86-170-14740

**Province of British Columbia** Ministry of Energy, Mines and Petroleum Resources

# ASSESSMENT REPORT TITLE PAGE AND SUMMARY

| TYPE OF REPORT/SURVEY(S) | TOTAL COST |
|---|---|
| PHYSICAL; GEOCHEMICAL | $28,575.54 |

AUTHOR(S) BRADFORD J. COOKE SIGNATURE(S) Brad Cooke

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED April 25, 1986 YEAR OF WORK 1985

PROPERTY NAME(S) MINTO MINE

COMMODITIES PRESENT Au, Ag, Cu, Pb, Zn, Sb

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 92 J/NE-75

MINING DIVISION LILLOOET NTS 92 J/1SE, 15W

LATITUDE 50°53.9' LONGITUDE 122°45.1'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:
Hillside Ext. 1-2 (Lots 3661, 3662), Minto Fr. (Lot 3664), Prince (Lot 3665), Frank Fr. (Lot 3666), Ex Fr. (Lot 3670) Om Fr (Lot 5718) Omega (Lot 5600), Omega 1-4 (Lots 5601, 5602, 5603, 5604), Alph Fr. (Lot 5719), Jack Fr. (Lot 7078), Golden Girl (Lot 3660)

OWNER(S)

(1) AVINO MINES AND RESOURCES LTD (2)

MAILING ADDRESS
100-455 GRANVILLE ST.
VANCOUVER BC V6C 1T1

OPERATOR(S) (that is, Company paying for the work)

(1) SAME (2)

MAILING ADDRESS
as above

FILMED

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):
The claims are underlain by north striking, steeply dipping basaltic volcanics and clastic sediments of the Middle Triassic age Bridge River Group which are intruded by Tertiary age porphyry dykes. Mineralization consists of disseminated arsenopyrite, pyrite, stibnite, tetrahedrite, sphalerite and galena occurring along shear zones near intrusive and stratigraphic contacts.

REFERENCES TO PREVIOUS WORK
A.R. 5364

(over)

## SUMMARY

The purpose of this document is to report on assessment work carried out on the Minto property between November 1 and December 15, 1985 as recommended by the writer in his qualifying report (Cooke, 1985). Included in this report are the results of talus sampling and excavator trenching, but not line cutting, geological mapping, soil sampling and VLF-EM surveying, which were covered in an earlier report (Symonds, 1985).

The Minto property occurs in the Bridge River district east of the main Bralorne-Pioneer belt of Triassic volcanic and sedimentary rocks. It is underlain by basaltic volcanics and cherty sediments of the Triassic Bridge River Group, intruded by porphyry dikes of Tertiary age, and mineralized with gold and silver along narrow shears near intrusive and stratigraphic contacts.

Some 57 talus samples were collected over 1.5 kilometres at 25 metre intervals along the main road to evaluate the less accessible cliffs above the road. A total of 24 trenches and 1.5 kilometres of road were dug to follow up geological and geochemical anomalies.

Virtually all of the talus samples are anomalous in Au, Ag, As, Sb, Pb and Zn due to downhill dispersion and sidehill contamination from known veins. However, at least one anomaly may reflect a hidden vein in the cliffs some 600 metres east of the Main adit.

Three new gold-bearing shear zones were discovered (Ponderosa, Winter, Rainbow), one old mineralized vein was extended (Dauntless) and two other areas (Minto, View) were tested. A best intersection of 0.23 oz/ton gold over 1.0 metres width was obtained on the Rainbow zone.

All six mineralized zones (Minto, Dauntless, View, Ponderosa, Winter, Rainbow) require more trenching, especially where the Winter and Rainbow zones intersect, where the Minto and Dauntless zones intersect and northwest of the View zones where three gullies contain porphyry dike fragments. The cliffs over the road also need more detailed mapping and sampling to explain the talus anomalies and evaluate the low grade, bulk tonnage potential of the porphyry dikes.

A two phase, CA $200,000 program is recommended to explore the Minto property. Phase 1, a continuation of surface work started in 1985, includes geological mapping, excavator trenching, underground sampling and sonic drilling, at a cost of CA $50,000 over a one month period. Phase 2, contingent upon the successful completion of Phase 1, involves diamond drilling from surface, at a cost of CA $150,000 over a two month period.

Phase 1 surface exploration calls for 5 kilometres of geological mapping to evaluate the cliffs above the road, 2 kilometres of excavator trenching to extend the known veins and discover new veins, 1 kilometre of underground sampling in the Main and Winter adits to identify potential ore shoots, and 500 feet of sonic drilling to test the old tailings for their gold content.

Phase 2 diamond drilling encompasses 6,000 feet in 20 holes to explore the Minto, Dauntless, Winter and Rainbow zones at 165 foot intervals along strike and down dip.

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# INTRODUCTION

## Purpose and Scope

The purpose of this document is to report on assessment work carried out on the Minto property between November 1 and December 15, 1985 as recommended by the writer in his qualifying report (Cooke, 1985). Included in this report are the results of talus sampling and excavator trenching, but not line cutting, geological mapping, soil sampling and VLF-EM surveying, which were covered in an earlier report (Symonds, 1985).

## Location and Access

Minto property is located approximately 9 kilometres northeast of Goldbridge and 180 kilometres north-northeast of Vancouver in southwestern British Columbia (Figure 1). Access to the property is by automobile from Vancouver, 145 kilometres east on Highway 1 to Hope, 225 kilometres north on Highways 1 and 12 to Lillooet, and 100 kilometres west on gravel road towards Goldbridge, where several old logging and powerline roads cross the claims.

## Physiography and Climate

The claims lie north of Carpenter Lake and south of Mowson Pond, at elevations of 655 metres along the lake to 1,020 metres on top of the hill southwest of the pond. Vegetation cover is typical coniferous forest that was selectively logged in the past, and the climate is characterized by hot, dry summers and cool, snowy winters.

## Accommodation and Labour

Goldbridge Hotel is convenient for room and board, self-contained suites are available for rent in Goldbridge, and there is a recreational campsite at Gun Creek. Cooke Geological Consultants Ltd. supervised the exploration program and contracted Hoedown Creek Resources Ltd. to carry out road building and excavator trenching.

## Claims Description

The Minto property consists of eight (8) crown grants, two of which are not contiguous with the others, and eight (8) reverted crown grants, totalling sixteen (16) units and covering 204 hectares in the Lillooet Mining Division (Figure 2). Total annual assessment on the claims is $869.22 for the whole group, rising to $1,669.22 after three years of filing (Table 1).

## Mining History

Exploration and mining history is summerized from the reports of many workers on the Minto property, with emphasis on British Columbia Minister of Mines Annual Reports and Company Reports (see References).

First staked around 1910, the claims were worked intermittently until 1930, when Consolidated Mining and Smelting Company of Canada Ltd. optioned the property and drove the River (400), Hagmo (200) and Warren (100) adits in 1931 and 1932. Minto Gold Mines Ltd. acquired the claims in 1933, extended the existing tunnels and drove the Main (300) adit, an internal shaft, and the 500 and 700 levels, producing 50 tons per day in 1934 and 125 tons per day between 1935 and 1937.

Some broken ore and underground pillars were extracted in 1940 and Pioneer Gold Mines Ltd. took an option on the property in 1941, but dropped it in 1942. Total production from the Minto mine amounted to 88,902 tons ore grading 0.20 oz/ton gold and 0.58 oz/ton silver.

The Winter zone was discovered in 1943 and an adit was driven 145 metres on the vein. Surface trenching and diamond drilling, totalling 514 metres in seven (7) holes, were undertaken in 1944, followed by 691 metres of diamond drilling in seven (7) holes underground in 1945. The property fell dormant thereafter until Avino Mines and Resources Ltd. acquired the claims in 1985 and carried out surface surveys, in preparation for the trenching and sampling program reported herein.

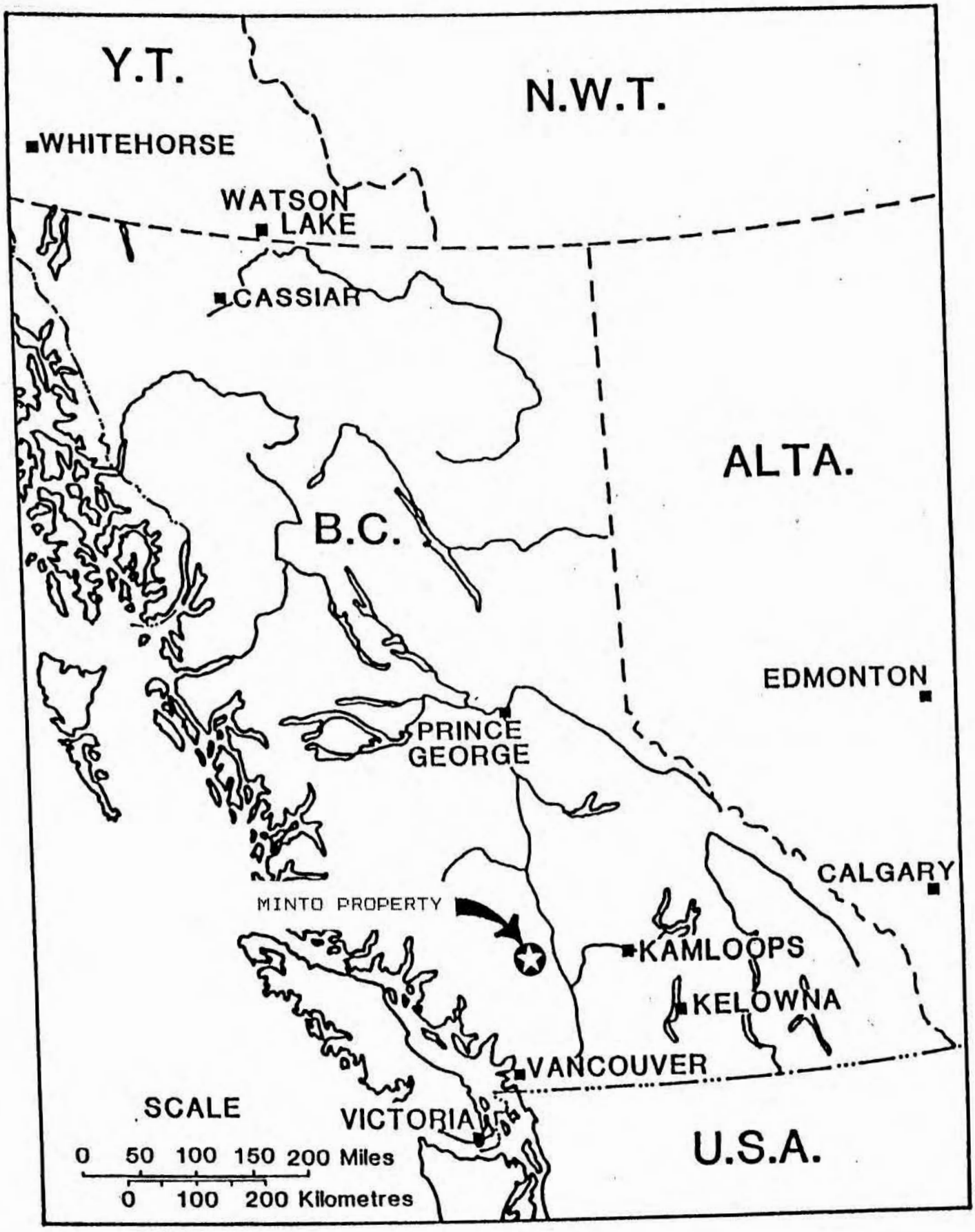



Figure 1. Location map.

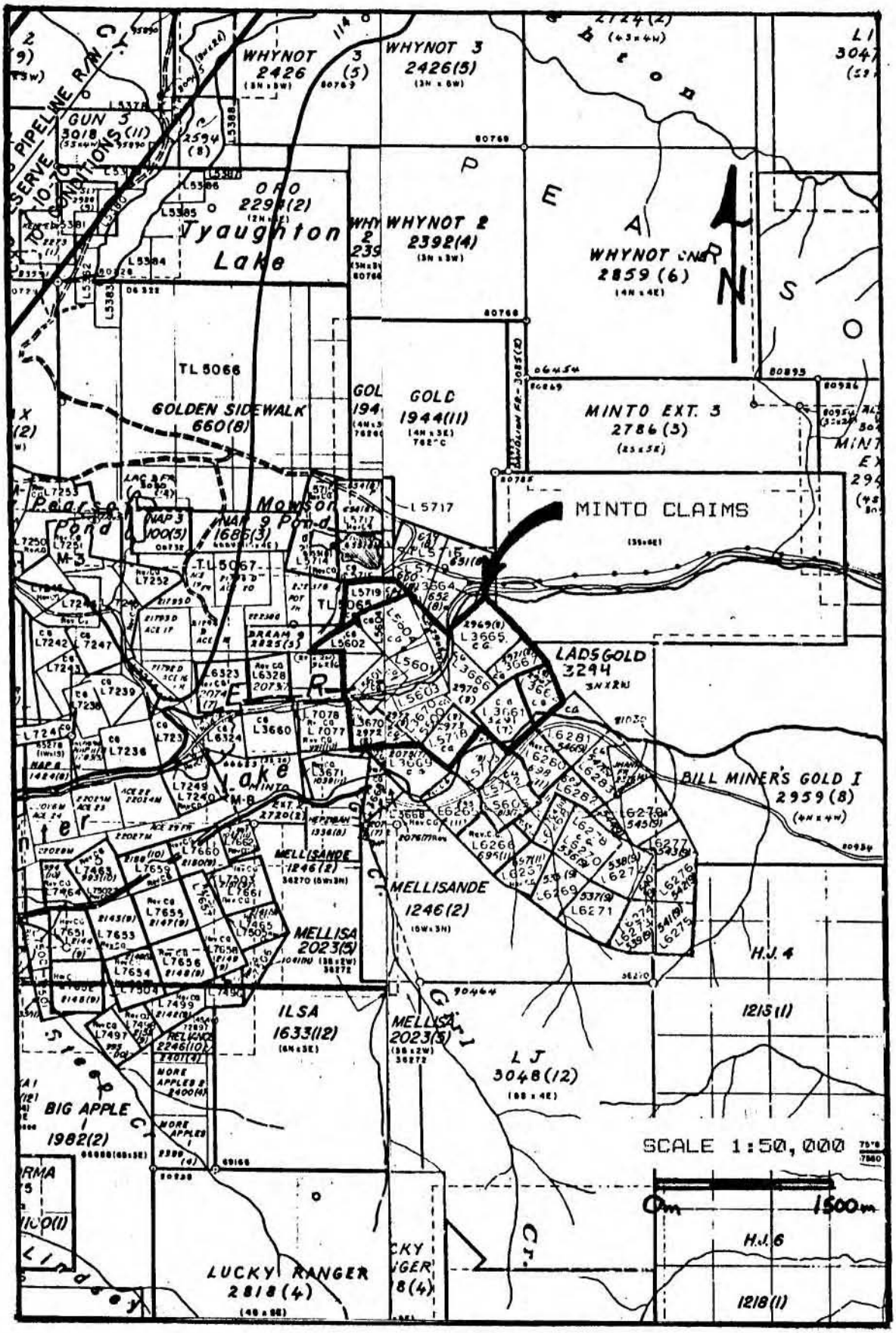



FIGURE 2: Claim map.

