ARIS SUMMARY SHEET

District Geologist, Smithers   Off Confidential: 89.05.31

ASSESSMENT REPORT 17706   MINING DIVISION: Liard

PROPERTY: Thibert
LOCATION: LAT   58 52 03   LONG   130 22 11
                   UTM   09   6525897   421004
                   NTS   104J16W 104J16E
CLAIM(S):   E.A. 121-140,EA 43
OPERATOR(S):   Equity Silver Mines
AUTHOR(S):   Robertson, R.C.R.
REPORT YEAR: 1988, 127 Pages
COMMODITIES
SEARCHED FOR: Gold,Platinum
GEOLOGICAL
SUMMARY: Several bodies of serpentinized or quartz-carbonate altered peridotite and dunite are present along the northwest trending Thibert fault. There is a long history of placer gold production from creeks draining the fault. There is also a reported occurrence of platinum group minerals in placer concentrates.
WORK
DONE: Drilling
                   DIAD   460.2 m   3 hole(s);NQ
                   Map(s) - 9; Scale(s) - 1:5000,1:1000,1:500,1:250
                   SAMP   168 sample(s) ;AG,AU
MINFILE: 104J 012

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INTRODUCTION

The Thibert Creek property of Equity Silver Mines Ltd. consists of 237 claim units covering the Thibert fault from the north end of Dease Lake to Defot Creek, a strike length of approximately 16 miles. The claim groups follow the strike of an elevated stream channel which has recorded production of over 90,000 ounces of placer gold since its discovery in 1873. Two hard rock gold sources are noted to occur in Thibert Creek. The "Keystone Showing" is described as being on Thibert Creek between Berry and Boulder Creeks. Open cutting and stripping about 1931 is said to have exposed a zone of quartz stringers in quartz porphyry with gold values variously reported as 0.25 oz/ton over 40 feet, or 0.5 oz/ton over 20 feet. A flat packsack drill hole drilled to the south from the Boulder Pit in 1964 reportedly carried gold values in poorly recovered core. Assays by the Provincial Mineralogist in 1902 of the mon-magnetic portion of black sands from hydraulic operations in this area contained 43 percent platinum group minerals.

The 1987 work program consisted of data compilation, prospecting, rock sampling and limited geological mapping, backhoe and hand trenching in the Boulder Creek/Berry Creek area, and drilling three diamond drill holes (1510 feet: 460 meters). Two holes were drilled west of Porcupine Lake and one hole was drilled near the junction of Boulder Creek and Thibert Creek.

PROPERTY

The Thibert Creek property of Equity Silver Mines Ltd. consists of 237 units recorded in the names of Edward Asp, Daisy Asp or Equity Silver Mines Ltd. in the Liard Mining Division, British Columbia. Claims recorded in the name of Edward Asp and Daisy Asp are subject to an option agreement with Equity Silver Mines Ltd.

Table 1 shows the property composition as at August 1988:

Table 1: Claim Record Data

Claim Name	Record Nos.	No. of Units	Record Date	Expiry Date
Rust 1-8	2998-3005	8	19 Oct 1983	19 Oct 1991
DAZ 11, 12, 32-37	3610-3617	8	3 Aug 1986	3 Aug 1991
EA 1-18	3582	18	18 Jul 1986	18 Jul 1991
EA 9, 10, 39-44	3583-3590	8	18 Jul 1986	18 Jul 1991
MAY 21-40		20	17 May 1988	17 May 1989
MAY 41-60		20	17 May 1988	17 May 1989
EA 61-78	4094	18	12 Jun 1987	12 Jun 1991
EA 81-100	4093	20	12 Jun 1987	12 Jun 1991
EA 101-120	4092	20	12 Jun 1987	12 Jun 1991
CAL 1-4	4229-4232	4	30 Sep 1987	30 Sep 1991
EQ 6 FRACTION	4238	1	30 Sep 1987	30 Sep 1991
EQ 1	4233	8	30 Sep 1987	30 Sep 1991
EA 121-140	4091	20	12 Jun 1987	12 Jun 1991
EQ 7-8	4268-4269	2	20 Oct 1987	20 Oct 1991
EQ 2	4234	6	30 Sep 1987	30 Sep 1991
EQ 3	4235	20	30 Sep 1987	30 Sep 1988
EQ 4	4236	15	30 Sep 1987	30 Sep 1988
EQ 5 FRACTION	4237	1	30 Sep 1987	30 Sep 1988
		217 Units		

LOCATION AND ACCESS

The Thibert Creek property is located on map sheets 104-J-16 East and West, forming a west and northwest trending belt of claims extending from near Porter Landing in the east to near the junction of Adsit Creek and Canyon Creek in the west. The accessible east end of the property is approximately 65 kilometers north of Dease Lake via the Stewart-Cassiar highway.

Rough bulldozer trails extend west from the head of Dease Lake and are reached from the highway by fording the Dease River. These trails serve a number of small placer gold operations and provide access to Thibert Creek (between Delure Creek and Berry Creek), Mosquito Creek, Porcupine Lake, Adsit Lake and Defot Creek. These trails were used for access by heavy equipment in the 1987 diamond drill program for fuel caching, trail widening and mobilization and demobilization of drill equipment and supplies. A Yukon Airways helicopter from Dease Lake was used for movement of supplies and personnel.

REGIONAL GEOLOGY

Thibert Creek occurs along the northeastern boundary of the Atlin Terrane which is a fault-bounded area of Upper Paleozoic rocks. Many sections of this fault boundary, including the Thibert Creek area, are marked by small ultramafic bodies. Structural evidence suggests that the Atlin Terrane is a large thrust sheet affected by compressional forces and marked at least on the southern edge by thrust or reverse faults.

The upper Paleozoic rocks of the Dease Lake area have been affected by two phases of deformation. The older phase is marked by penetrative foliation and associated low grade regional metamorphism. The second and more common phase consists of crumpling associated with strain-slip clevage.

Kedahda Formation (Mississippian to Permian)

On the property this formation consists of very schistose quartzite and lesser black, platy argillite. The strike of the well developed schistosity of foliation roughly parallels the Thibert Creek Fault. The schistosity generally dips 60 to 70 degrees southerly.

These rocks contain numerous coarse-grained white quartz lenses within a 200 m to 400 m wide band south of the Thibert Fault.

Such lenses range up to 30 cm in width and 6 m in length but are generally much smaller. Only rare trace sulphides were noted within these lenses. No alteration was noted adjacent to the lenses.

Nazcha Formation (Upper Triassic)

This formation underlies the northwestern portion of the property.

The formation consists of fine grained, well bedded light grey sandstone with varying but significant amounts of black argillaceous rocks. Bedding varies from 10 cm to 1 m in thickness with occasional more massive horizons.

Exposures of this formation are found along a branch of Defot Creek in the westernmost portion of the property. At this location the formation can be divided into three units. The easternmost consists of massive to thickly bedded sandstone with less than 10 percent argillite. A central unit with alternating horizons of sandstone and argillite vary from several meters to 5 to 25 cm in thickness. The westernmost unit consists of alternating sandstone and argillite horizons but such horizons are generally 5 cm or less thick giving the rock a distinctive banded appearance. Grade bedding is readily visible within this unit with tops consistently up. Occasional sandstone horizons are up to 30 cm thick.

Proceeding southwest from Defot Creek along the above branch, one is struck by the increased crumpling, folding and shearing within the formation as one nears the Thibert Creek Fault. Two degree bedding azimuth dipping 12 degrees easterly. Similar contorted bedding is seen near sample site 61108. Despite abundant contortions and bedding as flat as 20 degrees, beds generally dip 75 degrees N.

Shonektaw Formation (Upper Triassic)

This formation occurs within the central portion of the claim group. The formation consists of augite andesite and basalt.

Only a few outcrops of this formation were observed. These formations consisted of fine grained, greenish, volcanic rocks. The greenish colour is suggestive of small amounts of chlorite and perhaps epidote. Several exposures are fractured and sheared with small amounts of ironstaining.

Limestone

Outcrops of limestone up to 80 m wide are exposed along the upper parts of Porcupine Creek. Sporadic exposures occur for a distance of 500 m along the creek. These outcrops can be seen from a distance due to their whitish weathered surfaces.

On a fresh surface the limestone is light grey with a distinctive ribboned appearance. Such a texture is suggestive of algal layering. The limestone seems to consist of pure carbonate with no other material other than carbonate noted within the rock. Crosscutting white calcite veinlets are common. Locally the limestone appears to be partially silicified. No sulphides were noted within this formation.

Government mapping has show both the Nazcha Formation and Kedahda Formation to contain limestone lenses. The limestones seen along Porcupine Creek likely belong to the Nazcha Formation but this is uncertain.

Granodiorite (Late Triassic and Early Jurassic)

Granitic rocks, including biotite-hornblende quartz diorite, granodiorite, quartz monzonite and diorite, underlie the northern portions of several claims.

Ultramafic (Mississipian to Permian)

Ultramafic bodies in the Atlin Terrane have been divided into three types: elongate bodies occuring along the fault contacts to the Atlin Terrane, equidimensional bodies within the Atlin Terrane and bodies associated with Permo-Triassic volcanism at the northwestern end of the terrane.

These rocks are described by Monger (1975): "These rocks are predominately enstatite-bearing peridotite or harzburgite and dunite; partially or wholly serpentinized, and serpentine of indeterminate origin. Locally they contain irregular lenses and layers of pyroxenite; some of which contain clinopyroxene that may form poikilitic crystals enclosing olivine grains."

The ultramafics at Thibert Creek would be classified as "alpine type" ultramafics.

The exposures of ultramafic can be divided into three types:

a) unaltered, fine grained, black peridotite;
b) serpentinite;
c) quartz-carbonate-mariposite altered rock.

Peridotite

Small pockets of black, fine grained peridotite are found within all ultramafic bodies visited. Such pockets vary from a few meters to a few centimetres in width. Occasionally such rock was seen near the outer edges of ultramafic bodies. Peridotite would comprise less than 1 percent of most ultramafic bodies.

Serpentinite

Dark green waxy serpentine comprises a significant proportion of the ultramafic rocks found between Porcupine Lake and Thibert Creek.

Quartz-Carbonate-Mariposite Alteration

The ultramafic bodies occurring along Thibert Creek consist largely of quartz-carbonate-mariposite altered rock. Many of the ultramafic bodies consist of greater than 90 percent altered rock.

Silica would appear to be by far the predominant constituent. Emerald green mariposite is present in variable amounts but is also present even if in only trace amounts. Small amounts of calcite and magnesite are also present. Since magnesite often incorporates silica into its lattice and forms, a chert-like appearance, some of what appears to be silica may be magnesite and therefore the amount of carbonate may be much greater than it appears.

Outcrops of this altered rock are characteristically brightly ironstained with orange goethite. Outcrops are also often laced with abundant quartz veinlets generally less than 1 cm thick. Only very rare trace pyrite was seen in such veins. Similar networks of thin quartz veinlets were observed within sedimentary rocks adjacent to the ultramafic bodies.

PREVIOUS EXPLORATION

Placer gold was first discovered in what is now Thibert Creek in 1873. This discovery was made by a member of a party of prospectors led by Henry Thibert, about three miles (4.8 km) above the mouth of Thibert Creek near Delure Creek. Other areas draining into and near Thibert Creek were soon found to contain gold. The creeks that were actively mined as well as Thibert and Delure included Boulder, Defot, Mosquito, Porcupine and Vowell Creeks. The production from these creeks is recorded as being more than 70,000 ounces (2,000 kg) up until 1949. Most of the production occurred before the Klondike gold rush lured away most of the local prospectors. There have been short periods of intensive work since then and presently there are a few placer operations active in the area.

About two-thirds of the gold production was from Thibert Creek where economic gold placers are restricted to rock benches 5 to 200 feet (1.5 m to 61 m) above the present stream channel.

It has been reported that concentrates from the Thibert Creek placer operations contained about 2 oz/ton platinum.

The only hard rock gold source noted in government literature is the Keystone showing. This is described as being on 8 claims on Thibert Creek below Berry Creek. "Open-cutting and stripping has exposed a zone of quartz stringers in quartz porphyry." The owner reported gold values up to $5.50/ton (gold at $17/oz) across a width of 40 feet (12 m).

This showing was not located during the 1988 field work.

The Dease Lake area was covered by reconnaissance prospecting-sampling for porphyry type deposits early in the 1970s.

During 1983-84 Noranda Exploration carried out preliminary surface exploration programs over parts of the area included in the present Thibert Creek property of Equity Silver Mines Ltd. (Gorc and MacArthur, 1984). Exploration consisted of silt, soil and rock sampling with some geological mapping. Anomalous soil sample results with values up to 430 ppb gold and 1000 ppm arsenic were located in part of their reconnaissance grid west of Porcupine Lake.

1987 EXPLORATION PROGRAM

Introduction

The 1987 exploration program consisted of compilation of data from previous exploration in the area, particularly Noranda's 1983-84 results. Detailed prospecting and rock sampling, with some limited geological mapping, were carried out in a number of areas. Area selection was largely determined by anomalous results in Noranda's program of rock and soil sampling or by presence of altered ultramafic rocks along the Thibert Fault in areas known to produce placer gold. A limited amount of backhoe and hand trenching was carried out in the Boulder Creek-Berry Creek area; both reported hardrock gold showings ore in that area. The old Keystone showing has not been located and is believed to be covered by placer tailings in the area immediately east of the Berry Creek-Thibert Creek junction.

This program identified the Porcupine and Boulder-Berry areas as principal targets; both areas appear to be zones of strong folding, shearing and extensive quartz veining (from stringers to several meters wide) where competent rock units (altered, silicified ultramafic rocks and cherty metasediments) have been dismembered by folding and occur as folded blocks within sheared black shale and serpentinite masses. Deformation seems much less intense away from these zones.

Diamond Drill Program

In late 1987 three diamond drill holes were completed. Two holes (1010 feet, 307.8 m) were drilled west of Porcupine Lake to test rock and soil geochemical anomalies and obtain a three dimensional view of rock units underlying this area. A third hole (500 feet, 152.4 m) was drilled south from near the Boulder Creek-Thibert Creek junction to test serpentinite, quartz veins and a veined black shale unit (which carried up to 0.018 oz/ton gold in a backhoe pit).

Drilling was carried out by Caron Diamond Drilling Ltd., of Whitehorse, Yukon, using a skid-mounted Longyear 38 drill and drilling NQ size core. Drill mobilization and moving the drill from the Porcupine Lake area to Boulder Creek were hampered by the large size of the skid-mounted drill rig and by unusual fall/winter conditions on the trails (snow overlying unfrozen muddy ground). Two bulldozers were necessary to widen trails and to move the heavier sloops up steep muddy sections of trail. A D-7 bulldozer from Murphy Contracting, Dease Lake, and a D-8 bulldozer from Canyon Contracting, Dease Lake, were used.

Location of drill holes in the Porcupine Lake area is shown in Figure 7; drill sections are shown in Figures 8 and 9. Drill logs are included in Appendix 2; analyses of split drill core can be found in Appendix 3; and petrographic descriptions of some core samples are in Appendix 4. Rock names derived from petrographic studies by Vancouver Petrographics do not always correspond with names used in the core logs. In hole DDH87-P-1 a number of low-order gold-silver anomalies were found in quartz-veined black shale.

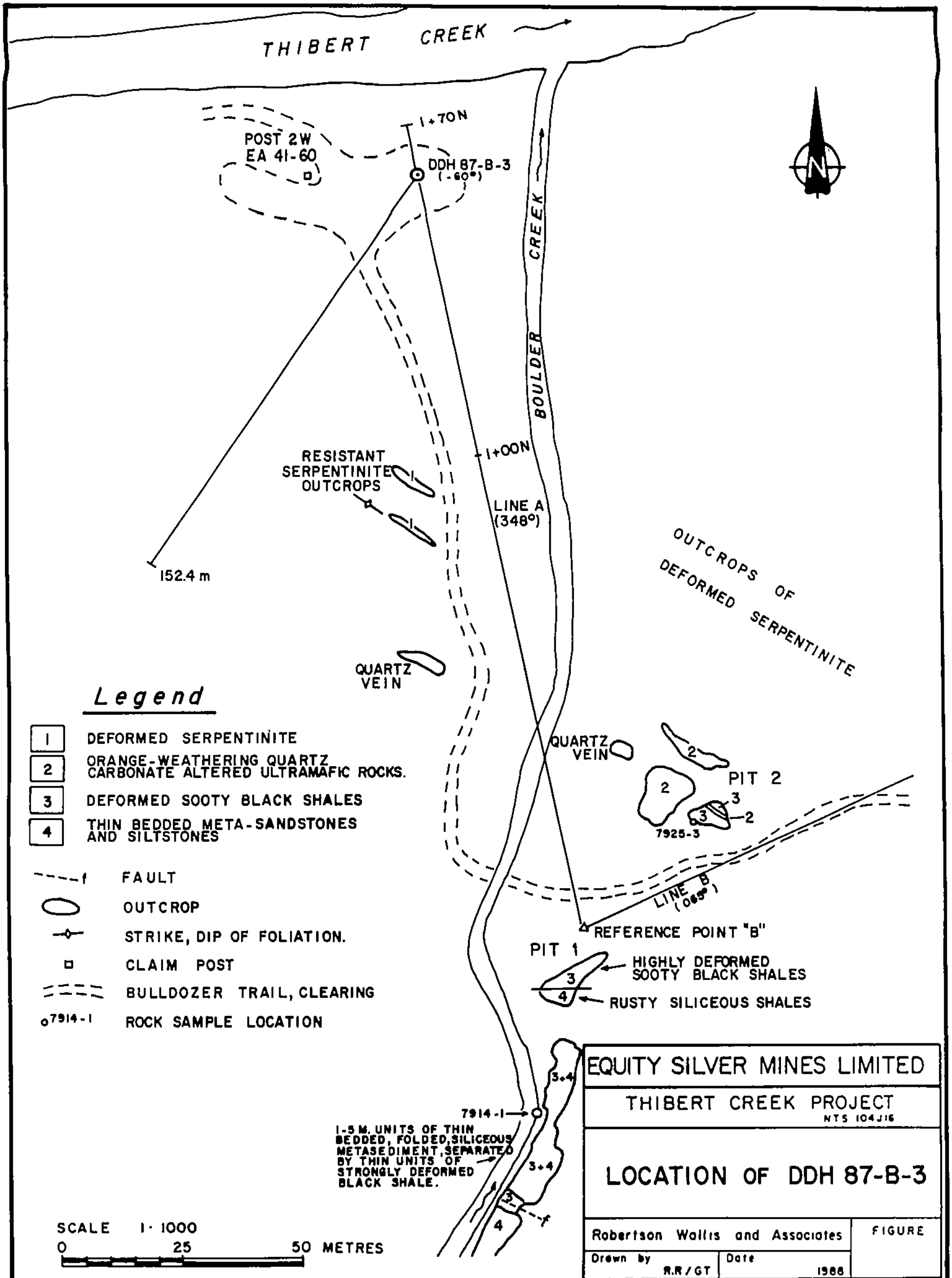
The location of hole DDH87-B-3 is shown in Figure 10; the drill hole is shown in section in Figure 11. Drill logs are included in Appendix 2; core analyses are in Appendix 3 and petrographic descriptions of some core samples are found in Appendix 4. The upper half of this hole cut a strongly sheared serpentinite unit, with very poor core recovery. The lower section of the hole cut shales, chert, altered ultramafic and some quartz veining. A 19 foot interval from 333 to 352 feet averaged 360 ppb gold in black shales and chert with patchy quartz veining, including a 5 foot section grading 1000 ppb gold. Sporadic platinum anomalies occur in parts of the deformed serpentinite unit in the top half of this hole:

Internal (feet)	Pt (ppb)
118.0 - 112.2	213
136.8 - 139.3	110
145.8 - 147.0	122
186.7 - 187.2	297
258.3 - 262.0	145

All drill core is stored at the Yukon Airways helicopter base at Dease Lake.

DISCUSSION

Source rocks of the placer gold mined in Thibert Creek appear to be the narrow band of ultramafic rocks along the Thibert Fault. The only gold producing creeks in the area either follow or cross the Thibert Fault.


THIBERT CREEK
1+70N
POST 2W
EA 41-60
DDH 87-B-3
(-60°)
CREEK
BOULDER
RESISTANT
SERPENTINITE
OUTCROPS
1+00N
LINE A
(348°)
152.4 m
OUTCROPS OF
DEFORMED SERPENTINITE
QUARTZ
VEIN
QUARTZ
VEIN
PIT 2
7925-3
LINE B
(065°)
REFERENCE POINT "B"
PIT 1
HIGHLY DEFORMED
SOOTY BLACK SHALES
RUSTY SILICEOUS SHALES
Legend
1 DEFORMED SERPENTINITE
2 ORANGE-WEATHERING QUARTZ CARBONATE ALTERED ULTRAMAFIC ROCKS.
3 DEFORMED SOOTY BLACK SHALES
4 THIN BEDDED META-SANDSTONES AND SILTSTONES
FAULT
OUTCROP
STRIKE, DIP OF FOLIATION.
CLAIM POST
BULLDOZER TRAIL, CLEARING
7914-1 ROCK SAMPLE LOCATION
7914-1
1-5 M. UNITS OF THIN BEDDED, FOLDED, SILICEOUS METASEDIMENT, SEPARATED BY THIN UNITS OF STRONGLY DEFORMED BLACK SHALE.
3+4
3+4
SCALE 1:1000
0 25 50 METRES
EQUITY SILVER MINES LIMITED
THIBERT CREEK PROJECT
NTS 104J16
LOCATION OF DDH 87-B-3
Robertson Wallis and Associates
FIGURE
Drawn by R.R/GT
Date 1988

Best gold values were recovered from the gravels in Thibert Creek downstream from Berry Creek, with lesser concentrations at the Mosquito Creek-Thibert Creek junction and in tributary creeks such as Defot, Bear and California which cross the fault and the ultramafic units. Important areas for potential gold mineralization are zones of strong deformation, alteration and silicification of the ultramafic rocks, where fluids have been mobilized during alteration and extensive quartz veining has been produced in the ultramafic units and enclosing sedimentary units, particularly black shale horizons.

REFERENCES

Gabrielse, H., Monger, J.W.H., et al.; 1979: Geology of Dease Lake Map Area (104J). Geological Survey of Canada Open File 707.

Gorc, D. and MacArthur, R.; 1984: B.C.D.M. Assessment Report 13309.

Monger, J.W.H., 1969: Stratigraphy and Structure of Upper Paleozoic Rocks, Northeast Dease Lake Map Area, British Columbia. Geological Survey of Canada Paper 68-48.

Monger, J.W.H., 1975: Upper Paleozoic Rocks of the Atlin Terrane, Northwestern British Columbia and South Central Yukon. Geological Survey of Canada Paper 74-47.

Price, M.E., 1965: Supplementary Report on the Barrington Properties situate on Thibert Creek in the Dease Lake Area. Private Report to Barrington Development Company Limited.

Rublee, V. J. (compilee), 1986: Occurrence and Distribution of the Platinum Group Elements in British Columbia. B.C. Ministry of Energy, Mines and Petroleum Resources Open File 1986-7.

APPENDIX 1

ROCK SAMPLE ANALYSES

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:VIA USA 7601067 UC

Certificate of ASSAY

[illegible] File: [illegible]
[illegible] Date: AUGUST [illegible]
[illegible] Type: ROCK ASSAY

[illegible] following results for samples submitted.

SAMPLE NUMBER	FIELD #	CU %	AG G/TONNE	AG OZ/TON	NI PPM	AU G/TONNE	AU OZ/TON	PT-FIRE PPB
[illegible]	7812-1		[illegible]	0.01	400	.02	0.001	1
[illegible]	7818-2	[illegible]	[illegible].1	0.06	640	.01	0.001	22
[illegible]	7818-3		[illegible]	0.04	[illegible]	.01	0.001	1
[illegible]	7818-4		[illegible]	0.01	40	.01	0.001	1
[illegible]	7818-5		[illegible]	[illegible]	[illegible]	.01	0.001	1
[illegible]	7818-6		[illegible]	0.01	[illegible]	.01	0.001	1
[illegible]	7818-7		1.0	0.0[illegible]	[illegible]	.01	0.001	7
[illegible]	7815-1		[illegible].1	0.01	40	.01	0.001	1[illegible]
[illegible]	7815-2		[illegible]	0.01	10	.01	0.001	1
[illegible]	7815-3		[illegible]	0.05	[illegible]	.01	0.001	1
[illegible]	7815-4		[illegible]	0.06	20	.01	0.001	1
[illegible]	7815-5		[illegible]	[illegible]	45	.01	0.001	7
[illegible]	7815-6		0.2	0.01	1720	.01	0.001	32
[illegible]	78?7-7		[illegible]	0.03	1460	.01	0.001	1[illegible]
[illegible]	7817-1		[illegible].4	0.07	85	.01	0.001	29
[illegible]	7817-2		0.7	0.01	15	.01	0.001	1
[illegible]	7817-3		1.0	0.03	80	.01	0.001	32
[illegible]	7817-4		1.9	0.06	560	.01	0.001	1
[illegible]	7817-5		[illegible].1	0.06	200	.02	0.001	46
[illegible]	7817-7		1.0	0.03	700	.0[illegible]	0.001	4
[illegible]	7817-8		2.1	0.06	1960	[illegible]	0.001	21
[illegible]	7817-9		1.8	0.05	1800	.0[illegible]	0.001	1[illegible]
[illegible]	7819-2	.011	1.7	0.05	1120	.02	0.001	20
[illegible]	7819-3	.007	1.0	0.03	1130	.03	0.001	18
[illegible]	7819-4	.008	0.2	0.01	1060	.03	0.001	15
[illegible]	7814-1		0.5	0.01	40	.01	0.001	24
[illegible]	7814-2		0.4	0.01	10	.01	0.001	1
[illegible]	7814-3		1.5	0.04	5	.01	0.001	9
[illegible]	7814-4		1.0	0.03	5	.01	0.001	10
[illegible]	7814-5		0.2	0.01	10	.01	0.001	10

Certified by ______________________

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Company: EQUITY SILVER MINES File: [illegible]

Project: [illegible] Date: AUGUST 29, [illegible]

Attention: RON ROBERTSON Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	Field #	AG G TONNE	AG OZ TON	NI PPM	AU G TONNE	AU OZ TON	[illegible]
54 031	7814-6	[illegible]	0.0[illegible]	25	.01	0.001	1
54 [illegible]	7814-7	[illegible]	0.01	5	.01	0.001	1
[illegible]	7814-8	[illegible]	[illegible]	100	.04	0.001	13
[illegible]	7814-9	[illegible]	0.01	[illegible]	.02	0.001	11
54 [illegible]	7814-10	[illegible]	[illegible]	5	.04	0.001	[illegible]
[illegible]	7814-11	[illegible]5	0.01	[illegible]	.0[illegible]	0.001	[illegible]
[illegible]	7814-12	1.[illegible]	[illegible]	5	.02	0.001	18
[illegible]	7814-14	[illegible]	0.01	140	.04	0.001	2
[illegible]	7814-15	[illegible].4	0.01	[illegible]3	.03	[illegible]	3
[illegible] 041	7814-16	[illegible]	0.01	5	.01	0.001	1
[illegible]	7814-17	0.3	0.01	20	.02	0.001	[illegible]
[illegible]	7814-18	0.1	0.01	5	.01	0.001	[illegible]
[illegible]	7814-19	[illegible]	0.01	5	.02	0.001	[illegible]
[illegible]	7814-20	[illegible]	0.01	5	[illegible]	[illegible]	[illegible]
[illegible]	7814-21	[illegible]	0.01	10	.02	0.001	[illegible]
[illegible]	7814-10A	0.2	0.01	5	.01	0.001	[illegible]
[illegible]	7813-1A	0.[illegible]	0.01	2	[illegible]	0.001	2
[illegible]	7813-1B	0.[illegible]	0.01	2	.01	0.001	10
[illegible]	7813-1C	1.0	0.0[illegible]	7	.01	0.001	[illegible]
[illegible]	7813-2	1.2	0.04	1520	.01	[illegible]	[illegible]
[illegible]	7813-3	0.4	0.01	[illegible]	.02	[illegible]	1
[illegible]	7813-4	0.6	0.02	[illegible]	.02	0.001	1
[illegible]	7813-5	0.2	0.01	2	.01	[illegible]	[illegible]
[illegible] 055	7813-6	1.6	0.05	2	.03	0.001	1
[illegible] 056	7813-7	1.2	0.04	15	.02	0.001	[illegible]
[illegible] 057	7813-8	0.2	0.01	2	.01	0.001	1
54 058	7813-9	0.4	0.01	20	.01	0.001	18
54 059	7813-10	1.0	0.03	5	.01	0.001	10
54 060	7813-11	0.2	0.01	10	.01	0.001	2
54 061	7813-12	0.3	0.01	10	.01	0.001	2

Certified by [signature]

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Company: [illegible] SILVER MINES
Project: [illegible]
Attention: [illegible]

File: [illegible]
Date: AUGUST [illegible]
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

SAMPLE NUMBER	FIELD No	CU %	AG G/TONNE	AG OZ/TON	NI PPM	AU G/TONNE	AU OZ/TON	PT-FIRE PPB
[illegible]	7813-13		[illegible]	0.01	20	.01	0.001	1
[illegible]	7813-14		1.8	0.05	15	.03	0.001	1
[illegible]	7813-15		[illegible]	0.02	5	.01	0.001	1
[illegible]	7813-16		[illegible]	0.01	[illegible]	.02	0.001	49
[illegible]	7813-17		[illegible]	[illegible]	[illegible]	.02	0.001	[illegible]
[illegible]	7813-18		[illegible]	[illegible]	20	.01	0.001	1
[illegible]	7813-19		[illegible]	[illegible]	10	.01	[illegible]	48
[illegible]	7813-20		[illegible]	[illegible]	[illegible]	.01	[illegible]	36
[illegible]	7813-21		[illegible]	[illegible]	15	.01	0.001	1
[illegible]	7813-22		[illegible]	[illegible]	[illegible]	.02	0.001	16
[illegible]	7813-23		0.2	0.01	70	.01	0.001	[illegible]
[illegible]	7813-24		0.4	0.01	45	.01	[illegible]	[illegible]
[illegible]	7813-25		[illegible]	0.01	64	.01	0.001	1
[illegible]	7813-26		[illegible]	0.01	16	[illegible]	0.001	[illegible]
[illegible]	7819-1	[illegible]	[illegible]	0.01	[illegible]	.01	[illegible]	[illegible]
[illegible]	7811-1	[illegible]	[illegible]	[illegible]	18	[illegible]	[illegible]	4
[illegible]	7817-6	.001	0.4	0.01	420	.01	0.001	[illegible]
[illegible]	7814-22	.001	0.2	0.01	615	.01	0.001	[illegible]
[illegible]	7813-27		0.2	0.01	18	[illegible]	0.001	14
[illegible]	7813-28		0.4	0.01	16	.01	0.001	[illegible]
[illegible]	7813-29		0.3	0.01	10	.01	[illegible]	7
[illegible]	7813-30		0.3	0.01	8	.02	0.001	15
[illegible]	7813-31		0.6	[illegible]	5	[illegible]	0.001	[illegible]
[illegible]	7813-32		0.2	0.01	28	.01	0.001	7
[illegible]	7813-33		0.5	0.01	24	.01	0.001	[illegible]
[illegible]	7813-34		0.4	0.01	19	.02	0.001	1
[illegible]	7813-35		0.2	0.01	16	.01	0.001	2
[illegible]	7813-36		0.2	0.01	3	.01	0.001	7
[illegible]	7813-37		0.3	0.01	5	.02	0.001	1
[illegible]	7813-38		0.2	0.01	4	.03	0.001	2

Certified by ______________

MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

[illegible] West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX:VIA USA 7601067 UC

Certificate of ASSAY

[illegible] EQUITY SILVER MINES [illegible]

[illegible] ATTENTION:[illegible]

We hereby certify [illegible] the following results for samples submitted.

