

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

**GEOLOGICAL AND GEOCHEMICAL  
REPORT ON THE  
HOLY CROSS PROPERTY  
(HC 1, 4, 5, HCM 1-3 Mineral Claims)**

**OMINECA MINING DIVISION  
N.T.S. 93 F/15**

**Co-ordinates: 53 deg 47' N  
124 deg 56' W**

**NORANDA EXPLORATION COMPANY, LIMITED  
(no personal liability)**

**by: Rodney Barber**

**October, 1989**

## TABLE OF CONTENTS

SUMMARY .....	1
INTRODUCTION .....	2
LOCATION & ACCESS .....	2
PHYSIOGRAPHY & VEGETATION .....	2
CLAIM DATA .....	2
PREVIOUS WORK .....	3
CURRENT PROGRAM .....	4
REGIONAL GEOLOGY .....	4
PROPERTY GEOLOGY .....	5
Lithologies .....	5
Structure .....	8
Alteration .....	8
Mineralization .....	9
GEOCHEMISTRY .....	10
TRENCHING .....	12
CONCLUSIONS & RECOMMENDATIONS .....	15

## LIST OF APPENDICES

APPENDIX I	Statement of Qualifications	16
APPENDIX II	Statement of Costs	17
APPENDIX III	Analytical Procedure	19
APPENDIX IV	Certificate of Analyses (Rocks)	
APPENDIX V	Certificate of Analyses (Silts, Soils, Pans)	

## LIST OF TABLES

TABLE 1	Claim Data	3
TABLE 2	Grid Soils Statistics	11
TABLE 3	Trenching Summary	13, 14

## LIST OF FIGURES

Figure 1	Location Map		1:8,000,00	2a
Figure 2	Claim Map		1:50,000	2b
Figure 3	Geology		1:10,000	in pocket
Figure 4	Sample Location Map		1:10,000	"
Figure 5	Geology (HC 1-5 Claims)		1:5,000	"
Figure 6	Fracture Orientations-Stereonet Presentation			
Figure 7	Soil Geochemistry	(Au)	1:10,000	"
Figure 8	"	(Ag)	1:10,000	"
Figure 9	"	(Cu)	1:10,000	"
Figure 10	"	(Au) Contour Presentation	1:10,000	"
Figure 11	"	(Ag) Contour Presentation	1:10,000	"
Figure 12	"	(Cu) Contour Presentation	1:10,000	"
Figure 13	Plan Map Trench	HC-10, 11	1:500	"
Figure 14	"	HC-12, 13	1:500	"
Figure 15	"	HC-14	1:500	"
Figure 16	"	HC-15	1:500	"
Figure 17	"	HC-16	1:500	"
Figure 18	"	HC-17	1:500	"
Figure 19	"	HC-18, 19, 20	1:500	"
Figure 20	"	HC-21	1:500	"
Figure 21	"	HC-22	1:500	"
Figure 22	"	HC-23	1:500	"
Figure 23	"	HC-24	1:500	"
Figure 24	"	HC-25	1:500	"
Figure 25	"	HC-26	1:500	"

SUMMARY:

The Holy Cross Property is located in north central B.C., 33 kilometres south of Fraser Lake in the Nechako Plateau. The claims were staked in 1987 to secure gold anomalies obtained from rock chip sampling of silica flooded Tertiary rhyolites.

Work during the 1989 summer field season consisted of reconnaissance geological and geochemical surveys over the HCM claims; linecutting, an IP survey, magnetometer survey and detailed (1:5,000 scale) geological mapping over the felsic dome on HC 4 and HCM 1, and some follow up prospecting and soil sampling of geochemical anomalies identified during the 1988 survey. Seventeen new trenches were subsequently excavated over various geological, geochemical and geophysical targets.

In general, the geology of the Holy Cross property consists of Ootsa Lake Group sedimentary and volcanic rocks, overlain by Endako Group basalts. Dioritic and monzonitic intrusive rocks are found in the northwest parts of the property. East northeast and northeast trending faults cut across the property. Age relationships of the intrusive rocks to other features on the property are uncertain, but they are thought to be post-Ootsa Lake Group, pre-Endako Group.

Trenching of several large, widely scattered high chargeability, high resistivity anomalies coincident with gold, silver and copper soil geochemistry anomalies revealed extensive areas of strong to moderate silicification, pyritization, and argillic alteration. Elevated levels of gold, silver and copper in these rocks were detected. The highest gold values obtained over significant widths was 1.0 gpt Au over 8.5 metres.

Although economic grades over mineable widths have yet to be defined, potential still exists for a significant deposit. Further exploration is recommended.

INTRODUCTION:

The HC-1 to HC-5 mineral claims were staked for Noranda Exploration Company, Limited in June and October, 1987, to follow up an anomalous gold value in a rhyolite dome indicated by earlier recon work. A series of these domes occur in a southeast-trending direction across the claim group.

The HCM claims were added in 1988 to cover the area west of these domes. The PB-1 to PB-8 claims were staked in 1987 to cover the area east of these domes.

This report documents detailed geological, geochemical and trenching surveys undertaken in 1989. All geological, geochemical and magnetometer surveys were carried out by employees of Noranda Exploration. The IP survey was supervised by Pacific Geophysics. Accommodation was provided by a tent camp constructed and maintained by Noranda employees on the HC-4 claim.

LOCATION AND ACCESS:

The HC claims are situated approximately 33 kilometres south of the town of Fraser Lake (Figures 1 & 2). The claims lie within the Nechako Plateau between Bentzi Lake and Holy Cross Mountain. Elevations range from 2800 feet to 4630 feet.

Access to the claims is via the Holy Cross Forest Service road, which starts 5 kilometres east of the town of Fraser Lake on Highway 16. Following this road for 38 kilometres will bring one to the claim group. Several secondary logging roads branch off the main road, and cross both halves of the claim group. Access to the westernmost claims was made by constructing a rough four-wheel drive road.

PHYSIOGRAPHY AND VEGETATION:

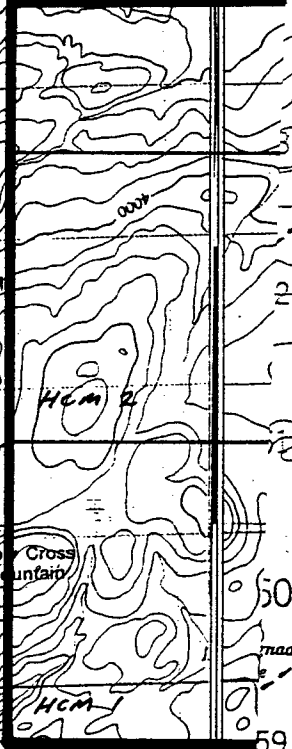
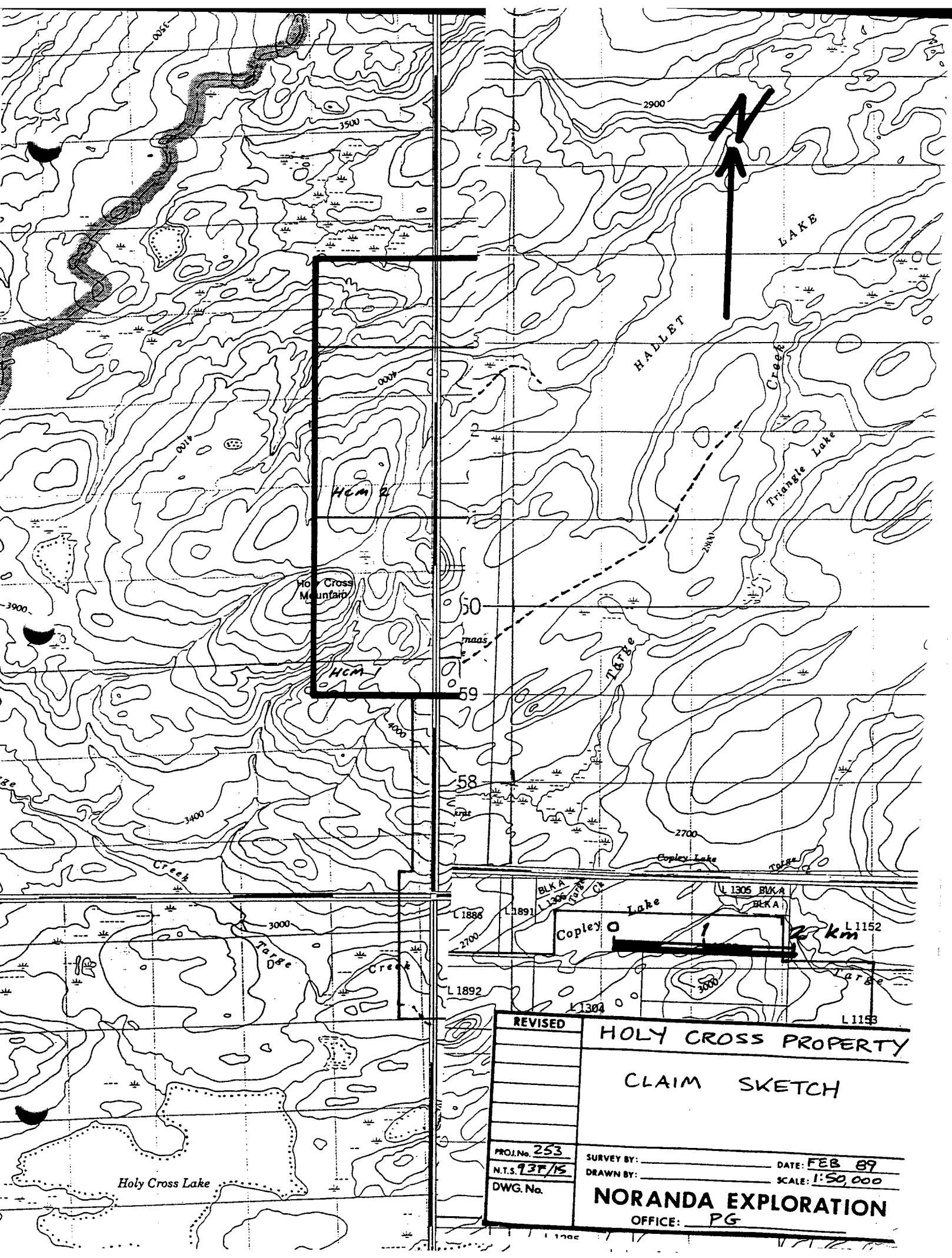
The local terrane is gentle to moderately sloping. There has been extensive logging in the eastern half; the western half remains forested.

Vegetation consists of mature spruce and pine. Creeks are covered by devils club and skunk cabbage. Berry bushes occur in clearcuts.

CLAIM DATA:

The Holy Cross property consists of sixteen contiguous claims totalling 245 units (Figure 2). The Janet 1 and 2 are owned by Mr. Patrick George of Fraser Lake. In 1988, Kookaburra Gold Corporation staked claims to the immediate south of the HC claims.





REVISED	<b>HOLY CROSS PROPERTY</b>	
	<b>CLAIM SKETCH</b>	
PROJ. No. <u>253</u>	SURVEY BY: _____	DATE: <u>FEB 89</u>
N.T.S. <u>1:37,15</u>	DRAWN BY: _____	SCALE: <u>1:50,000</u>
DWG. No. _____	<b>NORANDA EXPLORATION</b>	
	OFFICE: <u>PG</u>	

Upon acceptance of this report, the listed claims will be in good standing until the indicated expiry date (Table 1).

The claim data is summarized below:

TABLE 1. CLAIM DATA

<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>UNITS</u>	<u>RECORD DATE</u>	<u>EXPIRY DATE</u>
HC 1	8469	20	June 22/87	June 22/94
HC 2	9015	18	Oct. 13/88	Oct. 13/91
HC 3	8470	20	June 22/87	June 22/91
HC 4	9016	18	Oct. 13/88	Oct. 13/94
HC 5	9017	18	Oct. 13/88	Oct. 13/94
HCM 1	10008	20	Nov. 03/88	Nov. 03/91
HCM 2	10007	20	Nov. 03/88	Nov. 03/91
HCM 3	10009	16	Nov. 03/88	Nov. 03/91
PB 1	9498	20	June 30/88	June 30/91
PB 2	9499	9	June 30/88	June 30/90
PB 3	9500	20	June 30/88	June 30/90
PB 4	9633	20	Aug. 04/88	Aug. 04/91
PB 5	9634	20	Aug. 04/88	Aug. 04/91
PB 6	10031	18	Aug. 24/88	Aug. 24/91
PB 7	9845	12	Sept 25/88	Sept 25/90
PB 8	9846	2	Sept 25/88	Sept 25/91

PREVIOUS WORK:

The Geological Survey of Canada carried out a mapping program (1 inch to 4 miles) over the Nechako River Map-Area (Tipper, 1963) during the 1949-1952 field season.

No exploration activity is known in this area prior to Noranda staking the HC claims in 1987.

Donaldson (1988) performed reconnaissance mapping of the Holy Cross property. Subsequently, a flagged grid was established with lines at 200 metre intervals, 100 metre intervals over the western part of HC 4. Soil geochemical, geological and magnetometer surveys were performed on this grid (Savell and Church, 1988). Nine trenches to bedrock were subsequently excavated with a bulldozer.



CURRENT PROGRAM:

Work on the Holy Cross property during the 1989 summer field season consisted of reconnaissance geological and geochemical surveys over the HCM claims; linecutting, an IP survey, magnetometer survey and detailed (1:5,000 scale) geological mapping over the felsic dome on HC 4 and HCM 1, and some follow up prospecting and soil sampling of geochemical anomalies identified during the 1988 survey. Seventeen new trenches were subsequently excavated over various geological, geochemical and geophysical targets.

This report describes geological, geochemical and trenching surveys performed in 1989. Note that soil geochem data from previous years are included on the maps for purposes of completeness, however, only those costs applicable to the 1989 surveys are included in the Statement of Costs.

REGIONAL GEOLOGY:

The HC claims, in central British Columbia, are situated within the Nechako River area of the Interior Plateau; an area of low relief and minor bedrock exposure. The regional geology is comprised of Upper Triassic to Later Tertiary volcanic and sedimentary rocks. Andesite flows, breccias and tuffs with intercalated argillite and greywacke of the Upper Triassic Takla group form the oldest rocks. These rocks are overlain by andesite and local rhyolite, with interbedded chert pebble conglomerate, greywacke and minor argillite of the middle Jurassic Hazelton group. Continental, Upper Cretaceous to Oligocene, Ootsa Lake Group volcanics occur next in the geological succession. This group is divisible into two units; a lower andesite and an upper rhyolite. Unconformably overlying this group is the late Tertiary Endako Group, consisting of an undeformed succession of basaltic and andesitic plateau lavas, breccias and tuffs. The latter two groups outcrop on the property.

The Nechako River area was over ridden by Pleistocene glaciers which moved in a direction varying from northeast to east.

Intrusive events occurred which emplaced granitic, granodiorite and diorite rocks during the early Jurassic and granitic rocks during the late Jurassic in the Hazelton and Takla Groups.

Metamorphism is minimal (low grade) to non-existent. Structural interpretation is difficult due to a scarcity of well exposed rock. The most strongly deformed rocks belong to the Takla Group with dips to 70 degrees. The Hazelton and Ootsa Lake Group rocks have broad, open folds with dips up to 45 degrees. The Endako Group rocks are undeformed and essentially flat lying.

Faulting is characterized by zones of intense shearing, slickensides, gouge and breccia. Faults associated with the Ootsa Lake Group strike in all directions. The Endako Group is cut by a few near-vertical normal faults with only slight displacement.

PROPERTY GEOLOGY:

In general, the geology of the Holy Cross property consists of Ootsa Lake Group sedimentary and volcanic rocks, overlain by Endako Group basalts. Dioritic and monzonitic intrusive rocks are found in the northwest parts of the property. East northeast and northeast trending faults cut across the property. Age relationships of the intrusive rocks to other features on the property are uncertain, but they are thought to be post-Ootsa Lake Group, pre-Endako Group.

The geological plan is presented in Figure 3 (1:10,000 scale) and Figure 4 (1:5,000 scale).

LITHOLOGIES -

Individual rock types found on the property are:

OOTSA LAKE GROUP -

1. Conglomerate

This unit forms the base of the Ootsa Lake Group and, as such, is thought to be the oldest on the property. It is known only from a few scattered outcrops in the southern part of the property. Thickness of the unit is not known, but a lateral continuity of approximately 4 km is inferred. The rock is a poorly sorted, matrix or clast supported conglomerate containing well rounded, elongate pebbles of chert and vein quartz, 1-4 cm long in a moderately dark colored, very fine to medium grained sandstone matrix. Silicification of the matrix occurs locally and up to 5% secondary pyrite has been observed in this unit.

2. Fine Grained Sediments

These occur as discontinuous lenses, generally less than 10 cm thick, within the conglomerate unit. The sediments are sometimes laminated, with alternating siltstone and medium grained sandstone bands.

In Trench #HC-24, a fine grained, black, volcanoclastic sediment occurs. It has not been seen elsewhere on the property.

3. Basalt

This unit has been seen only in the northern part of the main grid area, between L10400N and L10800N. At 10575N, 7775E this unit is in contact with greenish andesite tuffs (unit 4b). The contact is irregular, but appears to be conformable. The basalt is massive to vesicular and/or porphyritic, with sparse K-spar phenocrysts up to 2mm long in an aphanitic to fine grained, black matrix. Vesicles are often partially filled with epidote.

#### 4. Andesite

This is one of the most abundant rock types on the property and is divisible into three sub-types: flows (4a), tuff and lapilli-tuff (4b), and plagioclase-phyric andesite (4c). All are either dark purple to maroon or grey green in color. Flows are aphanitic to fine grained, massive or vesicular (locally with epidote, calcite and/or quartz amygdules). Individual units are discontinuous over distances greater than 500 metres. The tuffs and lapilli tuffs consist of clast supported rocks containing angular to sub-angular clasts 0.5 to 2 cm long. Cherty clasts are locally more abundant, but overall, the composition is thought to be andesitic. One unit of this rock type varies from 50 m to 300 m thick and has been traced for 1.5 km, from 10150N, 6550E to the Trench 1 area. The tuffs also occur elsewhere on the property. The porphyritic andesites consist of tabular plagioclase crystals 0.5 to 0.7 cm long (rarely up to 2 cm long) set in a fine grained or aphanitic, usually dark purple or maroon matrix. Individual units are thought to be individual flows, generally 5-15 m thick. Stratigraphy is complex and individual flows cannot be traced with certainty over distances greater than a few hundred metres.

#### 5. Rhyolite

Four sub-divisions of rhyolite have been recognized at Holy Cross: rhyolite breccia (brecciated rhyolite), flow banded rhyolite, felsic tuff and lapilli-tuff, and felsic crystal tuff. Of these, only the breccias and flow banded rhyolites are volumetrically important, forming the prominent topographic highs in the area. Except for the tuffs, there is little evidence for the rhyolites having been deposited sub aurally. The "flow banding" is, in fact, probably the result of forceful intrusion in a subvolcanic setting.

"Rhyolite breccia" and "brecciated rhyolite" are here used interchangeably, and refer to one of the other rhyolite types (usually banded) which have been fragmented by tectonic processes. Fragments in these breccias are typically kaolinized, sericitized and/or silicified, and open spaces are filled with fine grained or vuggy vein quartz. Brecciated rhyolite seems to be most prevalent near the edges of the rhyolite domes, forming patches up to hundreds of metres long.

The banded rhyolite is aphanitic to fine grained, maroon in color and has a prominent slaty cleavage parallel to banding. It is this last feature which distinguishes it from similar looking massive andesites. It forms the bulk of the rhyolite domes, but is also prevalent throughout the property. Individual bands are generally less than 1 mm wide.

Units 5c and 5d have not been observed by the author, but Donaldson (1988) describes them as follows:

"The felsic lapilli tuff is maroon-to-grey colored, with up to 2 cm angular lapilli. There are up to 3% white and pink feldspar crystals in the matrix. Mineralization consists of 1% disseminated

pyrite and 3% specular hematite. Local calcite and/or epidote and/or quartz-carbonate veinlets cut the rocks.

The crystal tuffs are green colored, fine grained, andesitic to dacitic in composition and up to 1% plagioclase crystals within the ground mass."

#### 6. Diorite

Most of the western part of the property is underlain by a grey, massive, medium to coarse grained diorite. Plagioclase phenocrysts 0.5 to 1 cm long are common. A hornblende phyric phase, containing prismatic hornblende phenocrysts 0.5 to 0.7 cm long, is also present. The relatively fresh appearance of the diorite suggests that it has not been affected by the processes that altered the volcanic rocks, and that it is therefore later than both.

#### 7. Felsic Plutonic Rocks

Felsic plutonic rocks are only known from the northern part of the property. Composition ranges from syenitic to quartz monzonite, but these are believed to be phases of the same body. The rocks are brown to light pink, coarse grained, equigranular, homogenous and fresh.

Associated with the plutonic body is a massive, fine grained, black, extremely hard hornfels. Parts of this are weakly to moderately magnetic.

#### 8. Endako Group

The Endako Group lies unconformably over the Ootsa Lake Group and possibly the intrusive rocks. The Endako Group rocks have been subdivided into three units.

The first unit consists of a vesicular basalt and andesite. The basalt is dark grey to black in color and the rock is fine grained. Dispersed throughout the cryptocrystalline ground mass are 3% olivine phenocrysts (up to 2 mm diameter). The andesites are green colored, in an aphanitic matrix. Locally, 1% disseminated hematite occurs. There are up to 10%, square shaped, up to 3 mm feldspar phenocrysts and 5%, up to 1 mm mafic crystals. Minor epidote also is present. Vesicularity ranges from 5% to 50%.

The second unit of the Endako Group consists of an andesitic tuff. According to Tipper (1963), the composition of the andesitic tuff resembles that of the andesite mentioned above. Mapping has yet to locate a tuff on the claims.

The third and final unit of the Endako Group consists of a gabbro. The gabbro is black, medium grained and crystalline. No mineralization or veining has been noted in the gabbro.

STRUCTURE -

Due to a lack of outcrop in areas of lower elevation, much of the structural interpretation is based upon Landsat and airphoto interpretation.

Stratigraphy on the property appears to strike SE and probably dips to the SW. Endako Group rocks overlying the Ootsa Lake Group are essentially flat lying.

Two prominent circular features visible on the Landsat imagery outline rhyolite domes (Figure 3). Several prominent NE and ENE trending linear features cut across the property. On the ground, these are expressed as steep sided, deep gulleys. They are interpreted as faults. Note that two of these intersect near 9400N, 8200E, just north of a small lake, and close to the inferred boundaries of the rhyolite domes. Also note that some of these linear features appear to be terminated by the rhyolite domes whereas others cut across the domes. Several other, smaller gulleys have been observed on the ground and are also evident on aerial photographs of the area.

Less prominent on the Landsat imagery, but visible on aerial photographs and ground surveys are a series of NNE and NNW trending linears. These appear to cut all rock types and may be later than the other features in the area.