| Name | Record | Lot | Assess. | Expiry |
|---|---|---|---|---|
| Omega | | 5600 | 56.26 | 31Dec85 |
| Omega 1 | | 5601 | | " |
| Omega 2 | | 5602 | | " |
| Omega 3 | | 5603 | | " |
| Omega 4 | | 5604 | | " |
| Alph Fr. | | 5719 | | " |
| Jack Fr. | | 7078 | 12.96 | " |
| Golden Girl | | 3660 | | " |
| Hillside Ext. 1 | 2933 | 3661 | 100.00 | 26Jul85 |
| Hillside Ext. 2 | 2967 | 3662 | " | 27Aug85 |
| Minto Fr. | 2968 | 3664 | " | " |
| Prince | 2969 | 3665 | " | " |
| Frank Fr. | 2970 | 3666 | " | " |
| Hagmo | 2971 | 3667 | " | " |
| Ex Fr. | 2972 | 3670 | " | " |
| Om Fr. | 2973 | 5718 | " | " |

TABLE 1: Claim list.

## GEOLOGY

### Regional

Regional geology and tectonics are summarized from the reports of many workers in the Bridge River district, with emphasis on Geological Survey of Canada Reports and University of British Columbia Reports (see References).

The Bridge River district lies at the western margin of the Intermontaine Belt of volcanic and sedimentary rocks where it abuts against the Coast Plutonic Complex of plutonic and metamorphic rocks (Figure 3). Triassic arc volcanics and backarc sediments (Cadwallader and Bridge River Groups) are intruded by synvolcanic, intermediate plutons (Bralorne Intrusions) and faulted against ophiolitic, ultramafic intrusions (President Intrusions) (Table 2).

Jurassic and Cretaceous basinal sediments and rift volcanics (unnamed, Taylor Creek and Kingsvale Groups) are sequentially intruded by Cretaceous and Tertiary plutons of felsic composition (Coast, porphyry and Bendor Intrusions). Relatively flat-lying Tertiary intermediate and mafic volcanics (Rexmount porphyry and plateau basalt) cap the lithological sequence.

Triassic rocks probably formed a discrete plate, the Bridge River terrane, prior to collision with the North American plate to the northeast in Jurassic time. That collision thrusted arc volcanics, backarc sediments and oceanic crust onto the already assembled exotic terranes of the Intermontaine Belt and prompted uplift and erosion that produced the Jurassic and Cretaceous sediments.

Bridge River terrane then got sandwiched by the arrival of eastward-drifting Insular belt rocks from the west in Cretaceous time. This collision probably remobilized old faults and sparked several periods of intrusive activity that resulted in Cretaceous and Tertiary plutons and volcanics.

Old breaks such as the Fergusson and Cadwallader faults were probably mobilized again as Tertiary dextral strike-slip faults, followed by extrusion of plateau basalts in response to extensional tectonics. Finally, Pleistocene glaciation and Recent uplift and erosion sculpted the existing mountainous terrain.

Bralorne and Pioneer mines comprise the largest and richest lode gold mining camp in British Columbia. Between 1899 and 1971, they produced 4.16 million ounces gold and 0.95 million ounces silver from 8.23 million tons ore grading 0.51 oz/ton gold and 0.12 oz/ton silver. Gold-bearing quartz veins follow two sets of narrow fissures in Pioneer andesite and Bralorne diorite near Bralorne granite and albitite dikes. Mining stopped in ore some 2,000 metres down because of the ventilation problem and high mining costs.

Many other gold prospects in the region, such as the Minto mine on the Minto property, are gold-bearing sulfide replacements along narrow shears in Bridge River basalts and cherts, often near Tertiary porphyry dikes. A significant new discovery on the Congress property of Levon Resources Ltd., some 2.5 kilometres west of Avino's Minto claims, assays up to 0.37 oz/ton Au, 0.32 oz/ton Ag and 1.7% Sb over 6.9 metres true width. Thus, the exploration and mining potential of old prospects such as the Minto mine needs to be re-evaluated.

**Property**

The Minto property is underlain by north-striking, steeply west-dipping basaltic volcanics and cherty sediments of the Triassic Bridge River Group, intruded by north-trending, steeply east-dipping porphyry dikes of Tertiary age (Figure 4). Other lithologies include sheared argillite, altered serpentinite and andesite dikes.

Early tectonic deformation has shattered the cherts and sheared the argillites, but the more competent basalts are only mildly deformed. Gold-mineralized shear zones often follow the intrusive contacts of porphyry dikes or the stratigraphic contacts of sediments and volcanics and late, strike-slip faults offset the strata, dikes and veins.

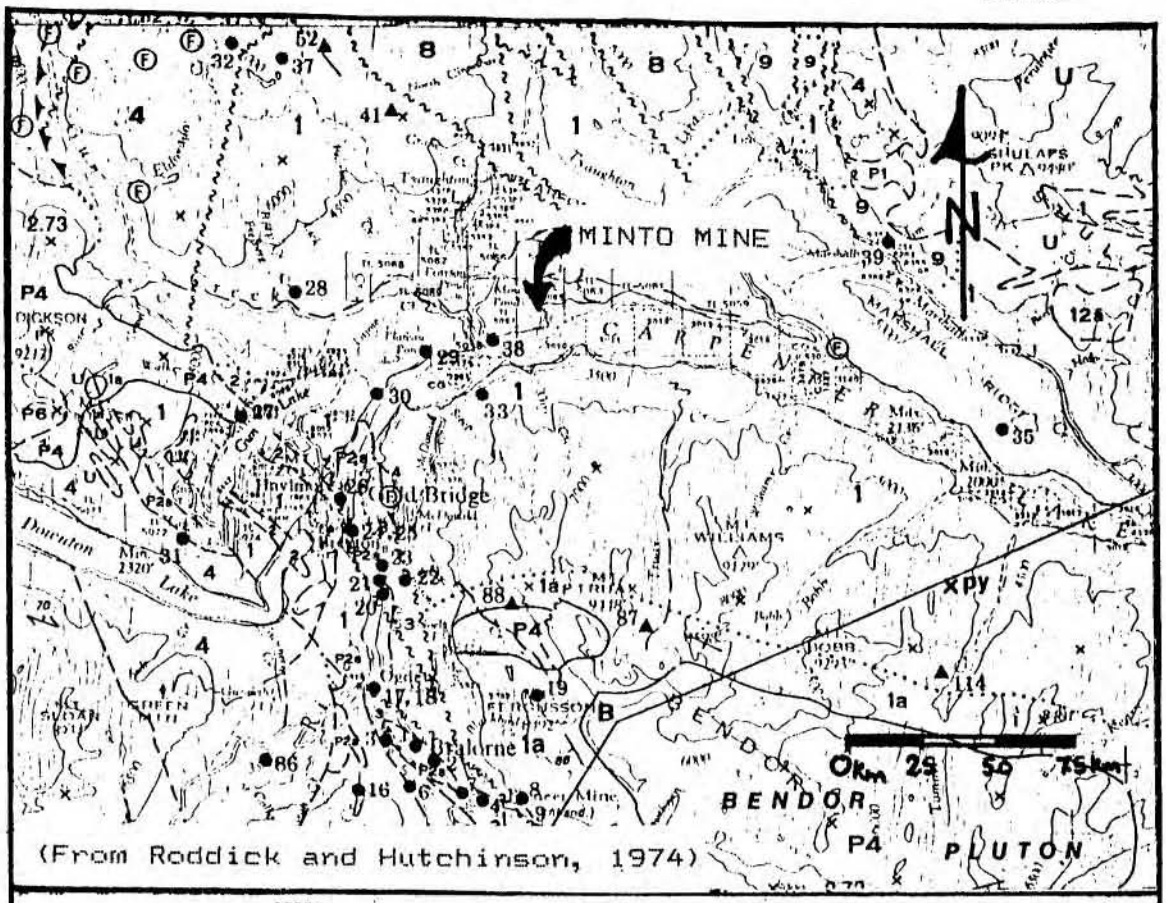
In the Minto mine, the Minto dike, a dark coloured, fine grained feldspar porphyry up to 6 metres wide, intrudes obliquely along a contact between basalt to the west and chert to the east, with the main vein striking north, dipping 75 degrees east, and averaging 1.2 metres wide along the dike footwall.

The vein has been explored for 460 metres along strike and 230 metres down dip by over 2,130 metres of underground workings, including 4 adits, 3 lower levels, a shaft and a winze. A main fault strikes north 75 west, dips 50 north, and offsets the south extension of the dike and vein some 75 metres to the east.

## Mineralization

Mineralization consists of quartz, calcite and mariposite veins and replacements containing disseminated to massive pyrite, arsenopyrite and stibnite, minor pyrrhotite, sphalerite and galena, and rare tetrahedrite, jamesonite, bismuth and gold. Silicification, carbonatization and pyritization also permeate sheared porphyry dike, footwall basalt and hangingwall chert and serpentinite.

Three new gold-bearing shear zones (Ponderosa, Winter, Rainbow) were discovered, one old mineralized vein (Dauntless) was extended, and two other areas (Minto, View) were tested by excavator trenching. It is apparent that the mineralized shears follow two intersecting trends; earlier, north-striking arsenopyrite rich veins (Minto, Winter) and later, east-northeast striking stibnite-rich veins (Dauntless, Rainbow).




LEGEND

QUATERNARY
PLEISTOCENE AND RECENT

14 Unconsolidated alluvial and glacial deposits

TERTIARY
MIOCENE (?)

13 Basalt and rhyolite flows

12 Rhyolite and dacite breccia, tuff and flows; 12a, Rexmount Porphyry (intrusive equivalent of 12?)

?P4e Miarolitic granodiorite and syenodiorite

LOWER TERTIARY

11 Andesite flows and breccia; basalt and minor dacite

10 Shale, siltstone, sandstone, arkose and conglomerate

CRETACEOUS
UPPER CRETACEOUS

P4 SCUZZY PLUTON (K-A 70 m.y.): granodiorite

KINGSVALE GROUP

9 Arkose, greywacke, shale and minor conglomerate

LOWER CRETACEOUS
TAYLOR CREEK GROUP

8 Chert-pebble conglomerate, black banded limy shale, green tuff, volcanic breccia, andesite and basalt

JACKASS MOUNTAIN GROUP

7 Undifferentiated; 7a, interbedded carbonaceous argillite and greywacke; minor conglomerate and coal; 7b, greywacke; pebble conglomerate, argillite and gritty sandstone; 7c, argillite; conglomerate and greywacke; 7d, massive greenish greywacke, argillite, gritty sandstone and pebble conglomerate

JURASSIC AND CRETACEOUS
UPPER JURASSIC AND LOWER CRETACEOUS
RELAY MOUNTAIN GROUP

6 Argillite; greywacke and pebble conglomerate

JURASSIC
LOWER JURASSIC

5 Argillite and shale; minor sandstone, limestone and pebble conglomerate

TRIASSIC
UPPER TRIASSIC

U Ultrabasic rocks

4 HURLEY FORMATION: Thin-bedded limy argillite, phyllite, limestone, tuff, conglomerate, agglomerate, andesite, and minor chert

3 PIONEER FORMATION: Greenstone derived from andesitic flows and pyroclastic rocks; 3a, andesite breccia, tuff and flows, greenstone; minor rhyolitic breccia and flows, slate, argillite, limestone and conglomerate

2 NOEL FORMATION: Thin-bedded argillite; chert, conglomerate and greenstone

MIDDLE TRIASSIC AND (?) OLDER
BRIDGE RIVER GROUP (FERGUSSON GROUP)

1 Chert, argillite, phyllite and greenstone; minor limestone, schist; 1a, metamorphosed rock of map-unit 1; mainly biotite schist

METAMORPHIC AND PLUTONIC ROCKS
(Mostly of unknown age)

B Metasedimentary rocks, mainly micaceous quartzite, biotite-hornblende schist, and minor schists bearing garnet, staurolite and possibly sillimanite

A Granitoid gneiss, migmatitic complexes, minor amphibolite and biotite schist

P6 Granite

P5 Quartz monzonite

P4 Granodiorite; 4a, miarolitic granodiorite and syenodiorite

P3 Quartz diorite

P2 Diorite; 2a, Braiorne intrusions: Augite diorite, gabbro, minor soda granite and quartz diorite

P1 Gabbro

Figure 3: Regional geology map.

| PERIOD | UNIT | LITHOLOGY |
|---|---|---|
| upper Tertiary | Plateau basalt | basalt, rhyolite flows, breccias |
| | | unconformable contact |
| lower Tertiary | Rexmount porphyry | rhyolite, dacite, andesite tuffs, breccias, flows, plugs |
| | | unconformable contact |
| upper Cretaceous | Porphyry dikes | quartz, feldspar, hornblende porphyry dikes |
| | | intrusive contact |
| | Coast Range intrusions | quartz diorite, diorite, granodiorite |
| | | intrusive contact |
| | Kingsvale group | arkose, greywacke, shale, conglomerate |
| | | unconformable contact |
| lower Cretaceous | Taylor Creek group | conglomerate, shale, tuff, breccia |
| | | unconformable contact |
| lower Jurassic | Unnamed sediments | argillite, shale, sandstone, limestone, conglomerate |
| | | unconformable contact |
| upper Triassic | Bralorne intrusions | augite diorite, soda granite, albitite dikes |
| | | intrusive contact |
| | President intrusions | serpentinite, peridotite, pyroxenite, dunite, gabbro |
| | | fault contact |
| | Cadwallader group<br>Hurley formation | limy argillite, phyllite, limestone, tuff, conglomerate, greenstone, chert |
| | Pioneer formation | greenstone, basalt, andesite, flows, tuffs |
| | Noel formation | argillite, chert, conglomerate, greenstone |
| | | conformable contact? |
| middle Triassic | Bridge River group | chert, argillite, phyllite, limestone, greenstone, metamorphic equivalents |

Table 2: Formation names, ages and lithologies.