Sample Number	Field No	AG G/TONNE	AG OZ/TON	NI PPM	AU G/TONNE	AU OZ/TON	[illegible] PPM
34 89[illegible]	7813-40	0.[illegible]	0.0[illegible]	[illegible]	.0[illegible]	0.001	4[illegible]
34 [illegible]94	7813-41	[illegible]	[illegible].05	18	.02	0.001	1
[illegible] 895	7813-43	0.[illegible]	0.01	7	.01	0.001	1
34 [illegible]	7813-44	[illegible]	[illegible].01	16	.02	0.001	[illegible]
34 [illegible]97	7813-45	[illegible]	[illegible]	20	.01	0.001	1
[illegible]	7813-46	[illegible]	[illegible].01	[illegible]	.01	0.001	[illegible]
[illegible]	7813-48	0.4	[illegible]	1[illegible]	.02	0.001	1
[illegible]	7813-50	0.2	[illegible].01	[illegible]	.0[illegible]	[illegible]	14
[illegible]	7813-51	[illegible]	[illegible]	1[illegible]	.0[illegible]	0.001	1
[illegible]	7813-56	[illegible].6	0.02	17	.01	0.001	1
[illegible] 90[illegible]	7813-57	[illegible].4	0.01	[illegible]	.02	0.001	1
[illegible]	7813-59	[illegible].4	0.01	2	.01	0.001	2
[illegible]4 [illegible]	7813-60	[illegible].2	[illegible].01	6	.02	0.001	[illegible]
[illegible]4 90[illegible]	7813-61	0.5	0.01	11	.03	0.001	[illegible]1

Certified by [signature]

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:VIA USA 7601067 UC

Analytical Report

SILVER MINES

Date: August

.................................104.................................

ground to mesh -150..............

discarded:..............................

discarded:..............................

ION-CHEMICAL ANALYSIS.

To: EQUITY SILVER MINES LIMITED,
708, 1155 West Pender Street,
Vancouver, B.C. V6E 2P4

ATTN: Terry Heard

File No. 30279
Date September 10, 1987
Samples Rock

Certificate of ASSAY
LORING LABORATORIES LTD.

Page # 1

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER
"Assay Analysis"		
8- 3	Trace	Trace
8- 4	Trace	.02
8- 5	.010	Trace
8- 6	Trace	Trace
8- 7	Trace	.04
8- 8	.004	.05
8- 9	Trace	Trace
8-10	Trace	Trace
8-1-A	Trace	Trace
8-1-B	Trace	Trace
8-1-C	Trace	Trace
8-1-D	.002	.01
8-1-E	.002	Trace
8-2-A	Trace	.07
8-2-B	.002	Trace
8-2-C	Trace	Trace
8-2-D	.002	.04
8-2-E	Trace	.06
8-2-F	.018	.01
R-1	Trace	Trace

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.
Pulps Retained one month unless specific arrangements made in advance.

D. [signature]
Assayer

To: EQUITY SILVER MINES LIMITED,
708, 1155 West Pender Street,
Vancouver, B.C. V6E 2P4

ATTN: Terry Heard

File No. 30279
Date September 10, 1987
Samples Rock

Certificate of ASSAY

LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER
R-2	Trace	.02
R-3	.002	.05
R-4	Trace	.01
R-5	Trace	Trace
R-6	Trace	Trace
R-7	Trace	Trace
789- 1	Trace	Trace
789- 2	Trace	Trace
789- 3	Trace	Trace
789- 5 A	.002	.01
789- 5 B	Trace	Trace
789- 6	Trace	Trace
789- 7	Trace	.01
789- 8	Trace	Trace
789- 9	Trace	Trace
789-10	Trace	.01
789-11	Trace	.02
789-12	Trace	.05
789-13	Trace	.05
789-14	.008	.01
789-15	Trace	Trace

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.
Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: EQUITY SILVER MINES LIMITED,
708, 1155 West Pender Street,
Vancouver, B.C. V6E 2P4

ATTN: Terry Heard

File No. 30279
Date September 10, 1987
Samples Rock

Certificate of ASSAY
LORING LABORATORIES LTD.

Page # 3

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER
789-16	Trace	Trace
789-17	Trace	Trace
789-18	Trace	Trace
789-19	Trace	Trace
789-20	Trace	Trace
789-21	Trace	Trace
789-22	Trace	Trace
789-23	Trace	Trace
789-24 A	Trace	Trace
789-24 B	Trace	Trace
789-25	Trace	Trace

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.
Pulps Retained one month
unless specific arrangements
made in advance.

Assayer

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: VIA USA 7601067 UC

Certificate of ASSAY

Company: EQUITY SILVER
Project:
Attention: T.HEARD

File: 7-1275/P1
Date: SEPT 12/87
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
7821-6	2.0	0.06	.01	0.001
7823-1	0.2	0.01	.02	0.001
7823-10	0.1	0.01	.01	0.001
7823-16	0.4	0.01	.01	0.001
7824-6	1.6	0.05	.03	0.001
7824-7	0.4	0.01	.01	0.001
7825-1	0.2	0.01	.04	0.001
7825-18	0.2	0.01	.01	0.001
7821-1	1.3	0.04	.01	0.001
7821-2	0.2	0.01	.01	0.001
7821-3	0.2	0.01	.03	0.001
7821-11	0.1	0.01	.17	0.005
7823-2	0.4	0.01	.01	0.001
7823-3	0.2	0.01	.04	0.001
7823-4	0.8	0.02	.02	0.001
7823-5	0.2	0.01	.02	0.001
7823-6	0.4	0.01	.01	0.001
7823-6A	0.7	0.02	.01	0.001
7823-7	0.3	0.01	.02	0.001
7823-8	0.6	0.02	.03	0.001
7823-9	0.3	0.01	.01	0.001
7823-11	1.1	0.03	.01	0.001
7823-12	0.8	0.02	.02	0.001
7823-13	0.4	0.01	.01	0.001
7823-14	0.2	0.01	.01	0.001
7823-15	0.3	0.01	.01	0.001
7823-17	0.2	0.01	.02	0.001
7823-18	0.3	0.01	.01	0.001
7823-19	0.2	0.01	.01	0.001
7823-20	1.6	0.05	.23	0.007

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: VIA USA 7601067 UC

Certificate of ASSAY

Company: EQUITY SILVER
Project:
Attention: T.HEARD

File: 7-1275/P2
Date: SEPT 11/8
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
7823-21	0.5	0.01	.02	0.001
7823-22	0.7	0.02	.01	0.001
7823-23	0.2	0.01	.01	0.001
7823-24	0.6	0.02	.03	0.001
7823-25	2.1	0.06	.01	0.001
7823-26	0.3	0.01	.01	0.001
7823 27	1.8	0.05	.01	0.001
7823-28	1.4	0.04	.01	0.001
7823-29	2.2	0.06	.05	0.001
7824-1	0.4	0.01	.01	0.001
7824-2	2.0	0.06	.01	0.001
7824-3	0.3	0.01	.01	0.001
7824-4	0.8	0.02	.01	0.001
7824-5	0.3	0.01	.05	0.001
7824-8	1.2	0.04	.01	0.001
7824-9	0.4	0.01	.01	0.001
7824-10	0.3	0.01	.01	0.001
7824-11	0.7	0.02	.01	0.001
7824-12	2.1	0.06	.01	0.001
7824-13	0.9	0.03	.01	0.001
7824-14	1.0	0.03	.01	0.001
7824-15	0.8	0.02	.01	0.001
7824-16	1.2	0.04	.04	0.001
7824-17	0.2	0.01	.01	0.001
7824-18	0.2	0.01	.01	0.001
7824-19	0.2	0.01	.01	0.001
7824-20	0.3	0.01	.01	0.001
7824-21	0.2	0.01	.01	0.001
7824-22	0.3	0.01	.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: VIA USA 7601067 UC

Certificate of Assay

Company: EQUITY SILVER
Project:
Attention: F. HEARD

File: 7-1275/P3
Date: SEPT 11/87
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
7825-2	0.5	0.01	.01	0.001
7825-3	0.6	0.02	.01	0.001
7825-4	0.2	0.01	.02	0.001
7825-5	0.4	0.01	.01	0.001
7825-6	0.2	0.01	.05	0.001
7825-7	0.3	0.01	.02	0.001
7825-8	0.2	0.01	.01	0.001
7825-9	0.1	0.01	.04	0.001
7825-10	0.2	0.01	.01	0.001
7825-11	0.3	0.01	.01	0.001
7825-12	0.2	0.01	.01	0.001
7825-13	0.3	0.01	.01	0.001
7825-14	0.2	0.01	.02	0.001
7825-15	0.3	0.01	.01	0.001
7825-16	0.4	0.01	.01	0.001
7825-17	0.4	0.01	.01	0.001
7825-19	0.3	0.01	.01	0.001
7825-20	0.2	0.01	.06	0.002
7825-21	0.2	0.01	.02	0.001
7825-22	0.2	0.01	.01	0.001
7825-23	0.5	0.01	.10	0.003
7825-24	1.0	0.03	.02	0.001
7825-26	0.5	0.01	.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:VIA USA 7601067 UC

Analytical Report

Company:EQUITY SILVER
Project:
Attention:T.HEARD

File:7-1275
Date:SEPT 12/87
Type:ROCK ASSAY

Date Samples Received :SEPT 7/87
Samples Submitted by :T.HEARD

Report on .... Geochem Samples
....
.......................82............................ Assay Samples
....

Copies sent to:
1. EQUITY SILVER, VANCOUVER, B.C.
2. EQUITY SILVER, WHITEHORSE, YUKON.
3.

Samples: Sieved to mesh .... Ground to mesh ....-150....

Prepared samples stored:.........X.... discarded:.......................
rejects stored:.........X.... discarded:.......................

Methods of analysis:

AG - ACID DIGESTION-CHEMICAL ANALYSIS.
AU - FIRE ASSAY.

Remarks

MORE ANALYSIS TO FOLLOW.

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:VIA USA 7601067 UC

Certificate of ASSAY

Company:COUITY SILVER
Project:
Attention:I.HEARD

File:7-1275/P1
Date:SEPT 15/87
Type:ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	PT G/TONNE	PT OZ/TON
7821-6	.01	0.001
7823-1	.01	0.001
7823-10	.01	0.001
7823-16	.02	0.001
7824-6	.01	0.001
7824-7	.01	0.001
7825-1	.01	0.001
7825-18	.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:VIA USA 7601067 UC

Analytical Report

Company: EQUITY SILVER
Project:
Attention: T.HEARD

File: 7-1275
Date: SEPT 15/87
Type: ROCK ASSAY

Date Samples Received : SEPT 7/87
Samples Submitted by : T.HEARD

Report on .... Geochem Samples
....
..............................8........................ Assay Samples
....

Copies sent to:
1. EQUITY SILVER, VANCOUVER, B.C.
2. RON ROBERTSON, WHITEHORSE, YUKON/
3.

Samples: Sieved to mesh .... Ground to mesh ....

Prepared samples stored:.........X.... discarded:........................
rejects stored:............. discarded:........................

Methods of analysis:

PT - FIRE.

Remarks

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: VIA USA 7601067 UC

Certificate of ASSAY

[illegible] SILVER [illegible]
[illegible] MORRISON
File: [illegible]
Date: SEPT [illegible]
Type: ROCK [illegible]

[illegible] the following results for samples submitted.

Sample Number	[illegible] G/TONNE	[illegible] OZ/TON	[illegible] G/TONNE	[illegible] OZ/TON
[illegible]	[illegible]	[illegible]	.10	[illegible]
[illegible]	[illegible]	[illegible]	.05	0.001
[illegible]	2.0	[illegible]	.12	0.004
[illegible]	[illegible]	[illegible]	.04	0.001
[illegible]	1.5	[illegible]	.02	0.001
[illegible]	1.4	[illegible]	.05	0.001
[illegible]	2.3	[illegible]	.02	0.001
[illegible]	[illegible]	0.02	[illegible]	0.001
[illegible]	1.0	0.03	.02	0.001
[illegible]	1.0	0.03	.01	0.001

Certified by [signature]

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: VIA USA 7601067 UC

Analytical Report

[illegible] SILVER
[illegible]
[illegible] ROBERTSON

File: [illegible]
Date: SEPT [illegible]
Type: [illegible] ASSAY

[illegible] Received : SEPT [illegible]
[illegible] Submitted By : R. ROBERTSON

[illegible] .... Geochem Samples
....
..................................10.......................... Assay Samples
....

[illegible]
1. [illegible] SILVER, VANCOUVER, B.C.
2. [illegible] ROBERTSON, WHITEHORSE, YUKON.
3.

[illegible] .... Ground to mesh ....-150......

[illegible] stored: ....X..... discarded: ....
[illegible] stored: ....X..... discarded: ....

[illegible]

[illegible] CHEMICAL ANALYSIS.
[illegible] ASSAY.

[illegible]

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:VIA USA 7601067 UC

Certificate of ASSAY

Company:LUCKY SILVER.
Project:THIBERT CREEK
Attention:R.ROBERTSON

File:7-1077/P1
Date:OCT 25/87
Type:ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
7825-25	.2	0.01	.01	0.001
7924-6	.7	0.02	.17	0.005
71008-1	.8	0.02	.01	0.001
71008-2	.4	0.01	.04	0.001
71008-3	1.2	0.04	.02	0.001
71008-4	.3	0.01	.03	0.001
71008-5	.4	0.01	.03	0.001
71008-6	1.0	0.03	.01	0.001
71013-1	.8	0.02	.02	0.001
71013-2	1.5	0.04	.03	0.001
71013-3	.6	0.02	.01	0.001
71013-4	.7	0.02	.04	0.001
71013-5	.2	0.01	.02	0.001
71013-6	.8	0.02	.02	0.001
71013-7	.4	0.01	.14	0.004
71013-8	.4	0.01	.03	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:VIA USA 7601067 UC

Analytical Report

Company :EQUITY SILVER
Project:TRIBERT CREEK
Attention:R.ROBERTSON

File:7-1707
Date:OCT 25/87
Type:ROCK ASSAY

Date Samples Received :OCT 22/87
Samples Submitted by :R.ROBERTSON

Report on .... Geochem Samples
....
........................16................................ Assay Samples
....

Copies sent to:
1. EQUITY SILVER, VANCOUVER, B.C.
2. R.ROBERTSON, WHITEHORSE, YUKON
3.

Samples: Sieved to mesh .... Ground to mesh .....-100.......

Prepared samples stored:........X.... discarded:........................
rejects stored:........X.... discarded:........................

Methods of analysis: AU-FIRE
AG-ACID DIGESTION CHEMICAL ANALYSIS

Remarks

Bondar-Clegg & Company Ltd.
130 Pemberton Ave
North Vancouver, B C
Canada V7P 2R5
Phone. (604) 985-0681
Telex. 04-352667

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 127-8673 PROJECT: NONE GIVEN

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Ag PPM	Ni PPM	As PPM	Au PPB	Pt PPB	Pd PPB
R2 7924-1		230	>50.0	860	400	90	35	4
R2 7924-2		4	2.4	700	150	15	<15	<2
R2 7924-3		3	0.9	800	250	25	<15	<2
R2 7924-4		8	0.2	850	60	<5	<15	2
R2 7924-5		20	0.1	31	14	<5	<15	<2
R2 7925-1		20	<0.1	580	5	<5	<15	<2
R2 7925-2		9	<0.1	104	<2	5	<15	<2
R2 7925-3		2	0.2	20	5	<5	40	<2
R2 7925-4		4	<0.1	8	450	20	15	<2
R2 7926-1		2	0.1	12	10	<5	15	<2
R2 7926-2		56	1.2	16	10	10	<15	2
R2 7926-3		21	0.1	15	5	<5	<15	<2
R2 7926-4		28	0.9	30	20	15	20	4
R2 7926-5		66	0.6	34	12	5	30	4
R2 7926-6		25	0.2	10	5	<5	30	<2
R2 7926-7		23	0.2	8	<2	<5	<15	<2
R2 7926-8		3	<0.1	3	4	<5	<15	4
R2 7926-9		10	0.1	1100	950	<5	20	8
R2 7926-10		46	0.2	370	5	<5	15	4
R2 7926-11		1	0.3	470	3	<5	15	<2
R2 7926-12		7	0.1	1400	5	<5	40	2
R2 7926-13		4	0.6	270	2	<5	20	<2
R2 7926-14		9	0.1	520	200	15	<15	<2

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North Vancouver, B C
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Telex 04-352667

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Geochemical Lab Report

REPORT: 127-8673 (COMPLETE)

REFERENCE INFO:

CLIENT: EQUITY SILVER MINES LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: ROBERTSON
DATE PRINTED: 4-NOV-87

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	23	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
2	Ag	Silver	23	0.1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
3	Ni	Nickel	23	2 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
4	As	Arsenic	23	2 PPM	NITRIC PERCHLOR DIG	Colourimetric
5	Au	Gold - Fire Assay	23	5 PPB	FIRE-ASSAY	Fire Assay AA
6	Pt	Platinum	23	15 PPB	FIRE-ASSAY	
7	Pd	Palladium	23	2 PPB	FIRE-ASSAY	

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	23	2 -150	23	CRUSH,PULVERIZE -150	23

REMARKS: ASSAY OF HIGH Ag TO FOLLOW ON 627-8673.

REPORT COPIES TO: EQUITY SILVER MINES LTD.
ROBERTSON, WALLIS & ASSOC

INVOICE TO: EQUITY SILVER MINES LTD.

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Phone: (604) 985-0681
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BONDAR-CLEGG

Certificate of Analysis

REPORT: 627-8673 PROJECT: NONE GIVEN PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Ag OPT
R2 7924-1		9.69

Registered Assayer, Province of British Columbia

Bondar-Clegg & Company Ltd.
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North Vancouver, B C
Canada V7P 2R5
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Certificate of Analysis

REPORT: 627-8673 (COMPLETE)

REFERENCE INFO:

CLIENT: EQUITY SILVER MINES LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: ROBERTSON
DATE PRINTED: 9-NOV-87

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Ag	Silver	1	0.01 OPT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	1	2 -150	1	AS RECEIVED, NO SP	1

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ROBERTSON, WALLIS & ASSOC

INVOICE TO: EQUITY SILVER MINES LTD.

APPENDIX 2

DIAMOND DRILL LOGS

DIAMOND DRILL LOG

Company:	**Equity Silver Mines Limited**	Hole No.:	**DDH 87-P-1**
Drilling Co.:	Caron Diamond Drilling Ltd.	Project:	Thibert Creek
Started:	25 November 1987	Code:	
Completed:	28 November 1987	Location:	Porcupine Lake Grid
Grid Co-ordinates:		Dip:	-55°
Elevation:	4050 Feet (estimate)	Horizontal advance:	282 ft (86m)
Azimuth:	070°	Vertical depth:	413 ft (126m)
Depth:	500 Feet (152.4 metres)	Acid test:	60° (corrected) at 250'
Core size:	NQ		59° (corrected) at 500'
Logged by:	R. Robertson (Jan/88)		

Principal Unit (ft)	**Sub-Unit** (ft)	**Description / Notes / Samples**
0 - 5		Overburden: casing removed.
5 - 160.5		Siltstone, shale and chert: grey to dark grey siltstone with black shale as occasional laminae and some wider intervals of sooty carbonaceous black shale. Long sections of ribbon banded grey chert with thin dark shale laminae towards base of unit. Sparse quartz veinlets occasionally in siltstone, sometimes extensive quartz veining in shale sections. Folding seen locally in siltstone; some badly sheared and deformed sections in black shale.
	12.0	Laminations at 30° to C.A.
	16.9 - 18.5	Lost core.
	24.5	Laminations at 90° to C.A.
	27.3 - 27.8	Black shale with abundant quartz veining, 20° to 40° to C.A.
	48.0	Laminations at 30° to C.A.
	59.8 - 62.0	Lost core.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples	
	68.0	Laminations at 60° to C.A.	
	75.4 - 76.0	Quartz - calcite veins to 2 cm in grey siltstone. Veins at 40° and parallel to C.A.; laminations at 65° to C.A.	
	85.5	Laminations at 30° to C.A.	
	85.5 - 106.0	Predominantly black shale with minor fine pyrite as blebs and seams parallel to laminations.	
	92.5 - 93.0	Laminations at 60-70° to C.A.	
	102.0 - 103.0	Grey chert bands; quartz veining (up to 1 cm wide), with black shale laminations (at 70-90° C.A.) with minor quartz, creamy feldspar and calcite in thin veinlets (1 mm) subparallel to C.A. and parallel to laminations.	
	104.5 - 106.0	Lost core.	
	106.0 - 111.0	Pale grey chert and siltstone, most core badly broken. Some white clay.	
		108.0 - 109.0	Lost core.
	111.0 - 160.5	Interbanded chert and black shale. Chert bands 2 mm to 2 cm wide; shale bands 1mm to 5mm; folded. Shale bands show strong pinch and swell around fold hinges. Occasional patchy white quartz veins.	
		118.5	Laminations at 55° to C.A.
		120.0 - 121.0	Lost core.
		124.0	Laminations at 90° to C.A.
		128.3 - 129.3	Broken black shale.
		129.3 - 131.0	Lost core.
		136.0 - 138.5	Abundant white quartz veins with thin veinlets of creamy feldspar(?).
		141.0	Laminations at 10° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
		147.5 - 149.0 Lost core.
		156.0 Laminations at 45° to C.A.
		159.2 - 160.5 Lost core.
160.5 - 163.9		Altered ultramafic rock: Pale grey-green siliceous rock with quartz, carbonate (ankerite)? and minor mariposite. Trace malachite. Fine grained brecciated and veined texture. Upper and lower contacts broken.
163.9 - 166.5		Chert and black shale: As 111.0 - 160.5. Laminations at 30-40° to C.A.
	164.2 - 166.0	Lost core.
166.5 - 194.7		Altered dacite: Pale cream to white colour with 10% plagioclase phenocrysts (white, clay altered, 2-5mm), 5% biotite phenocrysts (pale cream - pale green, altered to chlorite or sericite, 1-3mm), and trace partially resorbed quartz phenocrysts (2-7mm), minor disseminated hematite. Matrix pale buff, aphanitic, altered. Upper contact broken, lower contact sharp (at 40° to C.A.), very little variation in colour, texture, mineralogy. May be dyke or sill.
	167.1 - 169.4	Lost core.
	184.5 - 187.2	Lost core.
	193.5 - 194.5	Colour and grain size banding (1-2 cm) at 40° to C.A.
194.7 - 207.4		Mixed black shale / chert and altered ultramafic units: predominantly black shale and chert (interbanded) in upper portion and altered ultramafic below. In central section thin bands of quartz-ankerite / magnesite-mariposite rock (5mm-5cm) are interbanded with bands of black shale and grey chert (2mm-5cm). Banding probably results from folding and shearing.
	195.7 - 197.0	Lost core.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	197.8 - 199.6	Lost core.
	202.0	Laminations at 50° to C.A.
207.4 - 227.0		Altered ultramafic rock: highly siliceous grey-green quartz - ankerite / magnesite-mariposite rock with (commonly) brecciated and healed appearance. Locally abundant mariposite. Trace hematite. Upper and lower contacts gradational with thin films or laminae of black shale persisting over several feet. Late crosscutting veinlets of quartz and of magnesite.
227.0 - 231.0		Black shale / chert: broken section. Gradational into altered ultramafic above (interbanded); lower contact in broken core.
	228.5 - 230.0	Lost core.
231.0 - 236.0		Altered ultramafic rock: as 207.4 - 227.0.
236.0 - 243.0		Mixed black shale / chert and altered ultramafic units: as 194.7 - 207.4 but chert more abundant than shale here. Altered ultramafic predominant throughout. Both contacts gradational. Black shale partings at 236.0 at 40° to C.A. and at 45° to C.A. at 243.0. Deformed grey chert crosscut by thin white quartz veinlets.
243.0 - 266.0		Black shale / chert: interbanded black shale and grey chert. Quite deformed, chert often as pods in shale. Abundant white quartz as veinlets in chert and as larger veins and segregations. Late fractures offset quartz veinlets.
	243.0 - 244.0	Late fractures 10° to C.A.
	244.5 - 246.0	Lost core.
	249.0	Banding 90° to C.A.
	254.0	Late fractures 20° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
266.0 - 267.0		Altered ultramafic rock: pale grey fine grained siliceous quartz - ankerite / magnesite-mariposite rock. Brecciated and healed texture. Thin magnesite veinlets. Sharp contacts: Upper - 35° to C.A.; Lower - 55° to C.A.
267.0 - 272.5		Black shale / chert: interbanded; most bands less than 1 cm.
	269.4 - 270.2	Altered ultramafic rock. Upper contact 90° to C.A.; Lower contact 50° to C.A.
272.5 - 277.7		Altered ultramafic rock: as previous sections. Several bands and pods of black shale/chert unit incorporated. Crude foliation in altered ultramafic varies from parallel to perpendicular to C.A. Occasional pyrite blebs to 5mm. Irregular upper contact and sharp lower contact both at 30° to C.A.
277.7 - 291.5		Black shale / chert unit: Strongly banded with chert predominanting in upper section, becoming shalier downwards. Several sections of altered ultramafic incorporated, including both contact zones and 10 cm sections at 282 and 285. Note: bands and lenses of unidentified buff to pale pink-brown fine grained material in banded shale/chert sequence at 283 and 287-288. Sharp lower contact at 55° to C.A.
	280.0	Banding at 15-20° to C.A.
	290.0	Banding at 40° to C.A.
291.5 - 296.0		Altered ultramafic rock: as in previous sections. Note: typical foliated, brecciated, healed appearance. Occasional pyrite blebs to 5mm. Minor black shale as thin films towards base.
	294.0	Late shear zone at 30° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
296.0 - 309.5		Mixed black shale / chert and altered ultramafic unit: similar to previous sections. Chert more abundant than shale; quite strongly deformed and sheared. Most chert is in elongate lenses and pods rather than continuous bands or beds. Approximately 25% of section is altered ultramafic in pieces up to 20cm long. Banding varies from 30-90° to C.A. Sharp lower contact at 30° to C.A. Note: in shale and chert unit between 300.0 - 306.0 quite common pink-brown material in bands and lenses (as 287-288 above). Material is fine grained, quite hard (H = 5-6), often mixed with quartz, pearly lustre, sometimes wispy, fibrous texture.
309.5 - 313.3		Altered ultramafic rock: as previous sections, minor amounts of incorporated black shale/chert. Foliation at 312.0 is at 50° C.A. Sharp lower contact at 40° to C.A.
313.3 - 500.0		Black shale / chert: Similar to previous sections, but much more variable in lithology and extent of deformation. Chert abundant down to 368.5 (generally 30-50% to 368.5 and almost absent below). Considerable intermixed altered ultramafic rock as lenses, pods, laminae; forms up to 10% of section down to 350 but absent below. Generally, deformation very strong in upper part of interval, as extreme shearing probably with high load pressure. Local flaser texture; structures probably relate to regional thrust faulting. Sheared rocks generally very competent; hardly any broken or lost core in this unit. Below 368.5 rocks are virtually undeformed, competent black argillites with short sections of feldspathic greywacke; rare thin seams of fine pyrite in argillite.
	318.0	Banding at 50° to C.A.
	327.3 - 332.5	Strong flaser texture, oriented 25° to C.A. Cherty bands dismembered and elongated (clasts from 1mm to 2cm) in black argillaceous matrix. Some small clasts of altered ultramafic rock.
	341.5	Banding / foliation at 35° to C.A. cut by later faulting parallel to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	352.0	Sheared interbanded black shale and chert oriented 30° to C.A. becoming parallel to C.A. at 353.0.
	368.5	Structures at 40° and 60° to C.A. Sharp change to undeformed black argillites with minor calcite (lesser quartz) veinlets (virtually no calcite above this contact).
	376.8	Few small pyrite blebs with patchy calcite veinlets.
	396.4 - 401.8	Pale buff-grey feldspathic greywacke (small angular quartz, feldspar and black shale fragments in clay-rich matrix). Sharp upper contact at 90° to C.A. Sheared lower contact at 40° to C.A.
	406.0	Greywacke bands (1cm) define bedding in black argillite at 40° to C.A.
	410.0 - 412.0	Lost core.
	416.0 - 416.5	1-2 cm quartz-calcite veins in black argillite at 20° to C.A.
	429.5 - 430.0	Fine grained greywacke or siltstone; bedding defined by thin laminae of black shale at 40° to C.A.
	441.0	Bedding defined by thin (less than 1cm) siltstone bands in black argillite at 40° to C.A.
	447.0	Bedding of thin siltstone bands in black argillite at 35° to C.A.
	457.0	Siltstone bands in black argillite define bedding at 45-50° to C.A.
	460.0 - 467.4	Note thin calcite-serpentine veinlets and coatings on fracture surfaces; locally with minor chlorite or mariposite. Narrow siltstone bands occasionally show dark spotting; looks like early stage hornfelsing.
	467.4 - 476.7	Primarily fine grained siltstone and greywacke with lesser amounts of black argillite. Note that siltstone sometimes has buff or pink-brown colour like material at 287-288 and 296-309.5.
	472.0	Bedding at 45° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	479.5 - 485.0	Section of quite strongly deformed and sheared argillite - siltstone - chert. Foliation at 60° to C.A.
	485.0 - 492.3	Coarse grained greywacke. Note strong increase in grain size in basal 10-15 cm (clasts to 3cm; grains to 3-4mm) although actual contact to finely laminated argillite and siltstone below is 1cm fine grained siltstone. Bedding at 20° to C.A.
	495.0 - 497.5	Coarse grained greywacke. Sharp lower contact (minor fault and calcite-quartz vein) at 25° to C.A.
	497.5 - 500.0	Mixed greywacke and black argillite.
		END OF HOLE

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
1	5 - 22.5	5 - 8	3	2.5	83	0.4	16
		8 - 12	4	3.5	87	1.7	49
		12 - 16	4	3.7	92	0.3	8
		16 - 18	2	0.9	45	-	-
		18 - 19.5	1.5	1.0	67	-	-
		19.5 - 22.5	3	3.0	100	0.8	27
2	22.5 - 41.2	22.5 - 25.5	3	2.3	77	0.3	13
		25.5 - 31	5.5	5.0	91	1.8	36
		31 - 35	4	3.3	83	0.8	24
		35 - 39	4	3.4	85	1.5	44
3	41.2 - 58.8	39 - 44	5	4.2	84	1.6	38
		44 - 46	2	1.8	90	1.3	72
		46 - 51	5	5.0	100	4.0	80
		51 - 56	5	5.0	100	2.8	56
4	58.8 - 77.8	56 - 61	5	3.8	76	1.4	37
		61 - 64	3	2.0	67	-	-
		64 - 66	2	1.9	95	-	-
		66 - 72	6	5.3	88	2.4	45
		72 - 76	4	3.8	95	1.8	47
5	77.8 - 93.8	76 - 82	6	6.0	100	3.3	55
		82 - 87	5	5.0	100	1.2	24
		87 - 91	4	3.6	90	-	-
		91 - 94	3	3.0	100	0.8	27
6	93.8 - 110.5	94 - 96	2	1.7	85	-	-
		96 - 100	4	3.5	88	0.3	8
		100 - 102	2	1.8	90	-	-
		102 - 106	4	2.5	62	-	-
		106 - 109	3	2.0	67	0.3	15
7	110.5 - 126.5	109 - 111	2	1.8	90	0.3	17
		111 - 114	3	2.4	80	-	-
		114 - 116.5	2.5	2.0	80	-	-
		116.5 - 121.5	5	4.0	80	0.7	17
		121.5 - 126	4.5	4.5	100	0.8	18
8	126.5 - 143.5	126 - 127.5	1.5	1.2	80	-	-
		127.5 - 131	3.5	1.8	51	-	-
		131 - 133	2	1.8	90	-	-
		133 - 136	3	2.4	80	-	-
		136 - 141	5	5.0	100	1.8	3.6