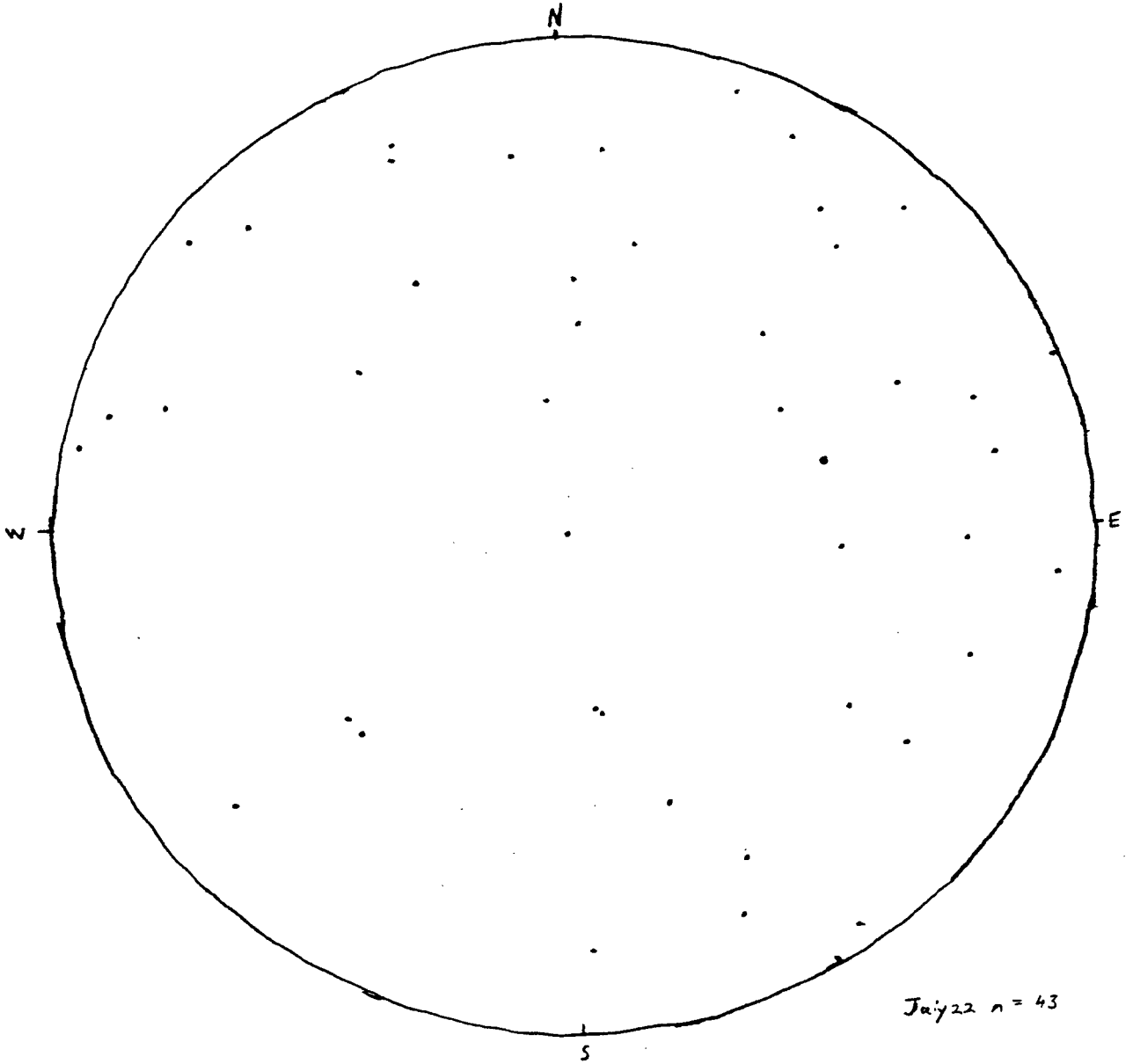
Figure 5 shows the poles to the most prominent fracture planes measured during the 1989 field season. Note that, since the most common rock type encountered was rhyolite, this plot is probably biased. In general, there is no preferred orientation in fracture direction, although a lack of shallowly dipping and NE dipping fractures is indicated. Fracture density ranges from 1 to 200 per metre and it was noted that fractures striking 030 to 045 degrees tended to have a greater density.

ALTERATION -

Alteration types present on the Holy Cross property are silicification, sulphidization, argillic and propylitic alteration.

Sulphidization is by far the most widespread and consists mainly of pyrite, usually fine to medium grained, euhedral and in amounts generally not greater than 5%. It appears to be associated with and overprints the other alteration types.

Silicification is here defined as the introduction of silica into a rock and replacement of that rock by silica. It occurs as a fine grained, grey, hard quartz rich rock, which may or may not be mineralized. Silicification is found at several locations on the property, but is always confined to zones not more than 10 metres wide, and rarely greater than 5 metres wide. Quartz veining almost always accompanies silicification but the reverse is not necessarily true. Silicification is always enveloped by and partially overprints argillic alteration.



July 22 n = 43

REVISED	HOLY CROSS	
	FRACTURE ORIENTATIONS	
	STEREONET PRESENTATION	
PROJ. No. _____	SURVEY BY: RB	DATE: DEC 89
N.T.S. _____	DRAWN BY: _____	SCALE: _____
DWG. No. 6	NORANDA EXPLORATION	
	OFFICE: PE	

Argillic alteration is restricted to the Ootsa Lake volcanics but within them affects very large areas. The most widespread form is kaolinite. Sericitization is mainly restricted to within a few tens of metres of silicified zones. The weakest form of the argillic alteration is manifested by feldspar phenocrysts in the andesite altered to kaolinite. Patches of white kaolinite in the groundmass (always with some pyrite) indicate a somewhat stronger mineralization. Strong argillic alteration completely alters rocks to a white, fine grained mass. Primary textures are usually destroyed. Pyrite is ubiquitous, but in minor amounts.

Propylitization is present mainly in the andesites and consists of epidote, chlorite and possibly montmorillonite. Epidote occurs as veinlets and fracture fillings, filling vesicles and occasionally replacing plagioclase. Chlorite is relatively rare, although intensely chloritized andesites do occur in trenches 5, 13, 14 and 15. Pyrite is particularly abundant at these locations. Montmorillonite envelopes sometimes occur around chloritized areas. The envelopes generally do not extend more than a few metres beyond the chlorite. Montmorillonite can also partly infill vesicles.

#### MINERALIZATION -

Mineralization at Holy Cross is of the epithermal type. Anomalous amounts of gold and silver are found associated with banded, vuggy quartz veinlets and in the associated silicification. Pyrite and/or chalcopyrite occur mainly in the silicified zone. In the Trench 1 area, values up to 7125 ppb Au were obtained from grabs in 1988. Detailed sampling in 1989 indicated a 8.5 metre section grading 1000 ppb Au.

Several other anomalous gold values have also been obtained.

Au/Ag ratios are generally low, generally 1:5 to 1:10, suggesting the mineralization is at moderate depths in the epithermal model.

To date, strongly anomalous but uneconomic precious metal values have been obtained over relatively wide widths near the edges of the rhyolite domes. The associated breccias are probably the result of the forceful intrusion of the rhyolite domes. Bonham (1980) emphasizes that in many epithermal deposits, economic mineralization occurs in major structures adjacent to areas of felsic doming. This implies that the prominent linear structures SE of Trench 1 could host economic mineralization. The area likely to have the greatest induced permeability would be the intersection of the linears.

GEOCHEMISTRY:

During the period May 1, 1989 to November 2, 1989, 770 rock and 1137 soil samples were taken for geochemical analysis. Based upon the results of the 1988 survey, it was decided to analyze all soil and rock samples for Au, Ag and Cu only. Results > 50 ppb Au in rocks are considered anomalous. Significant silver (>1.0 ppm Ag) and copper (>500 ppm Cu) occur, but are usually associated with anomalous gold values. Values > 10 ppb Au, >1.0 ppm Ag and >75 ppm Cu are considered significantly anomalous in soils, based upon the 1988 survey results.

Soil sample density was every 50 metres on reconnaissance lines, every 10 metres for follow up sampling. Lines were surveyed using hip chain and compass, and marked with 1 metre high pickets and fluorescent flagging. Approximately 12 km of lines were cut with a chainsaw to facilitate IP surveys on the HC 4 and 5 claims.

Samples of the "B" horizon were taken using either a grubhoe or soil auger. They were placed in Kraft paper envelopes and shipped to Noranda's lab at 1050 Davie Street, Vancouver, B.C. Details of the analytical procedure are provided in Appendix III.

The results of the grid soil analyses are presented on figures 6 through 11, and certificates of analyses provided in Appendix V. Table 2 is a statistical summary of all samples collected on the HC grid. A summary of the results appears below.

Copper: Copper values range from 2 to 2300 ppm, averaging 33.8 overall. Copper is a moderate indicator of anomalous areas.

Silver: Silver values range from 0.1 to 20.0 ppm, the average was 0.6. Quite a large number of silver values fall outside statistical norms and give rise to some significant anomalous areas.

Gold: Gold soil geochem ranged from 1 to 2700 ppb. There are some significant spotty gold anomalies which occur at the same localities as other geochem highs, particularly silver.

In general, anomalous gold values occur within larger areas of anomalous silver and copper values. As well, the reconnaissance sampling demonstrates to continuation of anomalous precious metal values to the west and north of the areas surveyed in 1988.

Trenching of selected anomalies indicates that they reflect elevated Au, Ag and Cu values within silicified, pyritized and argillic altered volcanics.



TABLE 2. GRID SOILS STATISTICS

Summary (Note: Reduced Average excludes values > 3 S.D.)

		Cu	Ag	Au
# Samples		4062	4062	4039
High		2300	20.0	2700
Low		2	0.1	1
Stnd Dev.		83	1.0	66
Distribution (# of values within)				
Avg.	0-0.5 S.D.	3795	3597	3943
	0.5-1 S.D.	111	199	43
	1-2 S.D.	78	154	17
	2-3 S.D.	34	50	8
	> 3 S.D.	44	62	28
Simple Avg.		33.8	0.6	14.6
Reduced Avg.		27.6	0.5	10.4

1989 TRENCHING PROGRAM:

Seventeen trenches were excavated over a variety of geological, geochemical and geophysical targets. Trenches 10 and 11 were done using a John Deere 350 tractor, during early May. David Chapman of Smithers, B.C., was contracted to excavate trenches 12 to 15 using a skidder-mounted backhoe. RAM Contracting of Quesnel, B.C., was engaged to excavate trenches 16 to 26, using a small excavator. Location of trenches are plotted of Figures 3 and 4.

The targets and results of the trenching program are summarized on the following table. In general, I.P. anomalies are due to pyrite and/or silicification in the host rocks and geochemical anomalies indicate areas of alteration. Some anomalous gold values have been obtained from chip samples.

TABLE 3. HOLY CROSS - 1989 TRENCHING SUMMARY

TRENCH	LENGTH	AZM	TARGET	FINDINGS
TRHC 10	30 m	030	Au in soil anomaly	moderately to strongly kaolinized banded rhyolite with dissem. pyrite.
TRHC 11	50 m	030	Au in soil anomaly	bedrock not reached
TRHC 12	10 m	290	increased chargeability Landsat structure	kaolinized rhyolite with pyrite, trench abandoned due to water and unstable ground
TRHC 13	2 pits 50 m apart	300	increased chargeability increased magnetic susceptibility	chloritic andesite with pyrite, overburden 8 m deep
TRHC 14	50 m	300	increased chargeability and resistivity, near large Au,Ag,Cu soil anomaly	altered andesites & rhyolites; 240 ppb Au/2m, and 74 ppb Au/1.5m from silicified zones, with pyrite
TRHC 15	50 m	300	increased chargeability resistivity, near Au, Ag,Cu soil anomaly	chloritic andesites with pyrite, 94 ppb Au/3 m
TRHC 16	75 m (composite length)	300	increased chargeability topographic high near intersection of Landsat structure.	strongly altered and locally faulted andesites and dacites with pyrite
TRHC 17	200m	300	anomalous Au in rock, increased chargeability resistivity, weak Au in soil anomaly	mainly banded and brecciated rhyolite, with andesite, zones of quartz veining, silicification and seritization with pyrite.
TRHC 18	200m	300	possible extension of gold bearing silicified and veined zone disc. in TRHC #1, increased chargeability & resis- tivity, Ag in soil anomaly.	variably altered rhyolite with some andesite, 2 silicified & veined zones, possibly parallel to known mineralization.
TRHC 19	150m	030	possible extension of zone in TRHC #1, Ag in soil anomaly.	moderately altered, locally brecciated rhyolite
TRHC 20	35 m	030	possible extension of zone in TRHC #1, Ag in soil anomaly.	altered andesite, 2 zones of silicification and quartz veining with pyrite, probably extension of known mineralization.

TRENCH	LENGTH	AZM	TARGET	FINDINGS
TRHC 21 (4 sections)	325m	300	anomalous Au in rock, favourable geology, increases resistivity, chargeability, Au, Ag soil anomaly.	variably altered andesites & rhyolite, some quartz veining with pyrite and/or specularite.
TRHC 22	50 m	300	increased chargeability and resistivity, Au in soil anomaly.	altered andesite and rhyolite with pyrite.
TRHC 23	35 m	300	possible extension of anomalous Au values in TRHC #9, increased chargeability, Ag in soil anomaly.	altered andesite with pyrite.
TRHC 24	75 m	010	Au in soil anomaly, known area of altera- tion.	variably altered andesite, with pyrite fresh siltstone.
TRHC 25	90 m	030	Cu in soil anomaly, known quartz veining and specularite mineralization.	green andesite with specularite.
TRHC 26	40 m	030	possible extension of anomalous Au minerali- zation, Cu in soil anomaly, liner topo- graphic depression.	altered andesites with pyrite. sphalerite and galena in HMC of till in 5 m deep pit.

CONCLUSIONS & RECOMMENDATIONS:

Although economic grades over mineable widths have yet to be defined on the Holy Cross property, potential still exists for a significant deposit. Exploration to date has been largely limited to higher areas, where outcrop is at or near surface. None of the major linear structures on the property has been adequately tested. These are interpreted as faults and could host mineralization now covered by overburden. Note that the absence of soil geochemical anomalies along these structures does not necessarily indicate an absence of mineralization. The deep, clay rich overburden in these areas could effectively mask hydromorphic dispersion of dissolved elements.

As well, several geochemical anomalies require follow up work. It is therefore recommended that:

1. prospecting and follow up soil sampling be performed around each of the geochemical anomalies on the recon lines.
2. the present grid on HCM 1 be extended so as to completely cover the west side of the "dome". Soil and geological surveys should be performed there.
3. attempt to trace the conglomerate unit on the south part of the property, taking as many rock samples as possible, and soil samples where outcrop is not present.
4. an IP survey be performed on the PB claims.
5. carry out the remainder of the trenching program outlined in 1989. Allowance should be made for further trenching, contingent upon the results of the proposed prospecting and soil sampling.
6. a diamond drill program be planned to test the economic potential of linear structures. This should include at least one hole to test the Main Showing at depth, a fence of 3 holes 100 to 200 metres apart, to test the area around the small lake on the west side of HC 4 and one hole to test the IP anomaly on L10,000N, 8037E.

STATEMENT OF QUALIFICATIONS

I, Rodney Alan Barber, do hereby certify that:

1. I currently reside at 369 John Street, Sudbury, Ontario, and have been employed by Noranda Exploration Company, Limited during the period of May 1, 1989 to December 20, 1989.
2. I graduated from Laurentian University, Sudbury, Ontario in June, 1988 with the degree of Bachelor of Science (Honors) in Geology.
3. I personally supervised the surveys described in this report and that this report is based upon a personal knowledge of the property.
4. That I hold no interest, direct or indirect in either the property or Noranda Exploration Company, Limited, or its affiliated companies.



Rodney A. Barber (B.Sc)

APPENDIX I

STATEMENT OF COSTS

CLAIM: HC 1, 4, 5

TYPE OF REPORT: GEOLOGICAL, GEOCHEMICAL  
DATE: DECEMBER 1989

a) WAGES:

No. of days - 137  
Rate per day - \$123.41  
Dates from - June 23, 1989 to December 1, 1989  
Total Cost: \$ 16,907.17

b) FOOD & ACCOMMODATIONS;

No. of days - 137  
Rate per day - \$26.81  
Dates from - June 23, 1989 to December 1, 1989  
Total Cost: \$ 3,672.97

c) TRANSPORTATION:

No. of days - 137  
Rate per day - \$21.43  
Dates from - June 23, 1989 to December 1, 1989  
Total Cost: \$ 2,935.91

d) ANALYSIS:

430 soil samples for Cu, Ag, Au @ \$7.20/sample \$ 3,096.00  
617 rock samples for Cu, Ag, Au @ \$10.20/sample \$ 6,293.40

e) COST OF REPORT PREPARATION:

Author \$250.00  
Drafting \$125.00  
Typing \$125.00  
Total Cost: \$ 500.00

TOTAL COST: \$ 33,405.45

APPENDIX I

STATEMENT OF COSTS

CLAIM: HCM 1, 2, 3, HC-5

TYPE OF REPORT: GEOLOGICAL, GEOCHEMICAL

DATE: DECEMBER 1989

a) WAGES:

No. of days - 168  
Rate per day - \$123.41  
Dates from - Nov. 4, 1988 to Nov. 2, 1989  
Total Cost: \$ 20,732.88

b) FOOD & ACCOMMODATIONS;

No. of days - 168  
Rate per day - \$26.81  
Dates from - Nov. 4, 1988 to Nov. 2, 1989  
Total Cost: \$ 4,504.08

c) TRANSPORTATION:

No. of days - 168  
Rate per day - \$21.43  
Dates from - Nov. 4, 1988 to Nov. 2, 1989  
Total Cost: \$ 3,600.24

d) ANALYSIS:

700 soil samples for Cu, Ag, Au @ \$7.20/sample \$ 5,040.00  
226 rock samples for Cu, Ag, Au @ \$10.20/sample \$ 2,305.20

e) COST OF REPORT PREPARATION:

Author \$250.00  
Drafting \$125.00  
Typing \$125.00  
Total Cost: \$ 500.00

TOTAL COST: \$ 36,682.40



## APPENDIX III

(Revised: 01/86)

### **ANALYTICAL METHOD**

#### DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applies to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver. (March, 1984).

#### Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples) are analysed in its entirety, when it is to be determined for gold without further sample preparation. See addendum.

#### Analysis of Samples

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.2 g or less depending on the matrix of the rock, and twice as much acid is used for decomposition than that is used for silt or soil.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn (all from the group A elements of the fee schedule) can be determined directly from the digest (dissolution) with an atomic absorption spectrometer (AA). A Varian-Techtron Model AA-5 or Model AA-475 is used to measure elemental concentrations.

#### Elements Requiring Specific Decomposition Method

**Antimony - Sb:** 0.2 g sample is attached with 3.3 mL of 6% tartaric acid, 1.5 mL conc. hydrochloric acid and 0.5 mL of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the acid solution with an AA-475 equipped with electrodeless discharge lamp (EDL).

**Arsenic - As:** 0.2 - 0.4 g sample is digested with 1.5 mL of 70% perchloric acid and 0.5 mL of conc. nitric acid. A Varian AA-475 equipped with an As-EDL measures the arsenic concentration of the digest.

**Barium - Ba:** 0.1 g sample is decomposed with conc. perchloric, nitric and hydrofluoric acid. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

**Bismuth - Bi:** 0.2 g - 0.3 g is digested with 2.0 mL of perchloric 70% and 1.0 mL of conc. nitric acid. Bismuth is determined directly from the digest into the flame of the AA instrument c/w EDL.

**Gold - Au:** 10.0 g sample (Pan-concentrates see below) is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with Methyl iso-Butyl ketone (MIBK) from the aqueous solution. Gold is determined from the MIBK solution with flame AA.

**Magnesium - Mg:** 0.05 g - 0.10 g sample is digested with 4 mL perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with a nitrous oxide flame determines Mg from the aqueous solution.

**Tungsten - W:** 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

**Uranium - U:** An aliquot, taken from a perchloric-nitric (3:1) decomposition, usually from the multi-element digestion, is diluted with water and a phosphate buffer. This solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.1 (10 ppb)
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

APPENDIX IV  
HOLY CROSS PROPERTY  
CERTIFICATES OF ANALYSES (ROCKS)

404 X (15)

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MW FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

*file*

DATE RECEIVED: MAY 15 1989 DATE REPORT MAILED: *May 17/89* SIGNED BY: *C. Long* ... D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8905-014 253 File # 89-1075

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Wl	Co	Mn	Fe	As	U	Al	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	%	PPM	PPB	
52801	3	10	19	60	.1	3	6	216	1.40	6	5	ND	3	14	1	2	2	6	.11	.039	18	9	.17	143	.01	2	.65	.01	.19	1	5
52802	1	4	13	27	.1	3	2	104	1.16	5	5	ND	2	11	1	2	2	2	.08	.028	25	2	.08	146	.01	4	.49	.01	.19	1	1
52803	1	17	12	96	.1	4	7	309	1.93	6	5	ND	1	4	1	2	2	7	.02	.028	14	11	.32	88	.01	2	1.00	.01	.15	1	1
52804	1	1	14	42	.1	2	2	265	1.06	4	5	ND	1	12	1	2	2	2	.02	.034	26	1	.06	239	.01	2	.52	.01	.21	1	1
52805	1	4	14	52	.1	3	5	209	3.91	15	5	ND	2	6	1	2	2	10	.08	.050	9	8	.24	194	.01	7	.98	.01	.29	1	1
52806	2	2	7	23	.1	5	2	88	1.03	18	5	ND	4	4	1	2	3	6	.05	.033	18	4	.11	77	.01	2	.36	.01	.22	1	1
52807	1	2	2	61	.1	5	6	511	1.33	9	5	ND	3	9	1	2	2	8	.08	.026	17	12	.10	131	.01	3	.71	.01	.18	1	1
52308	1	5	17	66	.1	1	4	1009	1.73	3	5	ND	4	43	1	2	2	18	.91	.049	31	2	.40	60	.03	3	.70	.01	.17	1	2
52809	12	13	114	15	.8	4	1	45	1.41	18	5	ND	3	10	1	2	2	5	.01	.015	7	21	.01	504	.01	2	.17	.01	.19	1	1
52810	5	9	44	6	.3	5	1	24	.61	17	5	ND	1	9	1	2	3	2	.01	.002	4	5	.01	525	.01	10	.13	.01	.13	1	7
52811	3	6	28	5	.6	3	1	18	.54	15	5	ND	3	7	1	2	2	2	.01	.002	5	23	.01	463	.01	11	.17	.01	.18	1	1
52812	3	8	36	8	.4	3	1	35	.80	16	5	ND	1	9	1	2	2	3	.01	.002	3	5	.01	498	.01	5	.17	.01	.16	1	2
52813	2	29	21	20	.1	2	2	77	1.66	14	5	ND	1	5	1	2	2	9	.01	.004	2	21	.01	209	.01	2	.26	.01	.15	1	4
52814	8	89	8	32	.1	2	4	174	1.39	3	5	ND	1	4	1	2	2	3	.01	.013	9	2	.02	390	.01	4	.31	.01	.15	1	3
52815	5	71	4	22	.5	3	3	37	1.06	4	5	ND	1	6	1	2	3	3	.01	.014	8	18	.01	866	.01	9	.23	.01	.14	1	3
52816	23	161	8	55	.1	2	3	114	2.12	7	5	ND	1	3	1	2	2	10	.01	.030	12	1	.02	78	.01	2	.41	.01	.17	1	1
52817	43	93	7	15	.7	1	1	44	.86	6	6	ND	3	17	1	2	2	4	.01	.015	21	7	.01	149	.01	6	.36	.01	.18	1	45
52818	20	11	15	6	3.8	1	1	19	.53	7	5	ND	1	5	1	2	3	2	.01	.007	6	2	.01	138	.01	2	.22	.01	.17	1	400
52819	41	21	11	2	9.7	3	1	31	.61	2	5	ND	1	9	1	2	2	1	.01	.005	4	32	.01	220	.01	7	.14	.01	.12	1	2640
52820	67	31	21	4	4.4	4	1	30	.72	9	5	ND	3	9	1	16	14	3	.01	.005	5	4	.01	429	.01	7	.16	.01	.14	1	320
52821	49	35	17	3	4.2	3	1	25	.80	7	5	ND	1	8	1	10	3	3	.01	.004	3	30	.01	272	.01	7	.14	.01	.13	1	610
52822	65	93	425	12	14.6	1	1	21	.89	40	5	ND	1	5	1	275	3	1	.01	.005	4	3	.01	350	.01	10	.16	.01	.19	1	390
52823	12	12	19	2	1.6	2	1	4	.34	4	5	ND	3	9	1	3	3	1	.01	.003	7	12	.01	460	.01	3	.17	.01	.19	1	21
52824	2	15	5	4	.2	1	1	14	.40	3	5	ND	2	5	1	2	3	1	.01	.010	4	1	.01	691	.01	10	.27	.01	.21	1	6
52825	13	13	3	2	3.4	3	1	24	.40	2	5	ND	1	4	1	2	2	2	.01	.003	5	22	.01	175	.01	5	.12	.01	.10	1	1710
52826	21	25	30	1	2.0	4	1	28	.29	9	5	ND	1	14	1	2	2	1	.01	.003	5	3	.01	295	.01	3	.16	.01	.14	1	8
52827	2	8	28	4	.3	2	1	34	.51	3	5	ND	3	21	1	2	2	1	.01	.015	9	19	.01	1139	.01	8	.18	.01	.19	1	1
52828	2	8	16	8	.3	1	2	56	1.98	3	5	ND	3	21	1	2	2	4	.01	.016	16	2	.01	331	.02	8	.20	.01	.18	2	1
52829	13	85	70	6	2.4	1	1	15	.26	11	5	ND	3	9	1	2	3	1	.01	.003	16	14	.01	167	.01	14	.23	.01	.16	1	3
52830	13	13	28	3	.9	2	1	13	.62	6	5	ND	3	4	1	2	2	1	.01	.005	15	3	.01	146	.01	9	.15	.01	.20	1	1
52831	6	68	18	2	2.0	1	1	6	.27	8	5	ND	3	7	1	2	2	1	.01	.003	19	12	.01	340	.01	5	.20	.01	.18	1	6
STD C/AU-R	18	63	38	132	7.2	72	31	952	3.81	43	16	7	37	49	18	16	22	57	.46	.086	37	55	.85	175	.06	34	1.81	.06	.13	11	490

*Copy to Mike*

RECEIVED  
MAY 24 1989

Holy Cross (RB)

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

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR NM FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GR SAMPLE.