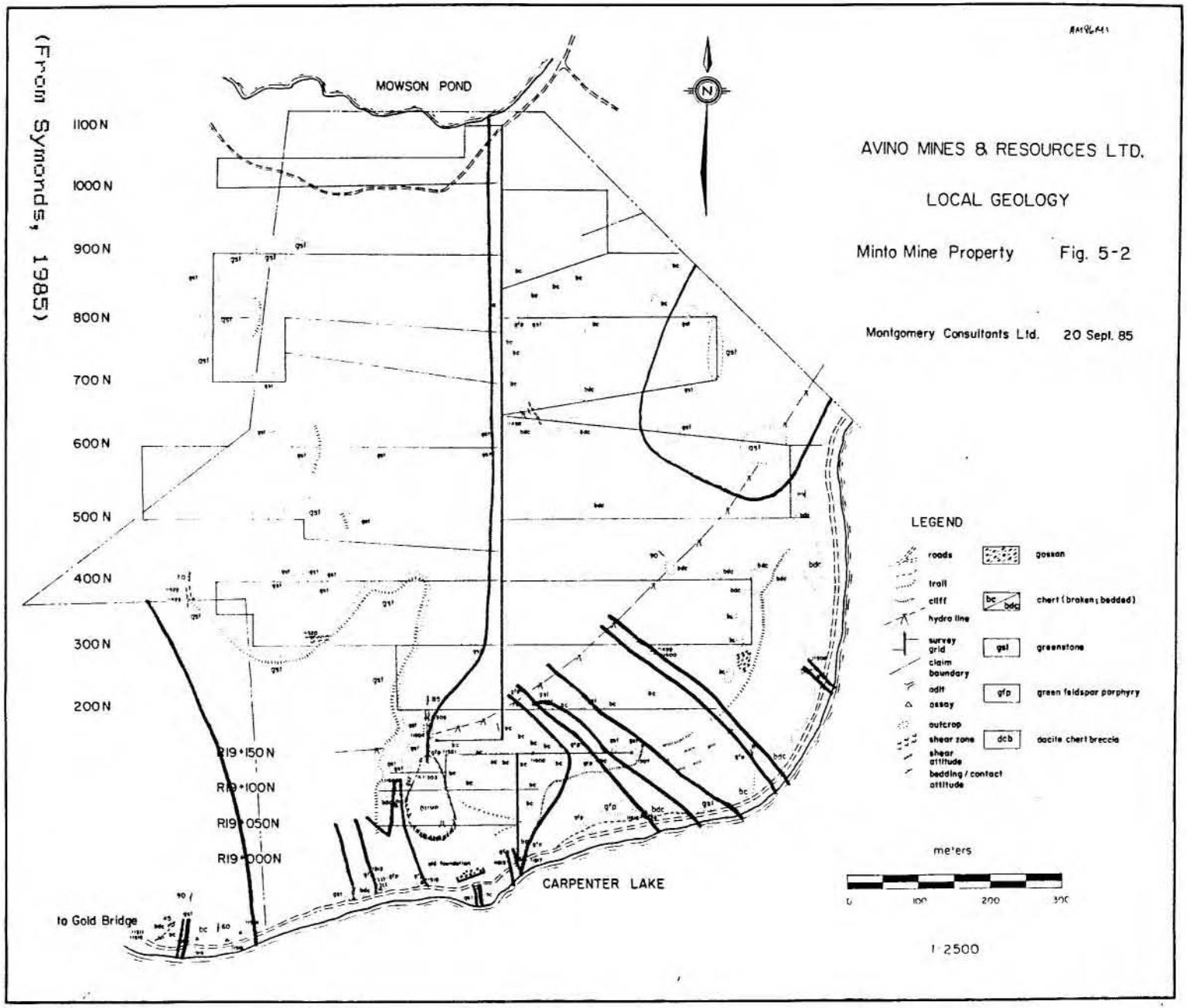



FIGURE 4: Property geology map.

## GEOCHEMISTRY

### Soils

Visual inspection of the soil geochemistry maps, (Symonds, 1985) suggests that gold and arsenic occur together in two discrete anomalies east of the baseline, whereas silver and antimony form at least two anomalies west of the baseline, and lead and zinc form spot highs that in general do not conform with the other elements.

### Talus

A total of 57 talus fine samples were collected over 1.5 kilometres at 25 metre intervals along the main road to evaluate the more inaccessible cliffs above the road. Unfortunately, a bulldozer trench has been cut above the road over the Minto mine, introducing the possibility of contamination in this area.

Nevertheless, virtually all of the samples are anomalous in Au, Ag, As, Sb, Pb, an Zn, indicating strong downhill dispersion and concentration of metals from known zones and possibly hidden veins (Figure 5). In particular, gold highs occur downslope from the Hagmo adit, east of the Main adit, downslope from the Winter trenches and downslope from a hidden vein? some 600 metres east of the Main adit.

## TRENCHING

### General Program

Some 24 trenches and 1.5 kilometres of road were dug with a Caterpiller 215 excavator to follow-up geological and geochemical anomalies (Symonds, 1985). Three new gold-bearing shear zones were discovered, (Ponderosa, Winter, Rainbow), one old mineralized vein was extended (Dauntless), and two other areas were tested (Minto, View).

Minto mine (TR23) and View zone (TR22) were not exposed in two trenches on surface due to deep overburden. The surface trace of the Minto vein is covered by deep talus above the open stope, and the View zone geochemical anomaly appears to be a dip-face of an unexposed, south-dipping dike and/or shear.

### New Discoveries

Dauntless adit actually penetrates onto the Minto claims where the vein pinches down to 10 cm wide. The Dauntless zone (TR1 and TR2) was extended by two trenches for 25 metres onto the Minto claims, running up to 0.038 oz/ton gold over 0.5 metres width (Table 3).

Ponderosa zone is a wide area of mineralized cherts, carrying small arsenopyrite-pyrite veins and lenses. The best intersection from two trenches (TR13 and TR14) assays 0.024 oz/ton gold over 12.0 metres width.

Rainbow zone is a narrow shear containing stibnite-arsenopyrite-pyrite veins in seven (7) trenches (TR15 to TR21) over 200 metres along strike. Values up to 0.227 oz/ton gold over 1.0 metres width were obtained.

Winter zone was previously explored by a 145 metre adit in 1943, with galena-sphalerite-stibnite-arsenopyrite-pyrite veins occurring in a narrow shear in ten (10) trenches over a 200 metre strike length. Assays up to 0.122 oz/ton gold over 1.5 metres width were received.

| Zone | Trench | Width (metres) | Gold (oz/ton) | Width (metres) | Silver (oz/ton) |
|---|---|---|---|---|---|
| Dauntless | TR1 | 0.50 | 0.029 | 0.50 | 0.130 |
| | TR2 | 0.50 | 0.038 | 0.50 | 0.194 |
| Winter | TR3 | 1.25 | 0.101 | 1.75 | 1.720 |
| | TR4 | 1.50 | 0.122 | 1.60 | 0.343 |
| | TR5 | 0.37 | 0.038 | 0.75 | 0.590 |
| | TR6 | 0.25 | 0.021 | 0.50 | 0.320 |
| | TR7 | 0.50 | 0.048 | 0.75 | 0.395 |
| | TR8 | no sigificant assays | | | |
| | TR9 | 0.25 | 0.047 | 1.50 | 0.173 |
| | TR10 | 0.50 | 0.134 | | |
| | TR11 | 0.25 | 0.033 | 1.00 | 0.278 |
| | TR12 | overburden no bedrock | | | |
| Ponderosa | TR13 | 4.50 | 0.029 | | |
| | | 12.00 | 0.024 | | |
| | TR14 | 0.75 | 0.018 | | |
| | | 0.20 | 0.064 | | |
| Rainbow | TR15 | 1.00 | 00.227 | 1.50 | 0.101 |
| | TR16 | no significant assays | | | |
| | TR17 | 0.25 | 0.073 | 0.25 | 0.255 |
| | TR18 | 0.50 | 0.020 | 2.25 | 0.160 |
| | TR19 | 0.25 | 0.064 | 0.25 | 0.281 |
| | TR20 | 0.50 | 0.025 | 0.25 | 0.059 |
| | TR21 | overburden no bedrock | | | |
| View | TR22 | overburden no bedrock | | | |
| Minto | TR23 | overburden no bedrock | | | |

TABLE 3: Trench list.

## CONCLUSION

### Conclusions

1) The Minto property occurs in the Bridge River district east of the main Bralorne-Pioneer belt of Triassic volcanic and sedimentary rocks. It is underlain by basaltic volcanics and cherty sediments of the Triassic Bridge River Group, intruded by porphyry dikes of Tertiary age, and mineralized along narrow shears near intrusive and stratigraphic contacts.

2) Some 57 talus samples were collected over 1.5 kilometres at 25 metre intervals along the main road to evaluate the less accessible cliffs above the road. A total of 24 trenches and 1.5 kilometres of road were dug to follow up geological and geochemical anomalies.

3) Virtually all of the talus samples are anomalous in Au, Ag, As, Sb, Pb and Zn due to downhill dispersion and sidehill contamination from known veins. However, at least one anomaly may reflect a hidden vein in the cliffs some 600 metres east of the Main adit.

4) Three new gold-bearing shear zones were discovered (Ponderosa, Winter, Rainbow), one old mineralized vein was extended (Dauntless) and two other areas (Minto, View) were tested. A best intersection of 0.23 oz/ton gold over 1.0 metres width was obtained on the Rainbow zone.

5) All six mineralized zones (Minto, Dauntless, View, Ponderosa, Winter, Rainbow) require more trenching, especially where the Winter and Rainbow zones intersect, where the Minto and Dauntless zones intersect and northwest of the View zones where three gullies contain porphyry dike fragments. The cliffs over the road also need more detailed mapping and sampling to explain the talus anomalies and evaluate the low grade, bulk tonnage potential of the porphyry dikes.

**Recommendations**

1) A two phase, CA $200,000 program is recommended to explore the Minto property. Phase 1, a continuation of surface work started in 1985, includes geological mapping, excavator trenching, underground sampling and sonic drilling, at a cost of CA $50,000 over a one month period. Phase 2, contingent upon the successful completion of Phase 1, involves diamond drilling from surface, at a cost of CA $150,000 over a two month period.

2) Phase 1 surface exploration calls for 5 kilometres of geological mapping to evaluate the cliffs above the road, 2 kilometres of excavator trenching to extend the known veins and discover new veins, 1 kilometre of underground sampling in the Main and Winter adits to identify potential ore shoots, and 500 feet of sonic drilling to test the old tailings for their gold content.

3) Phase 2 diamond drilling encompasses 6,000 feet in 20 holes to explore the Minto, Dauntless, Winter and Rainbow zones at 165 foot intervals along strike and down dip.

**EXPENDITURES**

| Item | |
|---|---|
| Labour and supervision | |
| 56 person days x $100 | 5,600.00 |
| 2 person days x $130 | 260.00 |
| 4 person days x $120 | 480.00 |
| 6 person days x $250 | 1,500.00 |
| Room and board | |
| 56 days x $43.79 | 1,702.68 |
| Transportation and fuel | 2,452.19 |
| Equipment and supplies | 358.67 |
| Backhoe contract | |
| 89 hrs x $85 | 7,565.00 |
| Drafting and reproductions | 665.57 |
| Assays and analyses | 5,387.40 |
| Miscellaneous | 6.25 |
| Administration | 2,597.78 |
| Subtotal | $28,575.54 |
| To be applied to PAC | $15,775.54 |
| **TOTAL** | **$13,000.00** |

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## QUALIFICATIONS

I, Bradford J. Cooke, am a professional geologist with a consulting business, Cooke Geological Consultants Ltd., located at 100-455 Granville St., Vancouver, B.C., V6C 1T1.

I was awarded a B.Sc. Honours Geology degree at Queen's University, Kingston, Ontario in 1976 and completed a M.Sc. Geology degree at the University of British Columbia, Vancouver, B.C. in 1984.

I have worked in mineral exploration, both seasonally and full-time, since 1975 and have performed geological field work since 1973.

I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining and Metallurgy and a member of the British Columbia-Yukon Chamber of Mines.

I personally reviewed the literature on Minto and supervised the work on the claims.

I have no interest, nor do I expect to receive any interest, in the securities or properties of Avino Mines and Resources Ltd.

I consent to the inclusion of this report in a Prospectus, or other qualifying documents, for the purpose of raising funds through the Vancouver Stock Exchange, or other financial institutions.

**Bradford J. Cooke**
Cooke Geological Consultants Ltd.
March 21, 1986

**APPENDIX 1** Assay Sheets.

**MIN-EN Laboratories Ltd.**
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: LEVON
ATTENTION: BRAD COOKE

FILE: 5-506
DATE: AUGUST 19/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| ORO-AD | .20 | 0.006 |
| ORO-RD | .02 | 0.001 |
| ORO-SH | .31 | 0.009 |
| ORO-SV | .24 | 0.007 |
| ORO-IR | 11.85 | 0.346 |
| GREYROCK-MS | 1.78 | 0.052 |
| GREYROCK-QV | 1.78 | 0.052 |
| MINTO-SH | .13 | 0.004 |

Minto shear

Dave Walker
Jordans Rest.
(604) 733-1174.