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
9	143.5 - 161.3	141 - 144.5	3.5	2.8	80	0.5	18
		144.5 - 149	4.5	3.0	67	1.2	40
		149 - 152.5	3.5	3.0	86	-	-
		152.5 - 156	3.5	3.5	100	1.6	46
		156 - 160.5	4.5	3.2	71	1.2	38
10	161.3 - 179.8	160.5 - 166	5.5	3.7	67	0.9	24
		166 - 168	2	1.1	55	-	-
		168 - 173.5	5.5	4.1	75	1.6	39
		173.5 - 177.5	4	3.2	80	0.7	22
11	179.8 - 195.2	177.5 - 182.5	5	4.2	84	0.7	17
		182.5 - 184	1.5	0.8	53	-	-
		184 - 189.5	5.5	2.8	51	-	-
		189.5 - 194.5	5	4.8	96	2.2	46
12	195.2 - 213.8	194.5 - 197	2.5	1.2	48	-	-
		197 - 199	2	0.8	40	-	-
		199 - 204	5	4.4	88	1.4	32
		204 - 206	2	2.0	100	-	-
		206 - 211	5	4.6	92	0.7	15
13	213.8 - 232.0	211 - 214	3	2.8	93	0.9	32
		214 - 216.5	2	*	*	*	*
		216.5 - 221.5	5	4.5	90	3.8	84
		221.5 - 226	4.5	4.1	91	3.5	85
		226 - 228	2	1.7	85	0.4	23
		228 - 229	1	0.5	50	-	-
		229 - 231	2	1.0	50	-	-
		231 - 232	1	1.0	100	0.4	40
14	232.0 - 248.0	232 - 234.5	2.5	2.5	100	1.3	52
		234.5 - 237	2.5	2.5	100	0.8	32
		237 - 238	1	1.0	100	-	-
		238 - 242	4	3.4	85	0.4	12
		242 - 246	4	2.5	63	0.6	24
		246 - 247.5	1.5	1.4	93	-	-
15	248.0 - 264.5	247.5 - 252.5	5	4.5	90	-	-
		252.5 - 256	3.5	3.5	100	1.1	31
		256 - 261	5	*	*	*	*
		261 - 266	5	4.6	92	1.7	37

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
16	264.5 - 282.0	266 - 271	5	4.8	96	1.9	40
		271 - 276	5	4.4	88	2.0	45
		276 - 281	5	5.0	100	2.9	58
17	282.0 - 300.2	281 - 286	5	5.0	100	1.5	30
		286 - 291	5	4.8	96	3.8	79
		291 - 296	5	4.8	96	3.0	62
18	300.2 - 318.9	296 - 301	5	4.8	96	1.9	40
		301 - 306	5	4.8	96	1.1	23
		306 - 311	5	5.0	100	1.2	24
		311 - 316	5	4.2	84	1.0	24
19	318.9 - 335.5	316 - 321	5	4.8	96	1.1	23
		321 - 326	5	4.4	88	0.7	16
		326 - 331	5	5.0	100	1.6	32
		331 - 336	5	4.8	96	1.5	31
20	335.5 - 353.5	336 - 341	5	4.8	96	2.3	48
		341 - 346	5	4.4	88	2.8	64
		346 - 351	5	4.8	96	1.7	35
21	353.5 - 370.7	351 - 356	5	4.8	96	2.7	56
		356 - 361	5	5.0	100	3.3	66
		361 - 366	5	5.0	100	1.9	38
		366 - 371	5	4.9	98	2.3	47
22	370.7 - 388.2	371 - 376	5	4.4	88	2.4	55
		376 - 381	5	4.7	94	2.6	55
		381 - 386	5	5.0	100	2.5	50
23	388.2 - 406.3	386 - 391	5	4.6	92	1.9	41
		391 - 395	4	3.8	95	1.4	37
		395 - 400	5	4.8	96	2.4	50
		400 - 405	5	4.7	94	2.7	57
24	406.3 - 425	405 - 406.5	1.5	1.5	100	-	-
		406.5 - 407.5	1.0	1.0	100	0.7	70
		407.5 - 412	4.5	2.5	55	1.2	48
		412 - 416	4	3.6	90	1.4	39
		416 - 418	2	2.0	100	0.8	40
		418 - 423	5	5.0	100	1.5	30

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered		RQD	
				feet	%	feet	%
25	425 - 441.8	423 - 426	3	2.8	93	0.7	25
		426 - 429	3	2.7	90	0.7	26
		429 - 433	4	3.7	93	1.7	46
		433 - 437	4	4.0	100	-	-
		437 - 441	4	3.8	95	-	-
		441 - 443	2	1.5	75	0.3	20
26	441.8 - 459.7	443 - 446	3	3.0	100	1.3	43
		446 - 451	5	5.0	100	3.2	64
		451 - 455	4	3.7	92	1.5	40
		455 - 460	5	5.0	100	3.4	68
27	459.7 - 476.8	460 - 463.5	3.5	3.2	91	1.1	34
		463.5 - 468	4.5	4.5	100	1.2	27
		468 - 472.5	4.5	3.8	84	0.6	16
		472.5 - 476	3.5	3.5	100	0.3	9
28	476.8 - 495	476 - 479.5	3.5	3.3	94	0.7	21
		479.5 - 484.5	5	5.0	100	0.3	6
		484.5 - 489.5	5	5.0	100	3.2	64
		489.5 - 495	5.5	5.3	96	1.5	28
29	495 - 500	495 - 500	5	4.4	88	2.6	59

END OF HOLE

*Note: Samples removed for assay before core logged.

DIAMOND DRILL LOG

Company:	Equity Silver Mines Limited	Hole No.:	DDH 87-P-2
Drilling Co.:	Caron Diamond Drilling Ltd.	Project:	Thibert Creek
Started:	28 November 1987	Code:	
Completed:	2 December 1987	Location:	Porcupine Lake Grid
Grid Co-ordinates:		Dip:	-50°
Elevation:	4050 Feet (estimate)	Horizontal advance:	328 ft (100m)
Azimuth:	104°	Vertical depth:	387 ft (118m)
Depth:	510 Feet (155.4 metres)	Acid test:	52° (corrected)
Core size:	NQ		at 315 feet
Logged by:	R. Robertson (Dec/87)		

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
0 - 10		Overburden: casing removed.
10 - 25		Siltstone / shale: dark grey, laminated, carbonaceous in places. Laminations parallel to C.A. down to 17.5 then 35-45° to C.A. Locally strong folding and shearing concentrated in carbonaceous sections. Thin quartz veinlets (1-2mm) parallel to laminations and widely spaced (1-5cm), with short sections of intense quartz veining as veinlets in stockwork and ladder formation, especially in carbonaceous shale (22-25 ft). Lower contact 25° to C.A.
25 - 29		Serpentinite: Pale grey, talcose, foliated 45° to C.A. Sparse pyrite as tiny cubes in quartz veinlets and matrix.
29 - 52		Carbonaceous black shale: sheared, quartz veined, strongly deformed. Minor disseminated pyrite.
	40.5 - 42.2	Lost core.
52 - 74		Serpentinite: pale grey, talcose, foliated, locally strongly deformed and quartz veined (55-60 ft). Occasional short shaly sections. Foliation generally 35-50° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
74 - 82.5		<u>Carbonaceous black shale</u>: transitional upper contact with some pale grey serpentinite down to 76.5 ft., then deformed, quartz veined black shale to lower contact. Trace pyrite throughout. Note mariposite with quartz veining at 79 ft.
82.5 - 85.5		<u>Altered ultramafic rock</u>: pale grey-green, foliated with quartz and magnesite stringers and veinlets, minor mariposite. Locally oxidized. Several thin black shale lenses suggest upper contact near-parallel to C.A.; foliation is 50-60^o to C.A. and lower contact 90^o to C.A.
85.5 - 92.5		<u>Black shale</u>: generally quite siliceous and competent down to 90 feet, then more carbonaceous and sheared. Thin quartz veinlets abundant. Note: several 1cm lenses and stringers of altered ultramafic rock with some malachite staining at 86-87 ft.
92.5 - 94.0		Lost core.
94 - 97		<u>Altered ultramafic rock</u>: pale grey green, locally oxidized, foliated. Thin lenses and bands of black shale. Quartz-carbonate (magnesite?) - mariposite rock with quartz - magnesite veinlets and stringers. Lower contact - irregular zone of brecciation and veining.
97 - 110.7		<u>Black shale</u>: variable from broken, sooty, carbonaceous shale to paler grey more siliceous shale. Abundant quartz veinlets and stringers. Foliation variable - commonly 50-60^o to C.A. Short sections of pale siliceous altered ultramafic rock at:
	98.2 - 100.2	Contacts 50^o to C.A.
	101.5 - 103.5	Lost core.
	105.2 - 106.0	Contacts 90^o to C.A.
110.7 - 112.0		Lost core.
112.0 - 122.0		<u>Altered ultramafic rock</u>: pale grey green, foliated, locally oxidized. Very siliceous. Quartz-mariposite (minor magnesite?) rock with wispy, irregular stringers and veinlets of quartz with lesser amounts of magnesite. Foliation varies from 45-90^o to C.A. Lower contact 30^o to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	118.0 - 118.8	Black shale with quartz veins, contacts at 50-60° to C.A.
	118.8 - 120.0	Zone of brecciation healed by quartz veining. Zone is mostly quartz with minor patches of black shale and some mariposite.
122.0 - 132.5		<u>Black shale</u>: strongly deformed, most of interval is sooty and carbonaceous. Quartz veinlets and stringers abundant particularly at:
		122.0 - 123.5 — 55° to C.A., with thin lenses of altered, siliceous, ultramafic rock (1-2cm).
		125.0 - 126.0
		128.7 - 129.5 — With thin lenses of siliceous, altered ultramafic rock.
		130.0 - 131.0 — as above.
		132.0 - 132.5 — Quartz veinlets (2-3mm) at 60° and parallel to C.A.
	127.5 - 128.2	Lost core.
		Lower contact at 65° to C.A.
132.5 - 246.0		<u>Serpentinite</u>: green-grey variably serpentinized perioditite. Widespread development of talc and serpentine. Least altered areas are dark coloured and strongly magnetic. Foliation strong but very variable on small scale. Abundant veinlets and stringers (1mm-1cm) throughout; mostly quartz and lesser magnesite. Wispy, irregular and discontinuous, often subparallel to foliation. Stronger veinlets crosscut foliation. Foliation and veining generally 30-70° to C.A.
	132.5 - 133.2	Strongly silicified contact area (90% quartz) with 3cm black shale zone between lower contact (45° to C.A.) and normal serpentinite below.
	204.2 - 205.5	Zone of shearing and gouge, foliation 60° to C.A.
	205.5 - 207.0	Lost core.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	215.2 - 217.0	Lost core.
	238.0	Foliation 20-30° to C.A.
	246.0	Foliation 45° to C.A.
246.0 - 276.0		Altered ultramafic rock: pale grey-green, foliated, non-magnetic, siliceous rock with some mariposite. Magnesite and mariposite most abundant in areas or brecciation healed by strong quartz veining. Gradational upper contact (over few cm); no change in foliation at contact. Alteration rock clearly formed from serpentinite. Locally oxidized. Strongest veining at: 256-257, 261-277. Note: core loss in broken oxidized zone at 267. Lower contact (at 276.0) to black shale very irregular, subparallel to C.A.
276.0 - 277.0		Lost core.
277.0 - 281.0		Black shale: sooty, carbonaceous black shale. Deformed and badly broken. Foliation 40° to C.A. Abundant quartz veinlets and stringers.
281.0 - 510.0		Siltstone and shale: grey laminated siltstone with variable amounts of black carbonaceous shale, often as thin laminae or locally thicker sections (noted below). Quartz veinlets quite sparse (1-5mm); most abundant zones of quartz veins concentrated in intervals of carbonaceous shale.
	285.2 - 286.0	Lost core.
	286.0	Foliation / lamination at 40° to C.A.
	295.0	Foliation / lamination at 30° to C.A.
	308.0	Foliation / lamination at 40° to C.A.
	308.5 - 310.0	Lost core (in black shale).
	313.5	Foliation / lamination at 25° to C.A.; note 5 mm quartz-feldspar vein parallel to laminae.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	317.0	Wavy laminations sub-parallel to C.A.
	320.0	Laminations 40° to C.A.
	321.5	Broken 2cm quartz-feldspar vein, sub-parallel to C.A.
	334.0	Lamination 55° to C.A.
	338.0	Laminated 50° to C.A.; 1-2cm quartz-feldspar veins 70° to C.A., with dip in opposite sense to laminae.
	351.5	Laminations at 30° to C.A.
	356.9 - 357.9	Broken section of black shale with some quartz veinlets.
	357.9 - 359.0	Lost core.
	363.0	Laminations at 50° to C.A.
	366.5	1-2 cm quartz-feldspar veins at 80° to C.A.
	368.0	Square (5cm) angular clast of white vein quartz in zone of crumpled and brecciated grey siltstone.
	408.0	Laminations at 45-50° to C.A.
	412.5 - 415.7	Lost core.
	422.0 - 422.6	Patchy quartz-feldspar veins to 2 cm in area where laminations change from 50° to C.A. (above) to 75° to C.A. (below) and change back to 50° to C.A. within 0.5 ft.
	427.0 - 427.6	Narrow zone of brecciated siltstone with abundant thin quartz veinlets.
	433.0	Laminations at 45° to C.A.
	442.0	Laminations at 45°-55° to C.A.
	467.0	Laminations at 60° to C.A.
	474.5 - 478.0	Zone of abundant quartz veining; strongest in sheared black shales from 474.5 to 476.5, but continuous in broken grey siltstones below.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	482.5 - 483.0	Zone of gouge in sheared black shale with quartz veinlets.
	491.0 - 492.5	Stronger quartz veining as stringers and patches in area of stronger deformation and increased black shale content.
	493.5	Laminations at 35° to C.A.
	503.0	Laminations at 45° to C.A.
	508.0 - 510.0	Broken core in interval of quartz veined black shale.
510.0		END OF HOLE

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
1	10 - 27	10 - 11.5	1.5	0.5	33	-	-
		11.5 - 15.5	4	3.5	88	1.2	34
		15.5 - 16.5	1	1.0	100	-	-
		16.5 - 21.5	5	3.5	70	0.7	20
		21.5 - 22	0.5	0.5	100	-	-
		22 - 24	2	1.5	75	-	-
2	27 - 44.5	24 - 29	5	5.0	100	1.5	30
		29 - 30.5	1.5	1.3	87	-	-
		30.5 - 35.5	5	4.0	80	-	-
		35.5 - 40.5	5	5.0	100	2.0	40
		40.5 - 45	4.5	2.8	62	-	-
3	44.5 - 61	45 - 50	5	5.0	100	2.0	40
		50 - 52.5	2.5	2.5	100	-	-
		52.5 - 55.5	3	2.8	93	0.5	18
		55.5 - 59.5	4	3.7	92	1.4	38
4	61 - 76	59.5 - 62	2.5	1.8	72	0.4	22
		62 - 65	3	2.3	77	-	-
		65 - 68	3	3.0	100	0.8	27
		68 - 69.5	1.5	1.5	100	-	-
		69.5 - 71.5	2	1.8	90	0.7	39
		71.5 - 73	1.5	1.5	100	-	-
5	76 - 94.8	73 - 79	6	5.6	93	2.0	36
		79 - 83	4	3.5	87	-	-
		83 - 88	5	5.0	100	1.1	22
		88 - 92	4	2.9	72	1.2	41
6	94.8 - 113	92 - 95	3	1.5	50	-	-
		95 - 97.5	2.5	2.5	100	0.5	20
		97.5 - 105	7.5	5.6	75	-	-
		105 - 110	5	5.0	100	2.8	56
		110 - 112	2	0.7	35	-	-
7	113 - 131	112 - 115	3	2.5	71	-	-
		115 - 120	5	4.9	98	1.5	31
		120 - 125	5	4.5	90	1.2	27
		125 - 127.5	2.5	1.6	64	-	-

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
8	131 - 150	127.5 - 132	4.5	3.3	73	-	-
		132 - 137	5	5.0	100	3.8	76
		137 - 142	5	4.1	82	0.7	17
		142 - 147	5	5.0	100	3.2	64
		147 - 152	5	5.0	100	3.5	70
9	150 - 168.8	152 - 157	5	5.0	100	4.5	90
		157 - 162	5	4.8	96	2.6	54
		162 - 167	5	4.6	92	3.1	67
10	168.8 - 187	167 - 172	5	4.7	94	1.9	40
		172 - 177	5	4.5	90	1.3	29
		177 - 182	5	5.0	100	4.3	86
		182 - 189	5	5.0	100	3.1	62
11	187 - 207.5	187 - 192	5	4.6	92	3.4	74
		192 - 197	5	4.4	88	2.8	58
		197 - 202	5	4.8	96	2.5	52
		202 - 207	5	3.5	70	1.8	51
12	207.5 - 227	207 - 212	5	4.8	96	2.8	58
		212 - 217	5	3.2	64	0.5	16
		217 - 222	5	4.7	94	2.1	45
		222 - 227	5	4.7	94	2.3	50
13	227 - 246	227 - 232	5	4.5	90	2.1	47
		232 - 237	5	4.8	96	2.5	52
		237 - 242	5	4.7	94	3.3	70
		242 - 247	5	5.0	100	2.1	42
14	246 - 265	242 - 252	5	4.7	94	2.7	57
		252 - 257	5	4.3	86	2.0	47
		257 - 262	5	5.0	100	3.7	74
15	265 - 283	262 - 267	5	4.8	96	3.2	67
		267 - 268	1	0.3	30	-	-
		268 - 269	1	0.8	80	0.4	50
		269 - 272	3	2.7	90	2.2	81
		272 - 277	5	4.0	80	2.7	67
		277 - 281	4	3.4	85	-	-
16	283 - 300	281 - 286	5	4.2	84	1.7	40
		286 - 291	5	4.6	92	3.0	65
		291 - 295	4	4.0	100	1.8	45
		295 - 300	5	4.8	96	1.0	21

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
17	300 - 318.5	300 - 302	2	1.7	85	0.7	41
		302 - 307	5	4.6	92	1.7	37
		307 - 310.5	3.5	2.0	57	-	-
		310.5 - 315.5	5	5.0	100	2.5	50
		315.5 - 317	1.5	1.0	67	-	-
18	318.5 - 335.5	317 - 321.5	4.5	3.8	84	1.9	50
		321.5 - 324	2.5	2.2	88	0.7	32
		324 - 327.5	3.5	3.5	100	1.1	31
		327.5 - 332	4.5	4.0	89	1.2	30
19	335.5 - 351.5	332 - 337	5	5.0	100	2.2	-
		337 - 339	2	2.0	100	-	-
		339 - 343.5	4.5	4.2	93	1.8	43
		343.5 - 347.5	4	4.0	100	1.3	-
		347.5 - 351.5	4	3.6	90	0.6	17
20	351.5 - 370	351.5 - 356.5	5	4.2	94	2.2	47
		356.5 - 359	2.5	1.4	56	-	-
		359 - 361	2	1.7	85	-	-
		361 - 366	5	4.9	98	1.8	37
		366 - 371	5	5.0	100	3.4	68
21	370 - 387.5	371 - 373.5	2.5	2.0	80	0.3	15
		373.5 - 378.5	5	5.0	100	2.7	54
		378.5 - 383	4.5	4.5	100	1.6	26
		383 - 388	5	5.0	100	1.3	26
22	387.5 - 405	388 - 390	2	2.0	100	1.7	85
		390 - 395	5	5.0	100	2.8	56
		395 - 398.5	3.5	3.2	91	-	-
		398.5 - 402	3.5	3.2	91	2.3	72
23	405 - 425	402 - 407	5	4.7	94	3.3	70
		407 - 411	4	4.0	100	1.3	32
		411 - 415	4	1.5	38	-	-
		415 - 417	2	1.3	65	0.5	38
		417 - 420	3	2.6	87	-	-
		420 - 425	5	4.8	96	1.4	29
24	425 - 443	425 - 429	4	3.8	95	0.4	21
		429 - 434	5	5.0	100	1.7	34
		434 - 439	5	5.0	100	3.1	62
		439 - 444	5	5.0	100	2.6	52

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
25	443 - 459.5	444 - 446.5	2.5	2.1	84	-	-
		446.5 - 447.5	1	0.9	90	-	-
		447.5 - 451	3.5	3.0	86	0.8	27
		451 - 453.5	2.5	2.1	84	-	-
		453.5 - 458.5	5	4.8	96	3.0	62
26	459.5 - 478	458.5 - 462.5	4	4.0	100	1.5	37
		462.5 - 467.5	5	4.8	96	0.9	19
		467.5 - 472	4.5	4.5	100	2.4	53
		472 - 475	3	2.6	87	1.3	50
		475 - 478	3	2.8	93	0.4	14
27	478 - 495	478 - 480	2	2.0	100	-	-
		480 - 484	4	4.0	100	0.5	12
		484 - 489	5	5.0	100	1.9	38
		489 - 494	5	5.0	100	1.0	20
28	495 - 510	494 - 498	4	4.0	100	1.0	25
		498 - 503	5	4.8	96	2.2	46
		503 - 508	5	5.0	100	2.7	54
		508 - 510	2	2.0	100	-	-

END OF HOLE

DIAMOND DRILL LOG

Company:	Equity Silver Mines Limited	Hole No.:	DDH 87-B-3
Drilling Co.:	Caron Diamond Drilling Ltd.	Project:	Thibert Creek
Started:	16 December 1987	Code:	
Completed:	21 December 1987	Location:	Boulder Creek
Grid Co-ordinates:		Dip:	-50°
Elevation:	2850 Feet (estimate)	Horizontal advance:	321.5 ft (98m)
Azimuth:	215°	Vertical depth:	380.5 (116m)
Depth:	500 Feet (152.4 metres)	Acid test:	51° (corrected) at 250'
Core size:	NQ		
Logged by:	R. Robertson (Jan/88)		

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
0 - 42.5		Overburden: large boulders of various local rock types. Drill hole collared on coarse tailings from old placer operations. Casing removed.
42.5 - 278.4		Serpentinite: green colour, variable from pale green to almost black. Moderately to strongly magnetic. Serpentine minerals and some talc after peridotite; a few short sections of black partially serpentinized peridotite. All of the section down to 255.3 is strongly sheared and broken with very little coherent rock and extensive core loss; overall core recovery from 42.5 - 255.3 is only 37%. Very little geological or structural information in this interval because of core loss and broken core. Core recovery from 255.3 - 278.4 is almost 90%.
	42.5 - 46.3	Lost core.
	48.0 - 51.5	Lost core.
	53 - 56.2	Lost core.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	59 - 60.5	Lost core.
	62 - 64.8	Lost core.
	67 - 70.8	Lost core.
	73 - 75.8	Lost core.
	78.6 - 84.1	Lost core.
	86.5 - 91.7	Lost core.
	92.0 - 95.0	More competent section. Foliation at 40° to C.A., few narrow quartz stringers at 93.0.
	96.3 - 98.8	Lost core.
	104.0 - 110.5	Lost core.
	113.4 - 115.5	Lost core.
	115.5 - 117.0	Serpentinized peridotite.
	117.0 - 118.0	Lost core.
	118.0 - 119.0	Serpentinized peridotite.
	121.2 - 122.6	Lost core.
	124.8 - 130.4	Lost core.
	134.2 - 136.8	Lost core.
	139.3 - 145.8	Lost core.
	147.0 - 155.6	Lost core.
	158.2 - 165.0	Lost core.
	166.0	Shear surfaces at 10o to C.A.
	167.0 - 170.0	Lost core.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	172.0 - 174.7	Lost core.
	178.3 - 186.7	Lost core.
	187.2 - 192.3	Lost core.
	193.0	Shear surfaces subparallel to C.A.
	194.4 - 197.6	Lost core.
	198.3	Blue black serpentinized peridotite with shear surfaces at 30-35° to C.A.
	198.8 - 200.2	Lost core.
	201.5	Black serpentinized peridotite with shear surfaces at 30° to C.A.
	202.5 - 207.2	Lost core.
	209.0 - 213.5	Lost core.
	213.5 - 215.5	Strongly serpentinized peridotite; shear surfaces at 10° and 45° to C.A.
	216.7 - 220.8	Lost core.
	223.3 - 229.4	Lost core.
	234.6 - 240.8	Lost core.
	243.3 - 251.3	Lost core.
	252.0 - 254.5	Lost core.
	257.0 - 258.3	Lost core.
	258.3 - 261.8	Sheared dark-green serpentinite; much more competent than most sections higher in hole. Foliation/shearing at 35-40° to C.A.
	261.8 - 274.0	Strongly serpentinized peridotite, very competent core. Abundant veinlets of serpentine minerals, talc, albite(?). Foliation/veining at 30-40° to C.A. Sharp lower contact at 60° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	274.0 - 275.3	Grey chert; appears brecciated and deformed. Sharp lower contact at 20° to C.A. Minor black shale component. Some quartz veining (to 1 cm) at 35° to C.A.
	275.3 - 276.2	Sheared serpentinite; shear surfaces at 20° to C.A. Sharp irregular lower contact; subparallel to C.A.
	276.2 - 276.8	Deformed chert with minor black shale.
	276.8 - 278.4	Red-green serpentinite. Competent, strongly foliated at 40° to C.A. Red hematite colour towards base of interval. Sharp lower contact at 50° to C.A.
278.4 - 479.6		<u>Black shale / chert / siltstone / sandstone</u>: strong deformation evident in sections of carbonaceous black shale; otherwise little evident deformation in competent units. Minor quartz veinlets throughout with local zones of strong quartz veining. Core generally very competent; high recovery except in some black shale sections.
	278.4 - 284.8	Banded chert with lesser amounts of black shale; deformed at upper contact to serpentinite. Minor quartz veining. Banding 20° to C.A.
	284.8 - 287.5	Lost core.
	287.5 - 313.0	Pale grey sandstone / greywacke with ubiquitous wispy quartz - feldspar veinlets in tension gashes at 40-70° to C.A. with occasional cross fractures (and veins) subparallel to C.A.
		296.5 - 297.5: Lost core in short section of black shale with thin quartz veins.
		298.0: Black shale films on fracture surfaces parallel and 20° to C.A.
		300.0 - 301.0: Possible faint bedding indicated by coarser grain size and thin shaley laminae at 15° to C.A.
		313.0: Sharp lower contact at 50° to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples
	313.0 - 315.3	Irregular grey chert bands with thin coaly black shale and abundant white quartz lenses and pods, all oriented 35-50° to C.A. Sharp lower contact at 50° to C.A.
	315.3 - 335.5	Carbonaceous black shale, with lesser amounts of pale grey, finely laminated siltstone, grey cherty pods and locally, irregular quartz veinlets. Shale is somewhat sheared and folded; shiny coaly appearance. Occasional small blebs (1-2mm) of pyrite in shale.
		315.7 - 317.0 Lost core.
		317.0 - 320.1 Strong slip surfaces in sheared black shale from 15° to parallel to C.A.
		320.1 Sharp contact to quartz-veined black shale (much less deformed) with veins and banding in shale 60-80° to C.A.
		323.0 - 325.0 Strong folding defined by siltstone bands and quartz stringers. Overall orientation 30-50° to C.A.
		329.0 - 331.0 As 323.0 - 325.0 but orientations subparallel to C.A.
		335.5 Broken core; contact not seen.
	335.5 - 340.5	Grey-white chert and quartz bands and lenses with grey-green chloritic shale as lesser component. Trace finely disseminated pyrite in green shale. Folded; bands subparallel to C.A. at top of section changing to 60° to C.A. at base.
	340.5 - 352.0	Coaly black shale (with some chert and siltstone) and abundant patchy quartz veining. Strongly folded; some shearing. Many structures at 5-30° to C.A. with some at 60-70° to C.A.
	352.0 - 409.5	Grey banded siltstone with lesser amounts of black shale, chert and patchy quartz veining. Shaly section from 361.0 - 365.3 has occasional small pyrite blebs. Strongly folded; some shearing, especially in shaly sections. Many

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples	
		structures 30-40° to C.A. Some fold hinges have limbs at 30-40° to C.A. with crest of open fold hinge subparallel to C.A.	
		376.0 - 385.0	Section of black shale with abundant quartz veins and lenses at 10-40° to C.A.
		388.5 - 395.0	Strongly sheared earthy and gougy black shale with some banded shale/chert/quartz vein sections. Late shear surfaces at 35° to C.A.
		407.0	Banding in siltstone/chert sequence at 10° to C.A.
	409.5 - 410.5	Altered ultramafic rock. Very siliceous, with lesser amounts of carbonate and mariposite. Upper contact in broken core; lower contact (at 20° to C.A.) to quartz veined black shale.	
	410.5 - 418.5	Black shale with minor siltstone component; extensive thin quartz veins. Strongly deformed; late shear surfaces at 20° to C.A. Core very broken.	
		413.9 - 417.3	Lost core.
	418.5 - 424.0	Siltstone with minor black shale and some quartz veining. Core very broken. Attitudes vary from subparallel to C.A. to 50° to C.A.	
	424.0 - 479.6	Black shale with abundant thin quartz veins and lenses. Lesser amounts of siltstone and chert. Several short sections with quartz veins up to 5 cm wide. Core badly broken in shaly sections. Whole interval is strongly folded and sheared.	
		424.3 - 430.3	Lost core.
		430.3 - 430.9	Broken quartz veins to 5 cm. Contacts 65° to C.A.
		431.5 - 433.3	Lost core.
		433.3 - 442.0	Foliation and late shear and fracture surfaces at 45-65° and 20° to subparallel to C.A.

Principal Unit (ft)	Sub-Unit (ft)	Description / Notes / Samples	
		446.0 - 448.2	Lost core.
		452.0 - 453.0	Lost core.
		454.0 - 460.0	Attitudes vary from subparallel to C.A. to 65° to C.A.
		470.0 - 475.0	Late fractures at 20° and 55° to C.A. Banding/foliation varies from parallel to C.A. to 80° to C.A.; most commonly subparallel to 40° to C.A.
		475.0 - 479.0	Banding and late shear surfaces at 30-45° to C.A.
		479.6	Sharp lower contact at 30° to C.A.
479.6 - 493.9		<u>Altered ultramafic rock</u>: grey-green siliceous quartz - carbonate - mariposite rock with patchy quartz and magnesite veinlets. Foliation 60-80° to C.A. Short sections of broken quartz veined black shale at 482.0 - 482.8. and 489.0 - 491.2. Sharp lower contact to grey chert at 50° to C.A.	
493.9 - 500.0		<u>Siltstone / chert / black shale</u>: with usual thin quartz veins and lenses. Shaly sections are badly broken. Some late fractures parallel to C.A. but most are 30-50° to C.A.	
	496.2 - 497.7	Massive white quartz vein, with minor feldspar. Contacts 10-15° to C.A. Abundant fine pyrite in 1 cm wide band in shale at upper contact.	
500.0		END OF HOLE.	