DATE RECEIVED: MAY 18 1989 DATE REPORT MAILED: May 23/89 SIGNED BY: C. Long D. TOYE, C. LIONG, J. WANG: CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8905-020 253 File # 89-1131

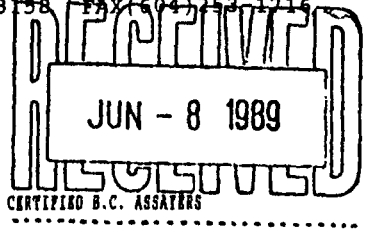
Table with columns for elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Tl, B, Al, Na, K, W, Au\*) and rows for sample numbers (52832, 52833, 52834, 52835, 52836, 52837, 52838, 52839, 52840, 52841, 52842, 52843, 52844, 52845, 52846, 52847, 52848, 52849, 52850, PR 86856, STD C/AU-R). Values are in PPM or %.

Copy to Mike

RECEIVED MAY 25 1989

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR NM PB SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.



DATE RECEIVED: MAY 31 1989 DATE REPORT MAILED: June 2/89 SIGNED BY: C. Long D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8906-009 253 File # 89-1280 Page 1

file

Table with columns for SAMPLE#, No, Cu, Pb, Zn, Ag, W, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Au\*, and PPB. Rows contain analytical data for various samples.

A. ...

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	V PPM	Au* PPB
52893	4	8	52	7	.7	5	1	89	1.07	2	5	ND	1	8	1	2	2	4	.04	.008	9	5	.01	222	.01	8	.15	.01	.17	3	2
52894	1	13	19	7	.8	1	2	37	1.15	2	5	ND	3	10	1	2	2	2	.01	.010	18	10	.01	592	.01	5	.25	.01	.22	2	7
52895	6	23	46	11	1.3	3	1	18	1.58	9	5	ND	3	14	1	3	2	8	.01	.016	28	3	.01	217	.01	5	.18	.01	.15	2	174
52896	1	5	11	6	.1	3	1	11	.51	2	5	ND	1	2	1	2	2	3	.01	.005	7	7	.01	73	.01	4	.13	.01	.14	4	2
52897	2	28	43	29	.3	2	2	65	1.97	11	5	ND	1	13	1	2	7	5	.01	.011	12	2	.01	91	.02	5	.22	.01	.15	4	3
52898	3	25	23	15	2.0	3	2	118	2.93	2	5	ND	1	1	1	9	9	19	.01	.010	3	34	.01	73	.01	2	.07	.01	.05	23	2
52899	1	5	9	43	.1	3	4	312	1.58	2	5	ND	1	4	1	2	2	4	.06	.033	17	3	.30	288	.01	4	.77	.01	.22	2	1
52900	5	16	12	10	1.4	5	7	54	1.29	23	5	ND	3	9	1	2	2	5	.01	.005	5	44	.01	148	.01	6	.19	.01	.21	2	11
STD C/AU-R	17	61	40	132	7.1	73	30	961	3.82	39	21	7	37	51	17	15	24	58	.47	.087	38	55	.87	175	.07	33	1.89	.06	.13	12	490

How Cross

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR NG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GR SAMPLE.

JUN 15 1989  
 RECEIVED

DATE RECEIVED: JUN 8 1989 DATE REPORT MAILED: June 13/89 SIGNED BY: C. Long D. TOYS, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8906-034 2537 File # 89-1401 Page 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Tl	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB
52871	1	26	12	98	.3	12	10	1651	4.07	71	5	ND	4	45	1	2	2	62	2.18	.103	11	11	1.19	119	.06	5	1.45	.04	.09	6	2
52872	2	9	5	9	.5	4	1	196	.66	3	5	ND	2	23	1	2	2	3	1.47	.534	4	4	.03	111	.01	5	.55	.01	.23	1	1
52875	3	26	23	100	.3	16	12	827	4.25	14	5	ND	3	31	1	2	2	69	1.00	.112	12	21	1.52	93	.14	2	1.57	.03	.06	2	1
52901	2	29	20	73	.1	9	10	736	3.97	2	5	ND	1	46	1	2	2	71	2.01	.196	12	16	1.35	61	.08	2	1.60	.03	.05	1	1
52903	40	101	26	10	4.3	8	2	67	1.09	20	5	ND	2	13	1	14	2	4	.06	.006	3	6	.07	219	.01	5	.20	.01	.11	1	15
52904	2	31	24	16	.2	5	1	122	2.02	3	5	ND	4	5	1	2	2	12	.02	.021	19	5	.03	78	.01	6	.34	.01	.19	2	2
52905	7	9	4	3	.2	5	1	22	.48	2	5	ND	2	5	1	2	2	1	.01	.003	8	4	.01	128	.01	6	.20	.01	.16	1	6
52906	37	12	37	5	1.6	6	1	31	.90	13	5	ND	2	11	1	2	2	1	.01	.005	9	6	.01	663	.01	6	.17	.01	.18	1	9
52907	34	8	27	8	1.2	8	1	31	.63	5	5	ND	2	7	1	3	2	1	.01	.003	10	5	.01	730	.01	2	.14	.01	.14	1	5
52908	4	5	40	7	.1	8	1	38	.76	5	5	ND	2	13	1	2	2	1	.01	.004	12	7	.01	721	.01	4	.15	.01	.15	1	4
52909	2	3	13	104	.1	4	4	1222	3.14	5	5	ND	1	17	1	2	2	5	.24	.093	10	3	.53	1	.01	5	1.13	.01	.18	1	1
52910	1	10	7	56	.1	8	9	706	2.65	6	5	ND	4	41	1	2	2	62	1.91	.128	14	6	1.05	91	.06	2	1.22	.03	.10	1	2
52918	10	5	45	8	2.1	11	1	74	.64	2	5	ND	1	3	1	2	2	1	.01	.006	6	9	.01	96	.01	3	.11	.01	.09	1	7
52921	6	12	42	62	.2	7	4	639	2.37	3	5	ND	2	6	1	2	2	19	.05	.030	17	7	.17	104	.01	2	.78	.01	.16	1	3
52922	1	8	6	101	.2	25	27	1260	9.38	8	5	ND	1	27	3	2	2	177	1.19	.065	2	36	2.77	100	.16	2	3.12	.02	.41	1	1
52923	1	2	14	207	.1	13	28	1495	7.74	14	5	ND	1	18	1	2	2	140	.46	.074	2	7	2.85	22	.06	2	3.19	.02	.08	1	1
52951	8	1	25	7	.1	3	1	32	.62	9	5	ND	3	14	1	2	2	2	.02	.007	7	2	.03	698	.01	2	.27	.01	.17	1	1
52952	3	8	10	4	.1	7	1	48	.63	2	5	ND	4	3	1	2	2	2	.01	.009	16	6	.01	72	.01	2	.18	.01	.14	1	1
52953	14	36	31	28	1.1	8	3	297	4.17	19	5	ND	4	9	1	2	2	12	.01	.008	9	5	.09	171	.01	2	.65	.01	.15	2	5
52954	5	375	10	25	3.2	7	1	285	1.20	4	5	ND	5	3	1	9	2	2	.01	.010	16	7	.05	99	.01	2	.44	.01	.12	1	1
52957	1	6	18	245	.2	168	21	1385	7.93	10	5	ND	3	31	2	2	2	115	1.57	.123	4	453	3.34	35	.10	5	2.97	.02	.05	1	3
52959	7	9	21	57	1.0	13	44	464	4.32	10	5	ND	1	7	1	3	2	6	.02	.005	5	9	.07	111	.01	4	.49	.01	.04	8	9
52961	3	24	18	60	.1	9	14	995	4.01	7	5	ND	4	134	1	2	2	59	3.04	.241	16	5	1.05	85	.19	3	2.77	.10	.13	3	1
52962	29	4	17	4	.3	8	1	44	1.09	4	5	ND	3	18	1	2	2	1	.02	.004	17	8	.01	306	.01	4	.24	.01	.13	1	2
57226	2	17	36	79	.1	15	14	737	3.91	17	5	ND	6	107	1	6	2	98	1.33	.151	16	11	1.76	162	.24	3	2.55	.06	.16	12	1
57227	1	29	15	57	.1	15	11	1287	3.85	11	5	ND	4	84	1	2	2	60	3.16	.137	19	14	1.03	618	.15	5	1.64	.04	.13	2	3
57228	3	4	13	3	.2	6	1	53	.87	8	5	ND	3	7	1	2	2	3	.01	.004	9	4	.01	499	.01	4	.17	.01	.15	1	35
57232	4	6	23	8	.1	7	1	42	1.09	10	5	ND	3	13	1	2	2	2	.03	.017	11	6	.01	903	.01	2	.19	.01	.12	1	1
57233	34	96	27	11	3.2	8	4	44	1.32	9	5	ND	2	26	1	2	2	2	.02	.004	5	6	.01	121	.01	2	.15	.01	.12	1	23
57234	5	5	7	6	.3	7	1	32	.80	2	5	ND	5	5	1	2	2	1	.01	.008	11	5	.01	335	.01	6	.18	.01	.15	1	2
57235	3	4	19	13	.1	8	1	111	1.14	5	5	ND	5	8	1	2	2	4	.01	.008	18	6	.02	201	.01	6	.22	.01	.14	1	1
57241	5	5	93	12	.4	3	1	35	1.91	5	5	ND	1	7	1	2	2	4	.01	.007	8	18	.01	77	.01	2	.17	.01	.17	1	16
57244	3	5	13	4	.1	3	1	21	.52	9	5	ND	3	6	1	2	2	1	.01	.005	17	3	.01	67	.01	7	.26	.01	.16	1	1
57245	15	7	11	3	.1	4	1	29	.84	2	5	ND	4	19	1	2	2	1	.01	.004	10	21	.01	340	.01	3	.18	.01	.19	1	4
57246	4	38	32	79	.1	67	19	955	4.65	18	5	ND	5	112	2	3	2	97	1.32	.155	25	18	.22	168	.17	4	1.20	.13	.15	6	2
57247	107	8	19	8	3.6	6	2	49	1.54	22	5	ND	2	12	1	2	2	1	.01	.012	7	25	.01	435	.01	6	.17	.01	.16	1	22
STD C/AU-R	20	63	44	132	8.1	75	31	1025	4.33	42	22	8	37	51	19	16	22	61	.51	.091	37	55	.84	179	.07	35	2.02	.06	.15	13	490



SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Hg %	Ba PPM	Ti %	B PPM	Al %	Si %	K %	W PPM	Au <sup>a</sup> PPB
57248	8	7	2	5	.1	3	1	50	1.24	2	5	ND	2	4	1	2	2	4	.01	.008	12	4	.01	67	.01	2	.15	.01	.16	4	1
57249	3	8	8	2	.7	4	1	58	.83	2	5	ND	2	5	1	2	3	1	.01	.005	15	21	.01	81	.01	2	.10	.01	.16	3	360

Holy Cross

ACME ANALYTICAL LABORATORIES LTD.

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

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

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR NG BA TI B V AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 SILT P2-P3 ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 15 1989 DATE REPORT MAILED: June 21/89 SIGNED BY: C. Long D. TOYK, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8906-051 2538 File # 89-1534 Page 1

Table with columns: SAMPLE#, No, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Tl, B, Al, Na, K, W, Au\*, and units (PPM, PPB, %). Rows list various sample numbers and their corresponding element concentrations.

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RECEIVED JUN 26 1989

file

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	Lo PPM	Cr PPM	Mg %	Ba PPM	Ti %	E PPM	Al %	Na %	K %	W PPM	Au* PPB
34753	2	13	2	27	.1	13	6	369	1.83	3	5	ND	1	4	1	2	2	20	.10	.022	6	16	.14	44	.01	2	.86	.01	.07	1	3
34754	6	21	9	9	1.0	4	1	127	.82	9	5	ND	3	9	1	2	2	2	.01	.011	16	3	.01	109	.01	6	.21	.01	.16	1	1
34755	5	23	5	20	.2	3	1	41	1.34	4	5	ND	3	4	1	2	2	2	.01	.011	15	17	.01	75	.01	7	.27	.01	.17	1	4
34756	27	22	43	9	3.3	6	3	89	.89	5	5	ND	1	8	1	2	2	1	.01	.004	6	4	.01	267	.01	6	.18	.01	.17	1	9
34757	7	8	12	3	.3	4	1	23	.48	3	5	ND	2	6	1	2	2	1	.01	.005	12	23	.01	142	.01	2	.22	.01	.16	1	3
34758	5	31	12	79	.2	4	2	386	3.40	19	5	ND	3	7	1	2	2	6	.04	.046	28	3	.09	154	.01	2	.55	.01	.21	17	4
34759	9	90	14	30	1.2	4	1	122	1.08	11	5	ND	3	5	1	2	3	1	.01	.015	13	21	.01	395	.01	9	.23	.01	.15	2	9
34760	8	52	5	7	2.4	5	1	42	.99	2	5	ND	2	6	1	2	2	1	.01	.010	9	4	.01	98	.01	4	.26	.01	.18	1	3
34761	6	15	2	4	.1	4	1	25	.74	3	5	ND	2	7	1	2	2	1	.01	.007	7	23	.01	100	.01	2	.24	.01	.21	1	6
34762	5	9	2	4	.1	5	1	47	.86	2	5	ND	2	9	1	2	2	2	.01	.011	17	3	.01	124	.01	3	.26	.01	.24	1	1
34763	7	125	24	164	1.1	6	14	826	6.07	4	5	ND	1	18	1	2	2	105	.27	.061	3	20	1.41	105	.20	2	2.23	.01	.22	1	7
52902	49	8	36	3	1.8	7	1	44	.36	2	5	ND	1	6	1	2	2	1	.01	.004	7	6	.01	114	.01	8	.18	.01	.11	1	1720
52913	2	7	5	39	.1	2	5	221	5.08	2	5	ND	2	23	1	2	2	27	.12	.085	9	9	.41	328	.01	7	1.17	.03	.96	1	34
52914	3	3	5	42	.1	7	4	287	2.75	2	5	ND	3	15	1	2	2	19	.12	.035	17	9	.54	213	.01	4	1.09	.02	.13	1	13
52917	7	5	33	7	.3	4	6	32	.63	7	5	ND	1	17	1	2	3	1	.01	.006	3	22	.01	1118	.01	8	.15	.01	.12	2	6
52920	4	6	7	14	.1	5	2	43	1.66	9	5	ND	3	7	1	2	2	3	.01	.011	9	3	.01	805	.01	10	.16	.01	.13	9	8
52924	7	7	10	3	.7	4	1	32	.49	8	5	ND	3	13	1	2	2	1	.01	.007	12	23	.01	199	.01	10	.18	.01	.15	1	7
52925	4	10	9	5	.2	6	1	62	1.30	2	5	ND	4	9	1	2	2	4	.01	.006	12	5	.01	1307	.01	5	.19	.01	.15	1	3
52926	5	10	9	9	.3	5	1	304	1.07	55	5	ND	4	11	1	2	2	3	.02	.007	12	4	.02	243	.01	2	.23	.01	.16	1	13
52927	2	7	2	5	.1	6	1	101	.77	2	5	ND	4	13	1	2	2	3	.01	.008	9	4	.01	229	.01	5	.19	.01	.15	1	4
52928	3	6	28	13	.4	5	1	188	1.46	4	5	ND	4	18	1	2	2	6	.01	.008	13	3	.01	1297	.03	12	.18	.01	.17	2	3
52929	3	16	32	12	.6	5	1	125	2.60	2	5	ND	4	14	1	2	2	8	.01	.015	12	3	.01	880	.03	6	.21	.01	.18	1	4
52930	7	6	25	13	1.1	6	2	93	1.61	3	5	ND	1	18	1	2	2	2	.01	.011	8	4	.01	273	.01	7	.20	.01	.18	1	11
52931	9	16	37	14	2.4	6	1	88	1.80	6	5	ND	1	11	1	2	2	5	.01	.013	11	4	.01	574	.01	5	.18	.01	.17	1	119
52932	2	11	24	7	1.1	4	1	51	1.35	2	5	ND	2	8	1	2	2	4	.01	.011	9	3	.01	190	.01	9	.20	.01	.21	1	19
52933	2	7	15	3	.8	4	1	31	.25	2	5	ND	2	14	1	2	2	1	.01	.003	10	6	.01	1998	.01	6	.22	.01	.14	1	6
52934	2	6	31	5	.5	4	1	44	.78	2	5	ND	2	10	1	2	2	1	.01	.007	14	3	.01	373	.01	2	.21	.01	.17	1	3
52935	11	23	6	22	.9	5	1	42	1.91	5	5	ND	2	14	1	2	2	3	.01	.013	8	4	.01	519	.01	2	.23	.01	.17	1	15
52936	4	12	76	6	2.5	7	1	66	.86	3	5	ND	2	22	1	2	3	1	.01	.009	13	5	.01	775	.01	2	.18	.01	.18	1	13
52937	33	13	45	11	6.5	6	2	76	8.71	22	5	ND	1	19	1	42	2	17	.01	.008	12	7	.01	299	.01	7	.08	.01	.12	53	11
52938	5	16	16	11	5.7	7	1	88	1.50	4	5	ND	1	9	1	5	2	3	.01	.007	6	5	.01	966	.01	2	.10	.01	.08	4	7
52939	3	10	27	7	.1	7	1	29	.44	2	5	ND	1	42	1	2	2	1	.01	.006	17	7	.01	2694	.01	2	.15	.01	.10	1	1
52940	5	23	172	8	3.7	8	1	58	.80	2	5	ND	1	15	1	2	2	2	.01	.013	8	6	.01	787	.01	8	.16	.01	.14	1	9
52941	2	6	24	67	.3	7	43	425	3.65	35	5	ND	3	11	1	2	2	43	.23	.077	11	10	.45	159	.04	6	1.15	.04	.10	1	7
52943	1	8	12	106	.1	16	10	1416	4.87	6	5	ND	1	208	1	2	2	116	2.36	.105	10	31	.80	706	.07	7	1.14	.03	.14	1	1
57112	5	10	2	3	.1	9	1	48	.40	10	5	ND	1	15	1	2	2	4	.03	.004	8	8	.01	65	.01	2	.15	.01	.06	1	2
STD C/AU-R	18	61	38	132	7.1	72	30	942	4.06	41	18	7	37	51	17	15	18	58	.49	.089	38	56	.83	177	.07	39	1.93	.06	.13	13	515

NORANDA EXPLORATION CO. LTD. PROJECT 8906-051 253 FILE # 89-1534

SAMPLE#	No PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Po %	As PPM	V PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
57113	10	5	82	4	.9	3	1	29	1.19	41	5	ND	1	17	1	2	2	2	.01	.005	10	30	.01	409	.01	7	.18	.01	.13	1	10
57114	4	7	169	26	.1	7	1	34	.51	7	5	ND	1	13	1	2	2	1	.01	.003	2	7	.01	1500	.01	6	.03	.01	.02	1	850
57115	1	8	9	10	.1	5	2	216	.93	4	5	ND	2	5	1	2	2	4	.01	.008	13	28	.01	573	.01	8	.25	.01	.15	2	9
57116	5	16	38	22	.4	6	2	95	1.61	2	5	ND	3	7	1	2	2	2	.01	.006	10	6	.01	280	.01	7	.32	.01	.17	2	33
52919	4	6	10	13	.1	6	1	46	.91	10	5	ND	3	6	1	2	2	2	.01	.006	14	5	.01	197	.01	7	.16	.01	.12	4	4

Holy Cross (RB) file

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JUN 22 1989  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED: June 23/89

GEOCHEMICAL ANALYSIS CERTIFICATE

- SAMPLE TYPE: ROCK  
AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

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

NORANDA EXPLORATION CO. LTD. PROJECT **8906-082-253** FILE # 89-1664 Page 1

SAMPLE#	AU* ppb
52945	27
52946	4
52947	12
52948	9
52949	4
52950	2
57026	12
57027	6
57028	1
57029	6
57030	2
57031	7
57032	1
57033	2
57034	1
57035	1
57036	1
57037	2
57038	13
57039	1
57040	6
57041	5
57042	2
57043	1
57044	10
57045	6
57046	3
57047	11
57048	7
57049	22
57050	5
57051	4
57052	3
57053	46
57054	5
57055	3

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SAMPLE#	AU* ppb
57056	13
57057	1
57058	3
57059	8
57060	2
57061	1
57062	1
57063	6
57064	18
57065	67
57076	5
57077	1
57078	1
57079	1
57080	2
57081	5
57082	1
57083	7
57084	4
57085	1
57086	97
57087	13
57088	5
57089	7
57090	1
57091	9
57092	46
57093	6
57094	7
57095	1
57096	3
57097	3
57098	5
57099	1
57100	1
57104	2

SAMPLE#	AU* ppb
57105	3
57106	5
57107	13
57108	1
57109	1
57110	1
57111	1
57117	1
57118	8
57119	3
57120	1
57121	2
57122	1
57123	4
57124	410
57125	72
57126	7
57127	2
57128	3
57129	1
57130	4
57131	3
57132	3
57133	3
57134	4
57135	9
57136	4
57137	1
57138	6
57139	3
57140	2
57141	4
57142	1
57143	2
57144	4
57145	5

SAMPLE#	AU* ppb
57146	10
57147	1
57148	5
57149	5
57150	149



8907-006

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby  
British Columbia, Can. V5B 3  
Ph: (604)299-6910 Fax: 299-6210

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.  
1050 DAVIE STREET  
VANCOUVER, B.C.

*file*

PROJECT : 253 *8907-006*  
TYPE OF ANALYSIS : GEOCHEMICAL

*Holy Cross (B)*

CERTIFICATE # : 89185  
INVOICE # : 90373  
DATE ENTERED : 89-07-14  
FILE NAME : NOR89185  
PAGE # : 1

RE FIX	SAMPLE NAME	PPM Cu	PPM Ag	PPB Au
A	57066	8	0.2	40
A	57067	10	0.7	5
A	57068	8	0.4	210
A	57069	14	0.5	5
A	57071	4	0.1	5
A	57072	12	0.1	5
A	57073	12	0.1	5
A	57151	36	0.1	5
A	57152	8	0.1	5
A	57153	4	0.1	5
A	57154	2	0.1	5
A	57155	2	0.1	5
A	57156	2	0.1	5
A	57157	2	0.1	5
A	57158	12	0.1	5
A	57159	6	0.1	5
A	57160	6	0.3	5
A	57161	68	1.2	5
A	57162	4	0.1	5
A	57163	144	0.8	5
A	57164	24	0.1	5
A	57165	4	0.5	30
A	57166	4	0.3	5
A	57167	2	0.2	5
A	57168	4	1.1	140
A	57169	4	0.1	30
A	57170	4	1.1	5
A	57171	4	0.1	5
A	57172	4	0.2	5
A	57173	30	0.5	5
A	57174	252	1.8	5
A	57175	8	1.3	5
A	57176	6	1.3	5
A	57177	6	0.3	5
A	57178	4	0.5	5
A	57179	16	0.9	10
A	57180	42	6.7	60
A	57181	44	6.7	70
A	57201	6	1.4	250
A	57202	8	0.2	220

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CERTIFIED BY :

*[Signature]*

ROSSBACHER LABORATORY LTD.

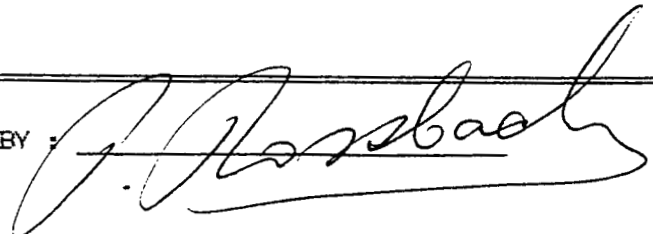
2225 S. Springer Ave., Burnaby  
 British Columbia, Can. V5B 3J1  
 Ph: (604)299-6910 Fax: 299-625

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.  
 1050 DAVIE STREET  
 VANCOUVER, B.C.  
 PROJECT : 253  
 TYPE OF ANALYSIS : GEOCHEMICAL

CERTIFICATE # : 89185  
 INVOICE # : 90373  
 DATE ENTERED : 89-07-14  
 FILE NAME : NOR89185  
 PAGE # : 2

RE FIX	SAMPLE NAME	PPM Cu	PPM Ag	PPB Au
A	57203	4	0.2	40
A	57204	28	1.4	30
A	57205	10	0.1	5
A	57206	4	0.1	5
A	57207	6	0.3	5
A	57208	4	0.3	5
A	57209	10	0.2	5
A	57210	4	0.2	5
A	57211	4	0.2	5
A	57212	6	0.1	40
A	57213	4	0.4	5
A	57214	6	0.8	5
A	57215	4	0.1	5
A	57216	6	0.1	5
A	57217	4	0.1	5
A	57218	8	0.2	5
A	57219	4	3.8	5
A	57220	26	3.5	80
A	57221	14	1.6	10
A	57222	8	0.7	5
A	57223	6	1.9	10
A	57224	6	0.2	5
A	34764	6	40.1	3640 ↑ wulf
A	34765	36	1.4	5
A	34766	24	0.7	5
A	34767	4	0.6	20
A	34768	32	0.7	5
A	34769	6	0.8	20
A	34770	2	0.7	60
A	34771	2	0.6	40
A	34772	2	0.7	30
A	34773	6	0.3	5
A	34774	6	0.7	5
A	34775	6	1.4	5 ↓
A	104801	4	1.2	5
A	104802	10	1.7	5
A	104803	6	0.9	5
A	104804	6	1.2	5
A	104805	6	1.2	5

CERTIFIED BY : 

Holy Cross

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

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN PB SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: SILT AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 30 1989 DATE REPORT MAILED: July 6/89. SIGNED BY: C. Long... D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION CO. LTD. PROJECT 8907-006, 253-F17 File # 89-1872

Table with columns: SAMPLE#, No, Cu, Pb, Zn, Ag, Hg, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Au\*. Rows include sample numbers 52916, 52942, 52944, 52963, 52964, 52968, 57070, and STD C/AU-3.