*Certified by*

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GEO27) PAGE 1 OF 1

PROJECT NO: LEVON — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-506

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:AUGUST 19, 1985

| ( PPM ) | ORO AD | ORO RD | ORO SH | ORO SV | ORO TR | GREY ROC K MS | GREY ROC K QV | MINTO SH | TYAX AV |
|---|---|---|---|---|---|---|---|---|---|
| AG | 16.5 | 4.5 | 9.7 | 13.6 | 97.4 | 36.7 | 1167.0 | 35.7 | 380.6 |
| AS | 16 | 1 | 1 | 148 | 28 | 806 | 1435 | 3819 | 448 |
| PB | 24 | 9 | 33 | 8 | 562 | 177 | 66790 | 984 | 158 |
| SB | 106 | 38 | 24 | 168844 | 2574 | 1305 | 5665 | 466 | 2542 |
| ZN | 45 | 60 | 59 | 440 | 22 | 23 | 4279 | 114 | 326 |

# MIN-EN Laboratories Ltd.

*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT:
ATTENTION: BRAD COOKE

FILE: 5-544A
DATE: AUGUST 29/85.
TYPE: ROCK ASSAY

***We hereby certify*** **that the following are assay results for samples submitted.**

| SAMPLE NUMBER | AG G/TONNE | AG OZ/TON | AU G/TONNE | AU OZ/TON |
|---|---|---|---|---|
| TG-1 | 290.0 | 8.46 | 3.16 | 0.092 |
| TG-2 | 17.5 | 0.51 | .10 | 0.003 |
| TG-3 | 54.4 | 1.59 | 2.29 | 0.067 |
| TG-4 | 840.0 | 24.50 | 6.75 | 0.197 |
| TG-5 | 76.5 | 2.23 | .01 | 0.001 |
| TG-6 | 213.0 | 6.21 | .75 | 0.022 |
| TG-7 | 32.0 | 0.93 | .42 | 0.012 |
| TG-8 | 22.4 | 0.65 | .04 | 0.001 |
| TG-10 | 172.0 | 5.02 | 2.46 | 0.072 |
| R-1 | 9.0 | 0.26 | .23 | 0.007 |
| R-2 | 24.2 | 0.71 | 15.60 | 0.455 |
| R-3 | 610.0 | 17.79 | 3.60 | 0.105 |
| R-4 | 11.0 | 0.32 | .45 | 0.013 |
| R-5 | 6.2 | 0.18 | .08 | 0.002 |
| ORO-400B | 0.3 | 0.01 | .01 | 0.001 |
| ORO-450E-900N | 1.2 | 0.03 | .16 | 0.005 |
| ORO#LCP | 2.4 | 0.07 | .04 | 0.001 |
| MOWSON-ADIT(A) | 2.0 | 0.06 | 7.62 | 0.222 |
| MOWSON-ADIT(B) | 6.5 | 0.19 | 25.50 | 0.744 |

*Certified by* _____

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1
PROJECT NO: — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-544A
ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:SEPT 4, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| IG1 | 260.4 | 6948 | 60720 | 46696 | 1591 |
| IG2 | 14.3 | 2721 | 759 | 316 | 102 |
| IG3 | 48.8 | 25991 | 6488 | 3020 | 97 |
| IG4 | 724.1 | 34977 | 41649 | 35099 | 4476 |
| IG5 | 69.1 | 4575 | 13558 | 7208 | 108 |
| IG6 | 192.7 | 14509 | 24545 | 1113 | 1267 |
| IG7 | 28.7 | 5906 | 4156 | 875 | 230 |
| IG8 | 20.5 | 89 | 314 | 148926 | 21 |
| IB10 | 145.8 | 31222 | 79017 | 37642 | 172 |
| R1 | 8.1 | 11615 | 1110 | 724 | 16 |
| R2 | 22.5 | 151591 | 721 | 994 | 38 |
| R3 | 531.4 | 33776 | 8509 | 450 | 1174 |
| R4 | 10.3 | 6418 | 3631 | 280 | 3863 |
| R5 | 5.9 | 18105 | 274 | 370 | 50 |
| ORD400B | .5 | 441 | 64 | 46 | 52 |
| ORDR450E900N | .2 | 100 | 46 | 77 | 72 |
| ORD#LCP | .4 | 8 | 78 | 60 | 21 |
| MONSONADIT(A) | 1.1 | 4737 | 36 | 2527 | 180 |
| MONSONADIT(B) | 5.3 | 5035 | 80 | 28162 | 23 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1

PROJECT NO: CONGRESS (MINTO) — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-857S/P1+2

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE SOIL GEOCHEM * — DATE:OCT 31, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN | AU-PPB |
|---|---|---|---|---|---|---|
| CONGRESS RD SAMP | 1.9 | 3 | 28 | 16 | 43 | 10 |
| L1R0+00 N/S | | | | | | |
| L1R0+50S | 1.7 | 308 | 59 | 14 | 120 | 115 |
| L1R0+75S | 1.3 | 1066 | 42 | 37 | 126 | 270 |
| L1R1+00S | 2.1 | 916 | 70 | 47 | 147 | 550 |
| L1R1+25S | 5.8 | 1816 | 246 | 91 | 304 | 2550 |
| L1R1+50S | 1.5 | 309 | 35 | 14 | 89 | 225 |
| L1R1+75S | 2.1 | 278 | 47 | 17 | 114 | 585 |
| L1R2+00S | 2.0 | 204 | 45 | 18 | 110 | 340 |
| L1R2+25S | 3.9 | 118 | 58 | 35 | 130 | 2100 |
| L1R2+50S | 2.3 | 158 | 41 | 19 | 120 | 165 |
| L1R2+75S | 2.1 | 115 | 47 | 16 | 139 | 1360 |
| L1R3+00S N/S | | | | | | |
| L1R3+25S N/S | | | | | | |
| L1R3+50S | 2.4 | 50 | 31 | 19 | 173 | 50 |
| L1R3+75S | 2.1 | 148 | 49 | 22 | 194 | 145 |
| L1R4+00S | 2.0 | 193 | 54 | 20 | 219 | 130 |
| L1R0+25N | 2.0 | 522 | 73 | 26 | 159 | 790 |
| L1R0+50N | 3.1 | 550 | 74 | 29 | 543 | 3450 |
| L1R0+75N | 4.8 | 689 | 101 | 51 | 538 | 1120 |
| L1R1+00N | 4.0 | 181 | 98 | 29 | 267 | 1350 |
| L1R1+25N | 5.0 | 352 | 238 | 37 | 943 | 1650 |
| L1R1+50N | 7.8 | 474 | 271 | 54 | 854 | 710 |
| L1R1+75N | 9.2 | 466 | 555 | 95 | 1094 | 660 |
| L1R2+00N | 6.5 | 307 | 233 | 76 | 701 | 635 |
| L1R2+25N | 12.7 | 821 | 1184 | 288 | 2319 | 1100 |
| L1R2+50N | 6.2 | 416 | 223 | 150 | 1149 | 1100 |
| L1R2+75N | 7.8 | 929 | 421 | 88 | 1357 | 920 |
| L1R3+00N | 4.4 | 396 | 167 | 62 | 551 | 430 |
| L1R3+25N | 8.5 | 1004 | 288 | 57 | 1261 | 1050 |
| L1R0+25S | 2.3 | 307 | 77 | 26 | 188 | 245 |
| L1R3+50N | 5.3 | 1237 | 282 | 63 | 1111 | 1865 |
| L1R3+75N | 3.1 | 1308 | 165 | 81 | 862 | 585 |
| L1R4+00N | 3.1 | 1726 | 144 | 62 | 484 | 1115 |
| L1R4+25N | 2.5 | 949 | 134 | 55 | 421 | 375 |
| L1R4+50N | 3.2 | 2102 | 291 | 152 | 446 | 960 |
| L1R4+75N | 2.2 | 1157 | 167 | 66 | 348 | 330 |
| L1R5+00N | 2.0 | 946 | 145 | 61 | 283 | 315 |
| L1R5+25N | 2.3 | 999 | 109 | 49 | 273 | 350 |
| L1R5+50N | 3.9 | 2801 | 279 | 113 | 542 | 660 |
| L1R5+75N | 9.3 | 6334 | 1226 | 610 | 1852 | 2000 |
| L1R6+00N | 10.3 | 4794 | 787 | 212 | 1483 | 1050 |
| L1R6+25N | 2.9 | 1654 | 177 | 58 | 491 | 880 |
| L1R6+50N | 4.4 | 2056 | 208 | 70 | 1234 | 800 |
| L1R6+75N | 3.4 | 1584 | 90 | 29 | 616 | 425 |
| L1R7+00N | 2.5 | 838 | 72 | 21 | 300 | 275 |
| L1R7+25N 40M | 1.9 | 2307 | 66 | 30 | 394 | 540 |
| L1R7+50N | 1.9 | 523 | 52 | 88 | 206 | 185 |
| L1R7+75N | 1.4 | 372 | 59 | 20 | 174 | 110 |
| L1R8+00N | 1.8 | 25 | 31 | 9 | 65 | 15 |
| L1R8+25N | 1.6 | 104 | 41 | 9 | 104 | 65 |
| L1R8+50N | 1.8 | 57 | 41 | 10 | 91 | 10 |
| L1R8+75N | 2.1 | 45 | 37 | 12 | 83 | 5 |
| L1R9+00N | 1.9 | 66 | 38 | 12 | 78 | 60 |
| L1R9+25N | 2.0 | 47 | 44 | 10 | 82 | 75 |
| L1R9+50N | 2.0 | 18 | 34 | 11 | 69 | 5 |
| L1R9+75N | 1.4 | 60 | 35 | 6 | 77 | 115 |
| L1R10+00N | 2.0 | 35 | 34 | 13 | 70 | 20 |

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*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-869
DATE: NOV. 1/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON | |
|---|---|---|---|
| MSX#1 | .60 | 0.017 | Massive Sulfide |
| QZ#2 | 1.00 | 0.029 | Quartz vein |
| FP#3 | .29 | 0.008 | Feldspar porphyry |

*Certified by*

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONSULTANTS | MIN-EN LABS ICP REPORT | (ACT:GE027) PAGE 1 OF 1

PROJECT NO: MINTO | 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 | FILE NO: 50869

ATTENTION: BRAD COOKE | (604)980-5814 OR (604)988-4524 | * TYPE ROCK GEOCHEM * | DATE:NOV 1, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MSX#1 | 4.8 | 1 | 54 | 71 | 37 |
| QZ#2 | 3.2 | 1 | 41 | 34 | 69 |
| FP#3 | 1.2 | 12 | 28 | 9 | 84 |

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE:(604)980-5814 OR (604)988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P1
DATE: NOV.21/85.
TYPE: ROCK ASSAY

***We hereby certify*** that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-001 | 1.30 | 0.038 |
| MT-002 | .28 | 0.008 |
| MT-003 | .01 | 0.001 |
| MT-004 | .24 | 0.007 |
| MT-005 | .03 | 0.001 |
| MT-006 | .73 | 0.021 |
| MT-007 | 4.91 | 0.143 |
| MT-008A | .42 | 0.012 |
| MT-009 | .25 | 0.007 |
| MT-010 | .60 | 0.017 |
| MT-011 | .44 | 0.013 |
| MT-012 | .62 | 0.018 |
| MT-013 | 1.68 | 0.049 |
| MT-014 | .94 | 0.027 |
| MT-015 | .62 | 0.018 |
| MT-016 | 1.48 | 0.043 |
| MT-017 | .61 | 0.018 |
| MT-018 | .18 | 0.005 |
| MT-019 | 2.01 | 0.059 |
| MT-020 | .60 | 0.017 |
| MT-021 | .33 | 0.010 |
| MT-022 | .06 | 0.002 |
| MT-023 | .03 | 0.001 |
| MT-024 | .05 | 0.001 |
| MT-025 | .19 | 0.006 |
| MT-026 | .38 | 0.011 |
| MT-027 | .85 | 0.025 |
| MT-028 | .23 | 0.007 |
| MT-029 | 3.23 | 0.094 |
| MT-030 | .02 | 0.001 |

*Certified by*

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P2
DATE: NOV. 21/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-031 | .03 | 0.001 |
| MT-032 | .04 | 0.001 |
| MT-033 | .01 | 0.001 |
| MT-034 | .01 | 0.001 |
| MT-035 | .20 | 0.006 |
| MT-036 | .54 | 0.016 |
| MT-037 | 1.69 | 0.049 |
| MT-038 | 1.49 | 0.043 |
| MT-039 | .12 | 0.003 |
| MT-040 | 2.58 | 0.075 |
| MT-041 | .40 | 0.012 |
| MT-042 | .71 | 0.021 |
| MT-043 | .10 | 0.003 |
| MT-044 | .27 | 0.008 |
| MT-045 | .42 | 0.012 |
| MT-046 | .02 | 0.001 |
| MT-047 | .03 | 0.001 |
| MT-048 | .08 | 0.002 |
| MT-049 | .12 | 0.003 |
| MT-050 | .13 | 0.004 |
| MT-051 | .61 | 0.018 |
| MT-052 | .09 | 0.003 |
| MT-053 | .04 | 0.001 |
| MT-054 | 2.08 | 0.061 |
| MT-055 | .30 | 0.009 |
| MT-056 | .37 | 0.011 |
| MT-057 | .22 | 0.006 |
| MT-058 | .24 | 0.007 |
| MT-059 | .10 | 0.003 |
| MT-060 | .06 | 0.002 |