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered		RQD	
				feet	%	feet	%
1	0 - 42	9 - 11	2	1.2	60	-	-
		11 - 13	2	0.7	35	-	-
		13 - 14.5	1.5	0.4	27	-	-
		14.5 - 20	5.5	1.0	18	-	-
		20 - 26	6	3.0	50	-	-
		26 - 28	2	1.3	65	-	-
		28 - 29	1	0.7	70	-	-
		29 - 32	3	1.2	40	-	-
		32 - 33.5	1.5	1.0	67	-	-
		33.5 - 42	8.5	2.6	30	-	-
2	42 - 72.4	42 - 47.5	5.5	1.7	31	-	-
		47.5 - 52	4.5	1.0	22	-	-
		52 - 54.5	2.5	1.0	40	-	-
		54.5 - 57	2.5	0.8	32	-	-
		57 - 62	5	3.5	70	-	-
		62 - 67	5	2.2	44	-	-
		67 - 72	5	1.2	24	-	-
		72 - 77	5	2.2	44	-	-
3	72.4 - 100.3	77 - 80	3	1.6	53	-	-
		80 - 85.5	5.5	1.4	25	-	-
		85.5 - 86	0.5	0.5	100	-	-
		86 - 90	4	0.5	12	-	-
		90 - 92	2	0.3	15	-	-
		92 - 94	2	2.0	100	-	-
		94 - 98	4	2.3	57	-	-
4	100.3 - 129	98 - 102	4	3.2	80	-	-
		102 - 107	5	2.0	40	-	-
		107 - 112	5	1.5	30	-	-
		112 - 115	3	1.4	47	-	-
		115 - 117	2	1.5	75	-	-
		117 - 119.5	2.5	1.5	60	-	-
		119.5 - 122	2.5	1.7	68	-	-
		122 - 124	2	1.4	70	-	-
		124 - 129	5	0.8	16	-	-
5	129 - 171.5	129 - 132	3	1.6	53	-	-
		132 - 135	3	2.2	73	-	-
		135 - 138	3	1.2	40	-	-
		138 - 142	4	1.3	32	-	-
		142 - 147	5	1.2	24	-	-
		147 - 152	5	0	0	-	-

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
		152 - 157	5	1.4	28	-	-
		157 - 162	5	1.2	24	-	-
		162 - 167	5	2.0	40	-	-
		167 - 172	5	2.0	40	-	-
6	171.5 - 208	172 - 177	5	2.3	46	-	-
		177 - 182	5	1.3	26	-	-
		182 - 187	5	0.3	6	-	-
		187 - 192	5	0.2	4	-	-
		192 - 194	2	1.7	85	-	-
		194 - 196	2	0.4	20	-	-
		196 - 198	2	0.4	20	-	-
		198 - 199.5	1.5	0.8	53	-	-
		199.5 - 202	2.5	1.8	72	-	-
		202 - 204	2	0.5	25	-	-
		204 - 208	4	0.8	20	-	-
7	208 - 237	208 - 212	4	1.0	25	-	-
		212 - 215.5	3.5	2.0	57	-	-
		215.5 - 218	2.5	1.2	48	-	-
		218 - 222	4	1.2	30	-	-
		222 - 226	4	1.3	32	-	-
		226 - 232	8	2.6	32	-	-
		232 - 237	5	2.6	52	0.4	15
8	237 - 266.3	237 - 242	5	1.2	24	-	-
		242 - 247	5	1.3	26	-	-
		247 - 252	5	0.7	14	-	-
		252 - 257	5	2.5	50	-	-
		257 - 262	5	3.7	74	-	-
		262 - 267	5	4.9	98	3.2	65
9	266.3 - 284.1	267 - 272	5	4.3	86	3.2	74
		272 - 277	5	4.8	96	2.7	56
		277 - 282	5	4.7	94	2.9	62
10	284.1 - 303	282 - 287	5	2.8	56	-	-
		287 - 292	5	4.5	90	2.8	62
		292 - 296	4	3.5	87	0.7	20
		296 - 299	3	2.0	67	-	-
		299 - 302.5	3.5	3.2	91	0.7	22

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
11	303 - 321.7	302.5 - 305	2.5	2.5	100	-	-
		305 - 309	4	4.0	100	1.9	48
		309 - 312	3	2.6	87	1.3	50
		312 - 317	5	3.7	74	2.0	54
		317 - 319	2	1.8	90	-	-
		319 - 323	4	4.0	100	0.4	10
12	321.7 - 338.3	323 - 328	5	4.8	96	1.8	37
		328 - 333	5	4.0	80	-	-
		333 - 335.5	2.5	2.0	80	-	-
13	338.3 - 355.3	335.5 - 340.5	5	5.0	100	1.5	30
		340.5 - 343	2.5	2.3	92	-	-
		343 - 346	3	2.7	90	-	-
		346 - 349.5	3.5	3.5	100	1.0	29
		349.5 - 352	2.5	2.5	100	1.7	68
14	355.3 - 372	352 - 357	5	5.0	100	3.1	62
		357 - 361	4	4.0	100	1.3	32
		361 - 366	5	4.8	96	2.3	48
		366 - 368	2	1.7	85	0.7	41
		368 - 369.5	1.5	1.0	67	-	-
15	372 - 387	369.5 - 374.5	5	4.8	96	1.2	25
		374.5 - 377.5	3	2.4	80	-	-
		377.5 - 382	4.5	4.2	93	-	-
		382 - 385	3	2.7	90	-	-
16	387 - 403	385 - 390	5	4.3	86	-	-
		390 - 395	5	4.5	90	1.0	22
		395 - 400.5	5.5	5.5	100	1.3	24
		400.5 - 402	1.5	1.5	100	1.3	87
17	403 - 420.5	402 - 407	5	4.8	96	2.2	46
		407 - 410	3	2.6	87	-	-
		410 - 415.5	5.5	3.9	71	-	-
		415.5 - 418.5	3	1.2	40	-	-
18	402.5 - 442.7	418.5 - 422	3.5	2.2	63	-	-
		422 - 427	5	2.3	46	-	-
		427 - 431.5	4.5	1.2	27	-	-
		431.5 - 437	5.5	3.7	67	-	-
		437 - 438.5	1.5	1.3	87	-	-
		438.5 - 442	3.5	3.3	94	0.7	21

CORE RECOVERY / RQD

Box No.	From - To (feet)	Run (feet)	Interval (feet)	Core Recovered feet	Core Recovered %	RQD feet	RQD %
19	442.7 - 460.3	442 - 447	5	4.0	80	0.8	20
		447 - 452	5	3.8	76	1.2	32
		452 - 456.2	4.5	3.5	78	-	-
		456.5 - 461.5	5	4.7	94	1.4	30
20	460.3 - 476	461.5 - 466	4.5	4.0	89	0.6	15
		466 - 470	4	2.5	62	0.3	12
		470 - 475	5	5.0	100	1.2	24
21	476 - 492.4	475 - 480	5	4.7	94	0.8	17
		480 - 485	5	5.0	100	1.9	38
		485 - 490	5	4.6	92	2.5	54
		490 - 492	2	1.3	65	-	-
22	492.4 - 500	492 - 495	3	2.5	83	1.2	48
		495 - 497	2	1.5	75	0.4	27
		497 - 500	3	2.1	70	-	-

END OF HOLE

APPENDIX 3

DIAMOND DRILL CORE ANALYSES

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:VIA USA 7601067 UC

Certificate of GEOCHEM

Company:EQUITY SILVER MINES
Project:
Attention:R.ROBERTSON/T.HEARD

File:8-120/P1
Date:FEB 7/88
Type:ROCK GEOCHEM
CORE

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU-FIRE PPB
87P 1001	2.1	3
87P 1002	1.8	19
87P 1003	1.1	6
87P 1004	1.9	12
87P 1005	1.8	7
87P 1006	0.8	13
87P 1007	1.7	55
87P 1008	1.4	235
87P 1009	1.3	183
87P 1010	1.5	6
87P 1011	1.2	7
87P 1012	1.1	13
87P 1013	0.6	8
87P 1014	1.7	6
87P 1015	1.4	4
87P 1016	3.8	8
87P 1017	2.3	12
87P 1018	1.7	15
87P 1019	1.8	10
87P 1020	1.5	8
87P 1021	1.1	21
87P 1022	0.9	6
87P 1023	2.1	5
87P 1024	1.7	4
87P 1025	3.1	13
87P 1026	3.9	11
87P 1027	1.8	8
87P 1028	1.4	6
87P 1029	1.7	7
87P 1030	1.8	6

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:VIA USA 7601067 UC

Certificate of GEOCHEM

Company: EQUITY SILVER MINES
Project:
Attention: R.ROBERTSON/T.HEARD

File: 8-120/P2
Date: FEB 7/88
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU-FIRE PPB
87P 1031	0.8	5
87P 1032	1.1	4
87P 1033	2.4	3
87P 1034	3.6	12
87P 1035	2.1	9
87P 1036	2.0	20
879 2001	1.6	8
87P 2002	3.1	13
87P 2003	1.3	25
87P 2004	1.2	28
87P 2005	1.8	20
87P 2006	1.7	45
87P 2007	2.9	88
87P 2008	0.8	135
87P 2009	6.3	8
87P 2010	1.8	14
87P 2011	1.7	31
87P 2012	1.1	6
87P 2013	1.3	7
87P 2014	1.2	35
87P 2015	1.3	25
87P 2016	1.6	18
87P 2017	0.8	11
87P 2018	0.7	32
87P 2019	0.9	17
87P 2020	1.2	6
87P 2021	2.2	62
87P 2022	1.1	45
87P 2023	2.1	85
87P 2024	0.6	23

*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:VIA USA 7601067 UC

Certificate of GEOCHEM

Company:EQUITY SILVER MINES
Project:
Attention:R.ROBERTSON/T.HEARD

File:8-120/P3
Date:FEB 7/88
Type:ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU-FIRE PPB
87P 2025	4.2	49
87P 2026	2.1	17
87P 2027	1.9	12
87P 2028	3.7	6
87P 2029	1.8	13
87P 2030	1.9	40
87P 2031	2.0	29
87P 2032	1.7	48
87P 2033	1.1	21
87P 2034	0.9	23
87P 2035	1.0	20
87P 2036	1.9	72
87P 2037	2.3	16
87P 2038	2.2	59
87B 3001	2.1	8
87B 3002	2.0	11
87B 3003	2.4	17
87B 3004	1.1	6
87B 3005	1.6	3
87B 3006	1.2	5
87B 3007	3.8	4
87B 3008	1.0	10
87B 3009	2.0	2
87B 3010	1.6	11
87B 3011	2.0	8
87B 3012	1.5	1
87B 3013	2.4	6
87B 3014	2.0	5
87B 3015	2.5	13
87B 3016	2.2	4

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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:VIA USA 7601067 UC

Certificate of GEOCHEM

Company: EQUITY SILVER MINES
Project:
Attention: R.ROBERTSON/T.HEARD

File: 8-120/P4
Date: FEB 7/88
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU-FIRE PPB
87B 3017	2.4	2
87B 3018	2.0	9
87B 3019	2.1	4
87B 3020	2.2	1
87B 3021	2.0	1
87B 3022	1.7	8
87B 3023	0.8	3
87B 3024	1.0	7
87B 3025	2.2	4
87B 3026	2.3	10
87B 3027	2.4	9
87B 3028	2.0	1
87B 3029	2.3	3
87B 3030	2.1	3
87B 3031	2.0	6
87B 3032	2.1	11
87B 3033	2.3	5
87B 3034	2.7	9
87B 3035	2.0	9
87B 3036	2.3	4
87B 3037	1.8	15
87B 3038	1.7	88
87B 3039	1.5	19
87B 3040	2.1	10
87B 3041	2.0	18
87B 3042	1.9	28
87B 3043	1.6	94
87B 3044	2.0	1000
87B 3045	1.2	163
87B 3046	1.7	118

*Certified by*________________

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705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE:(604)980-5814 OR (604)988-4524 TELEX:VIA USA 7601067 UC

Certificate of GEOCHEM

Company:EQUITY SILVER MINES
Project:
Attention:R.ROBERTSON/T.HEARD

File:8-120/P5
Date:FEB 7/88
Type:ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU-FIRE PPB
87B 3047	2.4	156
87B 3048	2.0	48
87B 3049	1.0	137
87B 3050	2.3	35
87B 3051	1.6	30
87B 3052	2.0	12
87B 3053	1.0	13
87B 3054	1.2	19
87B 3055	0.8	23
87B 3056	2.0	20
87B 3057	1.0	21
87B 3058	1.0	12
87B 3059	2.0	48
87B 3060	1.9	32
87B 3061	1.8	26
87B 3062	1.7	7
87B 3063	1.2	3
87B 3064	1.6	18
87B 3065	2.0	24
87B 3066	2.6	11
87B 3067	1.3	9
87B 3068	2.2	152
87B 3069	1.7	6

*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:VIA USA 7601067 UC

Analytical Report

Company:EQUITY SILVER MINES
Project:
Attention:R.ROBERTSON/T.HEARD

File:8-120
Date:FEB 9/88
Type:ROCK GEOCHEM

Date Samples Received :FEB 2/88
Samples Submitted by :R.ROBERTSON/T.HEARD

Report on ....143 ROCKS........... Geochem Samples
....
.... Assay Samples
....

Copies sent to:
1. EQUITY SILVER MINES. VANCOUVER. B.C.
2.
3.

Samples: Sieved to mesh .... Ground to mesh ......-100......

Prepared samples stored:......X...... discarded:........................
rejects stored:.......X..... discarded:........................

Methods of analysis:

AG-ACID DIGESTION CHEMICAL ANALYSIS.
AU-FIRE GEOCHEM.

Remarks

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:VIA USA 7601067 UC

Certificate of GEOCHEM

Company:EQUITY SILVER MINES
Project:
Attention:RONALD C.R.ROBERTSON

File:8-120/P1
Date:MAR 2/88
Type:ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	PD PPB	PT PPB
87P 1007	3	6
87P 1008	2	2
87P 1009	1	1
87P 1017	1	1
87P 1018	7	93
87P 1019	2	4
87P 1020	2	9
87P 1021	2	3
87P 1022	2	9
87P 1023	2	7
87P 1024	2	1
87P 1025	1	18
87P 1028	2	1
87P 1029	3	1
87P 2008	1	2
87P 2009	3	1
87P 2010	2	1
87P 2011	2	21
87P 2012	2	1
87P 2013	1	1
87P 2016	2	1
87P 2017	1	4
87P 2018	2	20
87P 2019	2	5
87P 2020	2	10
87P 2021	2	19
87P 2022	2	3
87P 2023	3	18
87P 2024	2	2
87P 2025	1	19

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705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE:(604)980-5814 OR (604)988-4524 TELEX:VIA USA 7601067 UC

Certificate of Geochem

Company:EQUITY SILVER MINES
Project:
Attention:RONALD C.R.ROBERTSON

File:8-120/P2
Date:MAR 2/88
Type:ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	PD PPB	PT PPB
87P 2026	3	11
87P 2027	2	3
87P 2028	2	38
87P 2029	2	1
87P 2030	3	1
87P 2031	2	6
87P 2032	4	21
87P 2033	5	4
87P 2034	2	12
87P 2035	3	1
87P 2036	3	17
87P 2037	2	1
87P 2038	3	2
87B 3001	1	2
87B 3002	2	83
87B 3003	1	2
87B 3004	2	11
87B 3005	2	1
87B 3006	3	1
87B 3007	3	26
87B 3008	2	22
87B 3009	6	11
87B 3010	2	12
87B 3011	2	1
87B 3012	4	12
87B 3013	7	213
87B 3014	5	30
87B 3015	2	7
87B 3016	3	110
87B 3017	2	122

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MIN-EN LABORATORIES LTD.

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705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604)980-5814 OR (604)988-4524 TELEX: VIA USA 7601067 UC

Certificate of Geochem

Company: EQUITY SILVER MINES
Project:
Attention: RONALD C.R. ROBERTSON

File: 8-120/P3
Date: MAR 2/88
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	PD PPB	PT PPB
87B 3018	1	1
87B 3019	3	1
87B 3020	2	12
87B 3021	2	1
87B 3022	3	297
87B 3023	2	1
87B 3024	2	21
87B 3025	4	58
87B 3026	7	54
87B 3027	2	10
87B 3028	3	38
87B 3029	5	23
87B 3030	2	32
87B 3031	4	22
87B 3032	33	88
87B 3033	6	145
87B 3034	6	1
87B 3035	4	51
87B 3036	7	23
87B 3044	6	33
87B 3045	10	5
87B 3046	2	39
87B 3047	3	54
87B 3048	2	1
87B 3049	1	3
87B 3065	1	9
87B 3066	3	36
87B 3067	4	1
87B 3068	1	28
87B 3069	3	1

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:VIA USA 7601067 UC

Analytical Report

Company:EQUITY SILVER MINES
Project:
Attention:RONALD C.R.ROBERTSON

File:8-120
Date:MAR 3/88
Type:PULP GEOCHEM

Date Samples Received :MAR 1/88
Samples Submitted by :R.ROBERTSON

Report on ....90 PULPS................ Geochem Samples
.... Assay Samples

Copies sent to:
1. EQUITY SILVER MINES, VANCOUVER, B.C.
2. R.ROBERTSON, VANCOUVER, B.C.
3.

Samples: Sieved to mesh .... Ground to mesh ....

Prepared samples stored:......X...... discarded:......................
rejects stored:............. discarded:......................

Methods of analysis:

PD PT-FIRE

Remarks

COMPANY: EQUITY SILVER MINES MIN-EN LABS ICP REPORT (ACT:F31) PAGE 1 OF 1
PROJECT NO: 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 FILE NO: 8-120/P1+2
ATTENTION: R.ROBERTSON/T.HEARD (604)980-5814 OR (604)988-4524 * TYPE ROCK GEOCHEM * DATE:FEB 12, 1988

(VALUES IN PPM)	AS	CU	NI	PB	ZN	CR
87P 1001	33	51	11	27	65	62
87P 1002	53	49	9	26	66	61
87P 1003	40	136	76	26	162	75
87P 1004	17	175	121	33	230	64
87P 1005	15	158	114	32	240	69
87P 1006	21	145	118	27	248	84
87P 1007	50	83	23	30	94	95
87P 1008	28	51	20	34	53	210
87P 1009	407	17	947	21	36	399
87P 1010	16	4	22	21	40	142
87P 1011	10	4	14	17	29	141
87P 1012	15	1	23	14	29	105
87P 1013	4	1	8	11	30	101
87P 1014	7	2	21	15	32	127
87P 1015	68	13	290	32	47	275
87P 1016	11	18	2	29	121	114
87P 1017	26	62	111	34	57	159
87P 1018	23	44	565	26	48	201
87P 1019	17	38	409	28	43	201
87P 1020	3	16	810	20	29	333
87P 1021	16	12	826	16	27	374
87P 1022	14	5	967	21	23	402
87P 1023	4	8	961	23	24	385
87P 1024	9	50	299	29	52	137
87P 1025	16	6	919	15	22	345
87P 1026	6	53	24	25	63	63
87P 1027	22	53	129	27	63	82
87P 1028	16	9	945	19	23	291
87P 1029	14	11	932	19	17	297
87P 1030	10	76	14	16	84	52
87P 1031	12	40	6	30	60	83
87P 1032	11	81	10	22	81	61
87P 1033	2	72	12	20	82	58
87P 1034	5	77	6	23	98	72
87P 1035	2	90	8	24	97	67
87P 1036	10	89	1	25	95	71
87P 2001	5	135	7	44	124	81
87P 2002	5	127	11	34	106	67
87P 2003	17	107	54	29	189	209
87P 2004	6	59	18	23	135	122
87P 2005	17	67	26	26	133	196
87P 2006	14	67	25	31	158	144
87P 2007	16	68	19	33	150	188
87P 2008	9	76	4	24	83	154
87P 2009	12	58	4	25	68	205
87P 2010	7	63	3	28	77	138
87P 2011	13	71	39	32	101	159
87P 2012	155	52	432	31	82	231
87P 2013	101	12	966	24	30	588
87P 2014	35	28	815	18	52	605
87P 2015	35	64	327	34	134	308
87P 2016	250	16	965	26	36	428
87P 2017	200	25	848	23	42	389
87P 2018	75	64	363	34	107	298
87P 2019	149	10	1024	29	22	336
87P 2020	96	5	1009	32	21	440
87P 2021	203	26	889	30	54	348
87P 2022	115	5	1079	23	17	334
87P 2023	116	69	503	40	134	231
87P 2024	53	94	109	30	176	225

PROJECT NO: 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 FILE NO: 8-120/P3+4
ATTENTION: R.ROBERTSON/T.HEARD (604)980-5814 OR (604)988-4524 * TYPE ROCK GEOCHEM * DATE:FEB 12, 1988

(VALUES IN PPM)	AS	CU	NI	PB	ZN	CR
87P 2025	20	46	677	28	98	300
87P 2026	15	14	898	22	34	569
87P 2027	12	10	815	19	23	714
87P 2028	11	7	939	20	22	766
87P 2029	19	10	775	8	19	706
87P 2030	191	9	1273	6	18	579
87P 2031	168	9	1210	16	16	585
87P 2032	187	5	1157	13	15	449
87P 2033	115	5	1024	25	16	444
87P 2034	160	5	990	18	16	391
87P 2035	217	8	615	23	20	300
87P 2036	28	98	45	19	82	232
87P 2037	114	66	12	27	65	117
87P 2038	22	83	14	19	76	158
87B 3001	33	13	1198	18	41	1331
87B 3002	10	14	1329	19	30	844
87B 3003	14	12	1554	2	28	793
87B 3004	17	11	1442	7	31	900
87B 3005	3	13	1467	14	26	754
87B 3006	4	7	1385	15	25	780
87B 3007	12	7	1437	15	24	778
87B 3008	5	12	1360	13	29	845
87B 3009	7	12	1396	9	26	689
87B 3010	11	14	1449	19	33	812
87B 3011	13	8	1434	15	29	585
87B 3012	9	9	1524	10	32	591
87B 3013	24	8	1136	14	30	683
87B 3014	22	6	1395	7	31	790
87B 3015	23	11	1347	10	30	724
87B 3016	10	6	1367	15	33	919
87B 3017	26	19	1407	14	39	1449
87B 3018	31	36	1233	25	50	1293
87B 3019	18	9	1429	13	38	1147
87B 3020	5	4	1549	9	29	837
87B 3021	15	3	1422	5	38	1240
87B 3022	30	10	1344	14	39	1377
87B 3023	36	7	1314	9	44	1492
87B 3024	31	5	1330	14	38	1317
87B 3025	32	6	1356	19	36	1390
87B 3026	16	8	1058	16	28	920
87B 3027	29	8	1234	20	34	1248
87B 3028	18	9	1307	7	34	1271
87B 3029	29	15	1130	12	45	1427
87B 3030	19	11	1252	10	38	1255
87B 3031	54	29	1355	20	58	1654
87B 3032	27	44	670	21	51	752
87B 3033	31	15	1187	15	33	1064
87B 3034	26	16	1301	14	37	1193
87B 3035	36	19	1125	19	41	1231
87B 3036	18	34	695	17	40	670
87B 3037	20	67	72	22	95	190
87B 3038	27	53	22	24	66	177
87B 3039	26	135	74	27	227	98
87B 3040	28	107	49	31	238	175
87B 3041	24	88	35	28	213	89
87B 3042	21	130	71	17	173	88
87B 3043	28	131	75	37	230	127
87B 3044	82	49	7	29	66	131
87B 3045	31	65	35	30	149	133
87B 3046	27	66	31	29	176	200

COMPANY: EQUITY SILVER MINES
PROJECT NO:
ATTENTION: R.ROBERTSON/T.HEARD

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

(ACT:F31) PAGE 1 OF 1
FILE NO: 8-120/P5
* TYPE ROCK GEOCHEM * DATE:FEB 12, 1988

(VALUES IN PPM)	AS	CU	NI	PB	ZN	CR
87B 3047	23	68	27	31	156	153
87B 3048	30	64	28	24	126	153
87B 3049	21	61	15	17	60	252
87B 3050	29	89	60	33	181	123
87B 3051	62	12	1029	25	27	357
87B 3052	28	80	117	28	154	131
87B 3053	24	115	84	28	178	92
87B 3054	24	90	48	22	128	214
87B 3055	24	84	35	17	144	131
87B 3056	36	93	54	30	264	149
87B 3057	23	75	32	25	147	171
87B 3058	22	72	32	18	136	186
87B 3059	24	47	30	16	88	218
87B 3060	32	68	41	32	149	169
87B 3061	24	64	30	24	90	241
87B 3062	35	69	52	30	92	176
87B 3063	33	80	39	24	108	245
87B 3064	33	66	43	28	131	221
87B 3065	264	13	785	14	25	338
87B 3066	334	13	1017	21	22	380
87B 3067	42	72	80	26	105	147
87B 3068	321	17	799	23	26	240
87B 3069	29	69	50	24	76	215

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:VIA USA 7601067 UC

Analytical Report

Company: EQUITY SILVER MINES
Project:
Attention: R.ROBERTSON/T.HEARD

File: 8-120R
Date: FEB 12/88
Type: ROCK GEOCHEM

Date Samples Received : FEB 2/88
Samples Submitted by : R.ROBERTSON/T.HEARD

Report on ....143 PULPS............ Geochem Samples
....
.... Assay Samples
....

Copies sent to:
1. EQUITY SILVER MINES, VANCOUVER, B.C.
2. R.ROBERTSON, VANCOUVER, B.C.
3.

Samples: Sieved to mesh .... Ground to mesh ....

Prepared samples stored:......X...... discarded:........................
rejects stored:............ discarded:........................

Methods of analysis:

6 ELEMENT TRACE ICP

Remarks

Bondar-Clegg & Company Ltd.
130 Pemberton Ave
North Vancouver, B C
Canada V7P 2R5
Phone: (604) 985-0681
Telex. 04-352667

BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-03772.0   PROJECT: THIBERT   PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au 30g PPB	Pt PPB	Pd PPB	Ag PPM	Cu PPM	Ni PPM	As PPM
D2 87-P-1 214-215		<5	20	4	0.1	2	1600	<2
D2 87-P-1 257-258		20	20	6	0.2	45	500	390
D2 87-P-1 258-259		<5	20	4	<0.1	45	200	140
D2 87-P-1 259-260		9	20	4	<0.1	75	40	20
D2 87-P-1 260-261		10	30	4	<0.1	40	30	13

Bondar-Clegg & Company Ltd.
130 Pemberton Ave
North Vancouver, B C
Canada V7P 2R5
Phone (604) 985 0681
Telex 04-352667

BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-03772.0 (COMPLETE)

REFERENCE INFO:

CLIENT: EQUITY SILVER MINES LTD.
PROJECT: THIBERT

SUBMITTED BY: R. ROBERTSON
DATE PRINTED: 8-JUN-88

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au 30g	Gold 30 grams	5	5 PPB	FIRE-ASSAY	Fire Assay AA
2	Pt	Platinum	5	15 PPB	FIRE-ASSAY	
3	Pd	Palladium	5	2 PPB	FIRE-ASSAY	
4	Ag	Silver	5	0.1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
5	Cu	Copper	5	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
6	Ni	Nickel	5	2 PPM	HNO3-HCL HOT EXTR	Atomic Absorption
7	As	Arsenic	5	2 PPM	NITRIC PERCHLOR DIG	Colourimetric

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	5	2 -150	5	CRUSH,PULVERIZE -150	5

REPORT COPIES TO: EQUITY SILVER MINES LTD.
ROBERTSON, WALLIS & ASSOC

INVOICE TO: EQUITY SILVER MINES LTD.
ROBERTSON, WALLIS & ASSOC

ROBERTSON, WALLIS & ASSOCIATES

Box 5474
Whitehorse, Yukon Y1A 5H4
(403) 668-6970

TO: [illegible]
[illegible]

SHEET NO. [illegible]

SAMPLE TYPE: [illegible]
FRACTION: [illegible]

CLIENT: [illegible]
PROJECT CODE: [illegible]
GEOLOGIST: [illegible]
SAMPLER: [illegible]
REPORT NO.: 8/120

ANALYSE FOR

	SAMPLE NUMBER	Au (ppb)	Ag (ppm)	As	Cu	Ni	Zn	Pd (ppb)	Pt (ppb)	Feet (Hole 1)	Metres
1	[illegible]	3	2.1	33	51	11	65	—	—	85.5 - 87.0	261-[illegible]
2	[illegible]	19	1.8	53	49	9	66	—	—	87.0 - 91.0	265-[illegible]
3		6	1.1	40	136	76	162	—	.	91.0 - 94.0	277-[illegible]
4	[illegible]	12	1.9	17	175	121	230	—	—	94.0 - 96.0	[illegible]
5	[illegible]	7	1.8	15	158	114	240	—	—	96.0 - 100.0	293-[illegible]
6	[illegible]	13	0.8	21	145	118	248	—	—	100.0 - 102.0	305-[illegible]
7	[illegible]	55	1.7	50	83	23	94	3	6	102.0 - 104.5	311-[illegible]
8	[illegible]	235	1.4	28	51	20	53	2	2	136.0 - 138.5	414-[illegible]
9		183	1.3	407	17	947	36	1	1	160.5 - 163.[illegible]	43[illegible]
10	[illegible]	6	1.5	16	4	22	40			166.5 - 171.0	507-[illegible]
11	[illegible]	7	1.2	10	4	14	29		—	171.0 - 173.5	[illegible]
12	[illegible]	13	1.1	15	1	23	29			173.5 - 177.5	528-[illegible]
13	[illegible]	8	0.6	4	1	8	30	.		177.5 - 182.5	541-
14	14	6	1.7	7	2	21	32			182.5 - 184.5	[illegible]
15	[illegible]	4	1.4	88	13	290	47	-		187.2 - 189.5	[illegible]
16	[illegible]	8	3.8	11	18	2	121	—		189.5 - 194.7	577-[illegible]
17	[illegible]	12	2.3	26	62	111	57	1	1	194.7 - 197.3	593-[illegible]
18	[illegible]	15	1.7	23	44	565	48	7	93	199.6 - 204.0	608-[illegible]
19	[illegible]	10	1.8	17	38	409	43	2	4	204.0 - 207.4	622-[illegible]
20	[illegible] 1020	8	1.5	3	16	810	29	2	9	207.4 - 211.0	632-64
21	21	21	1.1	16	12	826	27	2	3	211.0 - 214.0	643-[illegible]
22	[illegible]	6	0.9	14	5	967	23	2	9	215.0 - 221.5	655-[illegible]
23	[illegible]	5	2.1	4	8	961	24	2	7	221.5 - 227.0	675-69
24	24	4	1.7	9	50	299	52	2	1	227.0 - 231.0	692-70
25	25	13	3.1	16	6	919	22	1	18	231.0 - 236.0	704-71[illegible]
26	26	11	3.9	6	53	24	63			247.5 - 252.5	754-77
27	27	8	1.8	22	53	129	63			252.5 - 256.0	770-[illegible]
28	28	6	1.4	16	9	945	23	2	1	291.5 - 296.0	888-90
29	29	7	1.7	14	11	932	17	3	1	309.5 - 313.3	943-95
30	[illegible] 1030	6	1.8	10	76	14	84			376.0 - 381.0	114.6-116

OVERSIZE: [illegible]
PULPS: [illegible]

DATE SAMPLED: [illegible]
DATE SHIPPED: [illegible]
DATE RESULTS RECEIVED: 7 Feb 88

COST ESTIMATE:
INVOICE:

ROBERTSON, WALLIS & ASSOCIATES

Box 5474
Whitehorse, Yukon Y1A 5H4
(403) 668-6970

TO [illegible]

SHEET NO [illegible]

SAMPLE TYPE: [illegible]

FRACTION:

CLIENT:

PROJECT CODE:

GEOLOGIST:

SAMPLER: [illegible]

REPORT NO:

ANALYSE FOR

	SAMPLE NUMBER	Au (ppb)	Ag (ppm)	As	Cu	Ni	Zn	Pd (ppb)	Pt (ppb)	Feet	Metres
											Hole 1
1	[illegible]	5	0.8	12	40	6	60			396.4 - 401.8	120.8 - 12[illegible]
2		4	1.1	11	81	10	81			401.8 - 406.5	122.5 - [illegible]
3		3	2.4	2	72	12	82			406.5 - 410.0	123.9 - [illegible]
4	[illegible]	2	3.6	5	77	6	98			412.0 - 416.0	125.[illegible] - [illegible]
5	[illegible]	9	2.1	2	90	8	97			416.0 - 423.0	[illegible]
6	[illegible]	20	2.0	10	89	1	95			460.0 - 467.4	140.2 - 14[illegible]
											Hole 2
7	[illegible]	8	1.6	5	135	7	124	—	—	11.5 - 16.5	3.5 - [illegible]
8	[illegible]	13	3.1	5	127	11	106	—	—	16.5 - 22.0	5.0 - [illegible]
9		25	1.3	17	107	54	189	—	—	22.0 - 25.0	6.7 - [illegible]
10	[illegible]	28	1.2	6	59	18	135			29.0 - 35.5	8.8 - [illegible]
11		20	1.8	17	67	26	133			35.5 - 40.5	10.8 - [illegible]
12	[illegible]	45	1.7	14	67	25	158	-	-	42.2 - 45.0	12.9 - [illegible]
13	[illegible]	88	2.9	16	68	19	150	—		45.0 - 52.0	13.7 - 15[illegible]
14		135	0.8	9	76	4	83	1	2	52.0 - 55.5	15.8 - [illegible]
15	[illegible]	8	6.3	12	58	4	68	3	1	55.5 - 57.5	16.9 - 1[illegible]
16	[illegible]	14	1.8	7	63	3	77	2	1	57.5 - 65.0	18.1 - 19
17	[illegible]	31	1.7	13	71	39	101	2	21	74.0 - 79.0	2[illegible] - [illegible]
18	[illegible]	6	1.1	155	52	432	82	2	1	79.0 - 82.5	24.0 - [illegible]
19	[illegible]	7	1.3	101	12	966	30	1	1	82.5 - 85.5	25.1 - 2[illegible]
20	[illegible]	35	1.2	35	28	815	52	—	-	85.5 - 88.0	26.1 - 2[illegible]
21	[illegible]	25	1.3	35	64	327	134	-	-	88.0 - 92.5	26.8 - [illegible]
22		18	1.6	250	16	965	36	2	1	94.0 - 97.0	28.6 - 29
23	[illegible]	11	0.8	200	25	848	42	1	4	97.0 - 101.5	29.6 - 3[illegible]
24	[illegible]	32	0.7	75	64	363	107	2	20	103.5 - 110.7	31.5 - [illegible]
25	[illegible]	17	0.9	149	10	1024	22	2	5	112.0 - 115.0	34.1 - 35.0
26	[illegible]	6	1.2	96	5	1009	21	2	10	115.0 - 118.0	35.0 - 36
27	[illegible]	62	2.2	203	26	889	54	2	19	118.0 - 120.0	36.0 - 36.[illegible]
28	[illegible]	45	1.1	115	5	1079	17	2	3	120.0 - 122.0	36.6 - 37.2
29	[illegible]	85	2.1	116	69	503	134	3	18	122.0 - 125.0	37.2 - 38
30	[illegible]	23	0.6	53	94	109	176	2	2	125.0 - 127.5	38.1 - 38

OVERSIZE: [illegible]

PULPS:

DATE SAMPLED: [illegible]

DATE SHIPPED: [illegible]

DATE RESULTS RECEIVED:

COST ESTIMATE:

INVOICE:

ROBERTSON, WALLIS & ASSOCIATES

Box 5474
Whitehorse, Yukon Y1A 5H4
(403) 668-6970

TO: [illegible]

SHEET No

SAMPLE TYPE: [illegible]

FRACTION: [illegible]

CLIENT: [illegible]

PROJECT CODE: [illegible]

GEOLOGIST: [illegible]

SAMPLER: [illegible]

REPORT NO:

	SAMPLE NUMBER	ANALYSE FOR: ppb Au	ppm Ag	As	Cu	Ni	Zn	ppb Pd	ppb Pt	Feet	Hole 2
1	[illegible]	49	4.2	20	46	677	98	1	19	128.7 - 132.5	392-[illegible]
2		17	2.1	15	14	898	34	3	11	132.5 - 137.0	404-[illegible]
3	[illegible]	12	1.9	12	10	815	23	2	3	137.0 - 142.0	418-[illegible]
4		6	3.7	11	7	939	22	2	38	142.0 - 147.0	[illegible]
5	[illegible]	13	1.8	19	10	775	19	2	1	242.0 - 246.0	733-75
6	[illegible]	40	1.9	191	9	1273	18	3	1	246.0 - 252.0	750-7[illegible]
7		29	2.0	168	9	1210	16	2	6	252.0 - 257.0	768-[illegible]
8		68	1.7	187	5	1157	15	4	21	257.0 - 262.0	783-79
9		2	1.1	115	5	1024	16	5	4	262.0 - 268.0	798-[illegible]
10	[illegible]	23	3.9	160	5	990	16	2	12	268.0 - 272.0	817-[illegible]
11		20	1.0	217	8	615	20	3	1	272.0 - 276.0	82[illegible]
12		72	1.9	28	98	45	82	3	17	~~276.0~~ 277.0 - 281.0	844-8[illegible]
13	[illegible]	16	2.3	114	66	12	65	2	1	474.5 - 478.0	144.6-1[illegible]
14	[illegible]	59	2.2	22	83	14	76	3	2	508.0 - 516.0	154.5-15[illegible]
15	[illegible]	8	2.1	33	13	1198	41	1	2	46.3 - 48.0	Hole 3
16		11	2.0	10	14	1329	30	2	83	51.5 - 53.0	157-[illegible]
17		17	2.4	14	12	1554	28	1	2	56.2 - 57.0	171-8[illegible]
18		6	1.1	17	11	1442	31	2	11	60.5 - 62.0	18.4-19[illegible]
19		3	1.6	3	13	1467	26	2	1	64.8 - 67.0	19.7-20[illegible]
20		5	1.2	4	7	1385	25	3	1	70.8 - 73.0	[illegible]
21		4	3.8	12	7	1437	24	3	26	75.8 - 78.6	[illegible]
22		10	1.0	5	12	1360	29	2	22	84.1 - 86.5	[illegible]
23		2	2.0	7	12	1396	26	6	11	91.7 - 96.3	[illegible]
24	[illegible]	11	1.6	11	14	1449	33	2	12	98.8 - 104.0	[illegible]
25	[illegible]	8	2.0	13	8	1434	29	2	1	110.5 - 113.4	[illegible]
26	[illegible]	1	1.5	9	9	1524	32	4	12	115.5 - 117.0	[illegible]2-35
27		6	2.4	24	8	1136	30	7	213	118.0 - 121.2	[illegible]
28		5	2.0	22	6	1395	31	5	30	122.6 - 124.5	[illegible]
29		13	2.5	23	11	1347	30	2	7	130.4 - 134.2	[illegible]
30	[illegible]	4	2.1	10	6	1367	33	3	110	136.8 - 139.3	41[illegible]-42

OVERSIZE:

PULPS:

DATE SAMPLED:

DATE SHIPPED:

DATE RESULTS RECEIVED:

COST ESTIMATE:

INVOICE:

ROBERTSON, WALLIS & ASSOCIATES

Box 5474
Whitehorse, Yukon Y1A 5H4
(403) 668-6970

TO: [illegible]

SHEET NO: [illegible]
SAMPLE TYPE: [illegible]
FRACTION: [illegible]
CLIENT: [illegible]
PROJECT CODE: [illegible]
GEOLOGIST: [illegible]
SAMPLER: [illegible]
REPORT NO:

ANALYSE FOR

	SAMPLE NUMBER	Au (ppb)	Ag (ppm)	As	Cu	Ni	Zn	Pd (ppb)	Pt (ppb)	Feet	Hole
1	[illegible]	2	2.4	26	19	1407	39	2	122	145.9 - 147.0	[illegible]
2		9	2.0	31	36	1233	50	1	1	155.6 - 158.2	[illegible]
3		4	2.1	18	9	1429	38	3	1	165.0 - 167.0	[illegible]
4	[illegible]	1	2.2	5	4	1549	29	2	12	170.0 - 172.0	[illegible]
5	[illegible]	1	2.0	15	3	1422	38	2	1	174.7 - 178.3	[illegible]
6		2	1.7	30	10	1344	39	3	297	186.7 - 187.2	[illegible]
7	[illegible]	3	0.8	36	7	1314	44	2	1	192.3 - 194.4	[illegible]
8		7	1.0	31	5	1330	38	2	21	197.6 - 198.8	[illegible]
9	[illegible]	4	2.2	32	6	1356	36	4	58	200.2 - 202.5	[illegible]
10	[illegible]	10	2.3	16	8	1058	28	7	54	207.2 - 209.0	[illegible]
11		9	2.4	29	8	1234	34	2	10	213.5 - 216.7	[illegible]
12	[illegible]	1	2.0	18	9	1307	34	3	38	220.3 - 223.3	[illegible]
13	[illegible]	3	2.3	29	15	1130	45	5	23	229.4 - 234.6	[illegible]
14	[illegible]	3	2.1	19	11	1252	38	2	32	240.3 - 243.3	[illegible]
15	[illegible]	6	2.0	54	29	1355	58	4	22	251.3 - 252.0	[illegible]
16	[illegible]	11	2.1	27	44	670	51	33	88	254.5 - 257.0	[illegible]
17		5	2.3	31	15	1187	33	6	145	258.3 - 262.0	[illegible]
18	[illegible]	9	2.7	26	16	1301	37	6	1	262.0 - 267.0	[illegible]
19		9	2.0	36	19	1125	41	4	51	267.0 - 274.0	[illegible]
20		4	2.3	18	34	695	40	7	23	274.0 - 278.4	[illegible]
21	[illegible]	15	1.8	20	67	72	95			278.4 - 282.0	[illegible]
22	[illegible]	88	1.7	27	53	22	66			313.0 - 315.3	[illegible]
23		19	1.5	26	135	74	227			315.3 - 319.0	[illegible]
24	[illegible]	10	2.1	28	107	49	238			319.0 - 323.0	[illegible]
25	[illegible]	18	2.0	24	88	35	213			323.0 - 327.0	[illegible]
26	[illegible]	28	1.9	21	130	71	173			327.0 - 333.0	[illegible]
27	[illegible]	94	1.6	28	131	75	230			333.0 - 335.5	[illegible]
28	[illegible]	1000	2.0	82	49	7	66	6	33	335.5 - 340.5	[illegible]
29	[illegible]	163	1.2	31	65	35	149	10	5	340.5 - 346.0	[illegible]
30	[illegible]	118	1.7	27	66	31	176	2	39	346.0 - 352.0	[illegible]

OVERSIZE: [illegible]
PULPS:
DATE SAMPLED: [illegible]
DATE SHIPPED: [illegible]
DATE RESULTS RECEIVED:
COST ESTIMATE:
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ROBERTSON, WALLIS & ASSOCIATES

Box 5474
Whitehorse, Yukon Y1A 5H4
(403) 668-6970

SHEET NO: No

TO: ______

SAMPLE TYPE: ______

FRACTION: ______

CLIENT: ______

PROJECT CODE: ______

GEOLOGIST: ______

SAMPLER: ______

REPORT NO: ______

ANALYSE FOR

	SAMPLE NUMBER	Au	Ag	As	Cu	Ni	Zn	Pd (ppb)	Pt (ppb)	Feet	Hole
1	[illegible]	156	2.4	23	68	27	156	3	54	361.0 - 365.3	110.0 - 11[illegible]
2	[illegible]	48	2.0	30	64	28	126	2	1	370.0 - 382.0	114.6 - [illegible]
3		137	1.0	21	61	15	60	1	3	382.0 - 385.0	117
4	[illegible]	35	2.3	29	89	60	181			385.5 - 395.0	118.4 - 120
5		30	1.6	62	12	1029	27			409.5 - 410.5	124.8 - 125
6		12	2.0	28	80	117	154			410.5 - 413.4	126
7		3	1.0	24	115	84	128			417.3 - 418.5	127.2 - 12[illegible]
8		19	1.2	24	90	48	128			430.3 - 431.5	131.1 - 1[illegible]
9		23	0.8	24	84	35	144			433.3 - 433.5	132.1 - 1[illegible]
10		20	2.0	36	83	54	264			433.5 - 442.0	[illegible]
11	[illegible]	21	1.0	23	75	32	147			442.0 - 446.0	[illegible]
12		12	1.0	22	72	32	136			448.2 - 452.0	136.6 - 13[illegible]
13		48	2.0	24	47	30	88			453.0 - 456.5	138.1 - 1[illegible]
14	[illegible]	32	1.9	32	68	41	149			456.5 - 461.5	140.7
15	[illegible]	26	1.8	24	64	30	90			461.5 - 466.0	142.0
16	[illegible]	7	1.7	35	69	52	92			466.0 - 470.0	143.2
17		3	1.2	33	80	39	108			470.0 - 475.0	144.8
18	[illegible]	18	1.6	33	66	43	131			475.0 - 479.6	146.2
19		24	2.0	264	13	785	25	1	9	479.6 - 485.0	147.8
20	[illegible]	11	2.6	334	13	1017	22	3	36	485.0 - 489.0	149.0
21	[illegible]	9	1.3	42	72	80	105	4	1	489.0 - 491.2	149.7
22	[illegible]	152	2.2	321	17	799	26	1	28	491.2 - 493.9	150.5
23	[illegible] 67	6	1.7	29	69	50	76	3	1	493.9 - 500.0	152.4
24											
25											
26											
27											
28											
29											
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OVERSIZE: ______ **DATE SAMPLED:** ______ **COST ESTIMATE:** ______

PULPS: ______ **DATE SHIPPED:** ______ **INVOICE:** ______

DATE RESULTS RECEIVED: ______

APPENDIX 4

DIAMOND DRILL CORE - PETROGRAPHIC REPORT

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE Ph.D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY B.C.
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PHONE (604) 888-1323

Report for: **Ronald Robertson,**
Robertson, Wallis & Associates,
708 - 1155 West Pender Street,
VANCOUVER, B.C., V6E 2P4

Invoice 7263
March 1988

Copy + Invoice to: R.T. Heard,
Equity Silver Mines Ltd.,
708 - 1155 West Pender,
VANCOUVER, B.C., V6E 2P4

Project: Equity Silver Mines - 1987 Core Samples

Samples: 87-P-1 -179, -193.5, -197.3, -223, -287, -288, -301.5, -399, -462, -492.3
87-P-2 -58.5, -65, -94.5, -120.1, -138, -160, -223, -245, -247, -272.5, -363
87-B-3 -266, -301, -481, -487

Summary:

The rocks are divided into the following types:

1. Porphyritic Latite/Dacite Dike

Phenocrysts of plagioclase and much fewer of biotite, quartz, and hornblende are set in a groundmass dominated by plagioclase with lesser sericite, quartz, dolomite, and in part, K-feldspar. Mafic phenocrysts are altered completely to muscovite/sericite-dolomite-(Ti-oxide). Plagioclase is altered slightly to sericite and dolomite.

87-P-1 179

87-P-1 193.5 flow banded, coarser grained bands with K-feldspar, finer grained band without

2. Altered Ultramafic Rocks

ranging from serpentinized peridotite and dunite to talc-carbonate altered rocks to dolomite-quartz-sericite altered rocks; altered rocks mostly contain relic chromite. Serpentinite contains magnetite (partly altered to hematite); some samples show relic magmatic textures. Strongly altered rocks commonly strongly sheared and tightly folded. Veins of serpentine, carbonate, talc and quartz are common. A few samples contain quartz-barite veins. Arsenopyrite, pyrite and much less chalcopyrite form minor dissemination grains in many of the altered ultramafic rocks.

(continued)

2A. Serpentinite

In a few samples relic magmatic textures are preserved. With increasing degree of deformation, these are destroyed as serpentine is recrystallized.

87-P-2 160	dunite/peridotite; patchy alteration to magnesite-talc
87-P-2 223	dunite; patches and veins of magnesite-talc
87-P-2 245	dunite; more strongly altered to magnesite-talc
87-B-3 266	peridotite; olivine-orthopyroxene; veins of carbonate-talc

2B. Carbonate-Talc Alteration

Carbonate probably is magnesite; however, optical properties cannot distinguish it from dolomite. Carbonate is indicated as magnesite in talc-carbonate alteration, and as dolomite or carbonate in carbonate-quartz-(sericite) alteration. Ankerite is tentatively distinguished on the basis of higher relief. Likewise, talc and sericite are similar optically; talc is indicated in talc-magnesite alteration, and sericite (and locally mariposite) is indicated in rocks with quartz.

87-P-2 245	with relics of serpentine

2C. Dolomite-Chert Alteration (sericite noted where abundant)

87-P-1 197.3	abundant dolomite-quartz veins, no chromite
87-P-1 223	brecciated dolomite; mariposite seams; two unidentified sulfides, no chromite
87-P-2 94.5	veins of dolomite-quartz, quartz-barite
87-P-2 120.1	quartz-barite veins
87-P-2 138	ankerite-quartz-sericite; quartz-barite veins
87-P-2 247	minor quartz-barite veinlet, minor pyrite
87-P-2 272.5	breccia; carbonate-quartz altered ultramafic rock fragments in quartz-carbonate-chalcedony groundmass
87-B-3 481	quartz-dolomite veins
87-B-3 487	dolomite-quartz-sericite; dolomite-(kaolinite quartz) veins

3. Chert with Dolomite-Quartz Replacement

These samples are dominated by chert, cut by veins and replacement patches of dolomite-quartz. They probably have a different origin from the samples in Group 2, but similarities to the dolomitic-quartz-sericite alteration assemblage suggest that they may be related.

87-P-1 287	seams of carbonaceous opaque and of pyrite
87-P-1 288	seams of sericite-opaque-quartz with lenses of andesite; veins of dolomite-(kaolinite)

4. Dacite to Andesite Crystal Tuff, Tuffaceous Sediments

Rocks contain angular fragments of plagioclase, lesser quartz, and much less other minerals in an extremely fine grained tuffaceous groundmass.

87-P-1 399	abundant fragments of andesite flow; dolomitic groundmass; dolomite and calcite veins
87-P-1 462	andesitic tuffaceous sediment; veinlets of chlorite-calcite
87-P-1 492.3	bedded andesite tuff, one graded bed; veins of calcite-(chlorite-quartz-pyrite)
87-P-2 65	sheared cherty dacite tuff; ankerite alteration, quartz-ankerite veins
87-P-2 363	metamorphosed dacite tuff, brecciated, with veins of ankerite
87-B-3 301	metamorphosed dacite crystal tuff, quartz-dolomite veins

5. Volcanic Flow Rocks

87-P-1 301.5	andesite flow, wispy seams of pyrite; replacement patches of dolomite, and lenses of quartz-dolomite
87-P-2 58.5	metamorphosed dacite (?) : quartz-albite-sericite-ankerite-pyrite alteration; quartz-(dolomite) veins

John G. Payne
John G. Payne
986-2928

87-P-1 179 Porphyritic Latite/Dacite

The rock contains phenocrysts of plagioclase and lesser biotite, quartz and hornblende in a groundmass of very fine grained plagioclase with lesser sericite and much less dolomite and quartz. Alteration of plagioclase phenocrysts is slight to moderate to sericite and lesser dolomite. Mafic phenocrysts are altered to muscovite-dolomite.

phenocrysts	
plagioclase	17-20%
biotite	3- 4
hornblende	1
quartz	1
Ti-oxide	0.2
groundmass	
plagioclase	50-55
sericite	17-20
dolomite	4- 5
quartz	2- 3

Plagioclase forms subhedral to euhedral phenocrysts up to 2 mm in size and clusters of similar phenocrysts. Composition probably is oligoclase. Alteration is variable from slight to moderate to extremely fine grained sericite and lesser patches of dolomite.

Biotite forms ragged to subhedral flakes up to 1.5 mm in size. It is altered completely to pseudomorphic muscovite with lenses and patches of dolomite and minor lenses of Ti-oxide parallel to cleavage.

Quartz forms a few anhedral phenocrysts, commonly with subrounded and slightly embayed borders. Most are from 0.1-0.3 mm in size, and one large one is 2 mm long.

Hornblende forms subhedral to euhedral phenocrysts from 0.5-0.8 mm in size. It is replaced completely by dolomite with lesser sericite and minor Ti-oxide.

Ti-oxide forms scattered, equant patches averaging 0.1-0.2 mm in size, with a few up to 0.4 mm across.

In the groundmass, plagioclase forms anhedral, slightly interlocking grains averaging 0.03-0.1 mm in size. Sericite forms ragged flakes and clusters of flakes averaging 0.05-0.1 mm in length. Dolomite forms irregular patches averaging 0.2-0.3 mm in size, and a few up to 0.9 mm across. Quartz forms disseminated grains averaging 0.02-0.05 mm in size. Apatite forms subhedral prismatic grains up to 0.12 mm long. Pyrite forms an extremely fine grained lens in one biotite flake. It also occurs in some patches of Ti-oxide, probably as a replacement of Ti-oxide or parent ilmenite.

87-P-1 193.5 **Color-Banded Porphyritic Latite**

The rock contains phenocrysts of plagioclase and minor biotite, quartz, and hornblende in a groundmass of plagioclase with minor K-feldspar and quartz, commonly concentrated in lenses, patches of ankerite and minor disseminated pyrite. Color banding (in hand sample) from pale to medium greyish green probably is caused by variation in grain size of the groundmass, with the darker color existing in layers with the finer grained groundmass.

phenocrysts		
plagioclase	12-15%	
quartz	1- 2	(more in offcut block than in thin section)
biotite	0.5	
hornblende	0.5	
apatite	trace	
Ti-oxide	trace	
groundmass		
plagioclase	60-65	
K-feldspar	10-12	
quartz	3- 4	
sericite	4- 5	
dolomite	3- 4	
apatite	0.2	
pyrite	0.1	

Plagioclase forms subhedral to euhedral phenocrysts from 0.7-1.5 mm in average size. It is altered slightly to locally moderately to sericite. Cores of many phenocrysts are replaced completely by patches of extremely fine grained kaolinite with minor to moderately abundant dusty Ti-oxide and/or hematite.

Quartz forms a few equant to elongate phenocrysts up to 2 mm in size. It is more abundant in the stained offcut block than in the thin section.

Biotite forms a few subhedral phenocrysts up to 1 mm in size. It is replaced completely by muscovite with patches of dolomite and disseminated euhedral grains of Ti-oxide.

Hornblende forms a few euhedral phenocrysts in clusters up to 1 mm across. It is altered completely to extremely fine grained sericite with patches of dolomite/ankerite, and disseminated, euhedral equant grains of Ti-oxide and prismatic apatite.

Apatite forms a few elongate prismatic phenocrysts up to 0.3 mm long. Ti-oxide forms equant patches up to 0.4 mm in size.

The groundmass is variable. At one end of the section, layers are dominated by extremely fine grained (0.01-0.02 mm) plagioclase, with moderately abundant sericite and irregular patches of ankerite/dolomite. At the other end, the groundmass is somewhat coarser grained, consisting of equant, slightly to strongly interlocking plagioclase and K-feldspar grains averaging 0.07-0.15 mm in size, with minor quartz averaging 0.03-0.07 mm in size. Plagioclase is altered slightly to moderately to sericite, and dolomite forms irregular replacement patches. Dusty hematite is common, and is concentrated in certain grains. Apatite forms subhedral to euhedral prismatic grains averaging 0.03-0.07 mm in length. Pyrite forms disseminated anhedral to subhedral grains averaging 0.03-0.15 mm in size.

Quartz is concentrated in a few pods and lenses up to 0.3 mm in size. These are aggregates of very fine grains. A few of these patches also contain dolomite and/or K-feldspar.

87-P-1 197.3 **Siliceous Dolomite with Abundant Veins of Dolomite-Quartz: Probably Altered Ultramafic Rock**

The rock is an extremely fine grained aggregate of quartz and dolomite, with wispy, contorted seams of carbonaceous opaque with minor pyrite. It is cut by very abundant veins of dolomite and/or quartz of at least three ages. The original rock type is uncertain because of the absence of chromite. However, based on similarities with other samples, it probably was an ultramafic rock.

quartz	20-25%
dolomite	30-35
carbonaceous opaque	1
pyrite	0.1
veins	
dolomite	30-35
quartz	8-10

The rock consists of extremely fine grained (0.005-0.015 mm) cherty quartz intergrown with finer grained (0.002-0.01 mm) dolomite. The ratio of these two minerals varies moderately, and in places it appears that quartz-rich zones were replaced by dolomite.

The rock contains irregular, wispy, contorted seams up to 0.05 mm wide dominated by carbonaceous opaque with scattered anhedral grains of pyrite averaging 0.01 mm in size. Pyrite locally is concentrated in patches of quartz-rich rock up to 0.8 mm across as grains up to 0.02 mm in size. Elsewhere it forms anhedral to euhedral disseminated grains averaging 0.01 mm in size.

A few sets of veins range from less than 0.02 to over 2 mm in width. These consist of various combinations of dolomite and quartz. Grain size in the veins ranges from extremely fine to fine (locally up to 0.8 mm). Many of the veins are lensy and discontinuous on the scale of the thin section.

Some early-formed, banded, possibly replacement veins of cryptocrystalline dolomite up to 0.9 mm wide are cut by veins up to 0.4 mm wide of extremely fine grained (0.01-0.02 mm) dolomite.

The largest vein zone consists of very fine to fine grained dolomite with much less quartz; it was sheared strongly in a banded zone, in which dolomite was recrystallized to an extremely fine grained granular aggregate.

One vein up to 2 mm wide consists of fine grained quartz and dolomite in variable but overall about equal amounts. It has a center-line up to 0.15 mm wide of extremely fine grained dolomite.

87-P-1 223 Brecciated Dolomite with Mariposite(Cr-mica)-Rich Seams: Probably Replacement of Ultramafic Rock; Two Unidentified Sulfides

The rock is a fine to medium grained dolomite which was strongly brecciated and granulated. Seams rich in mariposite (Cr-mica) and lesser pyrite and carbonaceous opaque are common. The original rock probably was ultramafic, but no relic chromite is present to confirm this hypothesis. Two unidentified reflective minerals are present, one similar to chalcopyrite but strongly anisotropic (possibly cubanite), and the other with no distinctive properties, may be a sulfide or sulfo-salt.

dolomite	80-85%
mariposite	5- 7
quartz	3- 4
Mineral X	0.4
Mineral Y	0.1
carbonaceous(?) opaque	0.2
Ti-oxide	trace
veins	
dolomite-(quartz)	4- 5

Dolomite forms patches up to a few mm across of grains averaging 0.2-0.5 mm in size. These are strained strongly. and partly recrystallized to subgrain aggregates. They cut by abundant fractures of, and surrounded by extremely fine grained dolomite, which was formed by granulation of the coarser grained aggregate.

Quartz forms extremely fine grained patches scattered through the rock. Many of these have a chert texture.

A few coarser grained patches and veins consist of fine to very fine grained dolomite intergrown with minor to moderately abundant very fine grained, subhedral quartz.

Mariposite forms extremely fine grained aggregates concentrated in moderately crenulated seams up to 0.4 mm wide. It is pale green in color, with optical and textural properties similar to those of sericite. Associated with mariposite are seams of dusty opaque (carbonaceous?) and scattered patches up to 0.1 mm in size of Ti-oxide.

Mineral X forms lenses up to 0.2 mm in length of anhedral grains averaging 0.02-0.03 mm in size. In some patches it is intergrown coarsely with Mineral Y. Mineral X is light yellow in color, with low hardness, moderately high reflectivity and strong anisotropism. The mineral which best fits these properties is cubanite

Mineral Y occurs with Mineral X as described above, and also is the major reflective mineral in one patch of coarser dolomite-(quartz), in which it forms one equant grain 0.13 mm across and several much smaller ones. It is light grey in color with moderate reflectivity, isotropic nature, and low hardness. Several sulfides and sulfo-salts have these properties.

The elemental components of these minerals could be determined using the electron microscope.

87-P-1 287 **Chert cut by Veins of Dolomite and Quartz, with Seams and Patches of Carbonaceous Opaque and of Pyrite, one Plagioclase-rich Lens**

The rock contains two main types of chert, which are replaced largely by patches and veins of dolomite and quartz. The rock is cut by seams up to as few mm wide dominated by sericite, carbonaceous opaque and cherty quartz. Plagioclase is concentrated in one lens up to 1.5 mm wide. Pyrite and carbonaceous opaque form disseminated patches.

chert	25-30%
quartz	20-25
dolomite	30-35
sericite	7- 8
plagioclase	2- 3
carbonaceous opaque	3- 4
pyrite	0.5
chalcopyrite	trace

Much of the original rock consisted of extremely fine grained, massive chert with grain size from 0.003-0.01 mm. It is strongly replaced and cut by coarser grained quartz and dolomite patches and veins, respectively. Replacement quartz is up to 0.5 mm in size, and contains abundant dusty opaque inclusions. Dolomite is mainly very fine to extremely fine grained.

At one end of the section, chert is cryptocrystalline (0.002-0.005 mm), and shows a prominent foliation marked by dusty seams of carbonaceous opaque. It is cut by abundant early veins of extremely fine grained dolomite from 0.02-0.3 mm in width, and some later veins of very fine to fine grained dolomite averaging 0.1-0.4 mm wide. The pink-brown mineral in hand sample is dolomite.

The rock is cut by irregular, in part crenulated seams up to a few mm wide dominated by extremely fine grained sericite mixed with dusty to very fine grained carbonaceous opaque and lesser quartz. Other seams and veinlike zones are dominated by very fine grained dolomite. Some contain minor grains of pyrite and of chalcopyrite up to 0.03 mm in size.

Pyrite is concentrated in disseminated patches up to 0.6 mm across, commonly surrounded by and intergrown with quartz. Pyrite forms anhedral to euhedral grains averaging 0.02-0.1 mm in size. Quartz commonly is oriented perpendicular to crystal faces of coarser pyrite grains. Chalcopyrite forms disseminated grains up to 0.03 mm in size in dolomite and quartz aggregates.

One large patch up to 3 mm across and a few smaller ones consist of very fine to extremely fine grained carbonaceous opaque. Along borders of the large patch and in the smaller patches opaque grains are intergrown with and surrounded by dolomite and quartz. Carbonaceous opaque also forms disseminated patches up to 0.2 mm in size away from the main clusters.

A lens up to 2 mm wide and 3 mm long contains abundant anhedral equant plagioclase grains averaging 0.1-0.2 mm in size. Intergrown with plagioclase is minor interstitial quartz. The lens is brecciated and replaced slightly to moderately by dolomite, with lesser sericite and carbonaceous opaque. Another lens up to 2 mm long consists of very fine grained prismatic to lathy plagioclase from 0.05-0.15 mm long in a groundmass of anhedral, equant plagioclase averaging 0.002-0.005 mm in size, with abundant dusty Ti-oxide concentrated in interstitial seams.

87-P-1 288 **Chert Replaced by Quartz-Dolomite, Cut by Seams of Sericite-Opaque-(Quartz) containing Lenses of Andesite; Veins of Dolomite-(Kaolinite)**

The sample is similar to Sample 87-P-1 287. Chert is replaced strongly by quartz and lesser dolomite patches. The rock contains seams of sericite-opaque, associated with which are lenses of andesite dominated by plagioclase, and veins of dolomite. A few late veins are of dolomite-(kaolinite).

chert	12-15%	
quartz	50-55	
dolomite	20-25	
sericite	5- 7	
carbonaceous opaque	1- 2	
plagioclase	3- 4	(andesite)
Ti-oxide	minor	
pyrite	minor	
chalcopyrite	trace	
veins		
dolomite-kaolinite	0.5	

Chert forms relic patches up to 2 mm across. These contain zones averaging 0.002-0.005 mm in grain size, which grade upwards in size to less abundant patches averaging 0.02-0.05 mm in grain size. Dolomite forms veinlets and replacement patches in chert. Chert is replaced in large patches by fine to medium grained quartz with lesser dolomite. Quartz shows strained extinction and contains moderately abundant dusty opaque.