8907-017

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,  
British Columbia, Can. V5B 3N1  
Ph: (604)299-6910 Fax: 299-6252

CERTIFICATE OF ANALYSIS

CLIENT : NORANDA EXPLORATION CO. LTD.  
1050 DAVIE STREET  
VANCOUVER, B.C.  
PROJECT : 07-17 #253  
TYPE OF ANALYSIS : GEOCHEMICAL

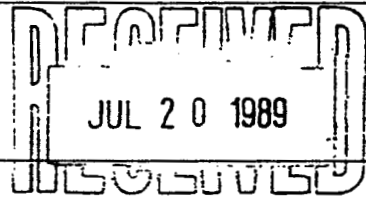
*Holy Cross (RB)*

CERTIFICATE # : 89192  
INVOICE # : 90383  
DATE ENTERED : 89-07-18  
FILE NAME : NOR89192  
PAGE # : 1

EX	SAMPLE NAME	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
	57182	18	0.1			5
	57183	8	0.5			5
	57184	18	0.2			5
	57185	12	1.1			5
	57186	18	0.4			5
	57187	6	1.6			5
	57188	10	1.0			5
	57189	4	1.4			5
	57190	4	0.8			5
	57191	10	0.4			5
	57192	8	0.1			5
	57193	6	0.5			5
	57194	6	0.1			5
	57195	4	1.2			5
	57196	6	0.4			5
	57197	12	0.3			5
	57198	8	1.2			5
	57199	4	0.1			5
	57200	12	0.5			5
	104826	6	0.1			5
	104827	6	0.1			20
	104828	4	0.1			5
	104829	4	0.1			5
	104830	6	0.1			40
	104831	10	1.9			90
	104832	72	1.9			10
	104833	2	0.1			5
	104834	4	0.1			5
	104835	6	0.1			5
	104836	4	0.1			5
	104837	38	0.2			5
	104838	188	3.2			5
	104839	16	0.6			5
	104840	8	0.2			5
	104841	2	0.7			5
	49626			56	10	
	49627			44	48	
	49628			4900	2120	

*file*

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*ppm; PG 2P*

CERTIFIED BY :

*[Signature]*

8907-017

**ROSSBACHER LABORATORY LTD.**

2225 S. Springer Ave., Burnaby  
British Columbia, Can. V5B 3J8  
Ph: (604)299-6910 Fax: 299-6250

**CERTIFICATE OF ANALYSIS**

TO : NORANDA EXPLORATION CO. LTD.  
1050 DAVIE STREET  
VANCOUVER, B.C.  
PROJECT : 07-17 #253  
TYPE OF ANALYSIS : GEOCHEMICAL

CERTIFICATE # : 89192  
INVOICE # : 90383  
DATE ENTERED : 89-07-18  
FILE NAME : NOR89192  
PAGE # : 1

*Holy Cross (R03)*

PRE FIX	SAMPLE NAME	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
A	57182	18	0.1			5
A	57183	8	0.5			5
A	57184	18	0.2			5
A	57185	12	1.1			5
A	57186	18	0.4			5
A	57187	6	1.6			5
A	57188	10	1.0			5
A	57189	4	1.4			5
A	57190	4	0.8			5
A	57191	10	0.4			5
A	57192	8	0.1			5
A	57193	6	0.5			5
A	57194	6	0.1			5
A	57195	4	1.2			5
A	57196	6	0.4			5
A	57197	12	0.3			5
A	57198	8	1.2			5
A	57199	4	0.1			5
A	57200	12	0.5			5
A	104826	6	0.1			5
A	104827	6	0.1			20
A	104828	4	0.1			5
A	104829	4	0.1			5
A	104830	6	0.1			40
A	104831	10	1.9			90
A	104832	72	1.9			10
A	104833	2	0.1			5
A	104834	4	0.1			5
A	104835	6	0.1			5
A	104836	4	0.1			5
A	104837	38	0.2			5
A	104838	188	3.2			5
A	104839	16	0.6			5
A	104840	8	0.2			5
A	104841	2	0.7			5
A	49626	20	0.4	56	10	5
A	49627	10	0.2	44	48	5
A	49628	8	1.3	4900	2120	5

*file*

**APPROVED**  
AUG 01 1989

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*[Signature]*

8907-045

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby  
British Columbia, Can. V5B 3  
Ph: (604)299-6910 Fax: 299-621

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.  
1050 DAVIE STREET  
VANCOUVER, B.C.  
PROJECT : 253 B907-045  
TYPE OF ANALYSIS : GEOCHEMICAL

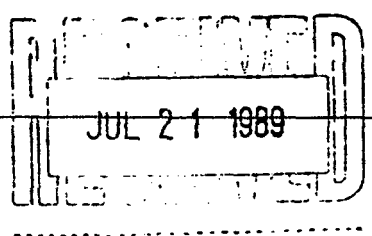
CERTIFICATE # : 89209  
INVOICE # : 90386  
DATE ENTERED : 89-07-19  
FILE NAME : NOR89209  
PAGE # : 1

*Holy Cross (RB)*

*file*

RE FIX	SAMPLE NAME	PPM Cu	PPM Ag	PPB Au
A	104842	24	3.6	180
A	104843	16	4.3	10
A	104844	10	1.8	30
A	104845	6	0.3	5
A	104846	36	0.9	5
A	104847	20	0.2	5
A	104848	6	0.1	5
A	104849	4	0.1	5
A	104850	8	1.3	5
A	104851	22	0.5	5
A	104852	6	3.0	5
A	104853	14	1.0	5
A	104854	4	0.1	5
A	104855	18	0.9	5
A	104856	6	0.6	5
A	104857	8	1.1	10
A	104858	8	0.5	5
A	104859	8	0.3	5
A	104860	6	0.3	5
A	104876	8	0.7	5
A	104877	6	0.3	5
A	104878	42	2.5	5
A	104879	14	0.1	5
A	104880	6	0.5	5
A	104881	6	1.7	5

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*[Signature]*

8908-003

ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnab  
British Columbia, Can. V5B 3J1  
Ph: (604)299-6910 Fax:299-625

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.  
1050 DAVIE STREET  
VANCOUVER, B.C.  
PROJECT : 253 8908-003  
TYPE OF ANALYSIS : GEOCHEMICAL

CERTIFICATE # : 89241  
INVOICE # : 90430  
DATE ENTERED : 89-08-08  
FILE NAME : NOR89241  
PAGE # : 1

*Holy Cross (AB)*

PRE FIX	SAMPLE NAME	PPM Cu	PPM Ag	PPB Au
A	104861	14	0.1	5
A	104862	40	0.2	100
A	104863	352	31.3	80
A	104864	20	0.5	5
A	104865	46	0.8	100
A	104866	10	0.7	5
A	104867	12	0.2	5
A	104868	86	1.9	5
A	104869	32	1.1	5
A	104870	10	0.2	5
A	104871	12	0.5	5
A	104872	18	0.2	5
A	104873	16	1.0	80
A	104874	26	0.1	5
A	104875	8	0.2	5
A	104882	22	5.5	30
A	104883	382	6.5	40
A	104884	10	1.6	5
A	104885	6	0.1	5
A	104886	26	2.4	90
A	104887	12	0.6	5
A	104888	18	1.0	5
A	104889	10	1.1	140
A	104890	18	1.8	5
A	104891	6	0.6	5
A	104892	24	0.3	5
A	104893	150	4.8	470
A	104894	10	0.2	5
A	104895	30	1.9	5
A	104896	24	6.6	30
A	104897	6	0.4	5
A	104898	34	1.5	5
A	104899	10	0.5	5
A	104900	18	0.7	5
A	104901	22	0.3	10
A	104902	108	6.6	5
A	104903	10	18.2	5
A	104904	6	1.6	5

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AUG 21 1989  
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*file*

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*[Signature]*

Holy Cross (RB)

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

DATE RECEIVED: AUG 11 1989

DATE REPORT MAILED: Aug. 16/89..

### GEOCHEMICAL ANALYSIS CERTIFICATE

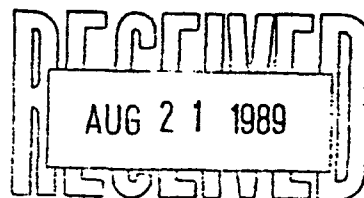
ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA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

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

NORANDA EXPLORATION CO. LTD. PROJECT 8908-054 253 FILE # 89-2860

SAMPLE#	Cu PPM	Ag PPM	Au* PPB
104936	39	.1	1
104937	7	.1	3
104938	17	.6	1
104939	21	.1	3
104940	7	.7	3
104941	5	.2	1
104942	101	5.7	19
104943	16	.1	3
104944	47	.8	7
104945	26	1.2	1
104946	31	2.8	1
104947	27	.3	1
104948	8	1.7	1
104949	15	.2	4
104950	4	.2	2
104976	7	.9	8
104977	19	1.0	3
104978	6	.1	1
104979	9	3.0	20
104980	28	1.2	15
104981	12	1.6	1
104982	149	.5	1
104983	92	.1	1
104984	61	.1	1
104985	13	.1	1
104986	12	3.6	440
104987	7	.7	3
104988	10	1.4	40
104989	23	4.9	100
104990	39	.7	1
104991	37	.6	1
104992	11	.1	1
104993	61	2.9	8
104994	16	2.4	19
STD C/AU-R	63	7.0	515

*file*



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

DATE RECEIVED: SEP 5 1989

DATE REPORT MAILED: *Sept. 8/89*

### GEOCHEMICAL ANALYSIS CERTIFICATE

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

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

Noranda Exploration Co. Ltd. PROJECT 8909-027 253 FILE # 89-3447 Page 1

SAMPLE#	Cu PPM	Ag PPM	Au* PPB
104995	116	2.6	6
104996	16	1.1	7
104997	215	.1	1
104998	197	.8	2
106501	94	.4	6
106502	84	.9	5
106503	179	.1	1
106504	291	1.8	27
106505	285	2.4	4
106506	907	7.8	14
106507	148	3.4	11
106508	78	2.0	25
106509	214	2.9	15
106510	108	3.4	27
106511	57	2.0	13
106512	48	.5	9
106513	98	1.5	13
106514	380	5.8	240
106515	222	.5	13
106516	770	2.1	21
106517	609	1.5	74
106518	522	9.0	25
106519	36	.2	13
106520	44	1.0	8
106521	102	.5	5
106522	223	.5	2
106523	58	.3	5
106524	163	.1	2
106525	261	.3	4
106526	8	.1	4
106527	4	.3	3
106528	18	.2	4
106529	16	.1	21
106530	10	.1	4
106531	8	.1	24
106532	9	.5	35
STD C/AU-R	61	6.9	520

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SAMPLE#	Cu PPM	Ag PPM	Au* PPB
106533	15	1.0	94
106534	13	.6	7
106535	22	.4	5
106536	26	1.1	3
106537	32	1.2	2
106538	36	.4	5
106539	13	1.0	1
106540	26	.3	1
106541	7	1.9	55
106542	9	.9	3
106543	6	.2	1
106545	5	.1	4
106546	22	.5	1
106547	5	.2	3
106548	16	.1	1
STD C/AU-R	61	7.0	530

Holy Cross (ms) file

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

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN PB SR CA P LA CR NG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 ROCK P2 SOIL AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 6 1989 DATE REPORT MAILED: Sept 12, 1989 SIGNED BY: D. J. J. D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Noranda Exploration Co. Ltd. PROJECT 8909-036 253 File # 89-3493 Page 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Ng	Ba	Ti	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB
RX 103751	12	285	78	27	2.5	4	2	46	.89	2	5	ND	3	12	1	2	5	4	.05	.022	30	24	.02	680	.01	10	.23	.01	.17	1	11

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SEP 18 1989  
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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
103756	5	395	13	152	.3	17	11	481	3.39	11	5	ND	3	36	1	2	2	64	.41	.076	19	27	.51	187	.11	2	1.90	.01	.09	1	18
103757	7	90	35	93	.2	10	10	597	3.66	5	5	ND	2	61	1	2	2	55	.69	.089	22	14	.51	314	.07	2	1.43	.02	.15	1	7
103760	5	90	22	138	1.0	8	10	407	4.68	14	5	ND	2	12	1	3	2	66	.10	.166	11	15	.25	152	.03	2	2.86	.01	.07	1	4

ACME ANALYTICAL LABORATORIES LTD.

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

PHONE(604)253-3158

FAX(604)253-1716

*Holy Cross (Rb)*

DATE RECEIVED: NOV 8 1989

V6A 1R6

DATE REPORT MAILED:

*Nov 10/89*

### GEOCHEMICAL ANALYSIS CERTIFICATE

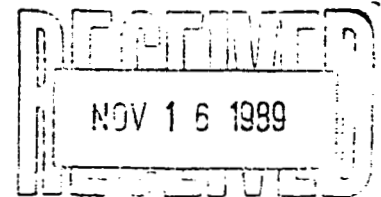
- SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

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

Noranda Exploration Co. Ltd. PROJECT 8911-016 253 FILE # 89-4676 Page 1

SAMPLE#	AU* ppb
106552	5
106555	3
106556	2
106557	2
106558	6
106559	1
106560	1
106561	2
106562	13
106563	1
106564	1
106565	1
106566	1
106567	30
106568	7
106569	1
106570	1
106571	2
106572	4
106573	24
106574	3
106575	27
106576	39
106577	8
106578	9
106579	8
106580	29
106581	10
106582	24
106583	21
106584	9
106585	2
106586	3
106587	10
106588	118
106589	280

*file*



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SAMPLE#	AU* ppb
106590	138
106591	16
106592	13
106593	10
106594	15
106595	27
106596	14
106597	16
106598	3
106599	2
106600	2
106601	7
106602	32
106603	250
106604	221
106605	52
106606	20
106607	25
106608	9
106609	17
106610	39
106611	29
106612	23
106613	86
106614	57
106615	73
106616	17
106617	3
106618	3
106619	7
106620	1
106621	3
106622	3
106623	1
106624	14
106625	206

SAMPLE#	AU* ppb
106626	2
106627	7
106628	1
106629	5
106630	1
106631	2
106632	2
106633	3
106634	8
106635	2
106636	8
106637	16
106638	13
106639	24
106640	8
106641	12
106642	8
106643	7
106644	3
106645	6
106646	4
106647	3
106648	3
106649	1
106650	3
106651	32
106652	12
106653	13
106654	35
106655	4
106656	5
106657	4
106658	1
106659	6
106660	1
106661	1

SAMPLE#	AU* ppb
106662	23
106663	2
106664	4
106665	3
106666	2
106667	1
106668	3
106669	2
106670	6
106671	1
106672	4
106673	1
106675	5
106676	3
106677	1
106678	3
106679	3
106680	3
106681	1
106682	1
106683	1
106684	3
106685	3
106686	5
106687	3
106688	1
106689	1
106690	4
106691	1
106692	3
106693	3
106694	1
106695	2
106696	1
106697	6
106698	27



SAMPLE#	AU* ppb
106699	31
106700	18
106701	8
106702	5
106703	2
106704	3
106705	1
106706	1
106707	1
106708	5
106709	38
106710	6
106711	5
106712	7
106713	8
106714	19
106715	1
106716	1
106717	1
106718	1
106719	1
106720	3
106721	3
106722	1
106723	1
106724	1
106725	2
106726	1
106727	4
106728	1
106729	1
106730	1
106731	1
106732	1
106733	2
106734	4

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8911-016

Project No. : 253  
 Material : 205 RX  
 Remarks :

Sheet: 1 of 4  
 Geol.: R.R.

Date rec'd: NOV. 08  
 Date compl: NOV. 21

Values in PPM, except where noted.

T. T. No.	SAMPLE No.	Cu	Ag
122	106552	12	0.4
123	106555	22	0.6
124	106556	8	0.5
125	106557	4	0.5
126	106558	8	0.6
127	106559	4	0.6
128	106560	6	0.6
129	106561	4	0.6
130	106562	4	0.6
131	106563	4	0.7
132	106564	6	0.8
133	106565	14	0.3
134	106566	10	0.3
135	106567	4	0.5
136	106568	8	0.8
137	106569	10	0.5
138	106570	14	0.7
139	106571	4	1.0
140	106572	4	1.0
141	106573	6	0.9
142	106574	6	0.7
143	106575	10	1.2
144	106576	8	1.0
145	106577	10	1.3
146	106578	10	0.9
147	106579	16	0.9
148	106580	14	0.4
149	106581	10	0.3
150	CHECK NL-6	58	1.1
151	106582	16	0.7
152	106583	16	2.4
153	106584	10	1.1
154	106585	8	0.7
155	106586	8	0.7
156	106587	10	0.6
157	106588	16	0.7
158	106589	18	1.2
159	106590	14	0.9
160	106591	26	1.1
2	106592	24	0.8
3	106593	32	1.6
4	106594	44	1.2
5	106595	80	1.6
6	106596	440	1.8
7	106597	40	1.2
8	106598	116	0.4
9	106599	88	0.2
10	106600	68	0.2

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T. T. No.	SAMPLE No.	Cu	Ag
11	106601	96	1.0
12	106602	48	3.6
13	106603	40	12.0
14	106604	16	1.6
15	106605	32	1.8
16	106606	64	2.0
17	106607	234	7.0
18	106608	28	1.4
19	106609	56	2.0
20	106610	480	8.2
21	106611	52	10.0
22	106612	40	4.2
23	106613	1600	22.0
24	106614	132	32.0
25	106615	52	16.0
26	106616	16	1.6
27	106617	12	0.2
28	106618	12	0.4
29	106619	44	0.8
30	106620	32	0.2
31	106621	24	0.2
32	106622	20	0.2
33	106623	16	0.2
34	106624	20	0.2
35	106625	88	1.8
36	106626	8	0.2
37	106627	8	0.2
38	106628	8	0.2
39	106629	12	0.2
40	106630	16	0.2
41	106631	12	0.2
42	106632	12	0.4
43	106633	12	0.2
44	106634	16	0.2
45	106635	20	0.2
46	106636	20	0.2
47	106637	20	0.4
48	106638	24	0.6
49	106639	64	0.2
50	106640	72	0.2
51	106641	48	2.2
52	106642	24	0.4
53	106643	72	0.4
54	106644	26	0.6
55	106645	24	1.2
56	106646	24	0.4
57	106647	20	0.2
58	106648	28	0.2
59	106649	28	0.4
60	106650	40	0.2
61	106651	148	1.6
62	106652	88	3.0
63	106653	92	2.2
64	106654	220	4.6
65	106655	84	0.1
66	106656	220	0.2
67	106657	12	0.1

T. T. No.	SAMPLE No.	Cu	Ag
68	106658	8	0.1
69	106659	8	0.2
70	106660	192	0.4
71	106661	94	0.4
72	106662	126	0.6
73	106663	52	0.1
74	106664	32	0.1
75	106665	6	0.1
76	106666	10	0.1
77	106667	4	0.1
78	106668	14	0.1
79	106669	14	0.1
80	106670	10	0.1
81	106671	6	0.1
82	106672	8	0.1
83	106673	6	0.1
84	106675	128	0.4
85	106676	24	0.1
86	106677	18	0.1
87	106678	18	0.1
88	106679	18	0.1
89	106680	12	0.1
90	106681	76	0.3
91	106682	6	0.2
92	106683	4	0.2
93	106684	6	0.1
94	106685	14	0.7
95	106686	6	0.3
96	106687	12	0.3
97	106688	16	0.4
98	106689	18	0.1
99	106690	10	0.7
100	CHECK NL-6	54	0.9
101	106691	10	0.2
102	106692	10	0.1
103	106693	6	0.1
104	106694	10	0.1
105	106695	14	0.5
106	106696	8	0.2
107	106697	6	0.2
108	106698	48	0.6
109	106699	6	0.6
110	106700	8	0.3
111	106701	6	0.3
112	106702	6	0.3
113	106703	6	0.1
114	106704	8	0.2
115	106705	4	0.2
116	106706	6	0.4
117	106707	18	0.3
118	106708	20	0.3
119	106709	20	1.3
120	106710	14	0.7
121	106711	40	1.4
122	106712	16	2.0
123	106713	12	0.2
124	106714	12	0.2

T. T. No.	SAMPLE No.	Cu	Ag
125	106715	8	0.2
126	106716	8	0.2
127	106717	16	0.4
128	106718	20	0.1
129	106719	12	1.4
130	106720	12	0.4
131	106721	12	0.2
132	106722	16	1.2
133	106723	12	0.1
134	106724	60	3.0
135	106725	28	1.6
136	106726	20	0.8
137	106727	12	2.6
138	106728	24	1.6
139	106729	12	2.0
140	106730	16	1.8
141	106731	24	7.4
142	106732	16	2.0
143	106733	12	0.8
144	106734	12	0.2
145	106735	12	1.0
146	106736	20	0.4
147	106737	16	0.6
148	106738	36	0.2
149	106739	24	0.2
150	CHECK NL-6	56	1.2
151	106740	36	0.2
152	106741	56	0.1
153	106742	52	0.4
154	106743	48	0.2
155	106744	40	0.1
156	106745	4	0.1
157	106746	4	0.1
158	106747	4	0.2
159	106748	4	0.4
160	106749	4	0.2
161	106750	4	0.2
162	106751	4	0.2
163	106752	8	0.1
164	106753	132	2.0
165	106754	140	6.8
166	106755	140	1.2
167	106756	24	0.8
168	106757	44	0.6
169	106758	48	2.2
170	106759	140	2.2

APPENDIX V  
HOLY CROSS PROPERTY  
CERTIFICATES OF ANALYSES (SOILS, PANS)

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS *file*

CODE : 8906-082

Project No. : 253  
 Material : 322 SOILS  
 Remarks :

Sheet: 1 of 6  
 Geol.: R.B.

Date rec'd: JUN. 21  
 Date compl: JUL. 13

Values in PPM, except where noted.