*Certified by* _____

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P3
DATE: NOV.21/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-061 | .55 | 0.016 |
| MT-062 | 2.59 | 0.076 |
| MT-063 | 12.35 | 0.360 |
| MT-064 | 2.42 | 0.071 |
| MT-065 | .99 | 0.029 |
| MT-066 | .01 | 0.001 |
| MT-067 | .01 | 0.001 |
| MT-068 | .01 | 0.001 |
| MT-069 | .02 | 0.001 |
| MT-070 | .01 | 0.001 |
| MT-071 | .01 | 0.001 |
| MT-072 | .02 | 0.001 |
| MT-073 | .01 | 0.001 |
| MT-074 | .01 | 0.001 |
| MT-075 | .01 | 0.001 |
| MT-076 | .40 | 0.012 |
| MT-077 | .43 | 0.013 |
| MT-078 | .61 | 0.018 |
| MT-079 | 8.81 | 0.257 |
| MT-080 | 5.42 | 0.158 |
| MT-081 | .25 | 0.007 |
| MT-082 | .03 | 0.001 |
| MT-083 | 15.25 | 0.445 |
| MT-084 | 13.10 | 0.382 |
| MT-085 | 17.10 | 0.499 |
| MT-086 | 2.05 | 0.060 |
| MT-087 | 1.52 | 0.044 |
| MT-088 | 9.30 | 0.271 |
| MT-089 | 5.77 | 0.168 |
| MT-090 | .46 | 0.013 |

*Certified by* _____

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P4
DATE: NOV.21/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-091 | 1.18 | 0.034 |
| MT-092 | .32 | 0.009 |
| MT-093 | .14 | 0.004 |
| MT-094 | 1.83 | 0.053 |
| MT-095 | .03 | 0.001 |
| MT-096 | .10 | 0.003 |
| MT-097 | .06 | 0.002 |
| MT-098 | .18 | 0.005 |
| MT-099 | 5.08 | 0.148 |
| MT-100 | .56 | 0.016 |
| MT-101 | .61 | 0.018 |
| MT-102 | 5.10 | 0.149 |
| MT-103 | 1.78 | 0.052 |
| MT-104 | .31 | 0.009 |
| MT-105 | .12 | 0.003 |
| MT-106 | 2.93 | 0.085 |
| MT-107 | .39 | 0.011 |
| MT-108 | .20 | 0.006 |
| MT-109 | .03 | 0.001 |
| MT-110 | .69 | 0.020 |
| MT-111 | .01 | 0.001 |
| MT-112 | .03 | 0.001 |
| MT-113 | .16 | 0.005 |
| MT-114 | .05 | 0.001 |
| MT-115 | .78 | 0.023 |
| MT-116 | 2.40 | 0.070 |
| MT-117 | .27 | 0.008 |
| MT-118 | .10 | 0.003 |
| MT-119 | .14 | 0.004 |
| MT-120 | .20 | 0.006 |

*Certified by*

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P5
DATE: NOV.21/85.
TYPE: ROCK ASSAY

***We hereby certify*** that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-121 | .96 | 0.028 |
| MT-122 | .17 | 0.005 |
| MT-123 | .28 | 0.008 |
| MT-124 | .39 | 0.011 |
| MT-125 | .10 | 0.003 |
| MT-126 | .26 | 0.008 |
| MT-127 | .42 | 0.012 |
| MT-128 | .53 | 0.015 |
| MT-129 | .15 | 0.004 |
| MT-130 | .33 | 0.010 |
| MT-131 | .42 | 0.012 |
| MT-132 | .21 | 0.006 |
| MT-133 | .33 | 0.010 |
| MT-134 | .67 | 0.020 |
| MT-135 | .36 | 0.010 |
| MT-136 | .03 | 0.001 |
| MT-137 | .01 | 0.001 |
| MT-138 | .51 | 0.015 |
| MT-139 | .05 | 0.001 |
| MT-140 | .23 | 0.007 |
| MT-141 | .07 | 0.002 |
| MT-142 | .10 | 0.003 |
| MT-143 | .35 | 0.010 |
| MT-144 | .23 | 0.007 |
| MT-145 | 3.76 | 0.110 |
| MT-146 | 4.80 | 0.140 |
| MT-147 | 5.56 | 0.162 |
| MT-148 | .55 | 0.016 |
| MT-149 | 2.32 | 0.068 |
| MT-150 | .18 | 0.005 |

*Certified by*

MIN-EN LABORATORIES LTD.

# MIN-EN Laboratories Ltd.

*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P6
DATE: NOV.21/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-151 | .02 | 0.001 |
| MT-152 | .16 | 0.005 |
| MT-153 | .21 | 0.006 |
| MT-154 | .10 | 0.003 |
| MT-155 | .56 | 0.016 |
| MT-156 | .06 | 0.002 |
| MT-157 | 7.79 | 0.227 |
| MT 158 | 6.42 | 0.187 |
| MT-159 | 1.60 | 0.047 |
| MT-160 | .12 | 0.003 |
| MT 161 | .05 | 0.001 |
| MT-162 | .04 | 0.001 |
| MT 163 | .20 | 0.006 |
| MT-164 | .10 | 0.003 |
| MT-165 | .16 | 0.005 |
| MT 166 | .05 | 0.001 |
| MT-167 | .06 | 0.002 |
| MT-168 | .05 | 0.001 |
| MT-169 | .71 | 0.021 |
| MT-170 | .21 | 0.006 |
| MT-171 | .10 | 0.003 |
| MT-172 | .04 | 0.001 |
| MT-173 | .03 | 0.001 |
| MT-174 | .85 | 0.025 |
| MT-175 | .52 | 0.015 |
| MT-176 | .16 | 0.005 |
| MT-177 | .18 | 0.005 |
| MT-178 | .14 | 0.004 |
| MT-179 | .04 | 0.001 |
| MT-180 | 1.04 | 0.030 |

*Certified by* _____

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*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-915/P7
DATE: NOV.21/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-181 | 3.52 | 0.103 |
| MT-182 | .51 | 0.015 |
| MT-183 | .57 | 0.017 |
| MT-184 | .02 | 0.001 |
| MT-185 | .01 | 0.001 |
| MT-186 | .03 | 0.001 |
| MT-187 | 9.09 | 0.265 |
| MT-188 | .40 | 0.012 |
| MT-189 | .19 | 0.006 |
| MT-190 | .46 | 0.013 |
| MT-191 | 2.37 | 0.069 |
| MT-192 | .51 | 0.015 |
| MT-193 | .71 | 0.021 |
| MT-194 | .84 | 0.024 |
| MT-195 | .93 | 0.027 |
| MT-196 | .73 | 0.021 |
| MT-197 | .03 | 0.001 |
| MT-198 | .01 | 0.001 |
| MT-199 | 1.42 | 0.041 |
| MT-200 | .21 | 0.006 |

*Certified by*

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1

PROJECT NO: MINTO — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-9150/P142

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 21, 1985

| (VALUES IN PPM ) | AG | AS | FE | SB | ZN |
|---|---|---|---|---|---|
| MT 001 | 6.7 | 3659 | 202 | 164 | 219 |
| MT 002 | 2.9 | 1305 | 21 | 204 | 75 |
| MT 003 | .6 | 360 | 23 | 93 | 59 |
| MT 004 | 2.6 | 1296 | 171 | 147 | 120 |
| MT 005 | .6 | 242 | 16 | 32 | 56 |
| MT 006 | 5.0 | 904 | 76 | 49 | 94 |
| MT 007 | 4.7 | 85976 | 70 | 215 | 67 |
| MT 008 | 3.6 | 2112 | 29 | 24 | 93 |
| MT 009 | 3.4 | 4886 | 34 | 31 | 738 |
| MT 010 | 2.6 | 2319 | 53 | 46 | 466 |
| MT 011 | 2.3 | 2317 | 35 | 25 | 121 |
| MT 012 | 1.8 | 2481 | 35 | 22 | 211 |
| MT 013 | 2.5 | 2210 | 34 | 23 | 107 |
| MT 014 | 2.5 | 3071 | 55 | 40 | 608 |
| MT 015 | 1.9 | 2142 | 36 | 28 | 137 |
| MT 016 | 2.2 | 5192 | 46 | 31 | 86 |
| MT 017 | 1.4 | 1160 | 48 | 32 | 49 |
| MT 018 | 1.5 | 456 | 49 | 33 | 116 |
| MT 019 | 3.4 | 1796 | 77 | 66 | 174 |
| MT 020 | 2.0 | 357 | 61 | 43 | 159 |
| MT 021 | 1.7 | 100 | 41 | 30 | 276 |
| MT 022 | 1.6 | 157 | 49 | 20 | 332 |
| MT 023 | 1.7 | 230 | 48 | 23 | 526 |
| MT 024 | 1.3 | 109 | 39 | 13 | 1169 |
| MT 025 | 1.8 | 2552 | 47 | 22 | 266 |
| MT 026 | .8 | 973 | 14 | 2 | 77 |
| MT 027 | 4.8 | 6923 | 65 | 62 | 261 |
| MT 028 | 2.5 | 1135 | 38 | 24 | 1993 |
| MT 029 | 4.1 | 1093 | 45 | 34 | 1041 |
| MT 030 | 1.1 | 332 | 18 | 12 | 292 |
| MT 031 | 1.0 | 141 | 18 | 5 | 110 |
| MT 032 | .6 | 84 | 12 | 2 | 93 |
| MT 033 | .9 | 190 | 14 | 6 | 95 |
| MT 034 | 1.1 | 480 | 27 | 6 | 180 |
| MT 035 | 1.7 | 630 | 49 | 27 | 504 |
| MT 036 | 1.9 | 3093 | 55 | 31 | 513 |
| MT 037 | 2.7 | 70064 | 65 | 86 | 310 |
| MT 038 | 2.7 | 74408 | 62 | 110 | 115 |
| MT 039 | 27.1 | 2212 | 34 | 25 | 316 |
| MT 040 | 4.2 | 8713 | 56 | 42 | 7857 |
| MT 041 | 2.6 | 1370 | 23 | 17 | 313 |
| MT 042 | 2.1 | 58157 | 39 | 41 | 254 |
| MT 043 | 2.4 | 1461 | 40 | 34 | 98 |
| MT 044 | 1.6 | 3895 | 36 | 28 | 101 |
| MT 045 | 3.3 | 12867 | 85 | 52 | 214 |
| MT 046 | 2.7 | 623 | 70 | 33 | 458 |
| MT 047 | 2.2 | 605 | 40 | 21 | 224 |
| MT 048 | 1.2 | 206 | 25 | 9 | 165 |
| MT 049 | 1.9 | 360 | 45 | 19 | 312 |
| MT 050 | .8 | 698 | 16 | 1 | 72 |
| MT 051 | 1.3 | 48819 | 31 | 38 | 97 |
| MT 052 | 2.1 | 1736 | 54 | 20 | 229 |
| MT 053 | 3.1 | 3628 | 44 | 27 | 383 |
| MT 054 | 3.3 | 78430 | 95 | 177 | 201 |
| MT 055 | 2.7 | 7065 | 62 | 50 | 509 |
| MT 056 | 2.5 | 16303 | 56 | 70 | 259 |
| MT 057 | 1.4 | 1555 | 29 | 40 | 403 |
| MT 058 | 1.8 | 2022 | 40 | 32 | 439 |
| MT 059 | 1.2 | 771 | 41 | 16 | 301 |
| MT 060 | 1.3 | 987 | 35 | 13 | 186 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN EN LABS ICP REPORT — (ACT:DE027) PAGE 1 OF 1

PROJECT NO: MINTO — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-915A/P3+4

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 21, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 061 | 9.0 | 5244 | 150 | 197 | 382 |
| MT 062 | 14.7 | 5435 | 723 | 482 | 882 |
| MT 063 | 71.3 | 12176 | 9290 | 6756 | 26366 |
| MT 064 | 33.4 | 5442 | 716 | 509 | 1476 |
| MT 065 | 5.5 | 2593 | 424 | 313 | 2060 |
| MT 066 | 3.7 | 2871 | 266 | 300 | 1688 |
| MT 067 | 3.3 | 2013 | 248 | 282 | 1738 |
| MT 068 | 2.6 | 741 | 42 | 46 | 1197 |
| MT 069 | 2.8 | 1059 | 61 | 43 | 887 |
| MT 070 | 2.6 | 636 | 76 | 52 | 1373 |
| MT 071 | 34.7 | 387 | 807 | 382 | 530 |
| MT 072 | 1.3 | 1061 | 42 | 30 | 571 |
| MT 073 | 1.9 | 282 | 46 | 28 | 290 |
| MT 074 | .6 | 145 | 22 | 5 | 154 |
| MT 075 | 1.1 | 578 | 33 | 14 | 187 |
| MT 076 | 9.0 | 2709 | 111 | 118 | 1776 |
| MT 077 | 12.4 | 3317 | 412 | 212 | 2484 |
| MT 078 | 8.7 | 3749 | 327 | 161 | 2427 |
| MT 079 | 529.4 | 7880 | 37676 | 37830 | 4294 |
| MT 080 | 32.6 | 8430 | 2216 | 1418 | 4495 |
| MT 081 | 7.9 | 3878 | 134 | 112 | 1266 |
| MT 082 | 24.9 | 792 | 658 | 288 | 985 |
| MT 083 | 96.2 | 15528 | 17032 | 10475 | 42807 |
| MT 084 | 118.8 | 9116 | 21647 | 12589 | 45475 |
| MT 085 | 15.8 | 7378 | 254 | 222 | 779 |
| MT 086 | 7.3 | 3045 | 756 | 423 | 1474 |
| MT 087 | 5.9 | 2728 | 394 | 228 | 799 |
| MT 088 | 8.7 | 6828 | 217 | 244 | 379 |
| MT 089 | 10.9 | 5689 | 214 | 314 | 1079 |
| MT 090 | 12.9 | 3016 | 337 | 248 | 900 |
| MT 091 | 13.3 | 2858 | 311 | 173 | 640 |
| MT 092 | 5.4 | 505 | 117 | 48 | 211 |
| MT 093 | 1.1 | 639 | 43 | 15 | 181 |
| MT 094 | 2.7 | 531 | 47 | 67 | 185 |
| MT 095 | .5 | 388 | 29 | 11 | 351 |
| MT 096 | 1.1 | 519 | 45 | 19 | 520 |
| MT 097 | .9 | 452 | 29 | 35 | 467 |
| MT 098 | 2.1 | 1312 | 40 | 87 | 198 |
| MT 099 | 5.6 | 4508 | 203 | 119 | 777 |
| MT 100 | 21.6 | 3305 | 171 | 212 | 1819 |
| MT 101 | 25.1 | 5408 | 199 | 272 | 818 |
| MT 102 | 15.5 | 6606 | 141 | 161 | 326 |
| MT 103 | 5.6 | 3181 | 321 | 176 | 464 |
| MT 104 | 3.3 | 846 | 76 | 26 | 211 |
| MT 105 | .9 | 429 | 38 | 11 | 136 |
| MT 106 | 6.1 | 2696 | 372 | 141 | 120 |
| MT 107 | 5.2 | 2749 | 26 | 120 | 47 |
| MT 108 | 2.0 | 186 | 9 | 1 | 142 |
| MT 109 | 2.1 | 237 | 8 | 2 | 93 |
| MT 110 | 2.7 | 4 | 5 | 1 | 107 |
| MT 111 | 1.3 | 271 | 23 | 38 | 40 |
| MT 112 | .3 | 164 | 7 | 16 | 28 |
| MT 113 | .4 | 232 | 19 | 20 | 56 |
| MT 114 | .4 | 387 | 6 | 9 | 444 |
| MT 115 | 6.5 | 1022 | 56 | 216 | 1177 |
| MT 116 | 100.3 | 1320 | 789 | 4966 | 1103 |
| MT 117 | 10.2 | 1680 | 87 | 172 | 263 |
| MT 118 | 1.1 | 860 | 23 | 56 | 179 |
| MT 119 | .4 | 223 | 16 | 22 | 174 |
| MT 120 | 7.9 | 1219 | 75 | 153 | 35 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1

