C.A./M.A.P.
SCALE 1:2,500	50 0 50 100 m
TAIGA CONSULTANTS LTD	MAP 4



NOTES:

VALUES IN ( ) ON LINE 0+00 ARE 1988 SOIL GEOCHEMICAL RESULTS (Ag ppm)

CONTOUR INTERVAL 1, 5, 10.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,100

SKEENA RESOURCES LTD

METSANTAN PROPERTY
'P' GRID EXTENSION
SOIL GEOCHEMICAL SURVEY
Ag (ppm)

DATE AUGUST, 1990	NTS 94 E/6
PROJECT BC-88-6	MAPPED/DRAWN BY C.A./M.A.P.
SCALE 1:2,500	50 0 50 100 m
TAIGA CONSULTANTS LTD	MAP 5