. T. a.	SAMPLE No.	Cu	Ag	PPB Au
2	11600N-4800E	6	0.1	5
3	4850	14	0.2	5
4	4900	46	1.8	5
5	4950	10	0.1	5
6	5000	8	0.1	5
7	5100	14	0.1	5
8	5150	12	0.1	5
9	5200	10	0.1	140
10	5250	12	0.1	5
11	5300	16	0.1	5
12	5350	26	0.2	5
13	5400	18	0.1	5
14	5450	18	0.1	5
15	5500	22	0.1	5
16	5550	14	0.2	5
17	5600	14	0.1	135
18	5650	16	0.1	5
19	5700	14	0.1	5
20	5750	14	0.1	5
21	5800	14	0.2	5
22	5900	10	0.1	5
23	11600N-5950E	12	0.3	5
24	9000E-11000N	40	0.1	5
25	11050	54	0.1	5
26	11100	22	0.2	5
27	11150	32	0.1	10
28	11200	38	0.1	5
29	11250	22	0.1	5
30	11300	18	0.1	5
31	11350	26	0.1	5
32	11400	20	0.1	5
33	11450	18	0.1	25
34	11500	18	0.1	5
35	11550	18	0.1	5
36	11600	24	0.1	5
37	11650	28	0.1	5
38	11700	12	0.1	5
39	11750	18	0.1	5
40	11800	20	0.1	5
41	11850	22	0.1	5
42	11900	14	0.1	5
43	11950	26	0.1	5
44	9000E-12000N	10	0.1	5
45	9200E-11000N	92	0.1	5
46	11050	38	0.2	5
47	11100	32	0.1	5
48	11150	26	0.1	5
49	9200E-11200N	42	0.1	5

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. T. No.	SAMPLE No.	Cu	Ag	PPB Au
50	9200E-11250N	42	0.1	5
51	11300	32	0.1	5
52	11350	24	0.1	5
53	11400	28	0.1	5
54	11450	22	0.1	5
55	11500	20	0.1	5
56	11550	34	0.4	5
57	11600	58	0.4	5
58	11650	16	0.1	5
59	11700	28	0.1	5
60	11750	22	0.1	5
61	11800	18	0.2	5
62	11850	16	0.2	5
63	11900	12	0.1	5
64	11950	34	0.1	5
65	12000	26	0.1	5
66	12050	18	0.1	5
67	9200E-12100N	18	0.1	5
68	8000E-11000N	22	0.1	5
69	11050	24	0.1	5
70	11100	22	0.4	5
71	11150	62	1.0	5
72	11250	24	0.7	5
73	11300	22	0.4	5
74	11350	24	0.2	15
75	11400	24	0.4	5
76	11450	16	0.3	5
77	11500	16	0.2	5
78	11550	14	0.1	5
79	11650	16	0.3	5
80	11700	50	1.3	5
81	11750	18	0.6	5
82	11800	16	0.1	5
83	11850	12	0.1	5
84	11900	16	0.1	5
85	8000E-11950N	12	0.1	5
86	8200E-11000N	32	0.2	5
87	11050	22	0.2	5
88	11100	16	0.3	5
89	11150	28	0.2	5
90	11200	34	0.2	5
91	11250	14	0.1	5
92	11300	172	2.0	5
93	11350	34	0.6	5
94	11400	18	0.2	5
95	11450	20	0.2	25
96	11500	36	1.2	5
97	11550	30	0.4	5
98	11750	14	0.1	5
99	11800	16	0.1	5
00	CHECK NL-6	54	1.0	1
01	11850	18	0.1	5
02	11900	10	0.1	5
03	11950	10	0.1	5
04	8200E-12000N	12	0.1	30
05	8400E-11000N	18	0.1	5
06	8400E-11050N	22	0.2	5



T. No.	SAMPLE No.	Cu	Ag	PPB Au
07	B400E-11100N	18	0.3	5
08	11150	28	0.1	5
09	11200	22	0.2	5
10	11250	20	0.4	5
11	11300	24	0.4	5
12	11350	20	0.1	55
13	11400	18	0.1	5
14	11450	22	0.2	5
15	11500	18	0.2	5
16	11550	18	0.1	5
17	11600	24	0.1	5
18	11650	52	0.4	5
19	11700	16	0.1	30
20	11750	14	0.1	5
21	11800	14	0.1	5
22	11850	22	0.1	5
23	11900	20	0.1	5
24	11950	14	0.1	5
25	B400E-12000N	14	0.1	5
26	9800E-9350N	22	0.1	5
27	9800E-9350N +10mN	30	0.1	5
28	9800E-9350N +10mE	20	0.2	125
29	9800E-9350N +10mS	14	0.1	5
30	9800E-9350N +10mW	22	0.1	5
31	9800E-9450N	22	0.1	5
32	9800E-9450N +10mN	24	0.1	5
33	9800E-9450N +10mE	18	0.2	5
34	9800E-9450N +10mS	22	0.3	5
35	9800E-9450N +10mW	24	0.1	5
36	9800E-9775N	24	0.2	5
37	9800E-9775N +10mN	22	0.2	5
38	9800E-9775N +10mE	18	0.2	5
39	9800E-9775N +10mS	22	0.2	5
40	9800E-9775N +10mW	12	0.1	5
41	10000E-9650N	90	0.6	5
42	10000E-9650N +10mN	32	0.1	5
43	10000E-9650N +10mE	22	0.4	5
44	10000E-9650N +10mS	242	0.2	5
45	10000E-9650N +10mW	24	0.2	5
46	12000N-5050E	14	0.1	5
47	5100	16	0.1	5
48	5150	16	0.2	5
49	5200	18	0.1	5
2	5250	12	0.1	50
3	5300	14	0.1	5
4	5350	22	0.1	5
5	5400	10	0.4	5
6	5450	8	0.2	5
7	5500	14	0.1	5
8	5550	18	0.3	5
9	5600	20	0.1	5
10	5650	16	0.3	5
11	5700	24	0.3	5
12	5750	18	0.1	5
13	5800	24	0.1	5
14	5850	12	0.1	5
15	12000N-5900E	24	0.2	5

T.  
No.

SAMPLE  
No.

Cu

Ag

PPB  
Au

8906-082  
Pg. 4 of 6

T. No.	SAMPLE No.	Cu	Ag	PPB Au
16	12000N-5950E	16	0.2	5
17	12000E-7050N	12	0.1	5
18	8800E-11000N	26	0.3	5
19	11050	14	0.4	5
20	11100	20	0.7	5
21	11150	24	0.2	5
22	11200	40	0.4	5
23	11250	20	0.1	5
24	11300	18	0.2	5
25	11350	24	0.1	5
26	11400	16	0.1	5
27	11450	14	0.1	5
28	11500	16	0.1	5
29	11550	28	0.2	5
30	11600	36	0.3	5
31	11650	24	0.1	5
32	11700	14	0.1	5
33	11750	10	0.1	5
34	11800	14	0.1	5
35	11850	12	0.2	5
36	11900	16	0.2	5
37	11950	14	0.1	5
38	8800E-12000N	38	0.4	5
39	8600E-11050N	82	0.9	5
40	11000	80	1.2	5
41	11100	58	0.2	5
42	11150	16	1.8	5
43	11200	116	1.7	5
44	11250	112	0.2	5
45	11300	28	0.3	5
46	11350	50	0.6	5
47	11400	62	0.1	5
48	11500	18	0.1	5
49	11550	12	1.4	5
50	11600	70	0.4	5
51	11650	22	0.1	5
52	11700	10	0.1	5
53	11750	12	0.1	5
54	11800	14	0.2	5
55	11850	14	0.2	5
56	11900	64	1.2	5
57	11950	14	0.3	5
58	8600E-12000N	20	0.4	5
59	10000E-10250N	90	0.4	5
60	10000E-10250N +10mN	72	0.6	5
61	10000E-10250N +10mE	86	0.8	5
62	10000E-10250N +10mS	72	0.5	5
63	10000E-10250N +10mW	100	0.3	5
64	10600E-9550N	16	0.4	5
65	10600E-9550N +10mN	16	0.4	5
66	10600E-9550N +10mE	18	0.2	5
67	10600E-9550N +10mS	14	0.2	5
68	10600E-9550N +10mW	10	0.2	5
69	10400E-9475N	12	0.5	200
70	10400E-9475N +10mN	54	0.5	5
71	10400E-9475N +10mS	18	0.4	70
72	10400E-9475N +10mW	20	0.2	5

T.	SAMPLE No.		Cu	Ag	PPB Au
73	10400E-9475N	+10mE	16	0.4	5
74	10500E-9850N		48	0.1	5
75	10500E-9850N	+10mN	22	0.1	5
76	10500E-9850N	+10mS	42	0.1	5
77	10500E-9850N	+10mW	52	0.2	5
78	10500E-9850N	+10mE	34	0.2	5
79	10800E-9975N		92	0.4	5
30	10800E-9975N	+10mN	36	0.4	5
31	10800E-9975N	+10mS	74	0.6	5
32	10800E-9975N	+10mE	78	0.6	5
33	10800E-9975N	+10mW	22	0.3	5
34	11000E-9975N		20	0.1	5
35	11000E-9975N	+10mN	14	0.3	5
36	11000E-9975N	+10mS	12	0.1	5
37	11000E-9975N	+10mE	10	0.1	5
38	11000E-9975N	+10mW	14	0.2	5
39	11400E-9750N		94	1.9	5
30	12100E-9350N		24	0.1	5
31	9350		14	0.1	5
32	9370		12	0.1	5
33	9380		12	0.1	5
34	9390		16	0.1	5
35	9400		20	0.1	5
36	9410		82	0.4	5
37	9420		50	0.4	5
38	9430		74	0.4	5
39	9440		76	0.4	5
00	CHECK NL-6		52	1.0	1
01	9450		62	0.3	5
02	9460		50	0.2	5
03	9470		74	0.4	55
04	9500		20	1.8	620
05	9510		26	1.5	520
06	9520		30	0.7	290
07	9530		16	0.6	425
08	9540		10	1.3	950
09	12100E-9550N		12	0.7	210
10	11600E-10600N		12	0.2	5
11	11600E-10600N	+10mN	12	0.2	5
12	11600E-10600N	+10mS	10	0.1	5
13	11600E-10600N	+10mW	16	0.2	5
14	11600E-10600N	+10mE	14	0.2	5
15	11600E-10575N		14	0.1	5
16	11600E-10575N	+10mN	14	0.2	5
17	11600E-10575N	+10mS	14	0.1	5
18	11600E-10575N	+10mW	14	0.1	5
19	11600E-10575N	+10mE	12	0.1	5
20	11200E-10400N		14	0.2	30
21	11200E-10400N	+10mN	16	0.3	5
22	11200E-10400N	+10mS	14	0.2	5
23	11200E-10400N	+10mW	14	0.1	5
24	11200E-10400N	+10mE	16	0.2	5
25	11500E-10350N		10	0.1	5
26	11500E-10350N	+10mN	18	0.1	5
27	11500E-10350N	+10mS	12	0.1	5
28	11500E-10350N	+10mW	16	0.1	5
29	11500E-10350N	+10mE	14	0.2	5

. T. No.	SAMPLE No.	Cu	Ag	PPB Au
30	10900E-9500N	12	0.1	5
31	10900E-9500N +10mN	14	0.1	5
32	10900E-9500N +10mS	12	0.2	5
33	10900E-9500N +10mW	12	0.1	5
34	10900E-9500N +10mE	14	0.2	5
35	12200E-10475N	14	0.2	5
36	12200E-10475N +10mN	14	0.2	5
37	12200E-10475N +10mS	10	0.1	5
38	12200E-10475N +10mE	16	0.1	5
39	12200E-10475N +10mW	30	0.2	25
40	12000E-10150N	28	0.3	5
41	12000E-10150N +10mN	20	0.1	5
42	12000E-10150N +10mS	24	0.3	5
43	12000E-10150N +10mE	32	0.7	15
44	12000E-10150N +10mW	18	0.2	5
45	12000E-10400N	10	0.3	5
46	12000E-10400N +10mN	12	0.1	25
47	12000E-10400N +10mS	12	0.1	5
48	12000E-10400N +10mE	12	0.2	5
49	12000E-10400N +10mW	10	0.3	5
50	CHECK NL-6	52	1.0	1
51	12400E-4900N	12	0.2	5
52	9710	12	0.1	5
53	9720	12	0.1	5
54	9730	10	0.1	5
55	9740	8	0.1	5
56	9750	12	0.2	5
57	9760	8	0.1	5
58	9770	10	0.1	5
59	9780	6	0.1	5
60	9790	12	0.1	250
61	9800	18	0.1	5
62	9810	22	0.5	5
63	9820	10	0.2	5
64	9830	10	0.1	5
65	9840	14	0.1	5
66	9850	8	0.1	10
67	9860	10	0.1	5
68	9870	14	0.1	5
69	9880	10	0.1	20
70	9890	8	0.1	5
71	9900	10	0.1	20
72	9910	10	0.1	5
73	12400E-9920N	8	0.1	5
74	11000E-9650N	18	0.1	5
75	11000E-9650N +10mS	10	0.1	5
76	11000E-9650N +10mN	12	0.1	5
77	11000E-9650N +10mE	12	0.1	35
78	11000E-9650N +10mW	14	0.1	15

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8906-034

Project No. : 253  
 Material : 314 SOILS  
 Remarks :

Sheet: 1 of 6  
 Geol.: R.B.

Date rec'd: JUN 08  
 Date compl: JUN 22

Values in PPM, except where noted.

.T. No.	SAMPLE No.	Cu	Ag	PPB	
				Au	
2	9600N-4100E	20	0.4		5
3	4150	16	0.3		5
4	4200	14	0.1		5
5	4250	12	0.2		5
6	4300	22	0.5		5
7	4350	14	0.4		5
8	4400	10	0.5		5
9	4450	12	0.1		5
10	4550	28	0.7		5
11	4600	20	0.2		5
12	4650	16	0.7		5
13	4700	12	0.3		5
14	4750	18	0.2		5
15	4850	22	0.4		5
16	4900	22	0.2		5
17	4950	16	0.2		5
18	5000	18	0.4		5
19	5050	12	0.4		5
20	5100	18	0.3		5
21	5150	16	0.2		5
22	5200	20	0.6		5
23	5350	16	0.4		5
24	5400	20	0.5		5
25	5450	18	0.2		5
26	5500	16	0.2		5
27	5550	14	0.2		5
28	5600	44	0.7		5
29	5650	16	0.2		5
30	5700	32	1.2		5
31	5750	20	0.5		5
32	5800	60	1.8		5
33	5850	20	0.2		5
34	5900	18	0.2		5
35	5950	18	0.7		5
36	6000	22	1.1		5
37	6050	28	0.8		5
38	6100	18	1.0		5
39	6150	18	0.5		5
40	6200	14	0.1		5
41	6250	14	0.3		5
42	6300	14	0.3		5
43	6350	30	0.9		5
44	6400	44	2.4		5
45	6450	34	1.2		5
46	6500	68	1.1		5
47	6550	172	0.8		5
48	6600	12	0.4		5
49	9600N-6650E	18	0.4		5

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T.  
No.

SAMPLE  
No.

Cu

Ag

PPB  
Au

8906-034  
Pg. 2 of 6

T. No.	SAMPLE No.	Cu	Ag	PPB Au
50	9600N-6700E	18	0.4	5
51	6750	12	0.3	5
52	6800	18	0.9	5
53	6850	16	0.6	5
54	6900	14	0.3	5
55	6950	16	0.4	5
56	7000	10	0.1	5
57	7050	40	1.2	5
58	7100	58	2.0	5
59	7150	152	2.9	5
50	7200	16	1.0	5
61	7250	20	2.8	5
62	7300	20	1.0	5
63	7350	18	1.3	5
64	7400	12	0.7	5
65	7450	14	1.3	5
66	7500	12	2.1	5
67	7550	8	1.6	5
68	7600	10	3.1	5
69	7650	22	5.6	5
70	7700	30	2.7	5
71	7750	8	0.2	5
72	7800	44	1.8	5
73	7850	38	1.6	5
74	7900	32	2.1	5
75	7950	120	6.2	5
76	9600N-8000E	20	1.3	5
77	10000N-3800E	12	0.6	5
78	3850	12	0.4	5
79	3900	12	0.5	5
80	3950	12	0.6	5
81	4000	24	0.4	5
82	4050	16	0.3	5
83	4100	18	0.5	5
84	4150	16	0.4	5
85	4200	14	0.5	5
86	4250	12	0.5	5
87	4300	12	0.3	5
88	4350	12	0.3	5
89	4400	14	0.4	5
90	4450	18	0.5	5
91	4500	16	0.5	5
92	4550	18	0.5	5
93	4600	68	1.1	5
94	4650	30	0.9	5
95	4700	40	1.2	5
96	4750	16	0.4	5
97	4800	18	0.5	5
98	4950	16	0.4	125
99	10000N-5050E	44	1.1	5
00	CHECK NL-6	54	1.1	-
01	10000N-5100E	30	0.8	5
02	5150	18	0.5	5
03	5200	20	0.5	5
04	5250	22	0.6	5
05	5300	100	1.5	5
06	10000N-5350E	18	0.7	5

. T. 3.	SAMPLE No.	Cu	Ag	PPB Au	8906-034 Pg. 3 of 6
07	10000N-5400E	18	0.5	5	
08	5450	16	0.4	5	
09	5500	18	0.4	5	
10	5550	14	0.6	5	
11	5600	20	0.7	5	
12	5650	86	2.5	5	
13	5700	22	1.1	5	
14	5750	14	0.9	5	
15	5850	62	1.8	5	
16	5900	36	0.8	5	
17	5950	62	1.4	5	
18	6000	20	0.8	5	
19	6050	20	0.7	5	
20	6100	18	1.4	5	
21	6150	16	1.3	5	
22	6200	18	4.3	5	
23	6250	18	2.5	5	
24	6300	24	2.4	5	
25	6350	22	1.2	5	
26	6400	22	2.2	5	
27	6450	8	1.2	5	
28	6500	16	1.0	5	
29	6600	22	1.6	5	
30	6650	24	2.1	5	
31	6700	10	0.7	5	
32	6750	30	1.5	5	
33	10000N-6800E	36	1.1	5	
34	10400N-4800E	18	0.8	10	
35	4850	30	1.1	5	
36	4900	16	0.6	5	
37	5000	16	0.8	5	
38	5050	14	1.3	5	
39	5100	16	0.7	5	
40	5150	12	0.9	5	
41	5200	20	0.7	5	
42	5250	18	0.7	5	
43	5350	30	1.1	5	
44	5400	16	0.7	5	
45	5450	18	2.7	5	
46	5500	30	1.7	5	
47	5550	56	1.3	5	
48	5600	68	1.5	5	
49	5650	26	1.3	15	
50	5700	64	1.2	5	
2	5750	112	0.8	5	
3	5800	360	0.6	5	
4	5850	22	0.1	5	
5	5900	18	0.1	5	
6	5950	16	0.1	5	
7	6000	48	0.2	5	
8	6050	24	2.0	5	
9	6100	22	2.8	5	
10	6150	18	1.9	5	
11	6200	18	1.0	5	
12	6250	12	0.1	5	
13	6300	18	1.2	5	
14	10400N-6350E	16	2.6	5	

. T. No.	SAMPLE No.	Cu	Ag	PPB	8906-034 Pg. 4 of 6
				Au	
15	10400N-6400E	22	1.6	5	
16	6450	24	0.6	5	
17	6500	60	2.5	5	
18	6550	36	1.4	5	
19	6600	22	0.4	5	
20	6650	94	3.3	5	
21	6700	16	0.3	5	
22	6800	18	0.9	5	
23	6850	18	2.3	5	
24	6900	30	1.1	5	
25	6950	22	2.1	5	
26	7000	20	0.7	5	
27	7100	30	0.8	20	
28	7150	30	3.0	5	
29	7200	36	7.8	5	
30	7250	16	0.9	5	
31	7300	26	1.4	5	
32	7350	90	1.3	5	
33	7400	18	0.8	5	
34	7450	40	1.9	10	
35	7500	48	1.2	10	
36	7550	18	1.2	875	
37	7600	44	1.7	5	
38	7650	28	1.4	20	
39	7700	52	3.0	30	
40	7750	26	0.9	5	
41	7800	18	0.9	70	
42	7850	38	0.1	5	
43	7900	16	0.2	5	
44	7950	34	0.7	5	
45	10400N-8000E	280	3.1	15	
46	10800N-4800E	8	0.1	35	
47	4850	12	0.1	5	
48	4900	12	0.1	5	
49	4950	14	0.1	5	
50	5000	16	0.2	5	
51	5050	12	0.1	5	
52	5100	12	0.1	5	
53	5150	14	0.1	5	
54	5200	14	0.1	5	
55	5250	20	1.2	5	
56	5300	12	0.1	5	
57	5350	14	0.1	30	
58	5400	16	0.1	5	
59	5450	24	0.1	5	
60	5500	18	0.3	5	
61	5600	22	0.1	5	
62	5650	48	0.1	5	
63	5700	30	0.1	5	
64	5750	24	0.4	5	
65	5800	16	0.6	5	
66	5850	18	0.4	5	
67	5950	20	0.3	5	
68	6000	18	0.1	5	
69	6050	22	1.1	5	
70	6100	12	0.1	5	
71	10800N-6150E	14	0.8	5	



T.	SAMPLE No.	Cu	Ag	PPB Au
2	10800N-6200E	22	0.7	5
3	6250	18	0.6	5
4	6300	26	0.1	5
5	6350	34	0.2	5
6	6400	105	0.4	5
7	6450	14	0.1	5
8	6500	16	0.1	5
9	6550	20	0.2	5
0	6600	22	0.1	5
1	6650	22	0.1	5
2	6700	30	0.1	5
3	6750	40	0.1	5
4	6800	162	0.1	5
5	6850	20	0.1	5
6	6900	590	0.8	5
7	6950	90	0.5	5
8	7050	174	0.6	5
9	7100	26	1.1	5
0	7200	22	0.1	5
1	7250	24	0.4	5
2	7300	20	0.1	5
3	7400	18	0.7	20
4	7450	12	0.1	5
5	7500	30	1.1	5
6	7550	30	0.8	5
7	7600	62	1.2	435
8	7650	20	0.7	5
9	10800N-7700E	30	1.4	5
0	CHECK NL-6	52	1.1	-
1	10800N-7750E	26	0.8	110
2	7800	240	2.4	5
3	7850	38	0.9	5
4	7900	26	0.1	20
5	7950	18	0.1	5
6	10800N-8000E	42	0.3	5
7	11200N-4850E	12	0.1	5
8	4900	10	0.4	5
9	4950	12	0.1	5
0	5000	16	0.2	5
1	5050	26	0.7	5
2	5100	20	0.4	5
3	5150	20	0.1	5
4	5200	14	0.1	5
5	5250	14	0.1	5
6	5300	16	0.2	5
7	5350	16	0.1	5
8	5400	12	0.1	5
9	5450	12	0.2	5
0	5550	12	0.2	5
1	5600	14	0.1	5
2	5650	10	0.1	5
3	5700	12	0.1	5
4	5750	14	0.2	5
5	5800	14	0.1	5
6	5850	16	0.2	5
7	5900	12	0.1	5
8	11200N-5950E	14	0.1	5

T.	SAMPLE No.	Cu	Ag	PPB Au
29	11200N-6000E	12	0.3	5
30	6050	14	0.2	5
31	6100	12	0.1	5
32	6200	14	0.1	20
33	6250	16	0.8	5
34	6300	12	0.4	5
35	6350	14	0.3	5
36	6400	14	0.1	5
37	6450	14	0.1	5
38	6500	18	0.2	5
39	6550	40	0.9	5
40	6600	6	0.1	5
41	6650	6	0.1	5
42	6700	10	0.1	5
43	6750	14	0.3	5
44	6800	12	0.1	5
45	6850	16	0.1	5
46	6900	20	0.3	10
47	6950	62	0.6	5
48	7000	42	0.3	5
49	11200N-7050E	56	0.4	5
50	CHECK NL-6	54	1.2	-
51	11200N-7100E	16	0.2	35
52	7150	24	0.3	5
53	7200	36	0.6	5
54	7250	60	1.1	5
55	7300	18	0.4	5
56	7350	18	0.1	10
57	7400	28	0.3	10
58	7450	18	0.5	5
59	7500	16	0.1	5
50	7550	32	0.3	5
51	7600	22	0.1	5
52	7650	12	0.1	5
53	7700	34	1.0	5
54	7750	20	0.1	10
55	7800	12	0.1	10
56	7850	22	0.6	5
57	7900	12	0.1	5
58	7950	18	1.1	5
59	11200N-8000E	24	0.4	5

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8906-051

Project No. : 253  
 Material : 199 SOILS  
 Remarks :

Sheet: 1 of 4  
 Geol.: R.B.

Date rec'd: JUN14  
 Date compl: JUL04

Values in PPM, except where noted.