The rock is cut by seams up to a few mm across containing seams of sericite-carbonaceous opaque-quartz, lenses of plagioclase-rich andesite, subrounded fragments of chert, and veinlike zones of dolomite. Plagioclase-rich lenses contain prismatic phenocrysts up to 0.2 mm long in a sparse to abundant groundmass of extremely fine grained plagioclase with locally minor to moderately abundant dolomite, sericite, and carbonaceous opaque.

Dolomite forms seams of very fine to extremely fine grain size parallel to and possibly in part replacing sericite-rich seams.

Pyrite forms disseminated grains up to 0.07 mm in size, mainly concentrated in sericite-rich seams. Chalcopyrite forms disseminated grains averaging 0.02-0.03 mm in size, with a few up to 0.1 mm long.

The rock is cut roughly perpendicular to foliation by veins up to 0.2 mm wide dominated by very fine grained dolomite, with a few patches up to 0.2 mm across of extremely fine grained kaolinite. Some dolomite veins cutting quartz are truncated against seams of sericite/carbonaceous opaque.

87-P-1 301.5 Andesite Flow, Replaced by Dolomite, with Lenses of Dolomite and of Quartz-(Dolomite)

The rock is a very fine grained andesite flow dominated by lathy plagioclase in a groundmass of extremely fine grained plagioclase with lesser chlorite, dolomite, and Ti-oxide. Pyrite is concentrated in wispy, contorted seams and patches. The rock is replaced by dolomite; where replacement is strong, the color of the rock is light grey. The rock contains replacement lenses (veinlets) of dolomite and of quartz-(dolomite).

plagioclase	50-55%
chlorite	5- 7
Ti-oxide	0.5
pyrite	1- 2
chalcopyrite	trace
dolomite	30-35
quartz	4- 5

Plagioclase forms unoriented, lathy grains from 0.1-0.3 mm in length. Some are slightly warped, and a few are replaced by quartz.

The groundmass is extremely fine grained (0.002-0.01 mm), and consists of plagioclase, dolomite, chlorite, and minor Ti-oxide. Chlorite forms clusters of colorless flakes with low birefringence. Dolomite forms irregular replacement patches throughout the rock. Where dolomite replacement is strong, chlorite is replaced completely, and the rock has a pale grey color. The outlines of zones of strong dolomite replacement are sharp in the hand sample, but much less obvious in thin section. Ti-oxide forms disseminated grains averaging 0.005-0.01 mm in size.

Pyrite is concentrated in wispy, in part strongly contorted seams averaging 0.05-0.1 mm in width. One patch up to a few mm across contains very abundant pyrite, mainly as anhedral to subhedral grains averaging 0.02-0.04 mm in size, with a few up to 0.2 mm across.

Chalcopyrite forms a very few grains averaging 0.01-0.03 mm in size, mainly associated with dolomite.

Dolomite forms replacement lenses up to 1.5 mm wide of very fine grained aggregates. Quartz forms a few lenses up to 1 mm wide of very fine to fine grained aggregates, commonly partly replaced by dolomite and cut by veinlets of dolomite.

87-P-1 399 **Andesite Tuff with Dolomite Alteration and Dolomite-Calcite Veins**

The rock contains fragments of plagioclase phenocrysts, andesite flow, chlorite-(opaque), leucoxene, and minor andesite tuff in a groundmass of extremely fine grained dolomite. It is cut by discontinuous veins up to 1 mm wide of dolomite and/or calcite.

fragments	
plagioclase	10-12%
andesite flow	25-30
andesite tuff	minor
chlorite-rich	2- 3
chlorite-(opaque)	1- 2
leucoxene	1
groundmass	
dolomite	40-45
pyrite	1
veins	
dolomite	7- 8
calcite	2- 3
quartz	0.1

Plagioclase phenocrysts and crystal fragments average 0.3-0.5 mm in size, with a few up to 1 mm long. Some are relatively fresh, and others are altered slightly to moderately to dolomite. A few are altered moderately to sericite. Dolomite veinlets are common in larger phenocrysts.

Fragments of andesite flows are from 0.3-0.7 mm in size. They are characterized by an extremely fine grained groundmass of plagioclase and chlorite with minor Ti-oxide. Many contain phenocrysts of plagioclase from 0.1-0.3 mm in size. A few are dominated by very fine grained prismatic plagioclase.

Several fragments up to 1 mm long are dominated by extremely fine grained chlorite. Other fragments up to 0.2 mm across consist of chlorite and moderately abundant Ti-oxide; these probably are secondary after hornblende.

Leucoxene forms anhedral patches up to 0.3 mm in size.

Pyrite forms a few clusters averaging 0.2-0.3 mm across of grains averaging 0.05-0.1 mm in size. One much larger cluster up to 1.7 mm long and 0.8 mm wide contains abundant anhedral to subhedral pyrite grains and fragments surrounded by groundmass dolomite.

The original groundmass and parts of many of the fragments are replaced by a groundmass of extremely fine grained dolomite.

The rock is cut by numerous veins and veinlets of carbonate. Most of these are discontinuous on the scale of the thin section. Many show textures suggestive of shear deformation after vein emplacement. Veins range from dolomite-rich (commonly strongly sheared) to calcite rich (generally coarser grained and less strongly sheared). One calcite-rich vein contains a few patches of very fine grained quartz.

A few late seams of calcite up to 0.03 mm wide are post-deformation.

87-P-1 462 Andesite Tuffaceous Sediment cut by Veinlets of Chlorite-Calcite

The rock contains angular fragments of plagioclase in an aphanitic groundmass probably of andesitic composition, and containing dusty brown to opaque material which gives the rock its black color. It is cut by veins and veinlets dominated by chlorite and others dominated by calcite. Pyrite form lenses with framboidal textures.

fragments	
plagioclase	20-25%
quartz	0.5
silica (chert)	0.3
volcanic glass (?)	minor
groundmass	
plagioclase-(chlorite)(?)	60-65
brown semiopaque/opaque	5- 7
pyrite	0.3
chalcopyrite	minor
Ti-oxide	minor
veins	
chlorite-calcite	4- 5

Plagioclase forms angular fragments averaging 0.02-0.03 mm in size. These most probably are fragments of phenocrysts from an andesitic source. A few lenses contain much more abundant fragments averaging 0.03-0.08 mm in size. As well as plagioclase, these lenses contain fragments of brown volcanic glass(?), chert, and quartz grains. Elsewhere in the rock quartz forms scattered equant fragments averaging 0.02-0.03 mm in size.

The fragments are set in a groundmass of uncertain composition (because of its grain size [0.001-0.005 mm]), probably dominated by plagioclase and lesser chlorite. Brown semiopaque/opaque forms dusty disseminations of varying intensity, and is moderately concentrated in lensy patches and lenses in parts of the section. Locally it forms dense patches up to 0.3 mm in length.

The rock contains an unusual J-shaped lens 1 mm long and 0.12 mm wide of extremely fine grained silica.

Pyrite forms disseminated grains averaging 0.005-0.01 mm in size. A few lenses from 0.2-0.4 mm long, and one irregular veinlike zone up to 1.2 mm long contain framboidal pyrite aggregates ranging in diameter from 0.001-0.008 mm. A few patches up to 0.06 mm across contain subhedral cubic pyrite grains 0.008 mm in size in a sparse groundmass.

Chalcopyrite forms disseminated grains averaging 0.01-0.02 mm in size, both in the rock and in the veins.

Ti-oxide forms a few equant grains averaging 0.02 mm across.

The rock is cut by veins up to 0.8 mm wide of very fine to extremely fine grained chlorite with minor to moderately abundant patches of very fine grained calcite. Other veins are dominated by calcite; these are mainly less than 0.2 mm wide, but locally widen rapidly to 0.8 mm (at the edge of the section).

No evidence was seen to suggest that the rock was hornfelsed.

87-P-1 492.3 **Bedded Andesite Tuff cut by Calcite-(Chlorite-Quartz-Pyrite) Vein and Calcite Veinlets**

The rock contains three main beds of andesite tuff, ranging from extremely fine to fine grained. The central layer shows well developed graded bedding. The rock is cut by a vein of calcite with lesser chlorite and much less quartz and pyrite, and several veinlets of calcite.

coarse layer (fragments average Ø.3-1 mm in size)

fragments	
plagioclase	15-2Ø%
andesite/latite	15-2Ø
sericite-altered andesite?	1Ø-12
carbonate-altered andesite	5- 7
chlorite	3- 4
calcite	2- 3
groundmass	
plagioclase-chlorite	2Ø-25
dusty opaque	2- 3

Plagioclase grains are phenocrysts from andesite flows. Alteration is variable, with most grains altered slightly to sericite and/or calcite.

Andesite fragments are of several types. Many have plagioclase phenocrysts in an extremely fine grained groundmass of plagioclase and much less chlorite and opaque. In some fragments, groundmass plagioclase is well oriented. Grain size of the groundmass ranges from extremely fine to very fine, and textures range from subhedral to moderately interlocking. Some andesite fragments are altered moderately to calcite, and others are replaced strongly to completely by sericite or carbonate. From the stained offcut block, several fragments are seen to contain K-feldspar. This mineral was not identified in thin section. Its presence indicates that some of the volcanic fragments are of latite composition.

A few fragments up to 1.7 mm in size are dominated by extremely fine grained chlorite. The largest contain patches up to Ø.7 mm in size of slightly coarser grain size and which contain minor to abundant pyrite inclusions; these may represent original mafic phenocrysts. They are surrounded by finer grained chlorite.

A few fragments up to 1 mm across are of single grains of calcite/dolomite.

The groundmass is too fine to identify optically. It probably is dominated by plagioclase and lesser chlorite, with moderately abundant dusty opaque.

Pyrite occurs in several fragments as disseminated, extremely fine grains and aggregates, and forms a few patches of even finer grains in the groundmass. It is concentrated in one patch 1 mm long as anhedral grains and aggregates of grains from Ø.Ø1-Ø.Ø3 mm in size.

(continued)

central layer

Grains are mainly of plagioclase composition, with a few of muscovite, chlorite, Ti-oxide and of apatite. Except at the bottom of the layer, grains are very angular. Grain size ranges from an average of 0.1-0.3 mm at the base of the layer rapidly to 0.05-0.1 mm, and then gradationally to 0.01-0.03 mm near the top. Plagioclase is fresh to slightly altered to sericite and/or calcite. Pyrite forms moderately abundant disseminated grains in the middle of the layer. The groundmass is aphanitic and probably composed of plagioclase and chlorite. Calcite forms minor to moderately abundant irregular replacement patches up to 0.1 mm in size. Dusty opaque is concentrated in a few wispy patches.

finest layer

This layer is slightly banded with minor gradation in grain size between sublayers. Angular fragments dominated by plagioclase average 0.03-0.07 mm in size, with a few grains over 0.1 mm long in the coarser grained sublayers. Sericite forms a few patches up to 0.2 mm in size; their origin is uncertain. The groundmass consists of plagioclase and chlorite with moderately abundant dusty brown semiopaque/opaque, and with minor to moderately abundant replacement patches up to 0.1 mm in size of calcite. Pyrite forms scattered framboidal clusters and seams parallel to foliation.

The rock is cut by several discontinuous veinlets from 0.02-0.15 mm in width of extremely fine grained calcite with scattered grains and clusters of pyrite up to 0.05 mm across.

The largest vein is mainly in the coarsest grained layer where it averages 0.8 mm wide. It is dominated by extremely fine to very fine grained calcite, with a core zone containing abundant very fine grained chlorite and lesser patches of very fine to extremely fine grained quartz. Pyrite forms several clusters of subhedral grains averaging 0.03-0.07 mm in size. One contains an inclusion of chalcopyrite 0.015 mm long. The vein narrows rapidly in the next bed, breaking into two braided, somewhat diffuse veinlets of calcite.

87-P-2 58.5 Meta-dacite (?) with Quartz-Albite-Sericite-Ankerite Pyrite Alteration and Quartz-(Dolomite) Veins

The rock was strongly replaced and deformed; as a result it is uncertain what if any of the present textures and minerals are original. Thus the origin of the rock is uncertain. It contains seams rich in sericite with lesser ankerite and pyrite-(chalcopyrite), and layers and patches dominated by coarser grained, generally strongly strained quartz and lesser albite and ankerite. Late veins are of quartz and minor dolomite.

quartz	50-55%
albite	12-15
sericite	8-10
ankerite-(dolomite)	12-15
pyrite	1- 2
chalcopyrite	minor
Ti-oxide	0.2
veins	
quartz	5- 7
dolomite	1

Quartz is most abundant as coarse grained replacement patches. These were strongly strained and partly recrystallized to very irregular subgrain aggregates. Some of the subgrain aggregates have a prominent foliation, indicating a high degree of shearing. Quartz also forms extremely fine to very fine grained patches intergrown with sericite and ankerite.

Albite forms anhedral grains averaging 0.2-0.7 mm in size. It is strained slightly, and albite twins commonly are discontinuous and slightly warped. Grains are fresh. Except for the presence of albite twins, albite is optically almost identical to quartz.

Ankerite forms extremely fine to very fine grained patches intergrown irregularly with finer grained, recrystallized quartz. Some of these have subhedral, rhombic outlines. Ankerite is characterized by very high relief. Dolomite forms coarser grained patches up to 1 mm across with grains up to 0.2 mm in size. It is tentatively distinguished from ankerite by lower relief.

Sericite is concentrated in irregular seams up to a few mm wide. In these it is intergrown with lenses and patches of extremely to very fine grained quartz and very fine grained albite, and patches and lenses of dolomite/ankerite. Carbonaceous opaque is concentrated in wispy seams and lenses.

Pyrite forms euhedral cubic grains averaging 0.1-0.2 mm in size, associated with sericite and extremely fine grained quartz, and less commonly with dolomite. Finer grained, anhedral pyrite forms irregular patches and lenses associated with sericite, and possibly associated with carbonaceous opaque. A few patches up to 1.5 mm across contain abundant extremely fine to very fine anhedral to euhedral grains of pyrite. A few larger pyrite grains contain an inclusion up to 0.02 mm across of chalcopyrite.

Ti-oxide forms a few equant grains up to 0.05 mm in size, and aggregates of much finer, anhedral grains, mainly associated with sericite. It is concentrated in a few lenses up to 0.4 mm long associated with sericite-rich seams.

Chalcopyrite forms disseminated grains up to 0.1 mm in size, commonly associated with pyrite.

The rock is cut by a few, late, subparallel veins up to 0.8 mm wide of fine to very fine grained quartz and minor to moderately abundant dolomite. Quartz grains are unstrained, indicating that the veins were formed after deformation.

87-P-2 65 Sheared Cherty Dacite Tuff with Ankerite Alteration, cut by Quartz-Ankerite Veins

The rock contains crystal fragments of quartz and plagioclase in an extremely fine grained, well foliated groundmass dominated by cherty silica, with lenses of sericite, patches of ankerite, and disseminated pyrite. Veins parallel and perpendicular to foliation consist of quartz and much less ankerite.

fragments			
plagioclase	3- 4		
quartz	1- 2%		
groundmass			
chert	45-50	Ti-oxide	0.2%
sericite	8-10	apatite	trace
ankerite	12-15	chalcopyrite	trace
pyrite	1- 2	Mineral Y	trace
veins			
1) quartz	5- 7	carbonaceous opaque	minor
ankerite	1- 2	chalcopyrite	trace
pyrite	minor		
2) calcite	trace		

Quartz and plagioclase form anhedral crystal fragments averaging 0.07-0.2 mm in size, with a few up to 0.3 mm across. Plagioclase is altered slightly to moderately to sericite. A few sericite-rich patches may represent completely altered plagioclase crystal fragments.

The groundmass is dominated by extremely fine grained quartz (0.003-0.008 mm). Sericite forms seams and lenses parallel to foliation. Coarser grained sericite (after plagioclase?) forms a few patches and lenses up to 0.3 mm wide. Ankerite forms extremely fine grained patches disseminated through the rock.

Pyrite forms a few euhedral grains averaging 0.07-0.15 mm in size, and more abundant anhedral to subhedral grains averaging 0.02-0.03 mm across. It is concentrated in a few lenses parallel to foliation as subhedral to euhedral grains from 0.03-0.1 mm in size. Chalcopyrite forms anhedral patches up to 0.05 mm in size. Associated with the largest cluster of chalcopyrite grains is a grain 0.04 mm across of an unknown sulfide(?). It is moderately reflective (slightly less than chalcopyrite), with low hardness, a light grey color, and isotropic nature. It may be the same mineral as Mineral Y in sample 87-P-1 223, and is grouped with it.

Ti-oxide forms lenses with subrounded outlines up to 0.15 mm in size, and disseminated, extremely fine grained patches and seams.

Apatite forms equant grains averaging 0.03-0.05 mm in size.

Opaque seams up to 0.05 mm wide are moderately abundant. Most are parallel to foliation, and those few which cross foliation are tightly crenulated. They contain minor patches of Ti-oxide and pyrite intergrown with non-reflective opaque (possibly carbonaceous).

The veins are up to 1.5 mm wide and are dominated by very fine to fine grained quartz, with moderately abundant ankerite and minor pyrite. The main vein which crosscuts foliation at about 90 degrees appears to be cut by the largest vein parallel to foliation. The latter contains patches which are strongly strained and in part recrystallized to foliated subgrain aggregates. Ankerite forms subhedral grains up to 0.3 mm long in the large vein parallel to foliation. Pyrite forms a few clusters uptown 0.25 mm in size of subhedral grains. Chalcopyrite forms a very few anhedral grains from 0.005-0.015 mm in size. Carbonaceous opaque forms a few equant patches up to 0.05 mm in size in one quartz-rich vein.

Calcite forms a few late veinlets up to 0.02 mm wide.

87-P-2 94.5 **Cherty Dolomite Replacement of Ultramafic Rock; cut by Veins of Dolomite-Quartz and of Quartz-Barite**

The rock consists of very fine grained dolomite with lenses and patches of extremely fine grained chert, with minor disseminated pyrite. Minor relic chromite patches indicate that the parent was an ultramafic rock. It is cut by veins up to a few mm wide of dolomite-quartz and veinlets up to 0.2 mm wide of quartz-barite.

dolomite	80-85%	
chert	10-12	
pyrite	0.5	
arsenopyrite	0.2	
chromite	0.7	
sericite	trace	
veins		
dolomite-(quartz)	4- 5	(17-20% in hand sample)
quartz-barite-(sulfide)	2- 3	

Dolomite forms anhedral aggregates averaging 0.03-0.1 mm in size.

Chert forms very irregular interstitial patches up to 1 mm in size; grains are strongly interlocking and average 0.01-0.02 mm in size. Some chert patches contain minor interstitial flakes of sericite/mariposite (suggested because po green color in hand sample; grains too small to show color in thin section).

Pyrite forms disseminated, subhedral grains averaging 0.02-0.05 mm in size, with a few up to 0.15 mm across.

Arsenopyrite forms disseminated subhedral cubic grains averaging 0.02-0.03 mm in size; it is distinguished from pyrite by its much white color. Anisotropism is too weak to recognize.

Chromite forms disseminated anhedral grains and clusters of grains averaging 0.1-0.3 mm in size, with a few up to 1 mm long. It is isotropic with a deep red-brown color. One cluster of chromite(?) 0.2 mm across consists of anhedral "grains" up to 0.15 mm in size. If it were originally chromite, it was altered to an unknown mineral (probably a variety of Fe oxide) which is opaque, with very low reflectivity, and very hard. "Grains" appear to be made up of cryptocrystalline aggregates.

The major vein in hand sample is present only in one corner of the section. It is dominated by medium to coarse grained dolomite with patches of very fine to locally fine grained quartz in fracture-filling seams and veinlets cutting across coarser grained dolomite.

Smaller veinlets up to 0.2 mm wide are dominated by very fine to fine grained quartz. One of these also contains abundant very fine grained barite, mainly in the core of the veinlet. This veinlet also contains scattered patches of pyrite and chalcopyrite-hematite(?) up to 0.06 mm in size. One lensy patch dominated by very fine grained quartz contains several ragged barite grains up to 0.3 mm in size.

87-P-2 120.1 Sheared Cherty Ankerite/Dolomite Replacement of Ultramafic Rock;Disseminated Arsenopyrite and Pyrite; Quartz-Barite Veins

The rock is a strongly sheared cherty carbonate rock dominated by ankerite/dolomite with seams of sheared quartz. It contains relic patches of chromite, which indicate that the parent rock was ultramafic. Arsenopyrite and pyrite form disseminated grains. Veins up to 0.3 mm wide of very fine to fine grained quartz-barite cut across the foliation.

ankerite/dolomite	87-90%
quartz	5- 7
chromite	1- 2
arsenopyrite	0.3
pyrite	0.3
mariposite	0.2
veins	
quartz-barite	2- 3

Ankerite/dolomite forms very fine to fine grained aggregates, which show a moderate to strong foliation, and commonly appears to have been very strongly sheared. Shearing is concentrated along wispy seams, in which carbonate is strongly granulated. These seams probably also contain minor mariposite, which accounts for the green-colored seams parallel to foliation. A few carbonate-rich layers up to a few mm across contain slightly coarser grained, generally unstrained grains; these may be metamorphic segregations, which were formed after much of the shearing occurred.

Quartz occurs in wispy seams and patches. Most patches show a very strong foliation produced by intense shearing, with extremely fine grains in parallel orientation. Textures in some of these patch are more typical of sericite than quartz. Other patches are unstrained and consist of extremely fine grained cherty aggregates with moderately interlocking grain borders. A few patches show textures suggestive of tight folds.

Chromite forms ragged lenses and equant grains from 0.05-1 mm in size. Grains have a deep red-brown color, and are fractured and in part corroded.

Mariposite forms a patch 0.15 mm long of extremely fine grain size (0.002-0.005 mm) enclosed in a lens of quartz.

Arsenopyrite and pyrite form anhedral to locally euhedral grains averaging 0.02-0.1 mm in size. These are moderately concentrated in seams parallel to foliation.

Late veins up to 0.3 mm in width are dominated by very fine grained quartz, with several patches of very fine grained barite.

87-P-2 138 Altered Ultramafic Rock: Ankerite-Quartz-Sericite-Magnetite-(Chromite-Barite-Phlogopite-Chlorite); veins of Quartz-(Barite) and of Ankerite/Dolomite

The sample is a well foliated and strongly altered ultramafic rock. Relic patches (dark in hand sample) are dominated by quartz, sericite, and Fe-oxides. Lighter colored replacement patches and veinlike zones are dominated by ankerite. Chromite forms relic grains and clusters of grains. The rock is cut by a few late veins of quartz-(barite) and of ankerite/dolomite.

ankerite	65-70%
quartz	10-12
sericite	10-12
magnetite/hematite	4- 5
chromite	1
barite	0.3
phlogopite	0.2
chlorite	0.2
veins	
quartz-(barite)	1- 2
ankerite/dolomite	0.3

Ankerite forms aggregates of very fine to locally fine grains. Many finer grained aggregates show moderate to strong shearing. Some coarser grained veinlike zones are probably late metamorphic segregations; these are very fine to fine grained, and generally unsheared. Some of these contain minor patches of quartz and of barite.

Quartz, with sericite and Fe-oxides, is concentrated in lensy patches showing a prominent foliation. Quartz commonly is extremely fine grained, and commonly appears to have been sheared strongly. A few patches of very fine grained quartz are unfoliated and unstrained.

Sericite forms extremely fine to very fine grained aggregates, generally unfoliated and in part with grains oriented perpendicular to foliation. A few fine grained seams of sericite are oriented parallel to foliation. Phlogopite forms a few ragged grains from 0.1-0.3 mm in size; pleochroism is from colorless to pale brown.

Chlorite forms slender flakes up to 0.1 mm long intergrown in some patches of extremely fine grained quartz.

Magnetite forms equant grains averaging 0.03-0.08 mm in size, strongly concentrated in lenses with quartz and sericite. In a few lenses, magnetite averages 0.01-0.03 mm in size. Magnetite is altered moderately to strongly to hematite; alteration is in irregular patches and is concentrated along borders of grains.

Chromite forms a few ragged, fractured grains up to 0.9 mm in size, some of which are concentrated in clusters up to 2.5 mm across. It ranges in color from deep red brown to opaque. It is altered slightly along grain borders and fractures to hematite.

Barite forms anhedral, commonly ragged grains from 0.1-0.3 mm in average size, commonly intergrown with ankerite.

The rock is cut by a few late veinlets up to 0.15 mm wide of quartz, mainly parallel to foliation, and up to 0.1 mm wide of ankerite/dolomite cutting foliation.

87-P-2 160 Dunite/Peridotite altered to Serpentine-Magnetite; Patchy Alteration to Magnesite-(Talc)

The rock is dominated by serpentine with irregular patches of magnetite, formed by alteration of olivine (and possibly pyroxene), and minor relic chromite. Later alteration to carbonate (magnesite?) and talc is concentrated in seams and patches.

serpentine	75-80%
magnetite	4- 5
chromite	0.5
carbonate (magnesite?)	10-12
talc	5- 7

Serpentine forms extremely fine to medium grained aggregates. Finer grained, more irregular serpentine aggregates are secondary after olivine. Some coarser grained patches may represent original phenocrysts of pyroxene. Other coarser grained zones form veins up to a few mm wide. Some veins show extremely finely laminated growth zoning in serpentine crystals or aggregates. Serpentine veins are common loci for later veins of carbonate and/or talc.

Magnetite is concentrated in veinlike lenses and patches averaging 0.05 mm wide, and in irregular lenses. Grains are very fine to extremely fine, and are replaced slightly to moderately by hematite.

Chromite forms clusters up to 1.5 mm long of anhedral grains averaging 0.2-0.4 mm in size. It ranges in color from deep red-brown to opaque. Commonly it is altered slightly along grain borders to hematite.

Carbonate (probably magnesite - based on composition of rock) is concentrated in veinlike zones up to 0.5 mm wide and in patches averaging 0.1-0.3 mm across. Some veinlike zones have thin borders of extremely fine grained talc. Elsewhere, talc forms similar veinlike zones of extremely fine grain size. It also occurs as thin selvages along fractures in masses of serpentine. In coarser grained serpentine patches and veinlike zones, talc appears to replace serpentine gradually; this is indicated by a gradual increase in birefringence of the mineral from 1st-order white typically of serpentine to 1st-order yellow and red and low 2nd-order colors more typical of talc.

87-P-2 223 Dunite: Altered to Serpentine-Magnetite; Late Patches and Veins of Magnesite-(Talc)

The rock is a dunite (or possibly peridotite) which was altered completely to serpentine-magnetite with minor relic chromite and local concentrations of chlorite. The serpentine appears to have been sheared and recrystallized, in part forming coarser veinlike zones. Later veins and replacement patches are of carbonate (magnesite) and minor talc.

serpentine	83-87%
magnetite	5- 7
chromite	0.5
arsenopyrite	0.2
pyrite	0.1
chlorite	1
carbonate (magnesite?)	7- 8
talc	0.1

Serpentine forms extremely fine to very fine grained aggregates in random orientation and extremely fine to medium grained aggregates in parallel orientation. None of these appears to preserve the original texture of the ultramafic rock, suggesting that the rock was strongly sheared and recrystallized. The interference color of serpentine ranges from 1st-order grey to bright 1st-order yellow, the latter occurring in some of the coarser grained recrystallized zones. It may suggest a slight alteration of serpentine towards talc.

Magnetite forms disseminated grains, moderately concentrated in clusters and lenses up to a few mm long. Grain size averages 0.02-0.1 mm. Grains are relatively fresh, with local alteration to hematite. Locally serpentine forms rims up to 0.1 mm wide of subparallel grains growing perpendicular to some large patches of magnetite.

Chromite forms a few anhedral, corroded grains up to 0.6 mm in size. Color ranges from very dark red-brown to opaque. It is altered slightly to moderately on grain borders to hematite.

Arsenopyrite and lesser pyrite form disseminated grains averaging 0.01-0.03 mm in size, and wispy lenses up to 0.2 mm long along cleavage in coarser grained serpentine.

Chlorite is concentrated in one patch 2.5 mm across as a few subhedral grains up to 0.8 mm long and much more abundant, very fine grains surrounded by and intergrown with serpentine. Textures suggest that an original mafic mineral (possibly phlogopite was replaced by chlorite, which was then deformed partly replaced by serpentine.

Carbonate (probably magnesite) forms irregular, braided, extremely fine grained veins up to 0.4 mm wide. Locally associated with carbonate are lenses up to 0.05 mm wide and 0.2 mm long of extremely fine grained talc.

87-P-2 245 Altered Dunite: Serpentine-Magnetite, and Carbonate (Magnesite?)-Talc

The rock is sheared and recrystallized, with development of a strong foliation and abundant microscopic drag folds. It contains lenses dominated by serpentine and others dominated by carbonate-talc. Magnetite is concentrated in lenses in both types of alteration assemblage. Chromite forms relic grains surrounded by serpentine.

serpentine	20-25%
magnetite/hematite	3- 4
chromite	1- 1.5
carbonate (magnesite?)	30-35
talc	35-40

Serpentine forms lenses up to 1 mm wide of extremely fine to fine grained aggregates. One shows tight folding. Some larger lenses are cut by veinlets up to 0.1 mm wide of carbonate.

Magnetite forms lenses and seams up to 0.7 mm wide of grains from 0.03-0.2 mm in size. Most are altered moderately to strongly to hematite. Finer grained (0.01-0.03 mm) magnetite is concentrated in seams parallel to foliation; it is altered strongly to completely to hematite.

Chromite forms corroded, relic grains from 0.2-0.8 mm in size, alone or in clusters of a few grains, mainly surrounded by serpentine. It is deep red-brown in color. Many grains have irregular cores of chromite surrounded by secondary magnetite, which in turn is altered slightly to moderately to hematite along grain borders.

Talc forms lenses and seams paralleled to foliation. Grain size ranges widely, from extremely fine grained aggregates to flakes up to 1 mm in size. Some coarser grained flakes show internal folding.

Carbonate is concentrated in seams parallel to foliation as very fine to extremely fine grains. In some it is intergrown intimately with extremely fine grained talc. Some seams of carbonate, with or without talc interlayers, show tight folds.

87-P-2 247 **Cherty Carbonate Alteration of Ultramafic Rock; Late Veinlets of Quartz-(Barite)**

The rock is strongly folded, and dominated by carbonate with much less cherty quartz and minor pyrite. Folds are outlined by bands of differ composition and/or texture, and are up to several mm across. Scattered grains of chromite indicate that the parent was an ultramafic rock. The dark grey color of seams (in hand sample) is caused by extremely fine grained carbonate with minor pyrite. A few late veinlets up to 0.1 mm wide are of quartz and lesser barite.

carbonate	85-87%
quartz	7- 8
chromite	1
pyrite	1- 2
Ti-oxide	minor
apatite	trace
late patches	
quartz-carbonate	2- 3
veinlets	
quartz	0.3
barite	0.1

Carbonate (magnesite or dolomite/ankerite) forms very fine to locally fine grained aggregates. Extremely fine grained ankerite(?) is concentrated in lenses with quartz and in recrystallized seams; it is distinguished from the main carbonate by higher relief (although this may be partly apparent because of the fine grain size). A few late veinlike zones of coarser carbonate (white in hand sample) are slightly coarser grained; in some grains are oriented subperpendicular to the length of the "vein".

Quartz forms wispy lenses of extremely fine grain size. In some, grains are strongly sheared and recrystallized parallel to foliation. In others, grains are equant and moderately interlocking with typical cherty textures. One lensy zone 5 mm long and up to 1 mm wide consists of extremely fine grained cherty silica with a banded texture; intergrown with it parallel to foliation are lenses and veinlets of carbonate. A few patches and dissemination grains of quartz 0.05 mm in size are intergrown with coarser grained carbonate.

Chromite forms relic, commonly fractured and corroded, equant grains up to 0.6 mm in size. It is red brown in color. Some grains are altered along borders slightly to moderately to magnetite. Patches of pyrite occur in some fractures.