PROJECT NO: NINTO — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-915A/P5+6

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 21, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 121 | 1.5 | 200 | 34 | 163 | 70 |
| MT 122 | 1.5 | 105 | 34 | 24 | 47 |
| MT 123 | 2.2 | 143 | 30 | 139 | 53 |
| MT 124 | 3.1 | 98 | 26 | 184 | 75 |
| MT 125 | 2.7 | 87 | 17 | 13 | 69 |
| MT 126 | 2.7 | 83 | 31 | 16 | 70 |
| MT 127 | 2.1 | 79 | 37 | 20 | 142 |
| MT 128 | 3.8 | 12 | 15 | 21 | 92 |
| MT 129 | 2.5 | 117 | 47 | 38 | 99 |
| MT 130 | 2.2 | 232 | 47 | 33 | 110 |
| MT 131 | 2.6 | 163 | 63 | 39 | 100 |
| MT 132 | 1.6 | 99 | 53 | 26 | 78 |
| MT 133 | 1.9 | 124 | 40 | 23 | 60 |
| MT 134 | 1.2 | 102 | 33 | 23 | 44 |
| MT 135 | 1.3 | 479 | 34 | 51 | 80 |
| MT 136 | .7 | 423 | 12 | 28 | 40 |
| MT 137 | .8 | 709 | 21 | 40 | 90 |
| MT 138 | 1.1 | 992 | 13 | 40 | 66 |
| MT 139 | .7 | 545 | 16 | 38 | 57 |
| MT 140 | .8 | 91 | 14 | 24 | 48 |
| MT 141 | .4 | 183 | 13 | 23 | 39 |
| MT 142 | .8 | 268 | 12 | 35 | 56 |
| MT 143 | .7 | 183 | 16 | 11 | 64 |
| MT 144 | .6 | 408 | 13 | 60 | 107 |
| MT 145 | 1.5 | 6574 | 16 | 152 | 74 |
| MT 146 | 1.9 | 6894 | 17 | 15120 | 86 |
| MT 147 | 2.0 | 3894 | 13 | 7265 | 102 |
| MT 148 | .9 | 1689 | 15 | 395 | 39 |
| MT 149 | 3.5 | 1440 | 19 | 16365 | 34 |
| MT 150 | .9 | 791 | 24 | 853 | 126 |
| MT 151 | .7 | 271 | 19 | 177 | 98 |
| MT 152 | .6 | 80 | 15 | 97 | 47 |
| MT 153 | 1.0 | 91 | 37 | 87 | 132 |
| MT 154 | .8 | 34 | 21 | 33 | 84 |
| MT 155 | 1.2 | 3531 | 26 | 24 | 122 |
| MT 156 | .8 | 216 | 27 | 12 | 175 |
| MT 157 | 2.0 | 1444 | 43 | 148 | 235 |
| MT 158 | .9 | 9834 | 10 | 3748 | 46 |
| MT 159 | 2.4 | 80 | 9 | 68107 | 32 |
| MT 160 | 2.3 | 96 | 5 | 931 | 126 |
| MT 161 | 2.1 | 168 | 7 | 253 | 201 |
| MT 162 | 1.2 | 351 | 15 | 180 | 223 |
| MT 163 | 5.7 | 666 | 75 | 107 | 259 |
| MT 164 | 13.7 | 1679 | 106 | 162 | 270 |
| MT 165 | 2.5 | 1478 | 35 | 91 | 281 |
| MT 166 | .5 | 450 | 15 | 28 | 193 |
| MT 167 | .5 | 188 | 21 | 23 | 106 |
| MT 168 | 1.1 | 929 | 14 | 47 | 201 |
| MT 169 | 16.6 | 1186 | 184 | 150 | 303 |
| MT 170 | 8.7 | 793 | 133 | 99 | 159 |
| MT 171 | 1.4 | 461 | 5 | 54 | 96 |
| MT 172 | 1.3 | 462 | 8 | 32 | 115 |
| MT 173 | .6 | 292 | 18 | 1942 | 127 |
| MT 174 | 1.8 | 782 | 9 | 36 | 455 |
| MT 175 | 1.4 | 1304 | 16 | 37 | 383 |
| MT 176 | .6 | 585 | 11 | 1 | 1782 |
| MT 177 | 1.4 | 1052 | 19 | 16 | 1781 |
| MT 178 | 2.3 | 578 | 19 | 21 | 282 |
| MT 179 | 2.7 | 358 | 13 | 26 | 315 |
| MT 180 | 7.4 | 3314 | 212 | 263 | 2417 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GEO27) PAGE 1 OF 1

PROJECT NO: MINTO — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-915A/P5+6

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 21, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 121 | 1.5 | 200 | 34 | 163 | 70 |
| MT 122 | 1.5 | 105 | 34 | 24 | 47 |
| MT 123 | 2.2 | 143 | 30 | 139 | 53 |
| MT 124 | 3.1 | 98 | 26 | 184 | 75 |
| MT 125 | 2.7 | 87 | 17 | 13 | 69 |
| MT 126 | 2.7 | 83 | 31 | 16 | 70 |
| MT 127 | 2.1 | 79 | 37 | 20 | 142 |
| MT 128 | 3.8 | 12 | 15 | 21 | 92 |
| MT 129 | 2.5 | 117 | 47 | 38 | 99 |
| MT 130 | 2.2 | 232 | 47 | 33 | 110 |
| MT 131 | 2.6 | 163 | 63 | 39 | 100 |
| MT 132 | 1.6 | 99 | 53 | 26 | 78 |
| MT 133 | 1.4 | 124 | 40 | 23 | 60 |
| MT 134 | 1.2 | 182 | 33 | 23 | 44 |
| MT 135 | 1.3 | 479 | 34 | 51 | 80 |
| MT 136 | .7 | 423 | 12 | 28 | 40 |
| MT 137 | .8 | 709 | 21 | 40 | 90 |
| MT 138 | 1.1 | 992 | 13 | 40 | 66 |
| MT 139 | .7 | 545 | 16 | 38 | 57 |
| MT 140 | .8 | 91 | 14 | 24 | 48 |
| MT 141 | .4 | 183 | 13 | 23 | 39 |
| MT 142 | .8 | 268 | 12 | 35 | 56 |
| MT 143 | .7 | 183 | 16 | 11 | 64 |
| MT 144 | .6 | 408 | 13 | 60 | 107 |
| MT 145 | 1.5 | 6574 | 16 | 152 | 74 |
| MT 146 | 1.9 | 6894 | 17 | 15120 | 86 |
| MT 147 | 2.0 | 3894 | 13 | 7265 | 102 |
| MT 148 | .9 | 1689 | 15 | 395 | 39 |
| MT 149 | 3.5 | 1440 | 19 | 16365 | 34 |
| MT 150 | .9 | 791 | 24 | 853 | 126 |
| MT 151 | .7 | 271 | 19 | 177 | 98 |
| MT 152 | .6 | 80 | 15 | 97 | 47 |
| MT 153 | 1.0 | 91 | 37 | 87 | 132 |
| MT 154 | .8 | 34 | 21 | 33 | 84 |
| MT 155 | 1.2 | 3531 | 26 | 24 | 122 |
| MT 156 | .8 | 216 | 27 | 12 | 175 |
| MT 157 | 2.0 | 1444 | 43 | 148 | 235 |
| MT 158 | .9 | 9834 | 10 | 3748 | 46 |
| MT 159 | 2.4 | 80 | 9 | 68107 | 32 |
| MT 160 | 2.3 | 96 | 5 | 931 | 126 |
| MT 161 | 2.1 | 168 | 7 | 253 | 201 |
| MT 162 | 1.2 | 351 | 15 | 180 | 223 |
| MT 163 | 5.7 | 666 | 75 | 107 | 259 |
| MT 164 | 13.7 | 1679 | 106 | 162 | 270 |
| MT 165 | 2.5 | 1478 | 35 | 91 | 281 |
| MT 166 | .5 | 450 | 15 | 28 | 193 |
| MT 167 | .5 | 188 | 21 | 23 | 106 |
| MT 168 | 1.1 | 929 | 14 | 47 | 201 |
| MT 169 | 16.6 | 1166 | 184 | 150 | 303 |
| MT 170 | 8.7 | 793 | 133 | 99 | 159 |
| MT 171 | 1.4 | 461 | 5 | 54 | 96 |
| MT 172 | 1.3 | 462 | 8 | 32 | 115 |
| MT 173 | .6 | 292 | 18 | 1942 | 127 |
| MT 174 | 1.8 | 782 | 9 | 34 | 455 |
| MT 175 | 1.4 | 1304 | 16 | 37 | 383 |
| MT 176 | .6 | 565 | 11 | 1 | 1782 |
| MT 177 | 1.4 | 1052 | 19 | 16 | 1781 |
| MT 178 | 2.3 | 578 | 19 | 21 | 282 |
| MT 179 | 2.7 | 358 | 13 | 26 | 315 |
| MT 180 | 7.4 | 3314 | 212 | 263 | 2417 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1

PROJECT NO: MIN10 — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-915A/P7

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 21, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 181 | 19.8 | 4666 | 177 | 161 | 1342 |
| MT 182 | 4.1 | 2109 | 44 | 76 | 260 |
| MT 183 | 7.0 | 2312 | 56 | 83 | 206 |
| MT 184 | 2.0 | 152 | 17 | 6 | 140 |
| MT 185 | 2.0 | 144 | 15 | 5 | 178 |
| MT 186 | 7.1 | 504 | 18 | 8 | 502 |
| MT 187 | 8.3 | 2934 | 646 | 45 | 3251 |
| MT 188 | 2.2 | 1094 | 62 | 24 | 2196 |
| MT 189 | 1.6 | 650 | 17 | 14 | 102 |
| MT 190 | 3.0 | 2160 | 30 | 29 | 442 |
| MT 191 | 17.2 | 6978 | 169 | 118 | 697 |
| MT 192 | 4.7 | 2312 | 47 | 84 | 143 |
| MT 193 | 2.2 | 1842 | 41 | 25 | 147 |
| MT 194 | 4.1 | 2390 | 38 | 37 | 152 |
| MT 195 | 26.3 | 1538 | 41 | 28 | 137 |
| MT 196 | 11.5 | 4388 | 76 | 161 | 176 |
| MT 197 | 4.3 | 955 | 51 | 45 | 206 |
| MT 198 | 3.3 | 190 | 17 | 9 | 136 |
| MT 199 | 161.7 | 3063 | 3978 | 3504 | 2394 |
| MT 200 | 4.4 | 3976 | 100 | 94 | 619 |

# MIN-EN Laboratories Ltd.

*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-931/P1
DATE: NOV.28/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-201 | .02 | 0.001 |
| MT-202 | .01 | 0.001 |
| MT-203 | .26 | 0.008 |
| MT-204 | .03 | 0.001 |
| MT-205 | .01 | 0.001 |
| MT-206 | .20 | 0.006 |
| MT-207 | 2.80 | 0.082 |
| MT-208 | .49 | 0.014 |
| MT-209 | .14 | 0.004 |
| MT-210 | .02 | 0.001 |
| MT-211 | .04 | 0.001 |
| MT-212 | .01 | 0.001 |
| MT-213 | .02 | 0.001 |
| MT-214 | .06 | 0.002 |
| MT-215 | .01 | 0.001 |
| MT-216 | .05 | 0.001 |
| MT-217 | .03 | 0.001 |
| MT-218 | .06 | 0.002 |
| MT-219 | .04 | 0.001 |
| MT-220 | .09 | 0.003 |
| MT-221 | .04 | 0.001 |
| MT-222 | .01 | 0.001 |
| MT-223 | .01 | 0.001 |
| MT-224 | .07 | 0.002 |
| MT-225 | .01 | 0.001 |
| MT-226 | .01 | 0.001 |
| MT-227 | .13 | 0.004 |
| MT-228 | .09 | 0.003 |
| MT-229 | .04 | 0.001 |
| MT-230 | .01 | 0.001 |

*Certified by*

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-931/P2
DATE: NOV.28/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-231 | .22 | 0.006 |
| MT-232 | .15 | 0.004 |
| MT-233 | 1.60 | 0.047 |
| MT-234 | .10 | 0.003 |
| MT-235 | .01 | 0.001 |
| MT-236 | .01 | 0.001 |
| MT-237 | .01 | 0.001 |
| MT-238 | .01 | 0.001 |
| MT-239 | .01 | 0.001 |
| MT-240 | .02 | 0.001 |
| MT-241 | .01 | 0.001 |
| MT-242 | .01 | 0.001 |
| MT-243 | .01 | 0.001 |
| MT-244 | .01 | 0.001 |
| MT-245 | .01 | 0.001 |
| MT-246 | .02 | 0.001 |
| MT-247 | .16 | 0.005 |
| MT-248 | .02 | 0.001 |
| MT-249 | .01 | 0.001 |
| MT-250 | .01 | 0.001 |
| MT-251 | .02 | 0.001 |
| MT-252 | .01 | 0.001 |
| MT-253 | .01 | 0.001 |
| MT-254 | .02 | 0.001 |
| MT-255 | .03 | 0.001 |
| MT-256 | .01 | 0.001 |
| MT-257 | .06 | 0.002 |
| MT-258 | .01 | 0.001 |
| MT-259 | .01 | 0.001 |
| MT-260 | .01 | 0.001 |

*Certified by*

MIN-EN LABORATORIES LTD.