T.	SAMPLE	Cu	Ag	PPB
No.	No.			Au
2	8800N-6700E	14	0.2	5
3	6750	18	0.3	5
4	6800	44	0.8	5
5	6850	18	0.8	5
6	6900	12	0.1	5
7	6950	14	0.2	5
8	7000	14	0.1	5
9	7050	46	0.9	5
10	7100	26	0.5	5
11	7150	48	0.3	5
12	7200	26	0.6	5
13	7250	16	0.3	5
14	7300	12	0.2	5
15	7350	20	0.5	200
16	7400	14	0.3	5
17	7450	14	0.2	5
18	7500	84	1.2	5
19	7550	16	0.2	5
20	7600	14	0.2	5
21	7650	10	0.2	5
22	7700	14	0.4	5
23	7750	8	0.2	5
24	7800	8	0.5	5
25	7850	10	0.6	5
26	7900	12	0.3	5
27	7950	12	0.2	5
28	8000	10	0.1	5
29	8050	12	0.2	5
30	8100	16	0.4	5
31	8150	10	0.1	5
32	8200	16	0.2	5
33	8250	12	0.3	5
34	8300	20	0.4	5
35	8350	76	1.3	5
36	8400	22	0.7	5
37	8450	12	0.9	5
38	8500	14	0.4	5
39	8550	20	0.9	5
40	8600	12	1.0	5
41	8650	12	0.4	5
42	8700	12	0.5	5
43	8750	28	0.8	5
44	8800	56	1.3	5
45	8850	16	0.6	5
46	8900	8	0.3	5
47	8950	26	0.8	5
48	9000	14	0.2	5
49	8800N-9050E	12	0.5	5

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T.	SAMPLE No.	Cu	Ag	PPB Au
50	8800N-9100E	18	0.4	5
51	9150	12	0.3	5
52	9200	16	0.4	5
53	9250	20	0.2	5
54	8800N-9300E	88	0.9	5
55	9075N-8000E	12	0.2	5
56	8050	22	0.4	5
57	8100	12	0.2	5
58	8150	14	0.4	5
59	8200	14	0.3	5
60	8300	36	0.4	5
61	8350	44	0.6	5
62	8400	70	1.6	5
63	8450	16	0.2	5
64	8500	12	0.2	5
65	8550	12	0.2	5
66	8600	22	0.5	5
67	8650	8	0.3	5
68	8700	10	0.3	5
69	8750	14	0.1	5
70	8800	12	0.3	5
71	8850	16	0.3	5
72	8900	18	0.3	5
73	8950	34	0.5	5
74	9000	80	1.7	5
75	9050	18	0.3	5
76	9100	16	0.8	5
77	9150	18	0.3	5
78	9200	12	0.2	5
79	9250	14	0.1	5
80	9075N-9300E	12	0.2	5
81	9200N-5750E	18	0.3	5
82	5800	22	0.3	5
83	5900	32	0.4	5
84	5950	40	0.7	5
85	6000	110	1.6	5
86	6050	20	0.2	5
87	6100	22	0.4	5
88	6150	22	0.2	5
89	6200	26	0.8	5
90	6250	10	0.4	5
91	6300	14	0.2	5
92	6350	16	0.6	5
93	6400	20	0.6	5
94	6450	22	0.9	5
95	6500	68	1.0	5
96	6550	22	0.8	5
97	6600	26	0.9	5
98	6650	18	0.7	5
99	6700	18	0.3	5
00	CHECK NL-6	54	1.1	1
01	6750	20	0.4	5
02	6800	14	0.2	5
03	6850	14	0.3	5
04	6900	18	0.5	5
05	6950	22	0.3	5
06	9200N-7000E	20	0.3	5

. T. No.	SAMPLE No.	Cu	Ag	PPB Au
07	9200N-7050E	22	0.2	5
08	7100	48	0.6	15
09	7150	16	0.3	5
10	7200	16	0.2	5
11	7250	10	0.5	5
12	7300	20	0.3	5
13	7350	16	1.1	5
14	7400	24	8.4	5
15	7450	48	1.1	5
16	7500	26	2.0	5
17	7550	50	2.5	30
18	7600	66	1.1	5
19	7650	162	1.5	5
20	7700	14	0.2	5
21	7750	14	0.1	5
22	7800	14	0.2	5
23	7850	26	0.3	5
24	7900	18	0.2	5
25	7950	42	0.3	5
26	9200N-8050E	270	1.5	5
27	11600N-6000E	24	0.4	5
28	6050	18	0.4	5
29	6100	14	0.4	5
30	6150	14	0.3	5
31	6200	16	0.5	5
32	6250	12	0.2	5
33	6300	12	0.2	5
34	6350	14	0.3	5
35	6400	14	0.5	5
36	6450	14	0.2	5
37	6500	14	0.3	5
38	6550	16	0.3	5
39	6600	10	0.2	5
40	6650	14	0.2	5
41	6700	14	0.3	5
42	6750	14	0.2	5
43	6800	10	0.1	5
44	6850	12	0.3	5
45	6900	10	0.2	5
46	7050	12	0.4	5
47	7100	14	0.2	5
48	7150	10	0.2	5
49	11600N-7200E	20	0.5	5
50	CHECK NL-6	52	1.0	1
2	11600N-7250E	18	0.3	5
3	7300	14	0.2	5
4	7350	10	0.1	5
5	7400	8	0.1	5
6	7450	12	0.3	5
7	7500	10	0.3	5
8	7650	32	0.6	5
9	7700	18	0.4	5
10	7750	20	0.3	5
11	7800	14	0.3	5
12	7850	16	0.3	5
13	7900	14	0.3	5
14	11600E-8000E	10	0.3	5

T.	SAMPLE No.	Cu	Ag	PPB Au
5	12000N-6000E	24	0.3	5
6	6050	18	0.5	5
7	6100	16	0.4	5
8	6150	14	0.4	5
9	6200	12	0.2	5
20	6250	32	0.6	5
21	6300	12	0.6	5
22	6350	16	0.4	5
23	6400	16	0.3	5
24	6450	20	0.5	5
25	6500	12	0.2	5
26	6550	12	0.4	5
27	6600	12	0.2	5
28	6700	14	0.7	5
29	6750	8	0.3	5
30	6800	8	0.3	5
31	6850	22	0.7	5
32	6900	14	0.5	5
33	6950	14	0.4	5
34	7000	10	0.3	5
35	7100	14	0.3	5
36	7150	16	0.6	5
37	7200	14	0.4	5
38	7250	10	0.3	45
39	7300	34	1.1	5
40	7350	10	0.3	5
41	7400	12	0.4	5
42	7450	28	0.7	5
43	7500	18	0.6	5
44	7550	14	0.4	5
45	7600	18	0.5	5
46	7650	160	1.3	5
47	7700	10	0.4	5
48	7750	10	0.2	5
49	7800	8	0.1	5
50	7850	10	0.1	5
51	7900	14	0.5	5
52	7950	12	0.2	5
53	12000N-8000E	12	0.1	5

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NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8907-006

Project No. : 253

Sheet: 1 of 3

Date rec'd: JUN. 29

Material : 151 SOILS

Geol.: R. B.

Date compl: JUL. 17

Remarks :

Values in PPM, except where noted.

. T. No.	SAMPLE No.	PPB		
		Cu	Ag	
2	8200N-8750E	20	0.3	5
3	8800	20	0.1	5
4	8850	18	0.1	5
5	8900	20	0.3	5
6	8950	18	0.1	5
7	9000	18	0.1	5
8	9050	14	0.3	5
9	9100	32	0.5	5
10	9150	16	0.2	5
11	9200	12	0.3	5
12	8200N-9250E	20	0.2	5
13	8500N-8750E	12	0.3	5
14	8800	20	0.4	5
15	8850	108	0.9	5
16	8900	12	0.2	5
17	8950	16	0.1	5
18	9000	12	0.1	5
19	9050	22	0.4	5
20	9100	16	0.1	5
21	9150	40	0.4	5
22	9200	20	0.3	5
23	8500N-9250E	18	0.2	5
24	9300E-11950N	14	0.1	5
25	12000	22	0.2	5
26	12050	42	0.4	5
27	12100	18	0.2	5
28	12150	30	0.4	10
29	12200	42	0.6	5
30	12250	84	1.3	5
31	12300	14	0.3	5
32	12350	12	0.1	5
33	12400	22	0.4	5
34	9300E-12500N	28	0.9	5
35	9400E-11950N	14	0.1	5
36	12000	22	0.4	5
37	12050	56	0.7	5
38	12100	12	0.2	5
39	12150	18	0.1	15
40	12200	14	0.1	10
41	12250	10	0.4	5
42	12400	22	0.4	5
43	12450	24	0.6	5
44	9400E-12500N	62	2.7	20
45	9500E-11950N	32	0.5	30
46	12000	48	0.7	5
47	12250	10	0.5	5
48	12050	54	0.9	5
49	9500E-12100N	20	0.4	5

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. T. a.	SAMPLE No.	Cu	Ag	PPB Au
50	9500E-12150N	14	0.4	5
51	12200	18	0.3	5
52	12300	28	1.1	5
53	12350	16	0.7	5
54	12400	14	0.5	550
55	12450	18	1.0	5
56	9500E-12500N	16	1.0	50
57	9600E-11950N	26	0.3	5
58	12000	28	0.4	5
59	12050	22	0.3	5
60	12100	54	1.0	5
61	12150	18	0.2	5
62	12200	18	0.1	5
63	12250	18	0.1	5
64	12300	14	0.2	5
65	12350	16	0.1	40
66	12400	20	0.3	5
67	12450	20	0.4	5
68	9600E-12500N	18	0.3	5
69	110000E-10880N	28	0.3	10
70	10890	78	0.2	5
71	10900	112	0.1	5
72	10910	270	0.9	5
73	110000E-10920N	28	0.1	5
74	11900N-9300E	14	0.1	5
75	9350	16	0.3	5
76	9400	12	0.2	5
77	9450	16	0.2	5
78	9500	20	0.1	5
79	9550	16	0.3	5
80	9600	14	0.3	5
81	9650	32	0.4	5
82	11900N-9700E	26	0.3	5
83	19200N-22505N	26	0.5	5
84	22515	22	0.4	5
85	22525	20	0.4	5
86	22535	16	0.1	5
87	22545	12	0.2	5
88	22605	16	0.2	5
89	22615	18	0.3	55
90	22625	12	0.2	5
91	22635	18	0.2	5
92	22645	22	0.1	10
93	22730	14	0.1	5
94	22740	14	0.1	5
95	22750	16	0.1	65
96	22760	18	0.2	160
97	19200N-22770N	14	0.2	5
98	19400E-19820N	10	0.1	5
99	19830	8	0.1	5
100	CHECK NL-6	54	1.1	-
101	19840	10	0.1	5
102	19850	10	0.1	5
103	19400E-19860N	8	0.1	20
104	19500E-22575N	98	0.7	5
105	22585	142	0.8	5
106	19500E-22595N	112	0.9	5



. T. No.	SAMPLE No.	Cu	Ag	PPB Au
07	19500E-22605N	130	1.0	5
08	22615	46	0.9	5
09	22625	16	1.0	10
10	22635	12	0.2	5
11	22645	12	0.1	5
12	22655	54	0.4	5
13	22665	98	0.6	5
14	19500E-22675N	44	0.8	5
15	19600E-22950N	16	0.3	5
16	22960	14	0.3	5
17	22970	12	0.3	5
18	22980	12	0.1	5
19	22990	10	0.2	5
20	19600E-23000N	10	0.1	5
21	19700E-20275N	8	0.1	5
22	20285	8	0.1	5
23	20295	10	0.2	5
24	20305	720	0.4	5
25	20315	30	0.4	5
26	19700E-20325N	60	0.4	5
27	19800E-19145N	10	0.1	5
28	19155	8	0.1	5
29	19165	14	0.1	5
30	19175	8	0.1	5
31	19185	12	0.2	5
32	19195	12	0.1	5
33	19800E-19205N	10	0.1	5
34	20000E-20450N	10	0.1	5
35	20460	10	0.1	5
36	20470	10	0.1	5
37	20480	20	0.2	5
38	20490	160	0.1	450
39	20500	490	1.0	490
40	20510	212	0.6	25
41	20530	12	0.3	5
42	20540	10	0.2	5
43	20550	10	0.3	5
44	20650	8	0.1	5
45	20660	10	0.1	5
46	20670	12	0.2	5
47	20680	14	0.1	5
48	20690	136	0.3	5
49	20000E-20700N	18	0.3	5
50	CHECK NL-6	54	1.1	-
51	29951 WOLF-1	6	0.1	5
52	29952 WOLF-2	8	0.3	5
53	29953 WOLF-3	6	0.5	5
54	29954 WOLF-4	6	1.3	5

NORANDA VANCOUVER LABORATORY

IDN:HOLY CROSS

CODE : 8908-003

:253  
:148 SOILS

Sheet:1 of 3  
Geol.:R.R.

Date rec'd:JUL27  
Date compl:AUG23

Values in PPM, except where noted.

PLE α.	Cu	Ag	PPB Au
00E	14	0.2	5
550	12	0.1	5
600	14	0.1	5
650	12	0.2	5
700	16	0.2	5
750	18	0.2	5
800	14	0.3	5
850	16	0.3	5
900	16	0.3	5
950	12	0.2	5
000	22	0.2	5
050	18	0.5	5
100	16	0.2	5
150	46	0.4	5
200	24	0.3	5
250	20	0.5	5
300	18	0.3	5
350	22	0.3	5
400	16	0.4	5
450	14	0.3	5
500	14	0.2	5
550	78	0.7	5
600	46	0.8	5
650	12	0.3	5
700	14	0.2	5
750	14	0.2	5
800	24	0.3	5
850	10	0.2	5
900	10	0.2	5
950	10	0.3	5
00E	18	0.2	5
00E	12	0.2	5
550	16	0.1	55
500	18	0.2	5
550	18	0.3	5
700	22	0.1	5
750	18	0.2	5
800	20	0.3	25
850	14	0.1	5
900	14	0.3	5
950	18	0.2	5
000	16	0.3	5
050	14	0.2	5
100	14	0.1	5
250	12	0.3	5
300	70	1.1	5
350	24	1.0	5
00E	22	0.8	5

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E

PPB

8908-003

Cu Ag

Au

Pg. 2 of 3

	Cu	Ag	Au
E	14	0.8	5
IO	16	1.0	5
IO	28	2.1	5
IO	32	5.6	5
IO	22	1.4	5
IO	32	4.4	5
IO	22	0.8	5
IO	38	0.9	5
IO	12	0.2	5
IO	14	0.3	5
IE	16	0.2	5
IE	22	0.7	5
IO	48	1.1	5
IO	28	1.3	5
IO	46	1.4	5
IO	16	0.7	5
IO	68	8.3	5
IO	22	0.9	5
IO	42	1.3	5
IO	22	2.0	5
IO	26	1.8	5
IO	82	0.5	5
IO	20	0.3	5
IO	14	0.2	5
IO	12	0.5	5
IO	18	0.7	5
IO	22	2.0	5
IO	24	1.0	5
IO	18	0.4	5
IO	20	0.3	5
IO	26	2.0	5
IO	24	8.4	5
IO	260	9.2	70
IO	14	0.5	5
IO	32	2.8	20
IO	50	4.8	5
IO	24	1.1	70
IO	50	0.9	5
IO	18	0.5	5
IO	300	1.6	5
IO	22	0.3	5
IE	48	0.3	5
IE	30	2.5	5
IO	22	1.2	5
IO	28	1.0	5
IO	20	0.5	5
IO	20	2.0	5
IO	42	1.8	5
IO	20	0.3	5
IO	18	0.5	60
6	52	1.0	-
IO	570	2.8	40
IO	58	0.9	5
IO	1160	2.6	5
IO	148	1.6	5
IO	106	4.3	5
E	66	1.1	5

AMPLE  
No.

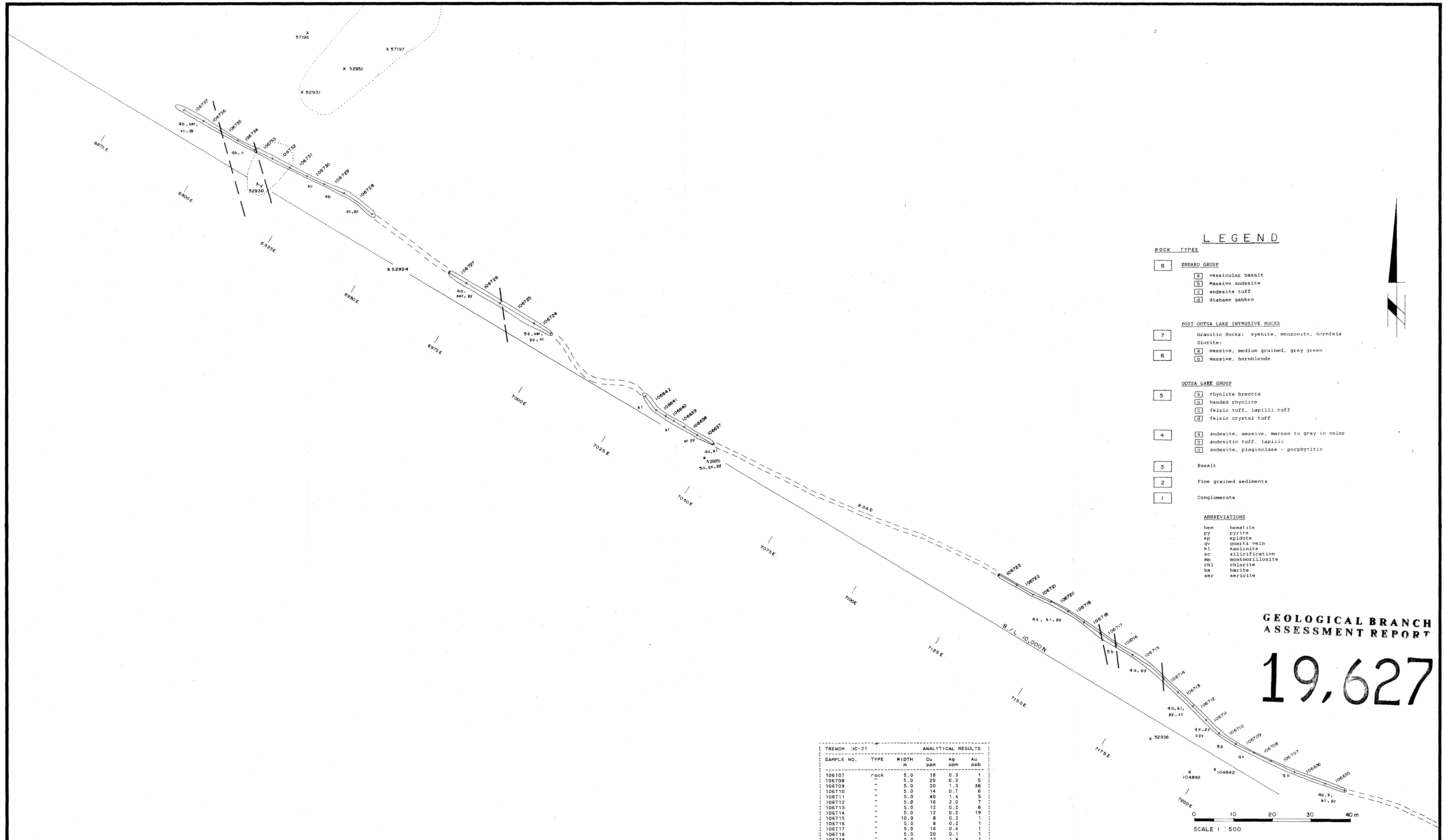
Cu

Ag

PPB  
Au

8908-003  
Pg. 3 of 3

600E	20	1.0	5
7350	38	0.6	5
7400	16	0.6	5
7450	16	0.8	5
7500	50	2.0	5
7550	44	1.0	5
7600	50	1.1	15
7650	22	2.4	5
7700	28	1.1	5
7750	36	1.1	5
7800	22	1.0	5
7850	20	0.3	5
7900	32	2.3	5
7950	18	0.3	5
800E	24	0.9	5
800E	16	0.9	5
8550	14	0.2	5
8600	46	0.8	5
8650	148	3.7	5
8700	254	1.8	100
8800	54	2.6	5
8850	50	0.9	5
8900	18	0.8	45
7000	16	0.9	50
7050	18	1.1	5
7100	18	0.8	20
7150	26	1.3	5
7200	26	1.6	5
7250	30	2.1	5
7300	44	1.3	20
7350	22	1.1	5
7400	62	2.1	5
7450	22	0.4	5
7500	20	0.6	5
7550	22	0.6	5
7600	16	0.3	5
7650	22	0.3	5
7700	20	0.7	5
7750	46	2.2	5
7800	18	0.5	60
7850	18	0.4	5
7900	24	0.4	5
7950	48	0.6	5
800E	30	0.5	5



- LEGEND**
- ROCK TYPES**
- 8 ENDAKO GROUP**
- 8a vesicular basalt
  - 8b Massive andesite
  - 8c andesite tuff
  - 8d diabase gabbro
- POST OOTSA LAKE INTRUSIVE ROCKS**
- Granitic Rocks: syenite, monzonite, hornfels  
Diorite:
- 6a massive, medium grained, grey green
  - 6b massive, hornblende
- OOTSA LAKE GROUP**
- 5a rhyolite breccia
  - 5b banded rhyolite
  - 5c felsic tuff, lapilli tuff
  - 5d felsic crystal tuff
- 4a andesite, massive, maroon to grey in color
  - 4b andesitic tuff, lapilli
  - 4c andesite, plagioclase - porphyritic
- 3 Basalt
  - 2 Fine grained sediments
  - 1 Conglomerate
- ABBREVIATIONS**
- hem hematite
  - py pyrite
  - ep epidote
  - qv quartz vein
  - kl kaolinite
  - sc silicification
  - mm monmorillonite
  - chl chlorite
  - ba barite
  - ser sericite

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

TRENCH NO. 21		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106707	rock	5.0	18	0.3	1
106708	"	5.0	20	0.3	5
106709	"	5.0	20	1.3	38
106710	"	5.0	14	0.7	6
106711	"	5.0	40	1.4	5
106712	"	5.0	16	2.0	7
106713	"	5.0	12	0.2	8
106714	"	5.0	12	0.2	19
106715	"	10.0	8	0.2	1
106716	"	5.0	8	0.2	1
106717	"	5.0	16	0.4	1
106718	"	5.0	20	0.1	1
106719	"	5.0	12	1.4	1
106720	"	5.0	12	0.4	3
106721	"	5.0	12	0.2	3
106722	"	5.0	16	1.2	11
106723	"	5.0	12	0.1	1
106724	"	5.0	80	3.0	1
106725	"	10.0	28	1.6	2
106726	"	10.0	20	0.8	1
106727	"	10.0	12	2.6	4
106728	"	10.0	24	1.6	1
106729	"	5.0	12	2.0	1
106730	"	5.0	16	1.8	1
106731	"	5.0	28	7.4	1
106732	"	5.0	16	2.0	1
106733	"	5.0	12	0.8	1
106734	"	5.0	12	0.2	2
106735	"	5.0	12	1.0	3
106736	"	5.0	20	0.4	6
106737	"	5.0	16	0.6	4
106635	rock	5.0	20	0.2	2
106636	"	5.0	20	0.2	8
106637	"	5.0	20	0.4	16
106638	"	4.0	24	0.6	13
106639	"	3.0	64	0.2	24
106640	"	2.5	72	0.2	8
106641	"	3.0	48	2.2	12
106642	"	5.0	24	0.4	8

REVISED	<b>HOLY CROSS</b>	
	<b>TRENCH PLAN 21</b>	
PROJ. No. 253	SURVEY BY: R.B.	DATE: Aug. 1989
N.T.S. 93F/14	DRAWN BY: S.K.B.	SCALE: 1:500
DWG. No.	<b>NORANDA EXPLORATION</b>	
FIG. 20	OFFICE: PRINCE GEORGE, B.C.	