Pyrite forms clusters and disseminated grains averaging 0.02-0.05 mm in size, with a few up to 0.1 mm across. These commonly are concentrated in lenses with extremely fine grained carbonate.

A few patches up to 2 mm across are of very fine to fine grained quartz and lesser carbonate; these probably formed during late recrystallization.

Ti-oxide forms scattered equant grains up to 0.03 mm in size.

Apatite occurs in a very few patches of quartz as anhedral, equant grains averaging 0.01-0.02 mm in size.

The rock is cut by a late veinlet up to 0.1 mm wide of very fine grained quartz and lesser barite.

87-P-2 272.5 **Breccia: Carbonate-Quartz Altered Ultramafic Rock *Fragments in* a Groundmass of Quartz-(Carbonate) with minor Chalcedony and Arsenopyrite**

The rock contains angular fragments from 0.3-2 mm in size of several types, mainly carbonate-(chert). The presence of scattered chromite grains indicates that the parent was ultramafic.

The groundmass is dominated by extremely fine to very fine grained quartz and lesser carbonate, with minor patches of chalcedony and disseminated grains of arsenopyrite. A late veinlet is of quartz.

fragments	
carbonate-cherty quartz	35-40%
quartz-(carbonate) vein	3- 4
chromite	0.1
groundmass	
quartz	40-45
carbonate	7- 8
vein quartz	3- 4
chalcedony	0.4
arsenopyrite	0.2
pyrite	trace
hematite	trace
veins	
quartz-carbonate seam	1- 2
quartz	0.4

Fragments up to 2 mm in size are of carbonate or carbonate-cherty quartz. Carbonate is mainly very fine grained, and commonly shows a preferred orientation. Cherty quartz shows textures similar to those in other samples of carbonate-quartz alteration. These include mainly unoriented grains averaging 0.002-0.005 mm, and patches with strong foliation and similar to slightly coarser grain size. Some foliated chert contains lenses of carbonate.

A few patches from 1 to 3 mm across of very fine to fine grained quartz and minor carbonate appear to be fragments.

Chromite forms angular grains up to 0.3 mm in size, either as fragments or as relic grains in chert-carbonate alteration. Chromite is fractured strongly.

The groundmass of the breccia is dominated by extremely fine to very fine grained quartz with minor to moderately abundant carbonate. In slightly coarser grained patches, subhedral prismatic quartz grains up to 0.15 mm long are common. A few patches up to 1.5 mm across of very fine to locally medium grained quartz appear to be late-formed replacement patches. Locally, chalcedony forms patches up to 1 mm in size of radiating to subparallel aggregates of grains averaging 0.05-0.1 mm in length.

Arsenopyrite forms disseminated subhedral to euhedral grains averaging 0.03-0.07 mm in size. Pyrite forms anhedral to subhedral grains averaging 0.02-0.03 mm in size.

A few interstitial patches consist of dense, dark red-brown hematite(?) showing very low reflectivity.

The rock is cut by a seam up to 0.3 mm wide of extremely fine grained chert and carbonate.

Late veinlets up to 0.2 mm wide are of very fine grained quartz.

87-P-2 363 **Metamorphosed Dacite Tuff, Brecciated and cut by *Veins of Ankerite***

The rock contains scattered fragments of quartz and lesser plagioclase in an extremely fine grained groundmass dominated by cherty quartz and sericite with lesser ankerite. The rock is brecciated along seams dominated by dusty opaque. It is cut by veinlets up to 0.5 mm wide (0.5 mm in hand sample) of ankerite.

fragments	
quartz	2- 3%
plagioclase	1
Ti-oxide	minor
apatite	trace
groundmass	
cherty quartz	40-45
sericite	20-25
ankerite	17-20
pyrite-marcasite	1
chalcopyrite	trace
dusty opaque	4- 5
veinlets	
1) early quartz	1
2) late ankerite	3- 4

Quartz and lesser plagioclase form angular to subrounded fragments from 0.1-0.2 mm in average size. Ti-oxide forms a few equant fragments up to 0.13 mm across. Apatite forms a very few equant fragments up to 0.05 mm in size.

The groundmass is dominated by extremely fine grained, chert quartz and sericite, with lesser patches and seams of ankerite. Dusty opaque (possibly carbonaceous) forms wispy seams and irregular patches. In hand sample, these appear to be concentrated in the matrix of an irregular breccia, and in part are associated with early-formed seams and veinlets of ankerite.

Pyrite is concentrated in a few clusters up to 0.9 mm long as subhedral to euhedral grains up to 0.2 mm in size. Many grains contain abundant tiny silicate inclusions. Some similar clusters up to 0.3 mm across are aggregates of anhedral, extremely fine grained marcasite.

Chalcopyrite forms anhedral grains from 0.01-0.02 mm size, and is concentrated locally in clusters of grains up to 0.05 mm across associated with very fine grained carbonate.

A few early, discontinuous veinlike zones and patches are of very fine grained quartz with much less carbonate.

Late, somewhat irregular, replacement and crosscutting veins averaging 0.2-0.3 mm wide are of extremely fine grained ankerite.

87 -B-3 266 Peridotite: Olivine and Orthopyroxene Altered to Serpentine-Magnetite; Veins of Carbonate and Talc

The rock is a medium to coarse grained peridotite dominated by olivine with lesser orthopyroxene and minor intercumulus chromite. Olivine is altered completely to serpentine and patches of magnetite, orthopyroxene is altered to serpentine, and chromite is altered to hematite. Original textures are well preserved. Early veinlets are of serpentine and late veins are of carbonate and of talc.

olivine (serpentine)	65-70%	veins	
orthopyroxene (serpentine)	17-20	serpentine	1- 2%
chromite	1- 2	carbonate-talc	
magnetite (secondary)	3- 4	(chalcopyrite)	3- 4
pyrite	0.3	talc	1- 2
chlorite	minor		

Olivine forms an aggregate of fine to medium grains; these are replaced by serpentine showing typically replacement textures controlled by fractures in olivine grains. Magnetite (after olivine) occurs in disseminated grains in, and interstitial patches between altered olivine grains.

Clinopyroxene forms clusters of anhedral to subhedral prismatic grains up to 3.5 mm in length. They are replaced by pseudomorphic serpentine. Some are slightly bent and broken.

Chromite forms interstitial (intercumulus) grains between olivine grains. Size ranges widely from 0.1-2.5 mm. Chromite is altered completely to opaque Fe-oxides of extremely fine grain size and low reflectivity. These in turn are replaced by wispy veinlets of hematite with higher reflectivity. Locally surrounding the largest two patches of chromite is minor chlorite showing brown interference color. This is bordered by larger zones of serpentine/chlorite showing bright blue anomalous interference color.

Magnetite is concentrated in seams and patches as anhedral grains averaging 0.02-0.1 mm in size. Although the optical properties suggest that magnetite is unaltered, the low magnetism of the rock suggests thailand is moderately replaced by hematite.

Pyrite and marcasite/pyrite form disseminated anhedral grains and clusters averaging 0.02-0.05 mm in size.

Veins are of four main types. Early veins averaging 0.1-0.3 mm in width are of fine to medium grained serpentine.

Carbonate (ankerite or magnesite) forms extremely fine to very fine grained veins up to 1.3 mm wide. Some of these veins contain minor to abundant patches of a pale to light brown mineral (probably a phyllosilicate) which forms "flakes" up to 1.5 mm in size of cryptocrystalline aggregates in subparallel orientation. The mineral has very low apparent birefringence, but that may be because it is so fine grained. A patch a few mm across near the largest carbonate vein consists of coarse grained serpentine-talc, with interference color ranging from 1st-order grey (typical of serpentine to 2nd order yellow (typical of talc). A few of the veins contain a trace of chalcopyrite as grains up to 0.05 mm in size.

A few veins up to 0.2 mm wide are dominated by very fine to fine grained talc. Talc also forms extremely fine grained veinlets and seams, in part associated with carbonate; in these, talc is pale brown in color, suggesting that the brown mineral described above also may be talc.

One banded veinlet up to 0.1 mm wide consists of finely banded, light brown, cryptocrystalline talc(?). Apparent age relations are ambiguous. This vein cuts a vein of coarser grained talc and itself is cut by an extremely fine grained carbonate vein, which appears to be cut by the coarser grained talc vein!

87-B-3 3Ø1 **Metamorphosed Dacite Crystal Tuff, cut by *Quartz-Dolomite Veins***

The rock contain fragments of plagioclase and quartz crystals in an extremely fine grained groundmass of plagioclase-quartz and lesser sericite and ankerite. It is cut by a few veins of quartz-dolomite. In the hand sample (not in the thin section) are veins up to 2.5 mm wide of fine grained dolomite-quartz.

fragments		
plagioclase	3Ø-35%	
quartz	8-1Ø	
cherty andesite(?)	Ø.3	
Ti-oxide	Ø.3	
zircon	trace	
groundmass		
plagioclase-quartz	35-4Ø	
sericite	4- 5	
ankerite	4- 5	
pyrite	Ø.3	
carbonaceous opaque	Ø.5	
graphite	minor	
chalcopyrite	trace	
veins		
quartz-dolomite-(apatite-kaolinite)		5- 7

Plagioclase and quartz form subangular grains averaging Ø.1-Ø.25 mm in size, with a few up to Ø.5 mm across. Plagioclase is altered slightly to moderately to sericite.

A few fragments are of extremely fine grained plagioclase/quartz with minor to moderately abundant dusty opaque; these may be fragments of intermediate volcanic rocks.

Zircon forms a very few anhedral grains up to Ø.Ø5 mm in size.

The groundmass is dominated by extremely fine grained plagioclase and lesser quartz, with minor to moderately abundant sericite and lesser ankerite.

Pyrite forms patches up to Ø.2 mm long of extremely fine grained aggregates, and disseminated grains averaging Ø.Ø3-Ø.Ø8 mm across. A few spheroidal patches up to Ø.5 mm across are of framboidal, extremely fine grained pyrite (less than Ø.ØØ2 mm). One patch Ø.1 mm across consists of abundant tiny framboidal aggregates.

Ti-oxide forms lenses from Ø.1-Ø.25 mm long of extremely fine grained to locally very fine grained aggregates.

Carbonaceous opaque forms wispy seams up to Ø.Ø5 mm wide concentrated in a zone up to 1 mm wide. In this zone, graphite forms a few seams up to Ø.5 mm in length of flakes up to Ø.Ø7 mm across.

Several veins averaging Ø.2-Ø.7 mm wide consist of very fine grained quartz and carbonate in varying proportions. One vein contains a few grains of apatite up to Ø.25 mm long, and a few patches up to Ø.15 mm across of extremely fine grained kaolinite. A few veins contain minor chalcopyrite grains up to Ø.Ø5 mm in size. Numerous veinlets up to Ø.1 mm in width are of extremely to very fine grained carbonate.

87-B-3 481 Dolomite-Quartz Alteration of Ultramafic Rock; Replaced by Quartz and cut by Quartz-Dolomite Veins

The rock is patchy in texture and consists of dolomite with much less, commonly cherty quartz. Minor relic chromite patches indicate that the parent rock was ultramafic. The rock is replaced by irregular patches of very fine to fine grained quartz, and cut by a few veins up to 1 mm wide of coarser grained quartz and dolomite.

dolomite	60-65%
quartz	4- 5
chromite	0.2
pyrite	0.2
arsenopyrite	0.1
magnetite/limonite	0.2
Ti-oxide	minor
veins	
quartz	25-30
dolomite	3- 4
chalcedony	minor

Dolomite forms a very fine grained, moderately to well foliated aggregate, with local coarser grains up to 0.3 mm in size. Intergrown with dolomite are minor patches of cherty to very fine grained quartz up to 1 mm in length.

Chromite occurs in one lensy patch 1.2 mm long as fragments up to 0.1 mm in size surrounded by soft, non-reflective, extremely fine grained opaque. Its presence indicates that the original rock was ultramafic. A second lens 0.6 mm long contains abundant fragments of magnetite averaging 0.005-0.02 mm in size surrounded by dense, non-reflective opaque. Textures are similar to those in the chromite-rich lens, suggested that the magnetite may have been formed by replacement of chromite.

Pyrite and arsenopyrite each form disseminated anhedral to euhedral grains averaging 0.02-0.05 mm in size. A few euhedral pyrite grains are up to 0.18 mm across. Pyrite is concentrated moderately in one patch up to 0.6 mm across, in which it forms anhedral grains from 0.01-0.07 mm in size. Arsenopyrite is concentrated moderately in a few wispy seams as grains from 0.005-0.01 mm in size.

Ti-oxide is concentrated in a cluster 0.3 mm across of anhedral grains up to 0.04 mm across.

Veins up to 1 mm in width consist of fine to very fine grained quartz and dolomite. Finer grained quartz forms replacement patches, in part association with and grading textural and spatially into the veins. One vein contains a band of extremely fine grained dolomite and quartz; associated with dolomite is a seam containing abundant extremely fine grained arsenopyrite.

Locally, veins contain patches of very fine grained chalcedony up to 0.3 mm in size.

87-B-3 487 **Dolomite-Quartz-Sericite-Altered Ultramafic Rock; Cut by Dolomite-(Quartz-Kaolinite) Veins**

The rock is strongly sheared and moderately warped to locally tightly folded. It consists of very finely banded dolomitic and much less quartz, with a few seams rich in sericite. A few relic lenses of chromite indicate that the parent rock was ultramafic. Veinlets are dominated by dolomite, with lesser quartz and/or kaolinite.

dolomite	70-75%
quartz	12-15
sericite	5- 7
chromite	0.1
pyrite/marcasite	0.3
arsenopyrite	0.1
Ti-oxide	0.1
veins and veinlets	
dolomite	7- 8
kaolinite	1
quartz	1
marcasite/pyrite	minor

Dolomite forms extremely fine to very fine grained aggregates variably intergrown with seams rich in quartz and/or sericite. Dolomitic forms irregular coarser grained patches and lenses averaging 0.1-0.2 mm in grain size.

Quartz forms a variety of textures. Many seams and lenses are extremely fine grained, and show textures indicative of strong shearing. Quartz forms a few very fine grained patches averaging 0.3-0.8 mm in size; the origin of these is uncertain.

Sericite is concentrated in a few seams up to 1 mm wide, mainly intergrown with quartz. Tight folds on the scale of 0.3-1 mm are best defined by thin interbanded zones of quartz-sericite and dolomite.

Chromite forms a few lenses up to 1 mm long containing equant angular fragments from 0.02-0.07 mm in size. The matrix between the fragments is extremely fine grained dolomite.

Pyrite and much less arsenopyrite form disseminated anhedral to euhedral grains averaging 0.02-0.07 mm in size. A few lenses up to 0.4 mm long consist of extremely fine grained aggregates of arsenopyrite and marcasite. A few opaque-rich seams parallel to foliation contain abundant pyrite grains averaging 0.005 mm in size.

Ti-oxide forms scattered grains up to 0.1 mm in size, and clusters up to 0.15 mm in size of extremely fine grains.

The rock is cut by numerous veinlets averaging 0.05-0.4 mm in width of dolomite. A few of these at one end crosscut the foliation, and appear to be slightly strained. Larger veins up to a few mm across occur in the hand sample.

One lensy vein up to 1 mm wide has an outer zone of very fine grained dolomite, and a core up to 0.6 mm wide of extremely fine grained (0.002-0.005 mm) kaolinite with scattered to moderately abundant patches of dolomite. Furthered along this vein are clusters up to 0.4 mm long of very fine grained marcasite/pyrite.

A few veins are of very fine grained dolomite and quartz.

One vein averaging 0.1-0.2 mm wide and dominated by very fine grained quartz contains a few patches up to 0.1 mm across of extremely fine grained kaolinite.

APPENDIX 5

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

1. Allocation of costs between CAL and RUST groupings:

   CAL group - 1,000 ft. drilled, 74 core samples
   RUST group - 500 ft. drilled, 69 core samples

2. Drill Expenditures

	CAL Group	RUST Group
Ed Asp, Dease Lake: sloop rental		
15 Nov - 31 Dec = $2,500	$ 1,675.00	$ 825.00
Caron Diamond Drilling:		
Invoice 2275	34,349.00	-
Invoice 2281	7,839.00	40,615.00
Invoice Jan/88	-	4,719.00
Canyon Contracting, Dease Lake:		
D8 bulldozer, etc.	9,312.00	-
" " "	4,416.00	5,625.00
" " "	-	2,689.00
Murphy Contracting, Dease Lake:		
D7 bulldozer, etc., and fuel caching	7,500.00	-
" " " " " "	42,452.00	20,909.00
Yukon Airways, Dease Lake:		
Hughes 500 helicopter - 28.7 hours	18,561.74	-
" " " - 19.0 hours	-	12,288.29
South Dease Services: groceries	500.00	400.00
Robertson, Wallis & Associates:		
Project management, personnel, camp	12,522.00	-
vehicles, expediting	6,117.00	20,506.00
	$145,243.74	$108,576.29

3. Sampling and Assaying

	CAL Group	RUST Group
Min-En Laboratories, Vancouver:	$ 1,612.09	$ 1,503.16
Freight: core samples	215.40	200.84
Robertson, Wallis & Associates:		
Jan./88 Core logging and sampling	3,784.00	3,324.00
	$ 5,611.49	$ 5,028.00

4. Petrographic Studies

	CAL Group	RUST Group
Vancouver Petrographics, Fort Langley	$ 1,165.00	$ 573.75

5. TOTAL EXPENDITURES

	CAL Group	RUST Group
TOTAL EXPENDITURES	$152,020.23	$114,178.04

APPENDIX 6

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Ronald C. R. Robertson, hereby certify:

That I am a self-employed consulting geologist with business addresses at Box 5474, Whitehorse, Yukon, and 1560-701 West Georgia Street, Vancouver, British Columbia, and that I supervised the 1987 diamond drill program described in this report;

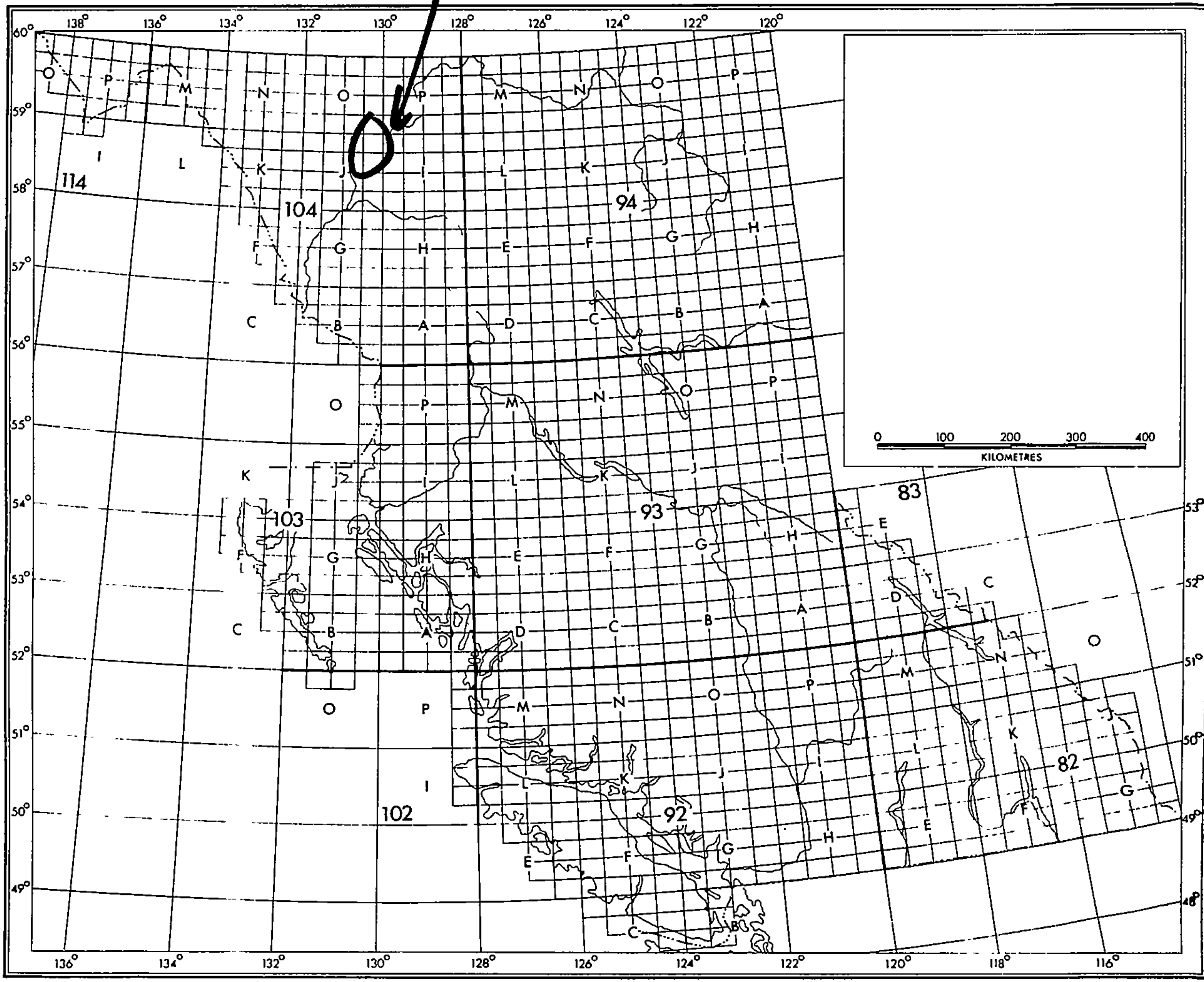
That I obtained a Bachelor of Science degree with First Class Honours in Geology from the University of Aberdeen, Scotland, in 1970 and subsequently carried out graduate studies in economic geology at McMaster University, Hamilton, Ontario, and at Queen's Unversity, Kingston, Ontario;

That I have engaged in mineral exploration for 18 years, of which 10 years have been on programs in the Yukon Territory, British Columbia and Alaska;

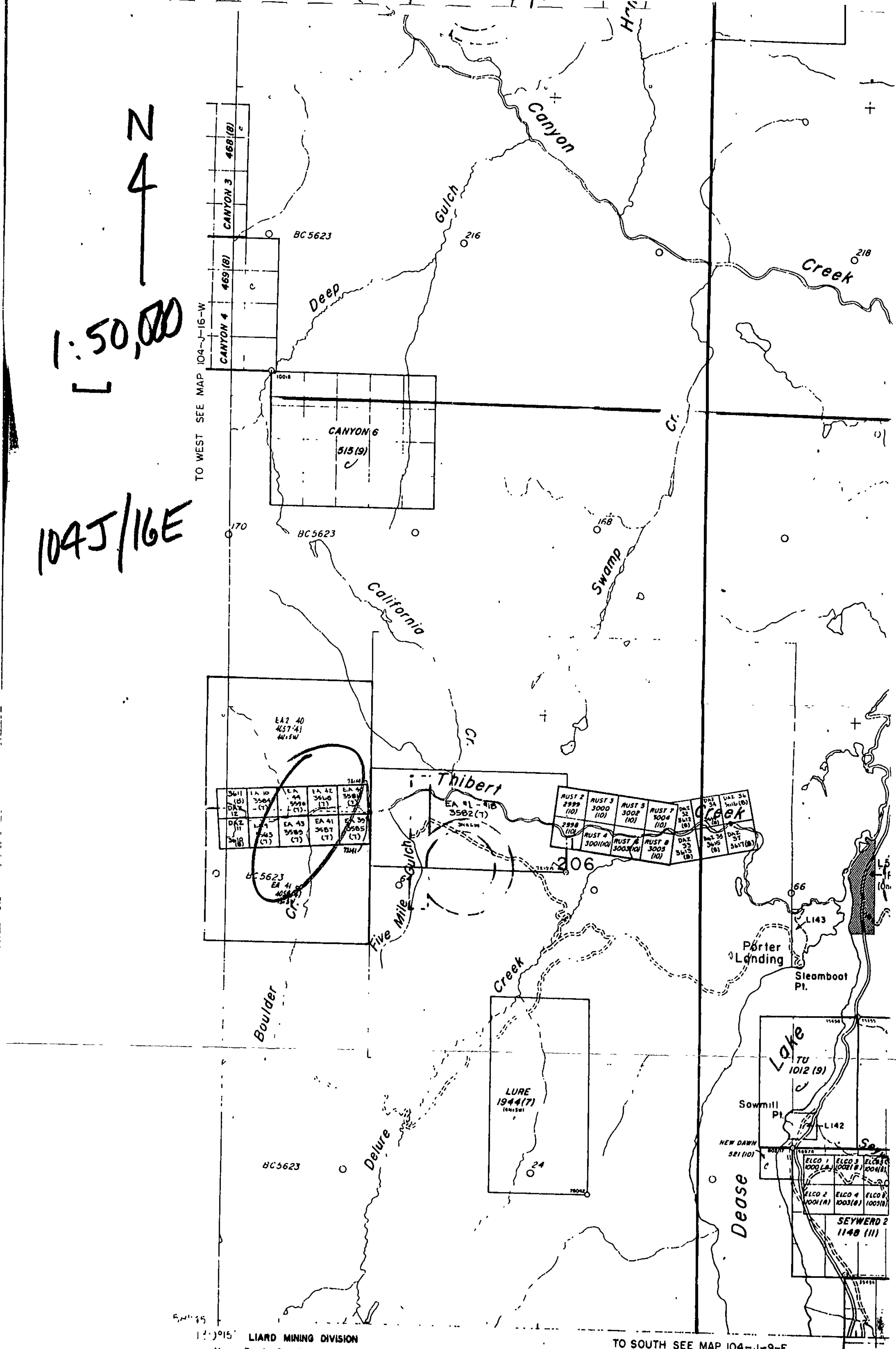
That I am a fellow of the Geological Association of Canada (Number F4858) and a member of the Society of Economic Geologists, the British Columbia-Yukon Chamber of Mines and the Canadian Institute of Mining and Metallurgy.

Dated at Vancouver, British Columbia, this 10th day of August, 1988.

Ronald C. R. Robertson, F.G.A.C.



0 100 200 300 400
KILOMETRES
82
83
92
93
94
102
103
104
114



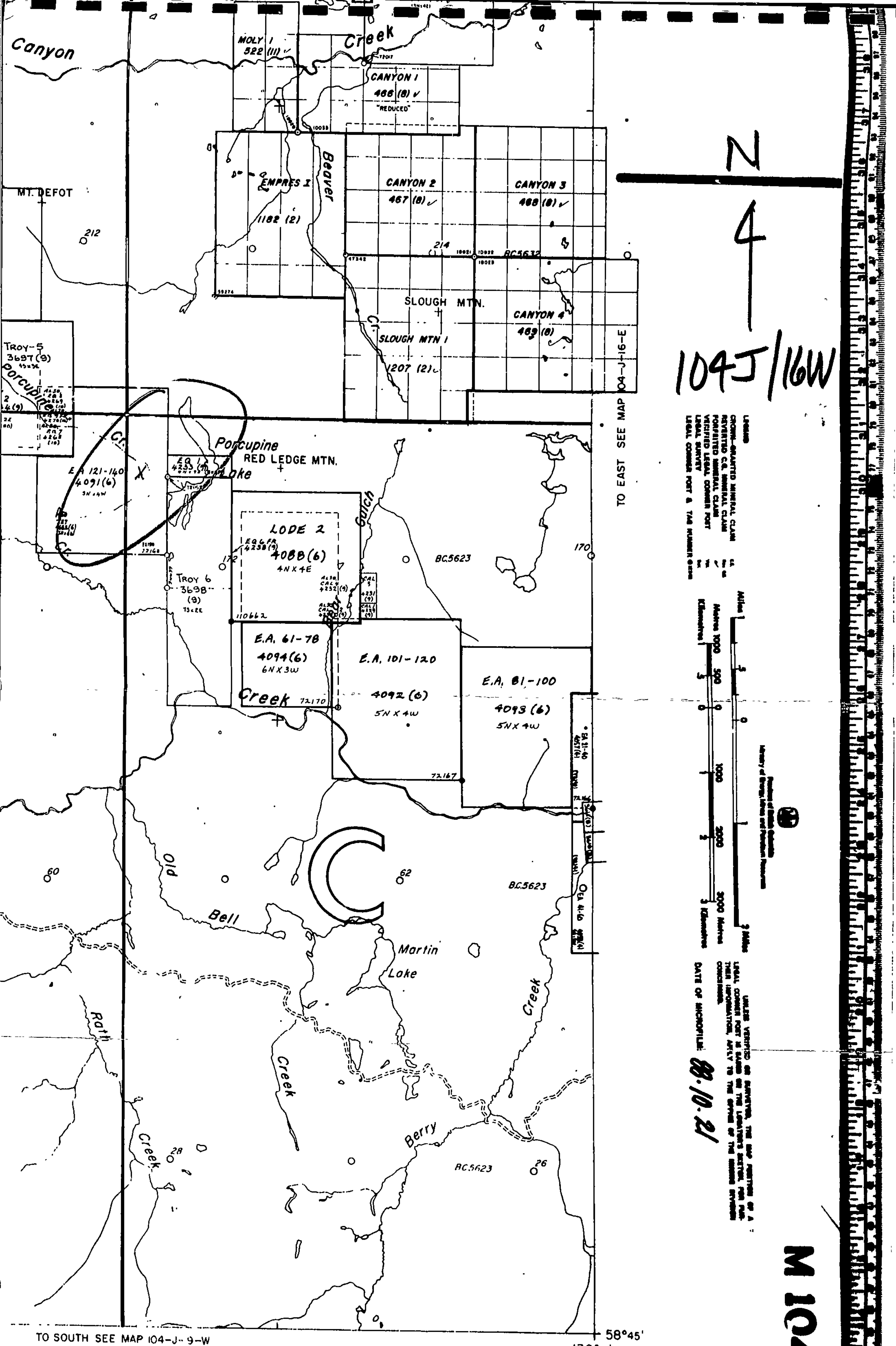
LIARD MINING DIVISION

Mining Division Boundary		Crown Granted	CG
Indian Reservation		Reverted C.G. Mineral Claim	Rev CG
Mineral and Placer Reserve		Forfeited Mineral Claim	✓