**MIN-EN Laboratories Ltd.**
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828

# *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-931/P3
DATE: NOV.28/85.
TYPE: ROCK ASSAY

***We hereby certify*** that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-261 | 2.49 | 0.073 |
| MT-262 | .05 | 0.001 |
| MT-263 | .01 | 0.001 |
| MT-264 | .01 | 0.001 |
| MT-265 | .01 | 0.001 |
| MT-266 | .01 | 0.001 |
| MT-267 | .01 | 0.001 |
| MT-268 | .55 | 0.016 |
| MT-269 | .87 | 0.025 |
| MT-270 | .22 | 0.006 |
| MT-271 | .04 | 0.001 |
| MT-272 | .02 | 0.001 |
| MT-273 | .06 | 0.002 |
| MT-274 | .01 | 0.001 |
| MT-275 | .01 | 0.001 |
| MT-276 | .01 | 0.001 |
| MT-277 | .01 | 0.001 |
| MT-278 | .21 | 0.006 |
| MT-279 | .01 | 0.001 |
| MT-280 | .02 | 0.001 |
| MT-281 | .01 | 0.001 |
| MT-282 | .01 | 0.001 |
| MT-283 | 2.18 | 0.064 |
| MT-284 | .02 | 0.001 |
| MT-285 | .01 | 0.001 |
| MT-286 | .01 | 0.001 |
| MT-287 | .01 | 0.001 |
| MT-288 | .01 | 0.001 |
| MT-289 | .01 | 0.001 |
| MT-290 | .15 | 0.004 |

*Certified by* _____

MIN-EN LABORATORIES LTD.

**MIN-EN Laboratories Ltd.**
*Specialists in Mineral Environments*
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352028

# CERTIFICATE OF ASSAY

COMPANY: COOKE GEOLOGICAL CONSULTANTS
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-931/P4
DATE: NOV.28/85.
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| MT-291 | .01 | 0.001 |
| MT-292 | .01 | 0.001 |
| MT-293 | .01 | 0.001 |
| MT-294 | .01 | 0.001 |
| MT-295 | .01 | 0.001 |
| MT-296 | .01 | 0.001 |
| MT-297 | .01 | 0.001 |
| MT-298 | .22 | 0.006 |
| MT-299 | .01 | 0.001 |
| MT-300 | .23 | 0.007 |
| MT-301 | .05 | 0.001 |
| MT-302 | .78 | 0.023 |
| MT-303 | .18 | 0.005 |
| MT-304 | .01 | 0.001 |
| MT-305 | .01 | 0.001 |
| MT-306 | .62 | 0.018 |
| MT-307 | 2.01 | 0.059 |
| MT-308 | .01 | 0.001 |
| MT-309 | .01 | 0.001 |
| MT-310 | .02 | 0.001 |
| MT-311 | .01 | 0.001 |
| MT-312 | .01 | 0.001 |
| MT-313 | .01 | 0.001 |
| MT-314 | .01 | 0.001 |

*Certified by* _____

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONSULTANTS — MIN-EN LABS ICP REPORT — (ACT:GE027) PAGE 1 OF 1

PROJECT NO: MINTO — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 5-931/P1+2

ATTENTION: BRAD COOKE — (604)980-5814 OR (604)988-4524 — * TYPE ROCK GEOCHEM * — DATE:NOV 28, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 201 | 1.2 | 73 | 19 | 3 | 145 |
| MT 202 | 1.2 | 245 | 30 | 10 | 229 |
| MT 203 | 3.9 | 724 | 60 | 20 | 283 |
| MT 204 | 1.1 | 497 | 29 | 15 | 350 |
| MT 205 | 1.2 | 401 | 35 | 29 | 334 |
| MT 206 | 16.0 | 1162 | 652 | 136 | 652 |
| MT 207 | 19.0 | 3016 | 701 | 238 | 4900 |
| MT 208 | 5.9 | 1004 | 65 | 47 | 1574 |
| MT 209 | 1.2 | 119 | 14 | 6 | 398 |
| MT 210 | 2.0 | 65 | 11 | 4 | 90 |
| MT 211 | 2.8 | 66 | 11 | 4 | 77 |
| MT 212 | .6 | 44 | 18 | 2 | 43 |
| MT 213 | 1.8 | 1 | 2 | 6 | 29 |
| MT 214 | .3 | 154 | 15 | 16 | 164 |
| MT 215 | 1.3 | 98 | 26 | 18 | 101 |
| MT 216 | 1.1 | 70 | 28 | 12 | 72 |
| MT 217 | 1.4 | 81 | 24 | 13 | 75 |
| MT 218 | 2.6 | 36 | 7 | 5 | 32 |
| MT 219 | 1.6 | 7 | 5 | 1 | 85 |
| MT 220 | .1 | 19 | 8 | 1 | 151 |
| MT 221 | 1.2 | 318 | 27 | 9 | 195 |
| MT 222 | 1.1 | 230 | 36 | 17 | 360 |
| MT 223 | 1.0 | 101 | 35 | 15 | 110 |
| MT 224 | 1.5 | 421 | 38 | 32 | 84 |
| MT 225 | .8 | 129 | 34 | 10 | 72 |
| MT 226 | 1.0 | 149 | 37 | 15 | 79 |
| MT 227 | 3.0 | 713 | 55 | 36 | 242 |
| MT 228 | 2.5 | 302 | 59 | 20 | 272 |
| MT 229 | 7.1 | 629 | 58 | 33 | 203 |
| MT 230 | 3.7 | 411 | 50 | 26 | 306 |
| MT 231 | 6.4 | 3288 | 49 | 54 | 241 |
| MT 232 | 4.5 | 2158 | 48 | 36 | 343 |
| MT 233 | 7.0 | 1792 | 65 | 31 | 1061 |
| MT 234 | 2.2 | 553 | 52 | 15 | 998 |
| MT 235 | 1.9 | 180 | 34 | 6 | 665 |
| MT 236 | 3.8 | 143 | 8 | 4 | 193 |
| MT 237 | 5.4 | 71 | 19 | 12 | 208 |
| MT 238 | 1.4 | 266 | 22 | 11 | 69 |
| MT 239 | .8 | 189 | 26 | 14 | 34 |
| MT 240 | 2.6 | 202 | 33 | 23 | 80 |
| MT 241 | 1.4 | 170 | 20 | 22 | 49 |
| MT 242 | 1.1 | 114 | 10 | 15 | 33 |
| MT 243 | 1.3 | 231 | 15 | 37 | 62 |
| MT 244 | 1.5 | 208 | 17 | 27 | 35 |
| MT 245 | 2.2 | 196 | 20 | 27 | 37 |
| MT 246 | .9 | 89 | 17 | 7 | 71 |
| MT 247 | .1 | 115 | 18 | 13 | 78 |
| MT 248 | .7 | 159 | 18 | 25 | 61 |
| MT 249 | .2 | 220 | 18 | 29 | 62 |
| MT 250 | .3 | 109 | 13 | 16 | 55 |
| MT 251 | .3 | 92 | 12 | 11 | 46 |
| MT 252 | .9 | 47 | 21 | 12 | 44 |
| MT 253 | .3 | 25 | 19 | 2 | 49 |
| MT 254 | .4 | 26 | 20 | 6 | 44 |
| MT 255 | .5 | 46 | 19 | 10 | 47 |
| MT 256 | 2.0 | 122 | 29 | 35 | 116 |
| MT 257 | .8 | 154 | 20 | 50 | 80 |
| MT 258 | .5 | 152 | 20 | 35 | 72 |
| MT 259 | .8 | 95 | 32 | 16 | 67 |
| MT 260 | .8 | 123 | 32 | 19 | 80 |

COMPANY: COOKE GEOLOGICAL CONSULTANTS | MIN-EN LABS ICP REPORT | (ACT:GE027) PAGE 1 OF 1

PROJECT NO: MINTO | 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 | FILE NO: 5-931/P3+4

ATTENTION: BRAD COOKE | (604)980-5814 OR (604)988-4524 | * TYPE ROCK GEOCHEM * | DATE:NOV 28, 1985

| (VALUES IN PPM ) | AG | AS | PB | SB | ZN |
|---|---|---|---|---|---|
| MT 261 | 8.8 | 3303 | 134 | 88 | 399 |
| MT 262 | .5 | 226 | 29 | 5 | 103 |
| MT 263 | .5 | 327 | 22 | 11 | 264 |
| MT 264 | .3 | 191 | 19 | 8 | 78 |
| MT 265 | 1.0 | 186 | 43 | 16 | 83 |
| MT 266 | 6.1 | 75 | 14 | 14 | 108 |
| MT 267 | 5.1 | 51 | 24 | 15 | 108 |
| MT 268 | 2.9 | 807 | 55 | 55 | 144 |
| MT 269 | 3.5 | 783 | 73 | 70 | 130 |
| MT 270 | 4.8 | 405 | 53 | 35 | 154 |
| MT 271 | 7.9 | 300 | 18 | 24 | 147 |
| MT 272 | 7.4 | 532 | 37 | 24 | 174 |
| MT 273 | 5.7 | 294 | 41 | 24 | 154 |
| MT 274 | .5 | 103 | 31 | 4 | 68 |
| MT 275 | 1.1 | 247 | 44 | 17 | 90 |
| MT 276 | 1.9 | 460 | 53 | 27 | 96 |
| MT 277 | 1.7 | 172 | 45 | 16 | 78 |
| MT 278 | 1.7 | 571 | 52 | 40 | 96 |
| MT 279 | 2.6 | 163 | 49 | 32 | 92 |
| MT 280 | 3.1 | 208 | 61 | 43 | 111 |
| MT 281 | 1.8 | 185 | 38 | 42 | 84 |
| MT 282 | 2.1 | 346 | 50 | 76 | 94 |
| MT 283 | 9.7 | 16997 | 38 | 2442 | 63 |
| MT 284 | 3.3 | 3423 | 32 | 341 | 44 |
| MT 285 | 1.7 | 829 | 53 | 226 | 74 |
| MT 286 | 1.4 | 468 | 38 | 111 | 66 |
| MT 287 | 2.3 | 788 | 59 | 147 | 106 |
| MT 288 | 2.0 | 464 | 58 | 71 | 185 |
| MT 289 | 3.8 | 498 | 80 | 93 | 195 |
| MT 290 | 3.9 | 691 | 85 | 65 | 173 |
| MT 291 | 2.2 | 665 | 43 | 103 | 97 |
| MT 292 | 2.9 | 27 | 21 | 9 | 75 |
| MT 293 | 4.9 | 1 | 28 | 1 | 66 |
| MT 294 | 1.4 | 135 | 30 | 38 | 65 |
| MT 295 | 1.7 | 127 | 32 | 60 | 100 |
| MT 296 | 1.8 | 241 | 34 | 87 | 105 |
| MT 297 | 1.6 | 663 | 34 | 140 | 140 |
| MT 298 | 3.6 | 2671 | 34 | 197 | 72 |
| MT 299 | 1.3 | 818 | 26 | 135 | 93 |
| MT 301 | .9 | 375 | 27 | 118 | 104 |
| MT 302 | 1.2 | 1848 | 33 | 131 | 90 |
| MT 303 | 1.4 | 472 | 25 | 51 | 67 |
| MT 304 | 1.4 | 210 | 21 | 27 | 46 |
| MT 305 | .8 | 428 | 24 | 35 | 39 |
| MT 306 | 2.0 | 2882 | 34 | 30 | 273 |
| MT 307 | 4.3 | 3747 | 226 | 102 | 199 |
| MT 308 | 1.5 | 379 | 32 | 64 | 118 |
| MT 309 | 2.7 | 471 | 70 | 86 | 201 |
| MT 310 | 2.3 | 169 | 46 | 28 | 125 |
| MT 311 | 2.3 | 121 | 32 | 13 | 103 |
| MT 312 | 2.6 | 85 | 31 | 17 | 97 |
| MT 313 | 2.2 | 94 | 54 | 16 | 112 |
| MT 314 | 1.5 | 83 | 48 | 9 | 67 |
| MT 300 | 1.5 | 1337 | 31 | 179 | 69 |

# MIN-EN Laboratories Ltd.

*Specialists in Mineral Environments*

705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: 04-352828


## *CERTIFICATE OF ASSAY*

COMPANY: COOKE GEOLOGICAL CONS.LTD.
PROJECT: MINTO
ATTENTION: BRAD COOKE

FILE: 5-948
DATE: DEC.2/85
TYPE: ROCK ASSAY

*We hereby certify* that the following are assay results for samples submitted.

| SAMPLE NUMBER | AU G/TONNE | AU OZ/TON |
|---|---|---|
| CT-06 | .06 | 0.002 |
| CT-07 | .10 | 0.003 |
| CT-08 | .08 | 0.002 |
| CT-09 | .05 | 0.001 |
| CT-10 | .10 | 0.003 |
| MT-315 | .02 | 0.001 |
| MT-316 | .01 | 0.001 |
| MT-317 | .02 | 0.001 |
| MT-318 | 1.00 | 0.029 |
| MT-319 | .99 | 0.029 |
| MT-320 | .02 | 0.001 |
| MT-321 | .02 | 0.001 |
| MT-322 | .36 | 0.010 |
| MT-323 | .51 | 0.015 |
| MT-324 | .69 | 0.020 |
| MT-325 | .05 | 0.001 |
| MT-326 | .02 | 0.001 |
| MT-327 | .10 | 0.003 |
| TG-147 | .06 | 0.002 |

*Certified by*

MIN-EN LABORATORIES LTD.