LEGEND

ROCK TYPES

- 8 ENDAKO GROUP
  - A vesicular basalt
  - B massive andesite
  - C andesite tuff
  - D diabase gabbro
- 7 POST OOTSA LAKE INTRUSIVE ROCKS
  - Granitic Rocks: syenite, monzonite, hornfels
  - Diorite:
    - A massive, medium grained, grey green
    - B massive, hornblende
- 5 OOTSA LAKE GROUP
  - A rhyolite breccia
  - B banded rhyolite
  - C felsic tuff, lapilli tuff
  - D felsic crystal tuff
- 4
  - A andesite, massive, maroon to grey in color
  - B andesitic tuff, lapilli
  - C andesite, plagioclase - porphyritic
- 3 Basalt
- 2 Fine grained sediments
- 1 Conglomerate

ABBREVIATIONS

- hem hematite
- py pyrite
- ep epidote
- qtz quartz vein
- kl kaolinite
- sc silicification
- mm montmorillonite
- chl chlorite
- ba barite
- ser sericite



TRENCH HC-19 ANALYTICAL RESULTS

SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106598	rock	5.0	116	0.4	3
106599	"	5.0	88	0.2	2
106600	"	5.0	68	0.2	2
106601	"	5.0	96	1.0	7
106602	"	5.0	8	0.2	2
106603	"	5.0	8	0.2	7
106604	"	5.0	8	0.2	1
106605	"	5.0	12	0.2	5
106606	"	5.0	16	0.2	1
106607	"	5.0	12	0.2	2
106608	"	5.0	12	0.2	2
106609	"	5.0	12	0.2	2
106610	"	5.0	12	0.2	2
106611	"	5.0	16	0.2	8

TRENCH HC-18 ANALYTICAL RESULTS

SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106576	rock	5.0	8	1.0	39
106577	"	5.0	10	1.3	8
106578	"	5.0	10	0.9	9
106579	"	5.0	16	0.9	8
106580	"	5.0	14	0.4	29
106581	"	5.0	10	0.3	10
106582	"	2.7	16	0.7	24
106583	"	1.7	16	2.4	21
106584	"	4.6	10	1.1	8
106585	"	5.0	8	0.7	2
106586	"	5.0	8	0.7	3
106587	"	5.0	10	0.6	10
106588	"	7.0	16	0.7	118
106589	"	11.3	18	1.2	280
106590	"	1.7	14	0.9	138
106591	"	3.0	26	1.1	16
106592	"	2.6	24	0.8	13
106593	"	5.0	32	1.6	10
106594	"	5.0	44	1.2	15
106595	"	4.0	80	1.6	27
106596	"	2.6	440	1.8	14
106597	"	2.4	40	1.2	16

TRENCH HC-1 ANALYTICAL RESULTS

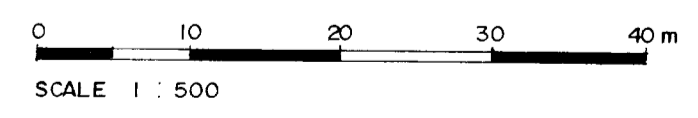
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
52818	rock	2.0	11	3.8	400
52819	"	2.0	21	9.7	2640
52820	"	2.0	31	4.4	320
52821	"	2.0	35	4.2	610
52822	"	1.5	93	14.6	390
52823	"	0.5	12	1.6	21
52824	"	2.5	15	0.3	6
52825	"	2.0	13	3.4	1710
52826	"	2.0	25	2.0	8
52827	grab	8	0.3	1	1
56751	"	5.0	6	0.3	5
56752	"	5.0	14	1.2	4
56753	"	5.0	14	3.1	64
56754	"	5.0	8	1.6	14
56755	"	5.0	27	4.4	10
56756	"	5.0	16	2.3	4
56757	"	5.0	18	2.1	7
56758	"	5.0	29	2.4	10
56759	"	5.0	114	8.9	113
56760	"	5.0	42	7.2	405
56761	"	5.0	6	3.0	32
56764	"	5.0	22	1.1	1
56765	"	5.0	79	1.3	1
56766	"	5.0	32	0.2	1
56767	"	5.0	74	1.0	1
56768	"	5.0	15	1.3	4
56769	"	5.0	10	2.1	6
104980	"	4.0	28	1.2	15
104981	"	2.0	12	1.6	1
104982	"	5.0	148	0.5	1
104983	"	3.0	92	0.1	1
104984	"	5.0	61	0.1	1
104985	"	3.0	13	0.1	1
104986	"	2.0	12	3.6	440
104987	"	5.0	7	0.7	3
104988	"	2.5	10	1.4	40
104989	"	2.0	23	4.9	100
104990	"	2.0	39	0.7	1
104991	"	6.0	37	0.6	1
104992	"	2.0	11	0.1	1
104993	"	2.0	61	2.9	8
104994	grab	16	2.4	19	1

TRENCH HC-20 ANALYTICAL RESULTS

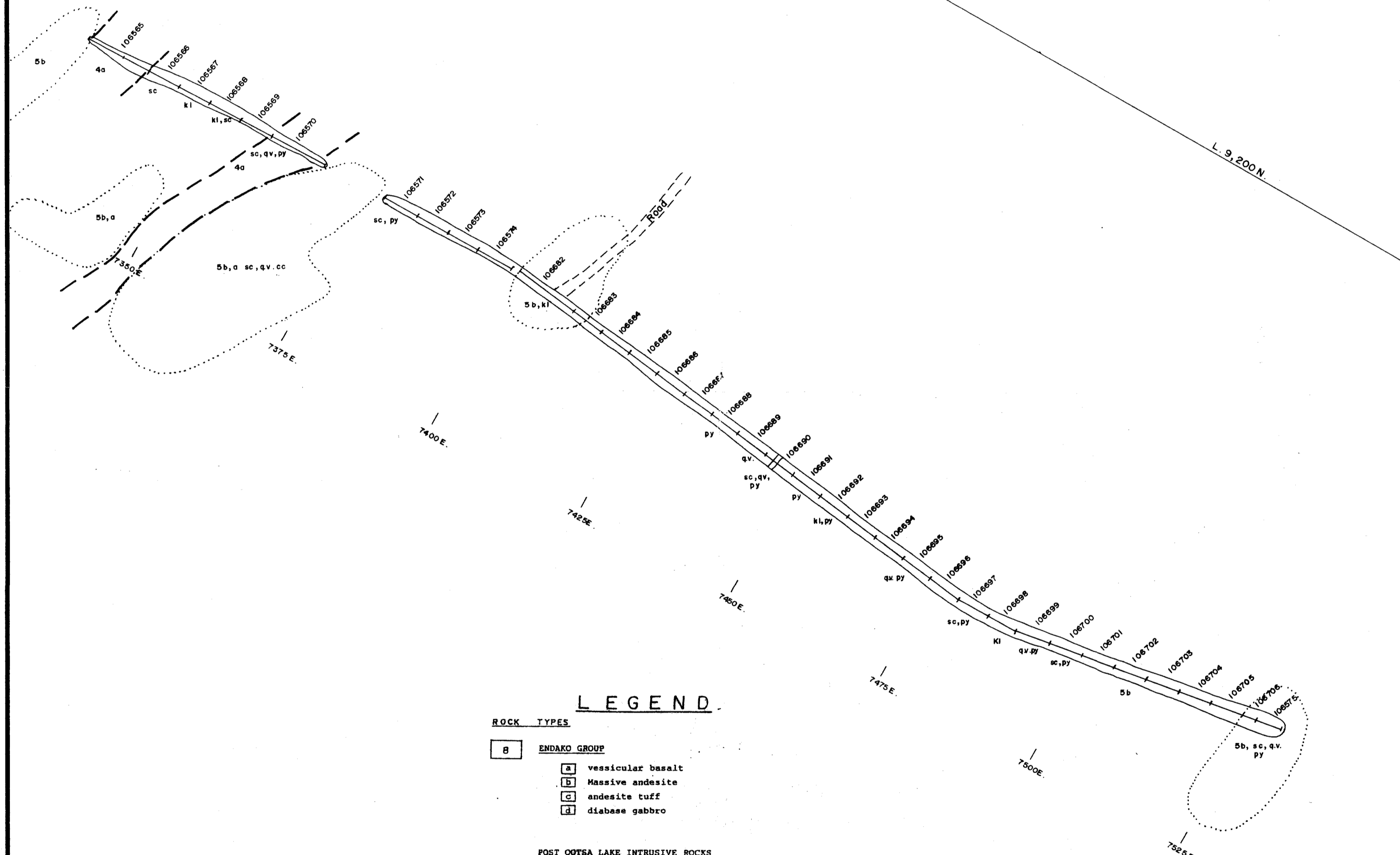
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106602	rock	5.0	48	3.6	32
106603	"	5.0	40	12.0	250
106604	"	5.0	16	1.6	221
106605	"	5.0	32	1.8	52
106606	"	5.0	64	2.0	20
106607	"	5.0	234	7.0	25
106608	"	5.0	28	1.4	9
106609	"	5.0	56	2.0	17
106610	"	5.0	480	8.2	39
106611	"	5.0	52	10.0	29
106612	"	5.0	40	4.2	23
106613	"	5.0	1600	22.0	86
106614	"	5.0	132	32.0	57
106615	"	5.0	12	1.6	17
106616	"	5.0	52	16.0	73
106617	"	5.0	12	0.2	3
106618	"	5.0	12	0.4	3
106619	"	5.0	44	0.8	7
106620	"	5.0	32	0.2	1
106621	"	5.0	24	0.2	1
106622	"	5.0	20	0.2	3
106623	"	5.0	16	0.2	1
106624	"	2.5	20	0.2	16
106625	"	3.7	88	1.8	206

GEOLOGICAL BRANCH ASSESSMENT REPORT

19,627



REVISED	HOLY CROSS	
	TRENCH 1, 18, 19, 20	
PROJ. No. 253	SURVEY BY: R.B.	DATE: Aug., 1989
N.T.S. 93F/14	DRAWN BY: S.K.B.	SCALE: 1:500
DWG. No.	NORANDA EXPLORATION	
FIG. 19	OFFICE PRINCE GEORGE, B.C.	



**LEGEND**

**ROCK TYPES**

**8 ENDAKO GROUP**

- A** vesicular basalt
- B** Massive andesite
- C** andesite tuff
- D** diabase gabbro

**POST OOTSA LAKE INTRUSIVE ROCKS**

- 7** Granitic Rocks: syenite, monzonite, hornfels
- Diorite:
  - A** massive, medium grained, grey green
  - B** massive, hornblende

**OOTSA LAKE GROUP**

- 5**
  - A** rhyolite breccia
  - B** banded rhyolite
  - C** felsic tuff, lapilli tuff
  - D** felsic crystal tuff
- 4**
  - A** andesite, massive, maroon to grey in color
  - B** andesitic tuff, lapilli
  - C** andesite, plagioclase - porphyritic

**3 Basalt**

**2 Fine grained sediments**

**1 Conglomerate**

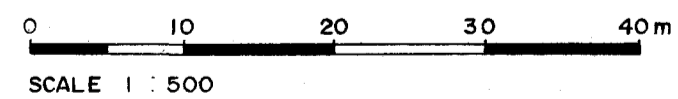
**ABBREVIATIONS**

- hem hematite
- py pyrite
- ep epidote
- qv quartz vein
- kl kaolinite
- sc silicification
- mm montmorillonite
- chl chlorite
- be barite
- ser sericite

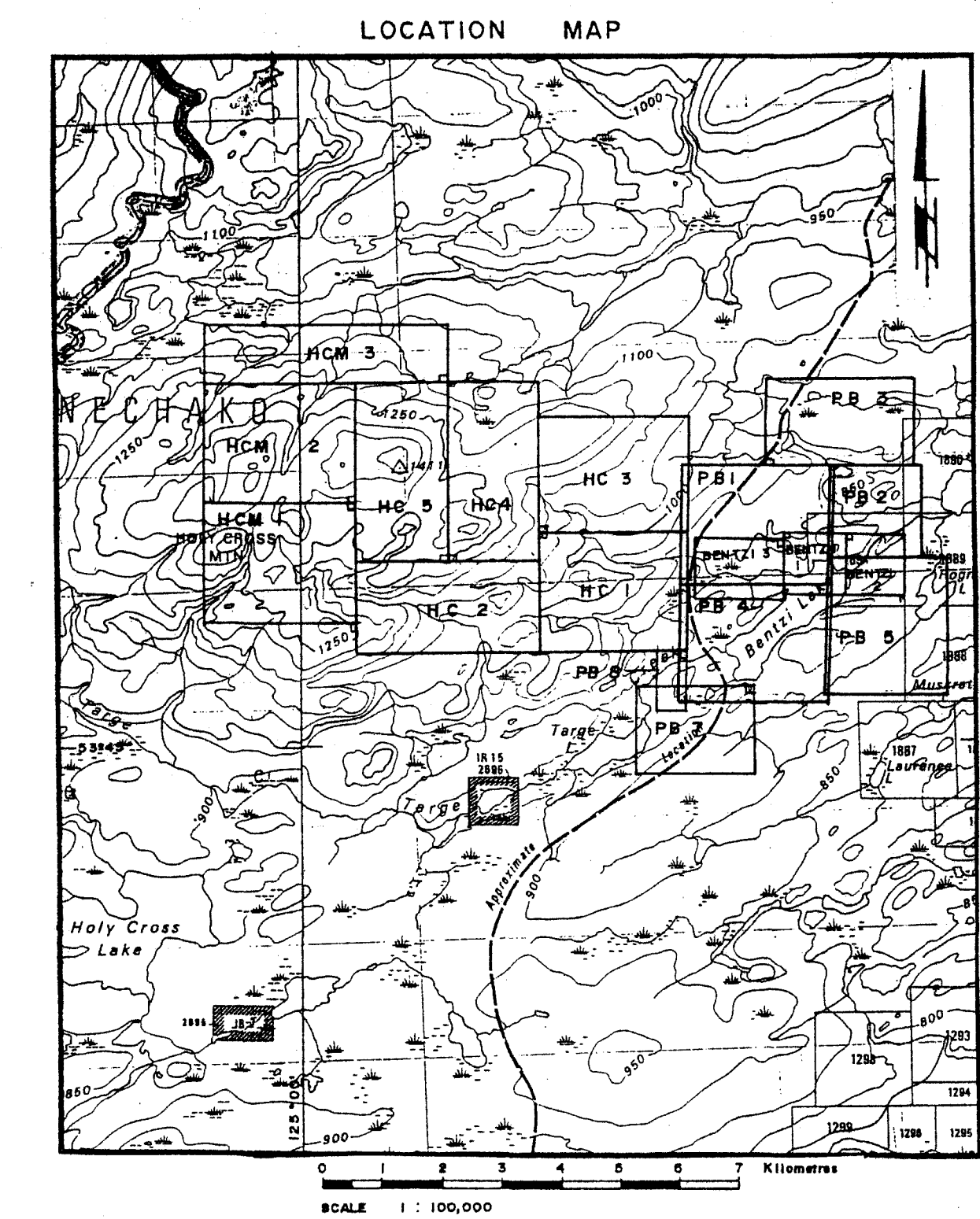
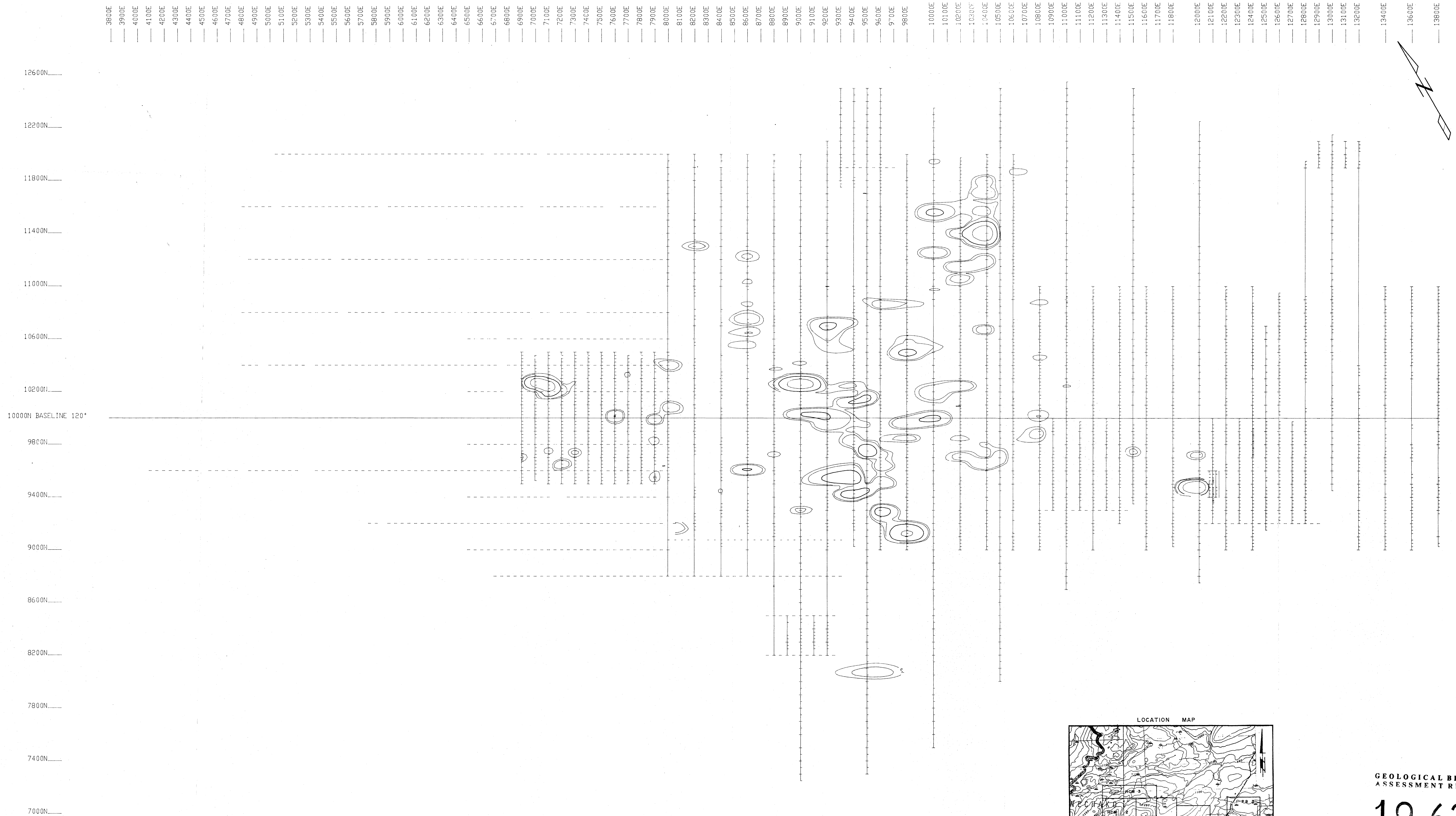
TRENCH	HC-17	ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106555	rock	5.0	14	0.3	1
106556	"	4.3	10	0.3	1
106567	"	5.0	4	0.5	30
106568	"	5.0	8	0.8	7
106569	"	5.0	10	0.5	1
106570	"	5.0	14	0.7	1
106571	"	5.0	4	1.0	2
106572	"	5.0	4	1.0	4
106573	"	5.0	6	0.9	24
106574	"	5.0	6	0.7	3
106575	"	5.0	10	1.2	27
106682	"	10.0	6	0.2	1
106683	"	5.0	4	0.2	1
106684	"	5.0	6	0.1	3
106685	"	5.0	14	0.7	3
106686	"	5.0	6	0.3	5
106687	"	5.0	12	0.3	3
106688	"	5.0	16	0.4	1
106689	"	5.0	18	0.1	1
106690	"	5.0	10	0.7	4
106691	"	5.0	10	0.9	1
106692	"	5.0	10	0.2	3
106693	"	5.0	6	0.1	3
106694	"	5.0	10	0.1	1
106695	"	5.0	14	0.1	2
106696	"	5.0	8	0.5	1
106697	"	5.0	6	0.2	6
106698	"	5.0	48	0.2	27
106699	"	5.0	6	0.6	31
106700	"	5.0	8	0.3	18
106701	"	5.0	6	0.3	8
106702	"	5.0	6	0.3	5
106703	"	5.0	6	0.1	2
106704	"	5.0	8	0.2	3
106705	"	5.0	4	0.2	1
106706	"	3.0	6	0.4	1

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

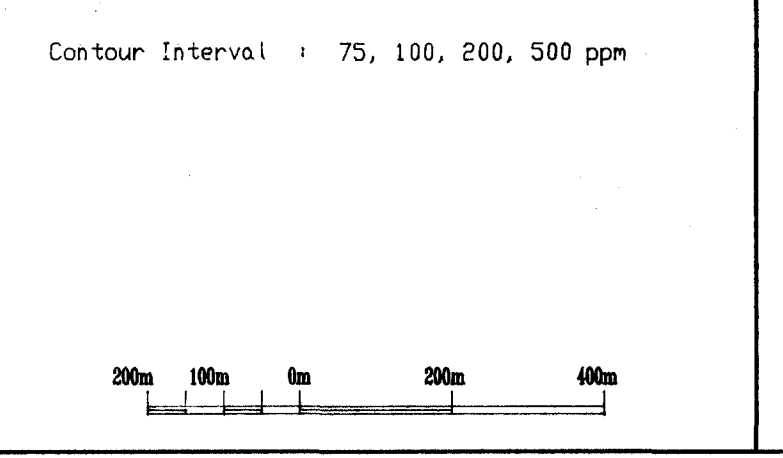


REVISED	<b>HOLY CROSS</b>	
	<b>TRENCH PLAN Nº 17</b>	
PROJ. No. 253	SURVEY BY: R. B.	DATE: Nov. 1989
N.T.S. 93F/14	DRAWN BY: S.K.B.	SCALE: 1:500
DWG. No.	<b>NORANDA EXPLORATION</b>	
FIG. 18	OFFICE: PRINCE GEORGE, B.C.	



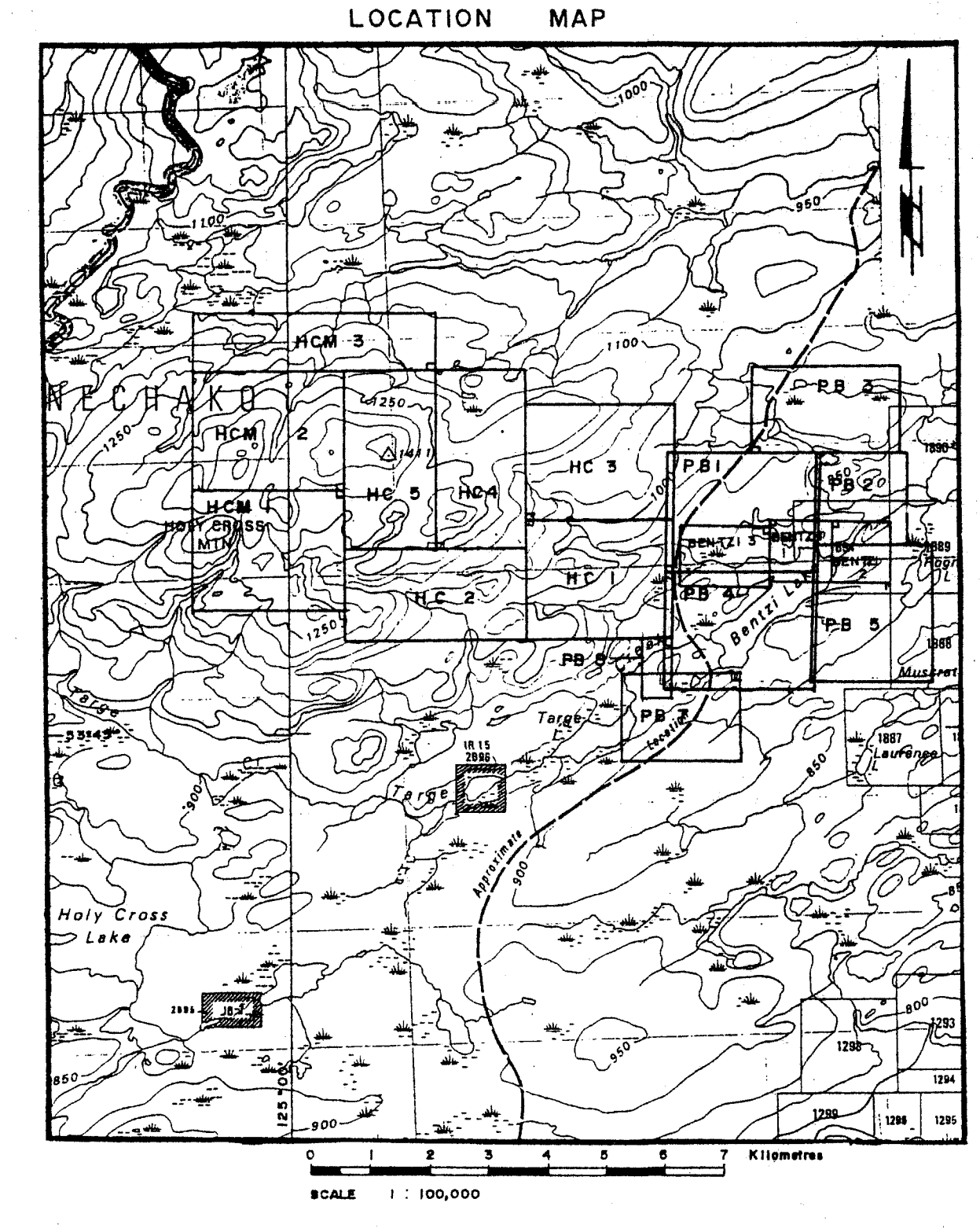
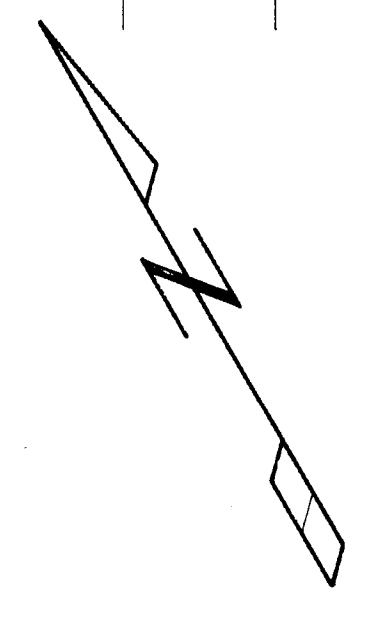
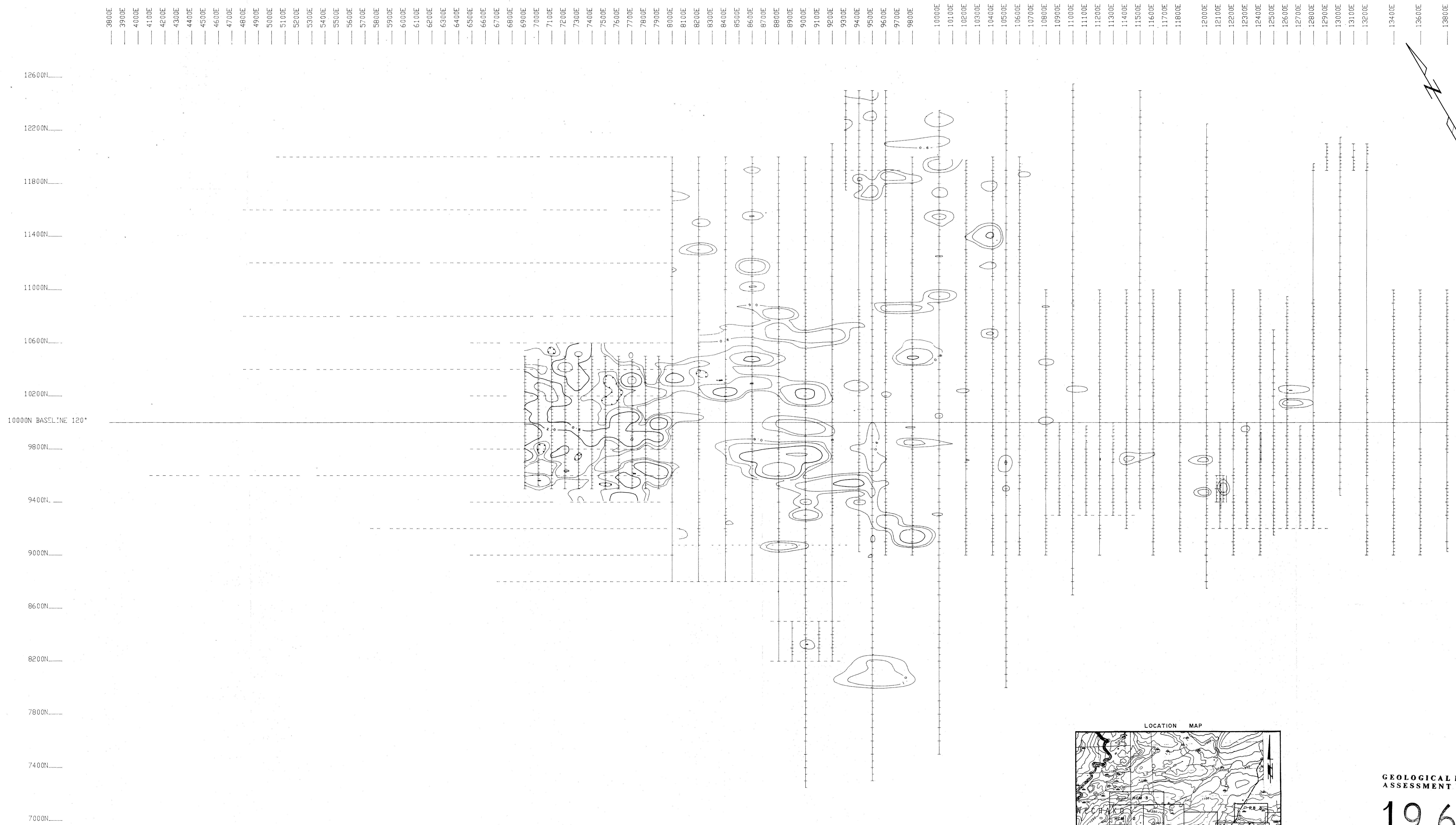
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**