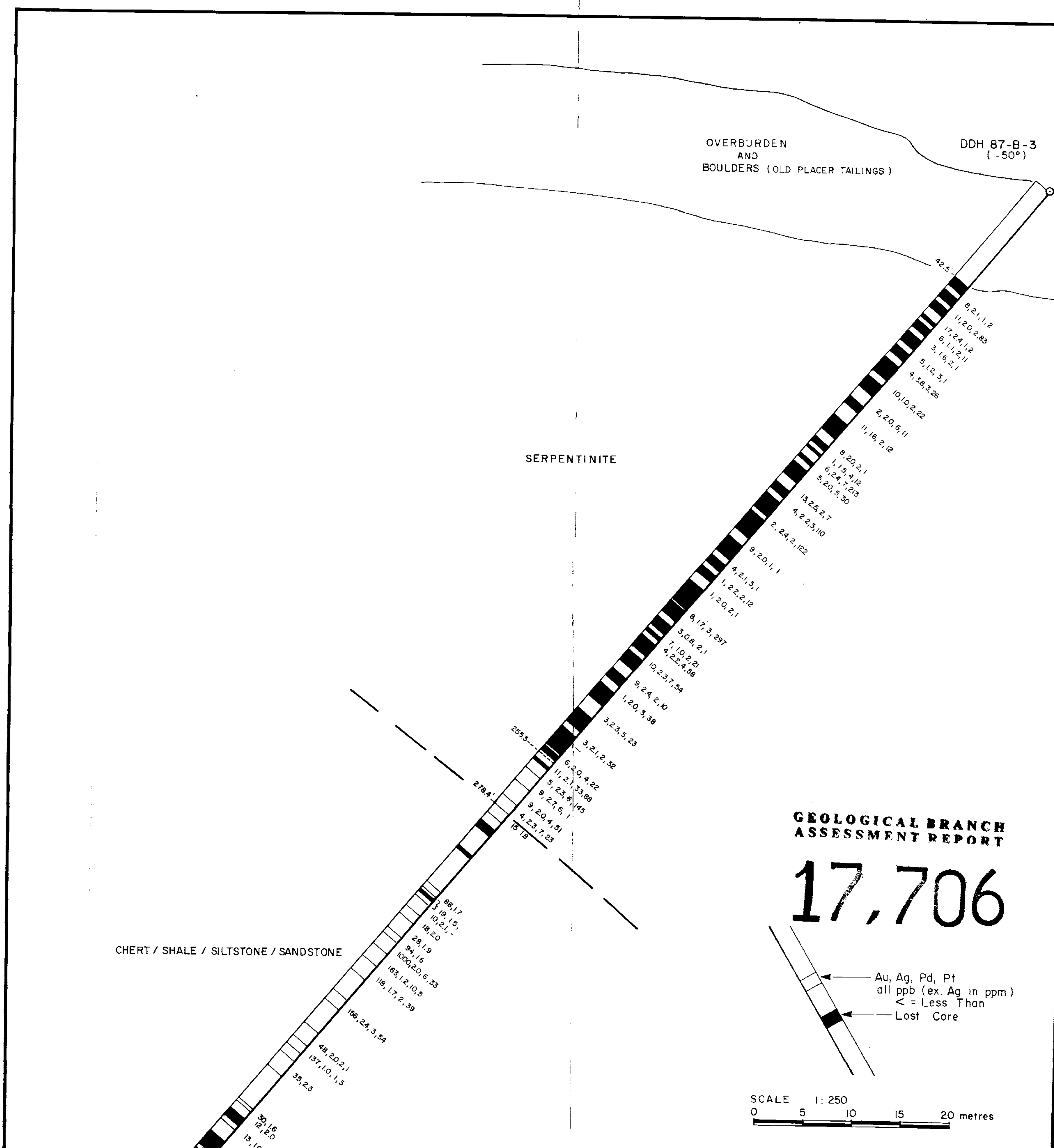
TO SOUTH SEE MAP 104-J-9-E

MINERAL TITLES REFER

DEPARTMENT OF MINES AND PET



MINERAL TITLES REFERENCE MAP 104 J / 16 W



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,706

EQUITY SILVER MINES LIMITED

THIBERT CREEK PROJECT

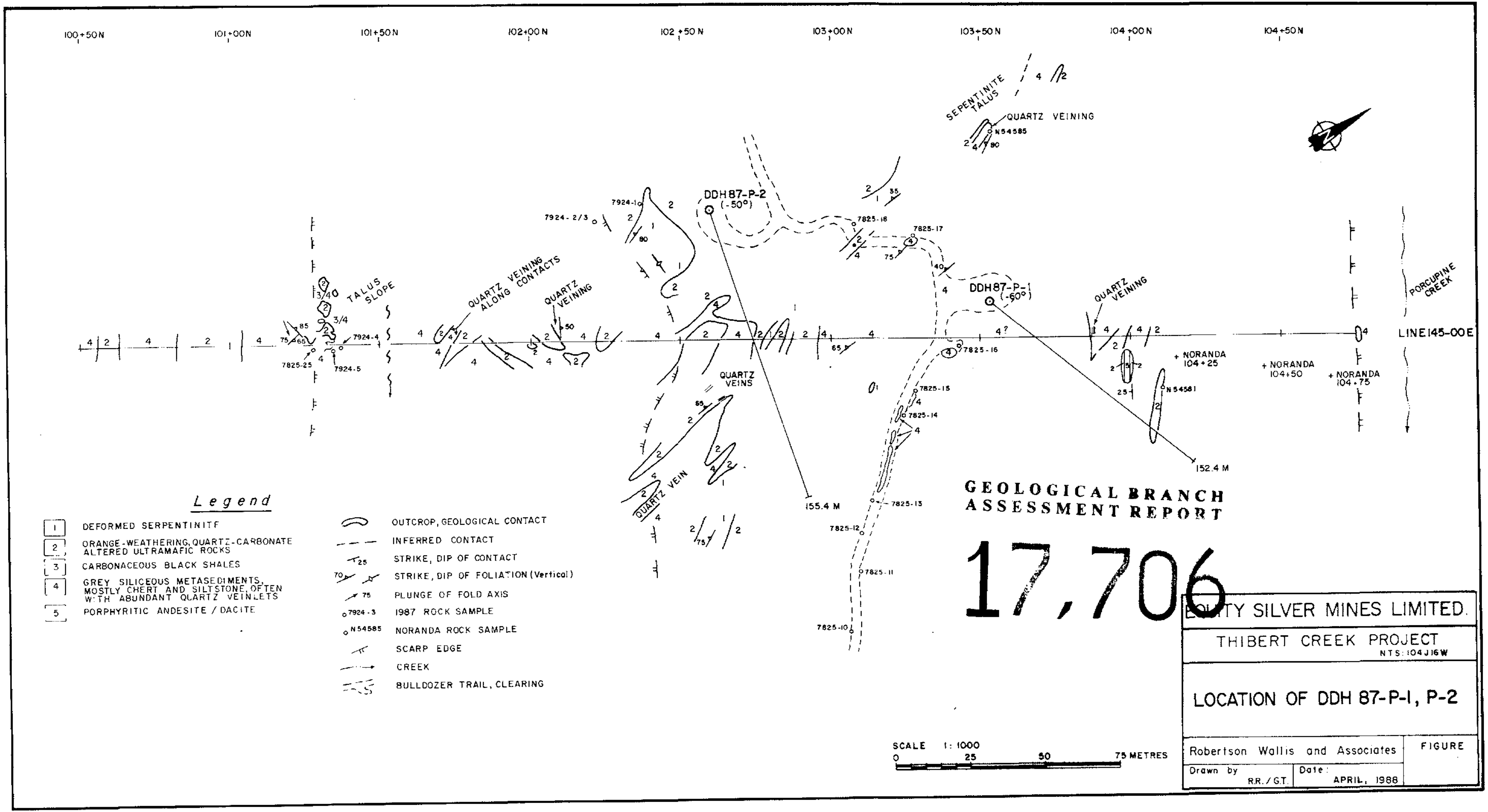
NTS: 104 J16E

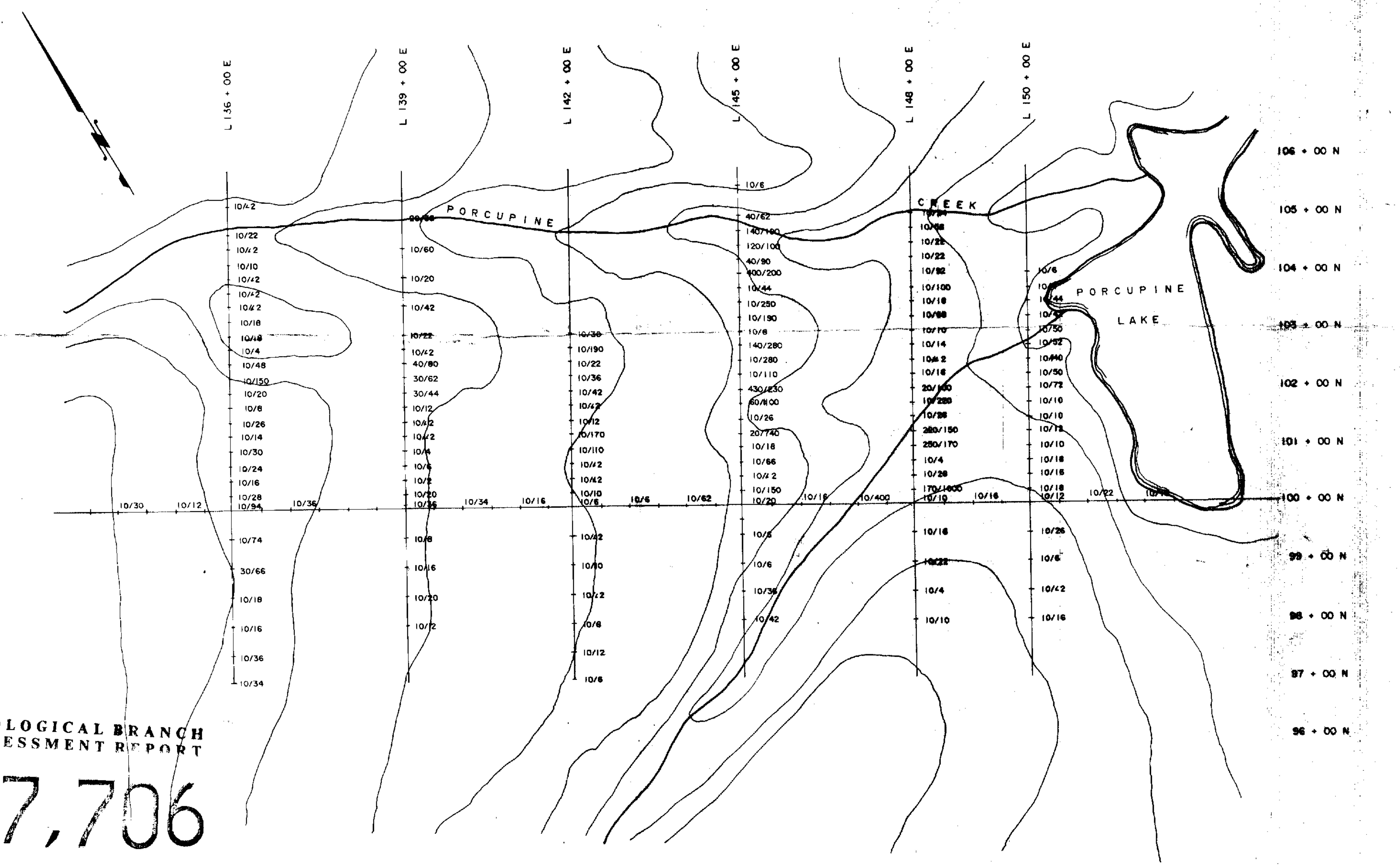
CROSS SECTION DDH 87-B-3

PORCUPINE LAKE AREA — FACING N.

Robertson Wallis and Associates	FIGURE
TECHNICAL / DRAFTING: RR, LK / GT	DATE: JUNE, 1988


EQUITY SILVER MINES LIMITED
THIBERT CREEK PROJECT
NTS: 104J16E/W
ROCK SAMPLE LOCATIONS:-
FIVE MILE CREEK, TO BERRY CREEK
Robertson Wallis and Associates
FIGURE
TECHNICAL/DRAFTING
RR, LK / GT
DATE:
JUNE 1988
Legend
CREEK
TRAIL
3000 CONTOUR
ROCK SAMPLES
EDGE OF OLD HYDRAULIC PITS (PLACER WORKINGS)
SCALE 1:500
0 5 10 20 30 40 50 60 70 80 90 100 metres
GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,706
DIORITE
CABIN
Thibert Creek
Berry Creek
Boulder Creek
FIVE MILE CREEK
7810-1/7
R-7
R-5
R-6
R-1/2
R-3/4
7813-3/61
7814-1/21
7813-1/2
7814-22
7821-1/11
71008-1/6
71013-1/8
7914-1
7925-2
789-22/25
789-8/21
8-1/10
7925-3
7902-101/103
789-7
7925-1
789-1/6
7818-5
7818-6/7
4000
3800
3600
3400
3200
3000
2800


100+50N
101+00N
101+50N
102+00N
102+50N
103+00N
103+50N
104+00N
104+50N
SEPENTINITE TALUS
QUARTZ VEINING
N54585
DDH 87-P-2 (-50°)
DDH 87-P-1 (-60°)
TALUS SLOPE
QUARTZ VEINING ALONG CONTACTS
QUARTZ VEINING
QUARTZ VEINS
QUARTZ VEIN
QUARTZ VEINING
PORCUPINE CREEK
LINE 145-00E
+ NORANDA 104+25
+ NORANDA 104+50
+ NORANDA 104+75
N54581
155.4 M
152.4 M
7924-1
7924-2/3
7924-4
7924-5
7825-25
7825-18
7825-17
7825-16
7825-15
7825-14
7825-13
7825-12
7825-11
7825-10
GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,706
Legend
1 DEFORMED SERPENTINITE
2 ORANGE-WEATHERING, QUARTZ-CARBONATE ALTERED ULTRAMAFIC ROCKS
3 CARBONACEOUS BLACK SHALES
4 GREY SILICEOUS METASEDIMENTS, MOSTLY CHERT AND SILTSTONE, OFTEN WITH ABUNDANT QUARTZ VEINLETS
5 PORPHYRITIC ANDESITE / DACITE
OUTCROP, GEOLOGICAL CONTACT
INFERRED CONTACT
STRIKE, DIP OF CONTACT
STRIKE, DIP OF FOLIATION (Vertical)
PLUNGE OF FOLD AXIS
1987 ROCK SAMPLE
NORANDA ROCK SAMPLE
SCARP EDGE
CREEK
BULLDOZER TRAIL, CLEARING
SCALE 1:1000
0 25 50 75 METRES
EQUITY SILVER MINES LIMITED.
THIBERT CREEK PROJECT
NTS: 104 J 16 W
LOCATION OF DDH 87-P-1, P-2
Robertson Wallis and Associates
FIGURE
Drawn by R.R./G.T.
Date: APRIL, 1988



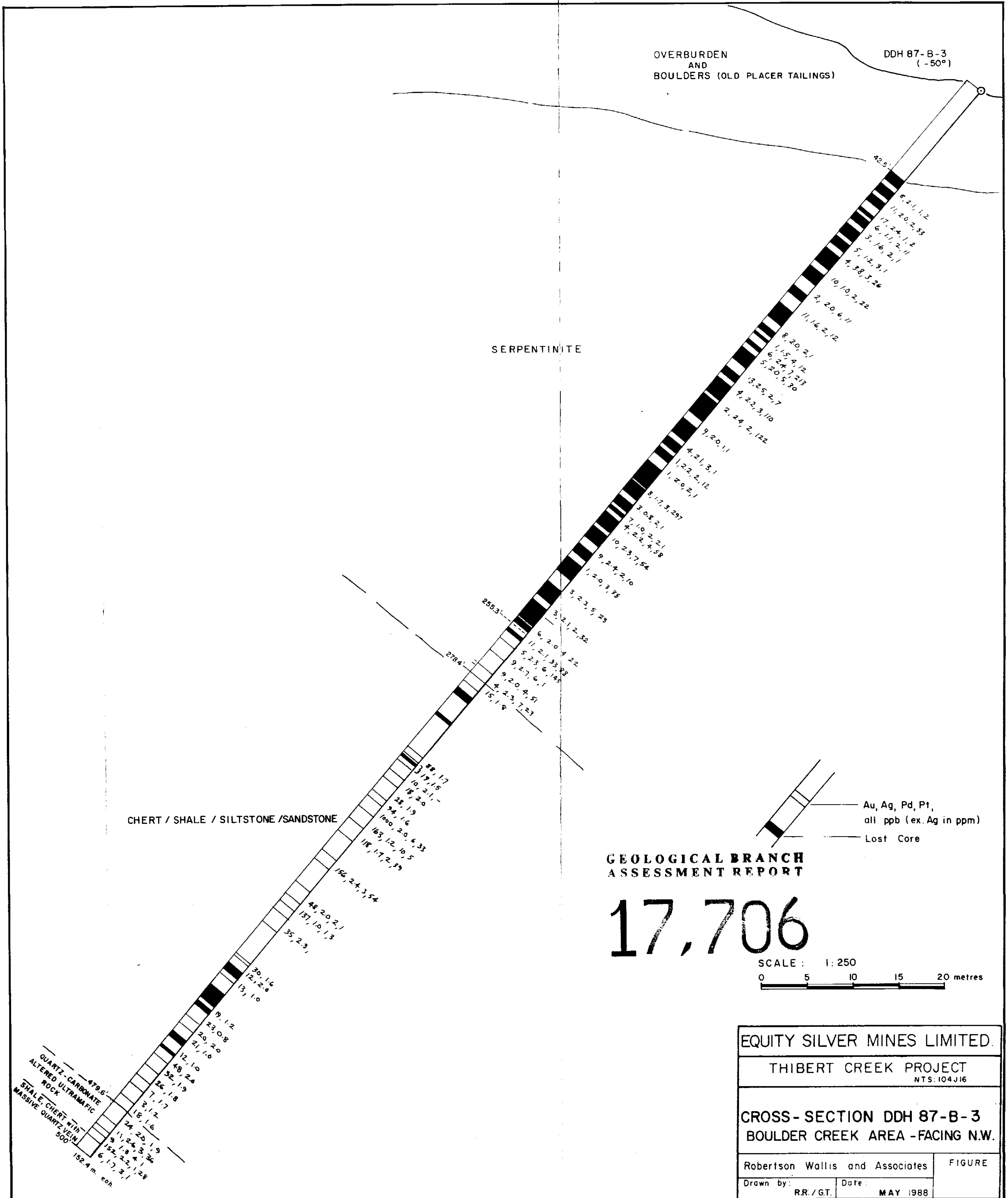
Robertson, Wallis & Associates
214 - 475 Howe St., Vancouver, B.C.

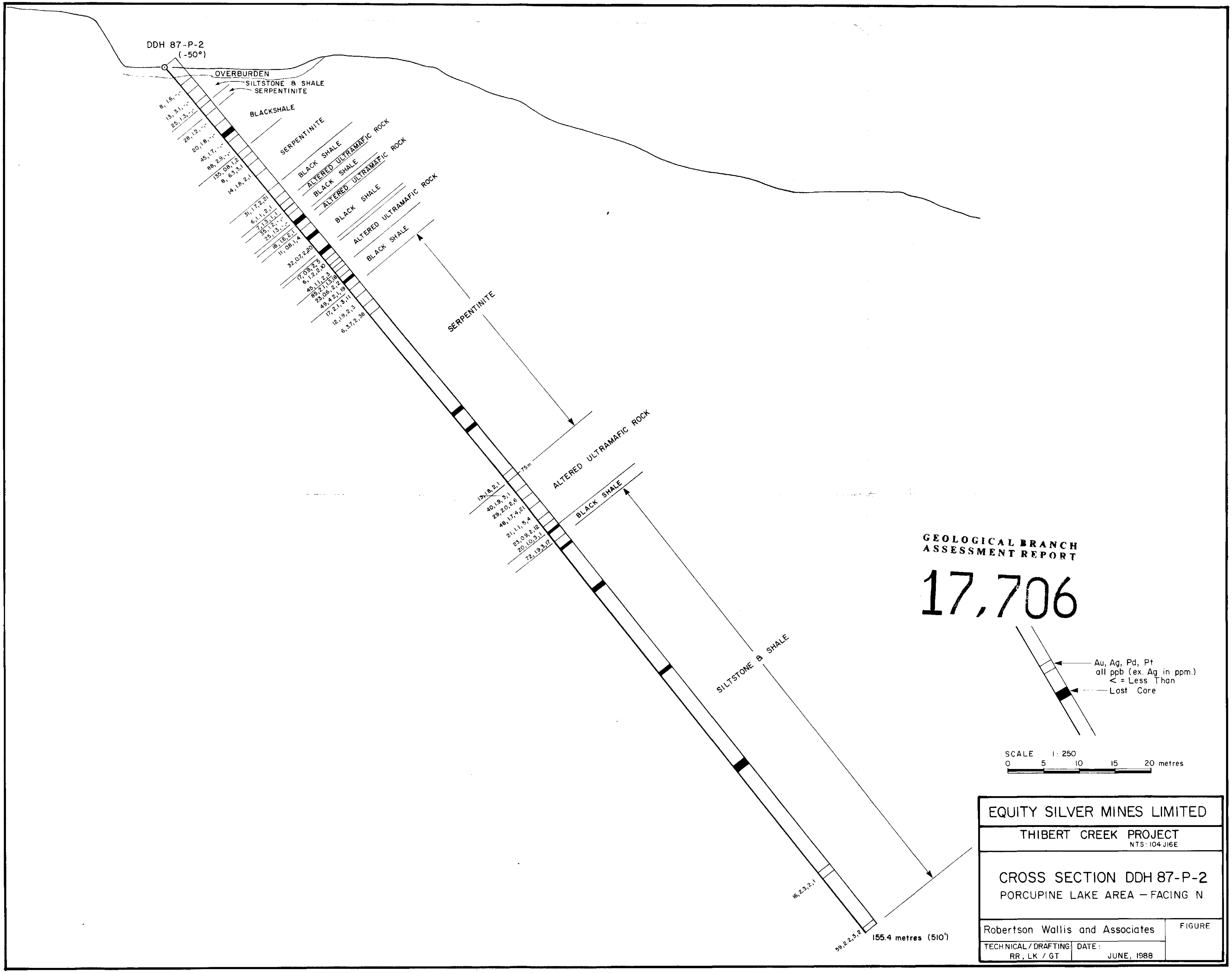
EQUITY SILVER MINES LIMITED
THIBERT PROJECT
Porcupine Lake Anomoly
Au, As, Soils

NORANDA 1983 - 1984 DATA

SCALE 1 : 5000

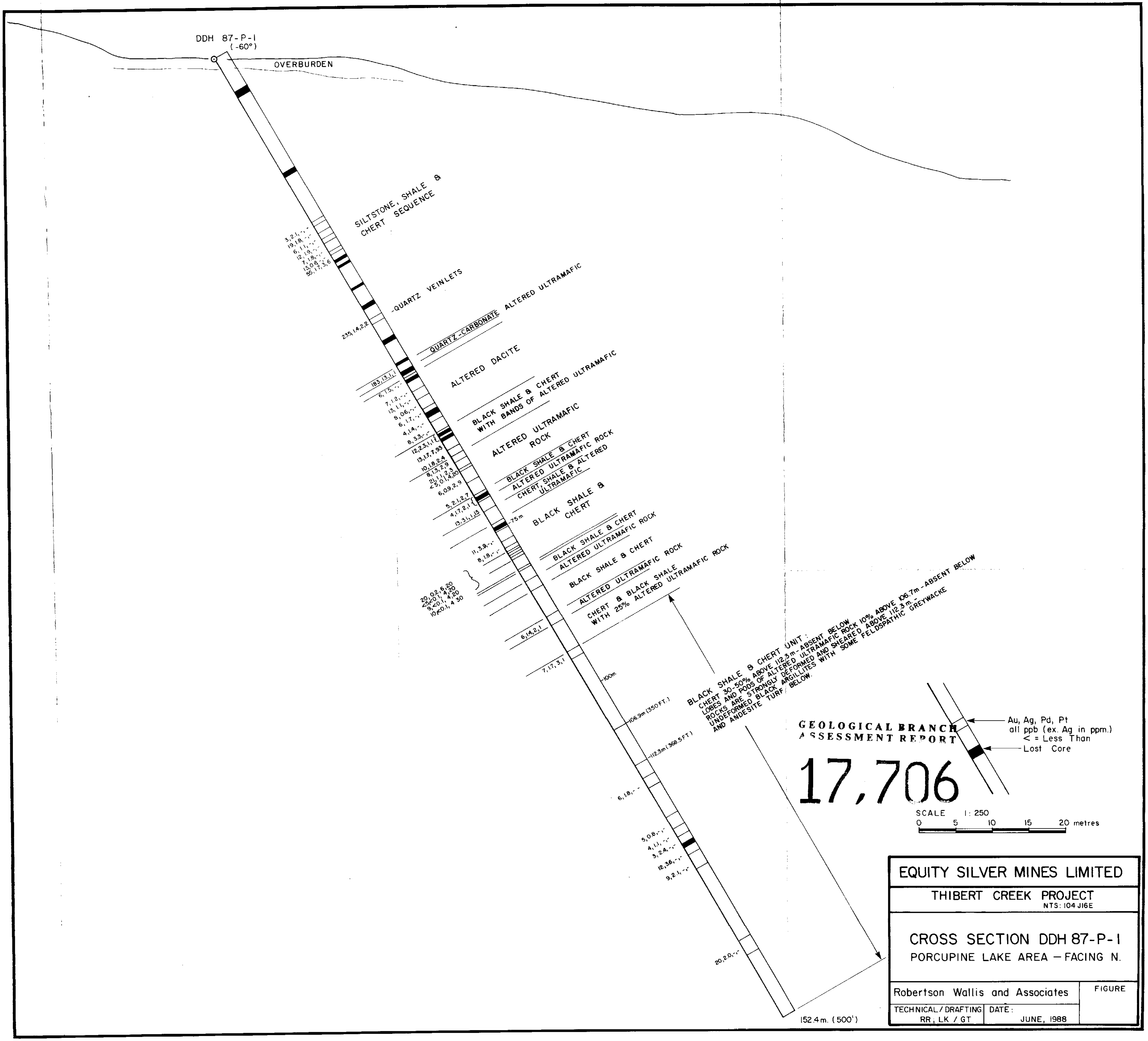
100 0 100 200 300 400 500 METRES


OVERBURDEN
AND
BOULDERS (OLD PLACER TAILINGS)
DDH 87-B-3
(-50°)
42.5
SERPENTINITE
255.3
278.4
CHERT / SHALE / SILTSTONE /SANDSTONE
QUARTZ-CARBONATE ALTERED ULTRAMAFIC ROCK
479.6
SHALE, CHERT with MASSIVE QUARTZ VEIN
500
152.4 m. eoh
Au, Ag, Pd, Pt,
all ppb (ex. Ag in ppm)
Lost Core
GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,706
SCALE : 1:250
0 5 10 15 20 metres
EQUITY SILVER MINES LIMITED.
THIBERT CREEK PROJECT
NTS: 104 J16
CROSS-SECTION DDH 87-B-3
BOULDER CREEK AREA - FACING N.W.
Robertson Wallis and Associates
FIGURE
Drawn by: R.R. / G.T.
Date: MAY 1988



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,706



DDH 87-P-1
(-60°)
OVERBURDEN
SILTSTONE, SHALE & CHERT SEQUENCE
-QUARTZ VEINLETS
QUARTZ-CARBONATE ALTERED ULTRAMAFIC
ALTERED DACITE
BLACK SHALE & CHERT WITH BANDS OF ALTERED ULTRAMAFIC
ALTERED ULTRAMAFIC ROCK
BLACK SHALE & CHERT
ALTERED ULTRAMAFIC ROCK
CHERT, SHALE & ALTERED ULTRAMAFIC
BLACK SHALE & CHERT
-75m
BLACK SHALE & CHERT
ALTERED ULTRAMAFIC ROCK
BLACK SHALE & CHERT
ALTERED ULTRAMAFIC ROCK
CHERT & BLACK SHALE WITH 25% ALTERED ULTRAMAFIC ROCK
-100m
-106.9m (350 FT.)
-112.3m (368.5 FT.)
BLACK SHALE & CHERT UNIT:
CHERT 30-50% ABOVE 112.3m - ABSENT BELOW
LOBES AND PODS OF ALTERED ULTRAMAFIC ROCK 10% ABOVE 106.7m - ABSENT BELOW
ROCKS ARE STRONGLY DEFORMED AND SHEARED ABOVE 112.3m -
UNDEFORMED BLACK ARGILLITES WITH SOME FELDSPATHIC GREYWACKE
AND ANDESITE TUFF BELOW.
152.4m. (500')
Au, Ag, Pd, Pt
all ppb (ex. Ag in ppm.)
< = Less Than
Lost Core
GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,706
SCALE 1:250
0 5 10 15 20 metres
EQUITY SILVER MINES LIMITED
THIBERT CREEK PROJECT
NTS: 104 J16E
CROSS SECTION DDH 87-P-1
PORCUPINE LAKE AREA – FACING N.
Robertson Wallis and Associates
FIGURE
TECHNICAL / DRAFTING: RR, LK / GT
DATE: JUNE, 1988


DIORITE
DIORITE
DIORITE
Thibert Creek
7811-1: DIORITE WITH MALACHITE STAINING
BLUEBELL PLACER WORKINGS
3400
3200
3000
2800
7818-5: SILICEOUS ARGILLITE
7818-6,7: FLOAT (SHALE AND ALTERED ULTRAMAFIC)
Five Mile Creek
7818-1 to 4: DARK ARGILLITE WITH QUARTZ VEINING, AND QUARTZ-CARBONATE ALTERED ULTRAMAFIC ROCK
Fork Gulch
DIORITE
SERPENTINITE
7925-4 SANDY SCHIST, SILT-STONE WITH QUARTZ LIMONITE VEINING
QUARTZ-CARBONATE ALTERED ULTRAMAFIC
1987 CAMP
QUARTZ-CARBONATE ALTERED ULTRAMAFIC AND SERPENTINITE
SERPENTINITE
SERPENTINITE
7926-14: QUARTZ-CARBONATE ALTERED ULTRAMAFIC AT CONTACT TO SERPENTINITE AND SHALE
Delure Creek
ROCK SAMPLES-7817-1 to 9: SERPENTINITE, PERIDOTITE AND GABBRO
7926-13: QUARTZ-MAGNESITE VEINING IN ALTERED ULTRAMAFIC
PERIDOTITE OUTCROPS
SERPENTINITE AND ALTERED ULTRAMAFIC
CONTACT BETWEEN SERPENTINITE & QUARTZ CARBONATE ALTERED ULTRAMAFIC
7926-12
10,11 QUARTZ-CHALCEDONY VEINS.
7926-10/11
7926-9 QUARTZ CARBONATE ALTERED ULTRAMAFIC
7926-8: QUARTZ VEINS IN SHALE & SILTSTONE
FAULT ZONE
7926-7: QUARTZ VEINS
7926-5: 3m. CHIP SHALE & SILTSTONE
7926-6: QUARTZ VEINS IN BLACK SHALE
7926-4: 2.5m. CHIP BLACK SHALE AND THIN QUARTZ VEINS
7926-3: SILICEOUS PHYLLITE WITH QUARTZ, Fe CARBONATE VEINING
7926-2: QUARTZ VEINING IN BLACK SHALE
7926-1: QUARTZ VEINS IN SHALE AND CHLORITE SCHIST
3600
3800
N
GEOLOGICAL BRANCH ASSESSMENT REPORT
17,706
Legend
CREEK
TRAIL
3000 CONTOUR
ROCK SAMPLES
EDGE OF OLD HYDRAULIC PIT (PLACER WORKINGS)
SCALE 1:500
0 5 10 20 30 40 50 60 70 80 90 100 metres
EQUITY SILVER MINES LIMITED
THIBERT CREEK PROJECT
NTS: 104J16E
ROCK SAMPLE LOCATIONS:-
DELURE CREEK TO FIVE MILE CREEK
Robertson Wallis and Associates
FIGURE
TECHNICAL/DRAFTING RR; LK / GT
DATE: JUNE 1988

L 133+00E
L 136+00E
L 139+00E
L 142+00E
L 145+00E
L 148+00E
L 150+00E
L 170+00E
4400
4200
4000
3800
3600
4600
4800
Porcupine Creek
Porcupine Lake
NORANDA BASE LINE
CAMP
7824-7
7824-8
7824-9
7824-10/11
7823-14/15
7823-12/13
7824-16/17
7824-18/19
7824-20/21
7824-22
7823-19/20
7825-20
7823-17/18
7823-21/22
7823-25/26
7825-16/19
7823-23/24
7823-27/2
7825-21
7825-15
7825-10/14
7825-9
7825-7/8
7825-5/6
7825-2/3
7825-4
7825-1
7823-15/16
7823-14
7823-11
7823-13
7823-12
7823-10
GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,706
Legend
CREEK
TRAIL
3000 CONTOUR
ROCK SAMPLES
N
SCALE 1:500
0 5 10 20 30 40 50 60 70 80 90 100 metres
EQUITY SILVER MINES LIMITED
THIBERT CREEK PROJECT
NTS: 104J16W
ROCK SAMPLE LOCATIONS:-
PORCUPINE LAKE AREA
Robertson Wallis and Associates
FIGURE
TECHNICAL/DRAFTING
RR; LK / GT
DATE:
JUNE 1988