COMPANY: COOKE GEOLOGICAL CONS.LTD. MIN-EN LABS ICP REPORT (ACT:GE027) PAGE 1 OF 1
PROJECT NO: MINTO 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 FILE NO: 5-949A
ATTENTION: BRAD COOKE (604)980-5814 OR (604)988-4524 * TYPE ROCK ASSAY * DATE:DEC. 3, 1985

| (VALUES IN PPM ) | AG | AS | FB | SB | ZN |
|---|---|---|---|---|---|
| CT-06 | 3.0 | 1 | 19 | 2 | 78 |
| CT-07 | 3.1 | 1 | 19 | 3 | 69 |
| CT-08 | 3.0 | 1 | 24 | 5 | 89 |
| CT-09 | 4.0 | 1 | 14 | 3 | 89 |
| CT-10 | 1.8 | 1 | 25 | 1 | 59 |
| MT 315 | 1.0 | 197 | 90 | 10 | 164 |
| MT 316 | .8 | 267 | 47 | 5 | 105 |
| MT 317 | .9 | 644 | 33 | 35 | 250 |
| MT 318 | 5.4 | 1940 | 657 | 94 | 1652 |
| MT 319 | 3.6 | 2684 | 544 | 155 | 663 |
| MT 320 | 1.3 | 1307 | 62 | 87 | 430 |
| MT 321 | .7 | 1028 | 24 | 124 | 42 |
| MT 322 | 1.9 | 3736 | 25 | 156 | 76 |
| MT 323 | 2.2 | 4914 | 35 | 183 | 32 |
| MT 324 | 5.0 | 1078 | 33 | 1060 | 300 |
| MT 325 | .9 | 101 | 19 | 30 | 55 |
| MT 326 | 1.7 | 145 | 49 | 38 | 112 |
| MT 327 | 1.6 | 138 | 53 | 50 | 100 |
| TG-147 | 3.9 | 2247 | 357 | 175 | 107 |

**APPENDIX 2** Analytical Procedures.

## Routine Gold-Assay Procedures Used by Min-En Labs. Ltd.

1. Samples are received, cataloged and dried at 105°C if necessary.

2. Whole sample is passed through a primary crusher which reduces sample to -½ inch.

3. Whole sample is further passed through a secondary crusher which further reduces the sample to -10 mesh.

4. The whole sample is riffled through a ½ inch riffle to obtain a subsample of approx 300-400 grams. The remaining reject is bagged and stored.

5. The above 300-400 gram split is then pulverized to obtain -100 mesh using an iron plate rotary mill pulverizer.

6. Sample pulp is now rolled and analysed.

7. The sample pulp is assayed for gold using a 1 assay ton fire assay preconcentration and atomic absorption finishing techniques.

8. The remaining sample pulp is retained and stored.

PHONE: (604) 980-5814 or 988-4524

TELEX: 04-352828

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

# FIRE GOLD GEOCHEMICAL ANALYSIS BY MIN-EN LABORATORIES LTD.

Geochemical samples for Fire Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 15.00 or 30.00 grams are fire assay preconcentrated.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 1 ppb.

PHONE 980-5814

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

## GOLD GEOCHEMICAL ANALYSIS BY MIN-EN LABORATORIES LTD.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pretreated with $HNO_3$ and $HClO_4$ mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 0.005 ppm (5ppb).

PHONE 980-5814

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK - 26 ELEMENT ICP

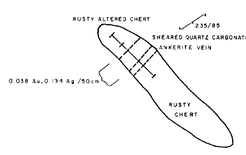
Ag,Al,As,B,Bi,Ca,Cd,Co,Cu,Fe,K,Mg,Mn,Mo,
Na,Ni,P,Pb,Sb,Sr,Th,U,V,Zn

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

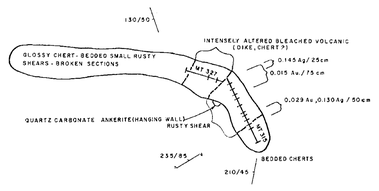
After drying the samples at 95°C soil and stream sedimint samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with $HNO_3$ and $HClO_4$ mixture.

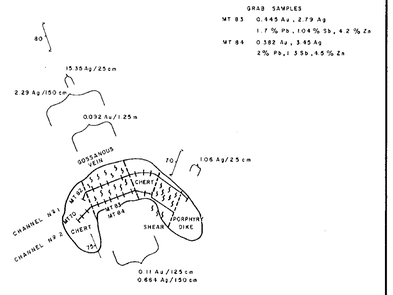
After cooling samples are diluted to standard volume. The solutions are analysed by Computer operated Jarrell Ash 9000ICP. Inductively coupled Plasma Analyser. Reports are formated by routing computer dotline print out.




TRENCH 2




TRENCH 1

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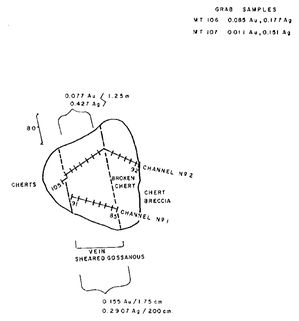


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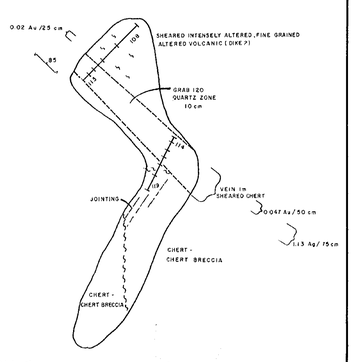


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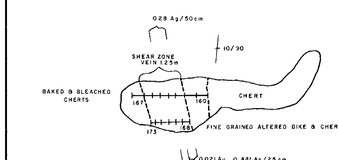


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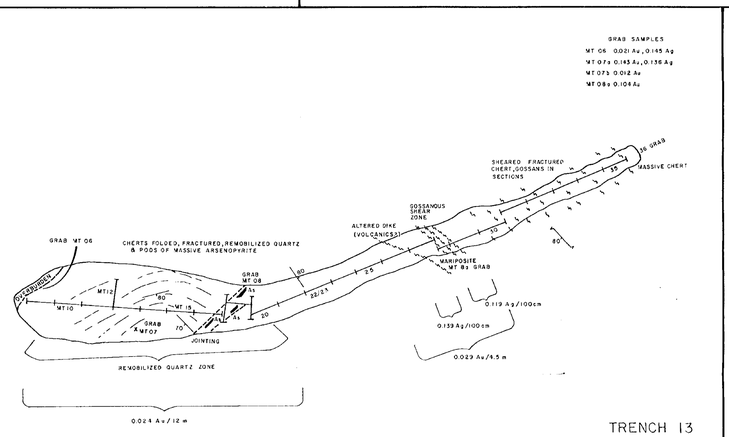


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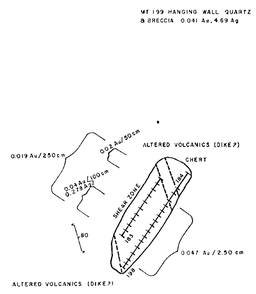


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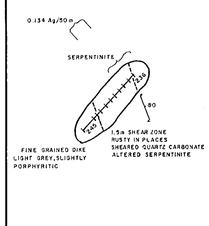


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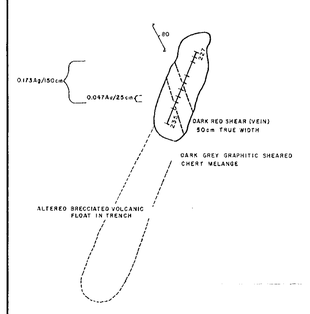


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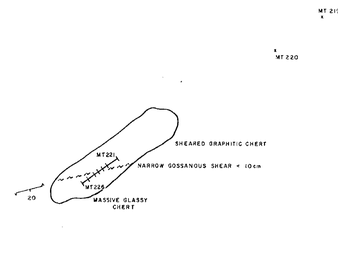


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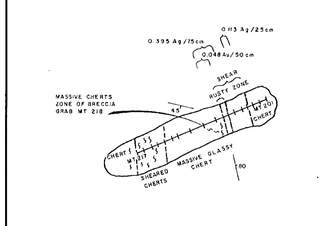


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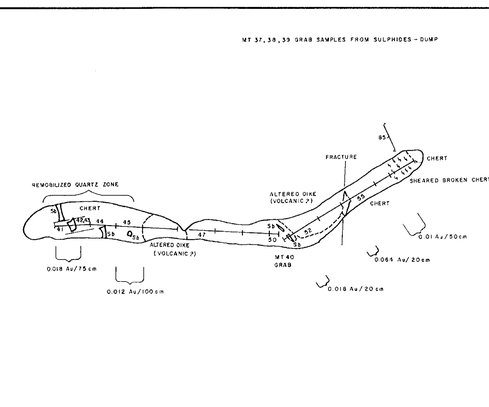


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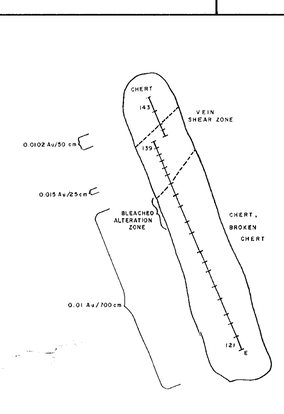


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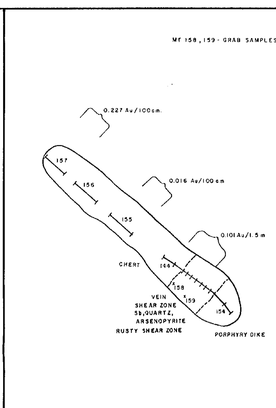


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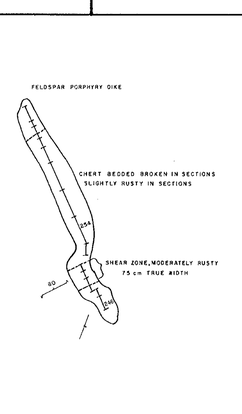
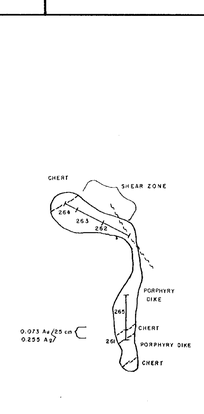
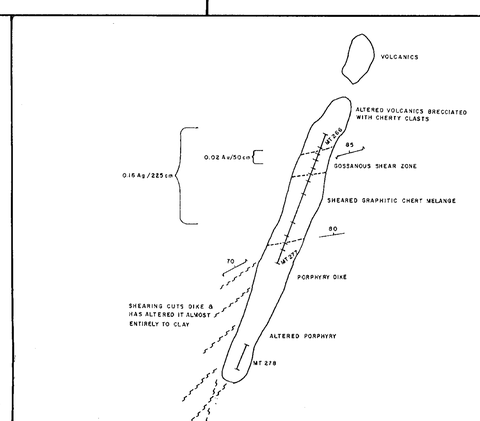


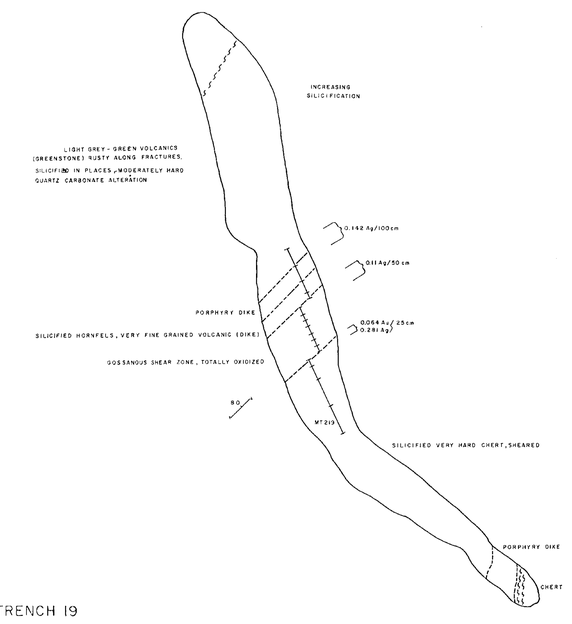

TRENCH 17



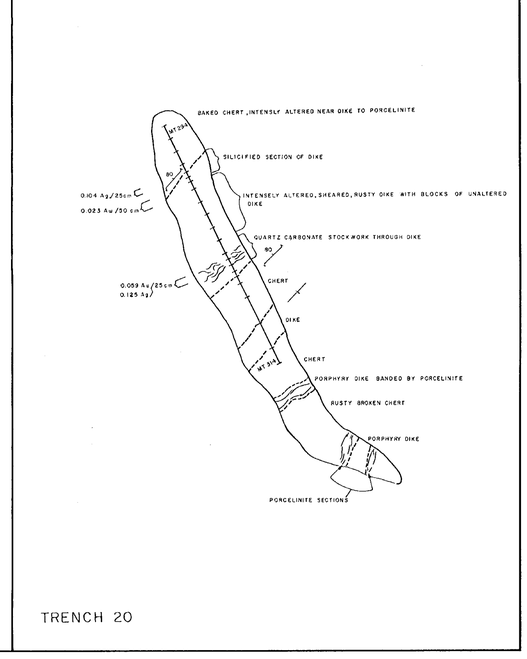

TRENCH 17 B




TRENCH 18




TRENCH 19




TRENCH 20

**DETAIL OF TRENCHES** **SCALE 1:100**

0 5m




LEGEND

- SHEAR
- BEDDING ORIENTATION
- SHEARING ORIENTATION
- TRENCH
- ADIT

ASSAY RESULTS

- 0.064 Au / 20cm — GOLD ASSAY IN OUNCES PER TON / WIDTH OF SAMPLE
- 0.021 Ag/ 2.5cm — SILVER ASSAY IN OUNCES PER TON / WIDTH OF SAMPLE
- 710 — TALUS GEOCHEMICAL SAMPLE, GOLD PLOTTED IN P.P.B.

0 500 1000 FEET
0 50 100 150 200 250 METRES



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# EXCAVATOR TRENCHING AND TALUS SAMPLING

COOKE GEOLOGICAL CONSULTANTS LTD.

| | | |
|---|---|---|
| BY: J. ROBINS | SCALE 1:2,500 | FIG. 5 |
| DATE: DEC. 1985 | DRAWN: J.R./d.w. | |