<b>HC GRID</b>	
<b>SOIL GEOCHEMICAL SURVEY</b>	
PPM Cu	
PROJECT: HOLY CROSS PROJECT # : 253	
BASELINE AZIMUTH : 120 Deg.	
SCALE = 1:10000	DATE : / /
SURVEY BY : M. SAVELL	NTS : 93%/14, 15
FILE: 0253HC	
FIG. 12 NORANDA EXPLORATION	





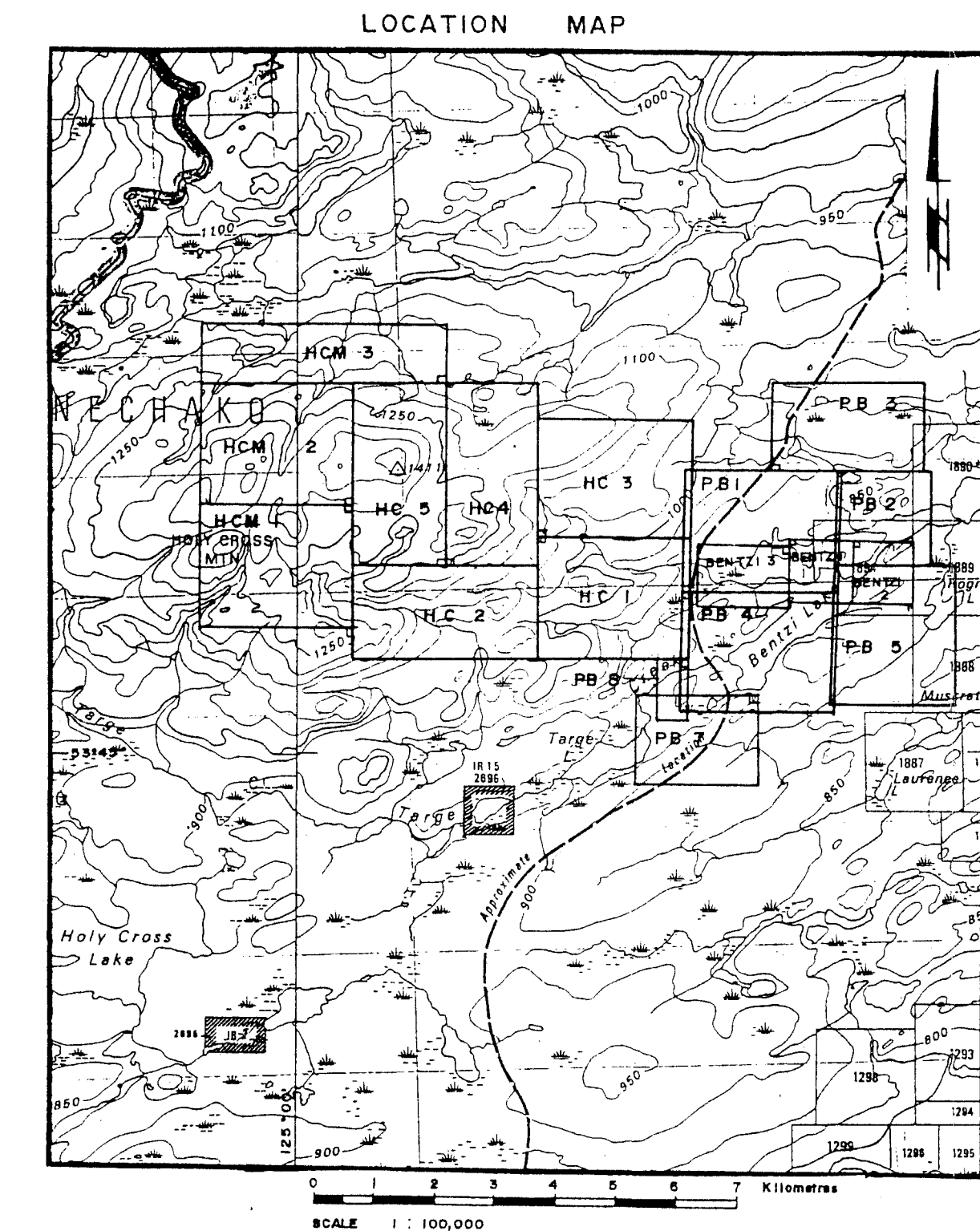
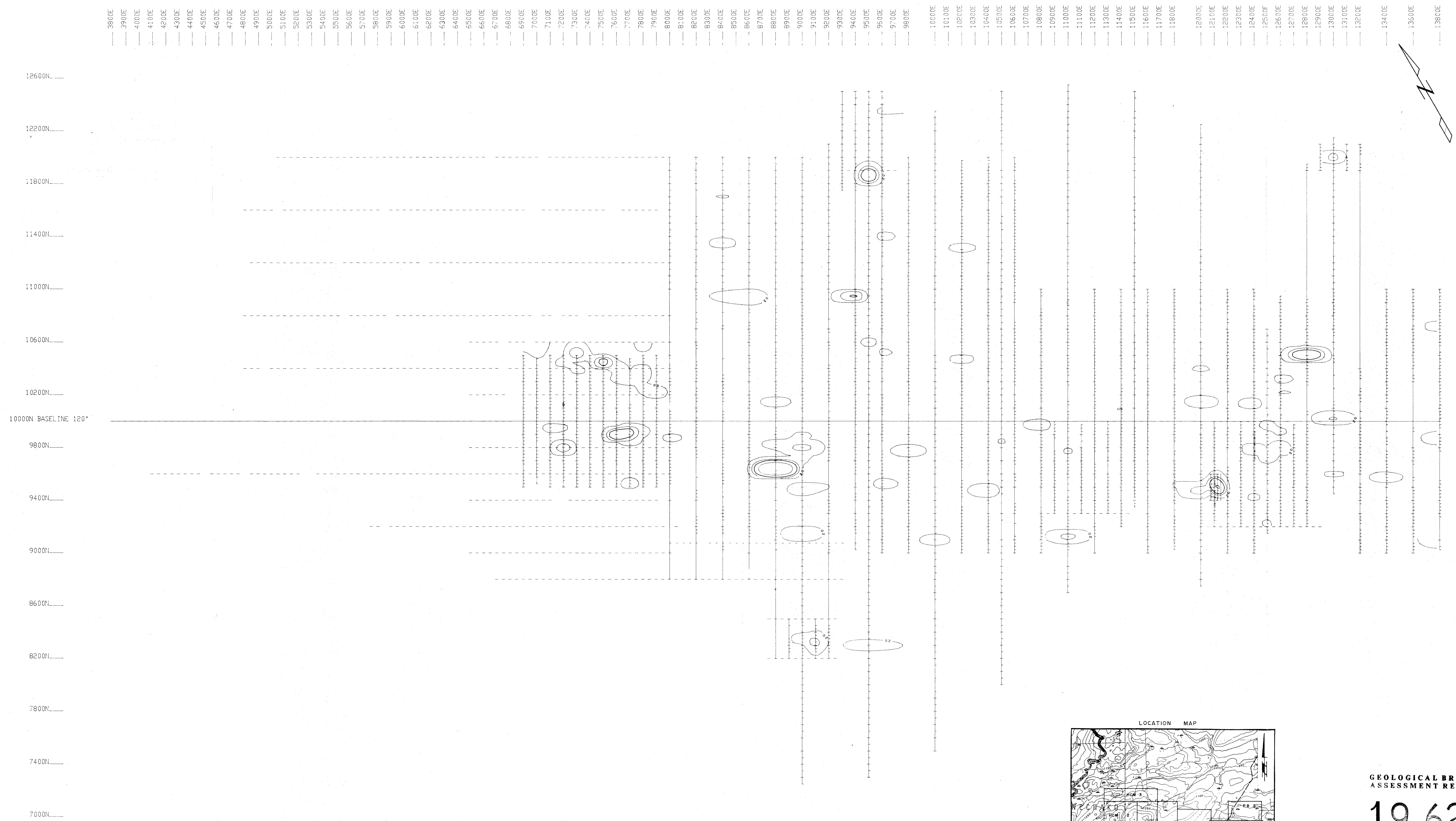
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

Contour Interval : 0.7, 1.0, 2.0, 5.0 ppm



**HC GRID**  
**SOIL GEOCHEMICAL SURVEY**  
**PPM (Ag)**  
 PROJECT: HOLY CROSS PROJECT # : 253  
 BASELINE AZIMUTH : 120 Deg.  
 SCALE = 1:10000 DATE: / /  
 SURVEY BY : M SAVELL NTS : 95874.15  
 FILE: C253HC  
**FIG II NORANDA EXPLORATION**



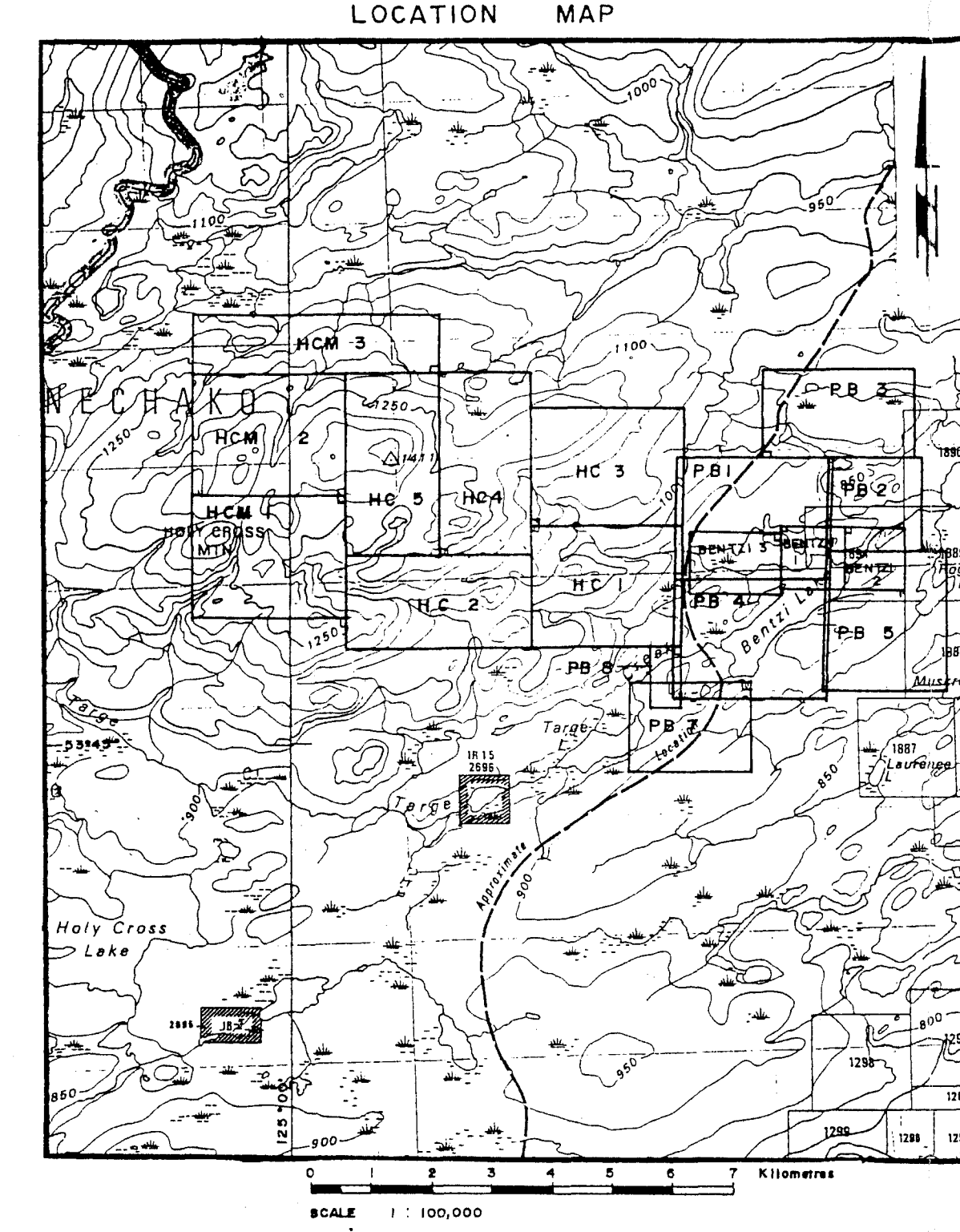
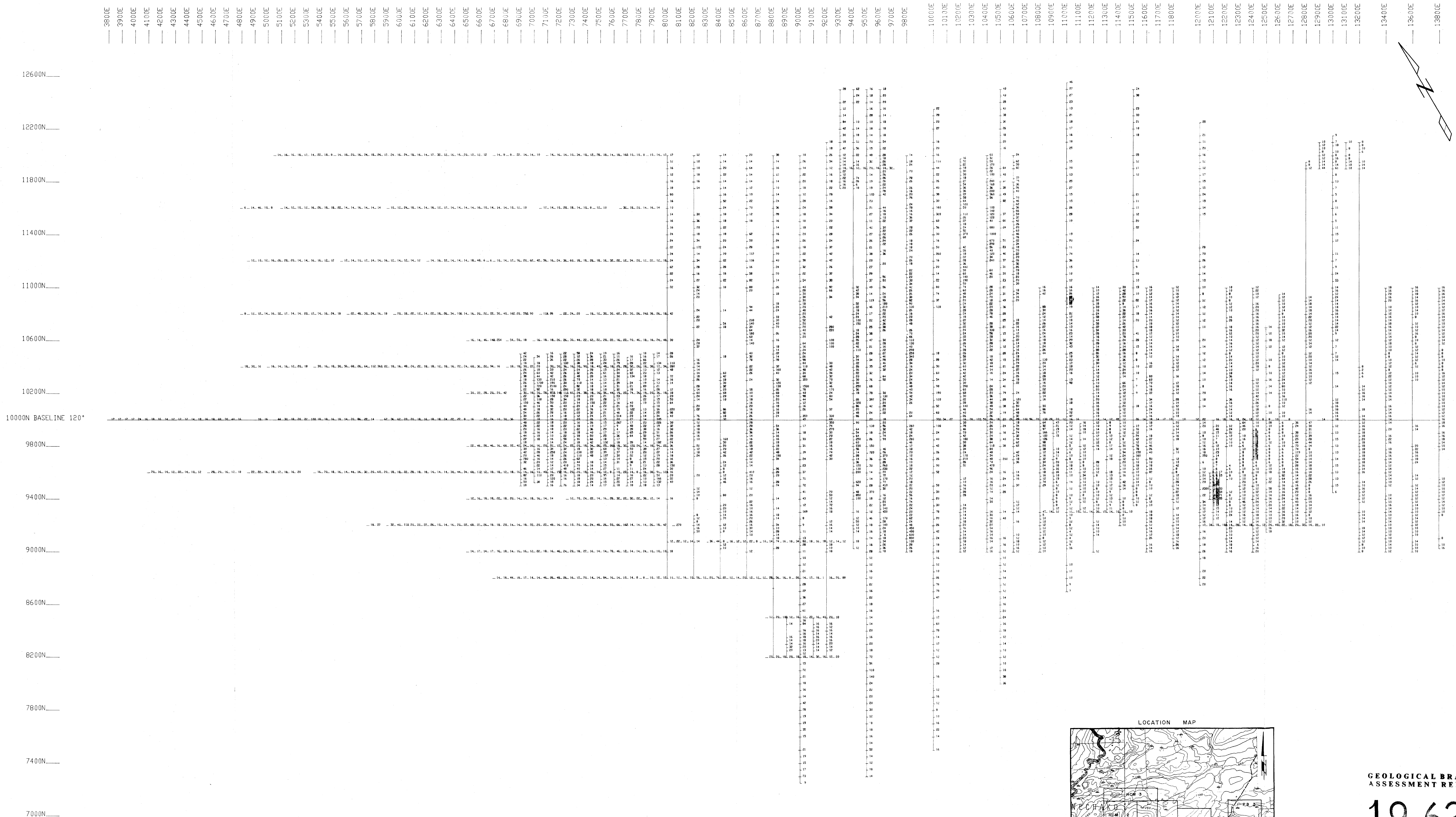
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

Contour Interval : 20, 100, 200, 500 pps

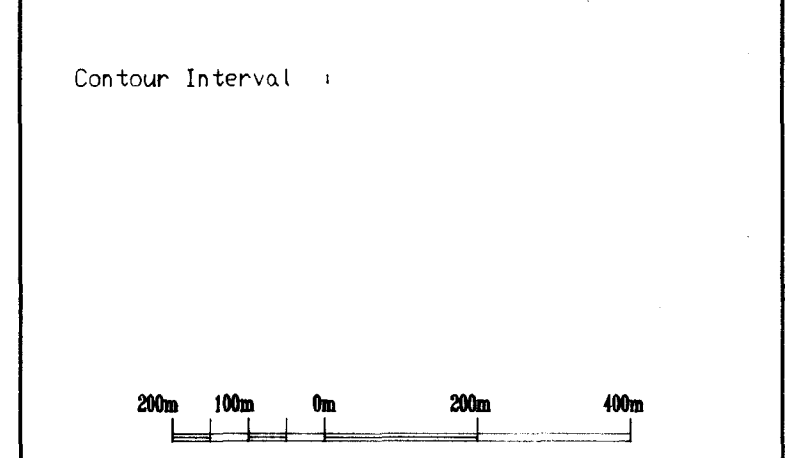
0m 10m 20m 30m 40m

<b>HC GRID</b>	
SOIL GEOCHEMICAL SURVEY	
PPB Au	
PROJECT: HULY CROSS PROJECT #: 253	
BASELINE AZIMUTH : 120 Deg.	
SCALE = 1:10000	DATE : / /
SURVEY BY : M SAVELL	NTS : 93/14J5
FILE: C253HC	
FIG. 10 NORANDA EXPLORATION	

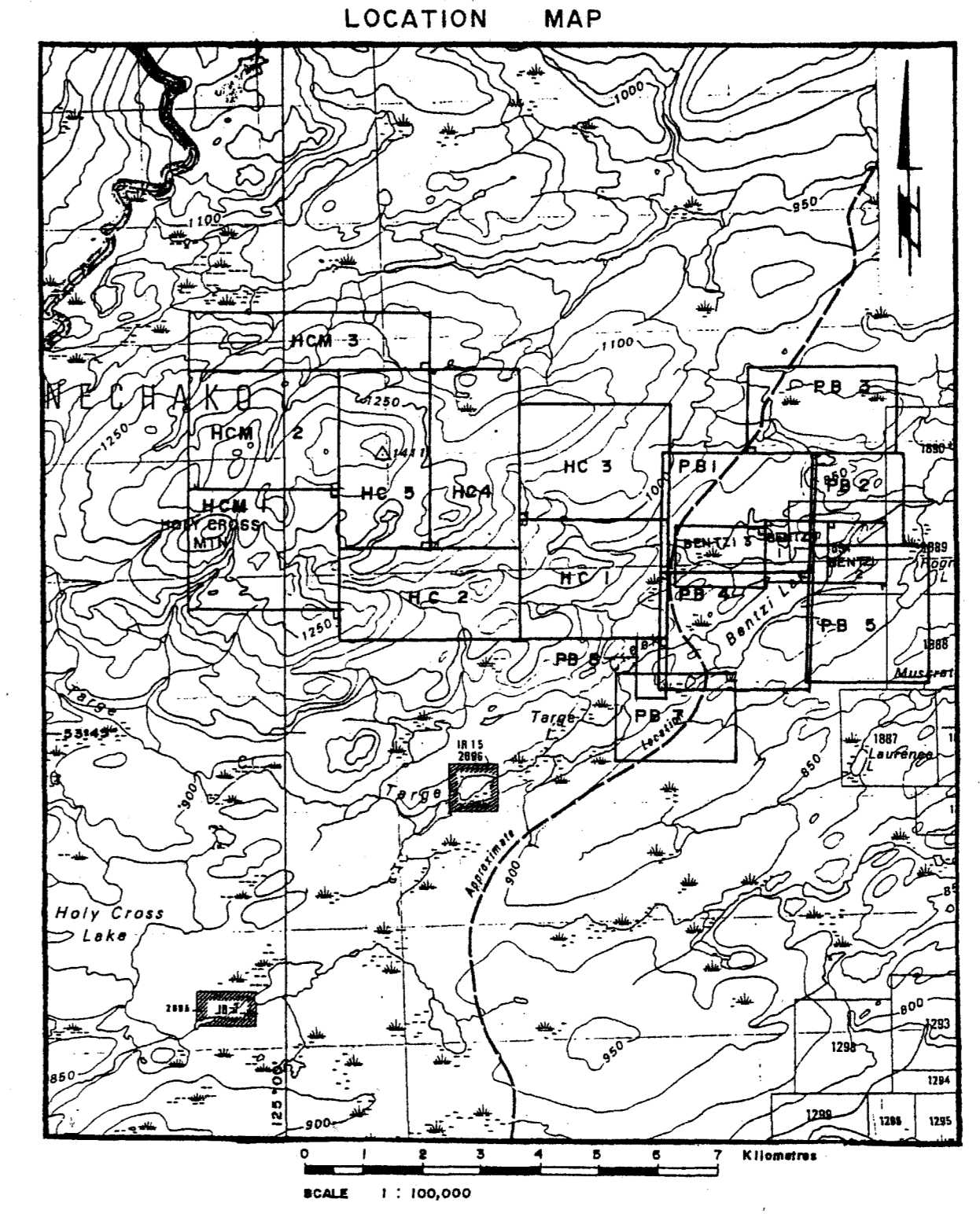
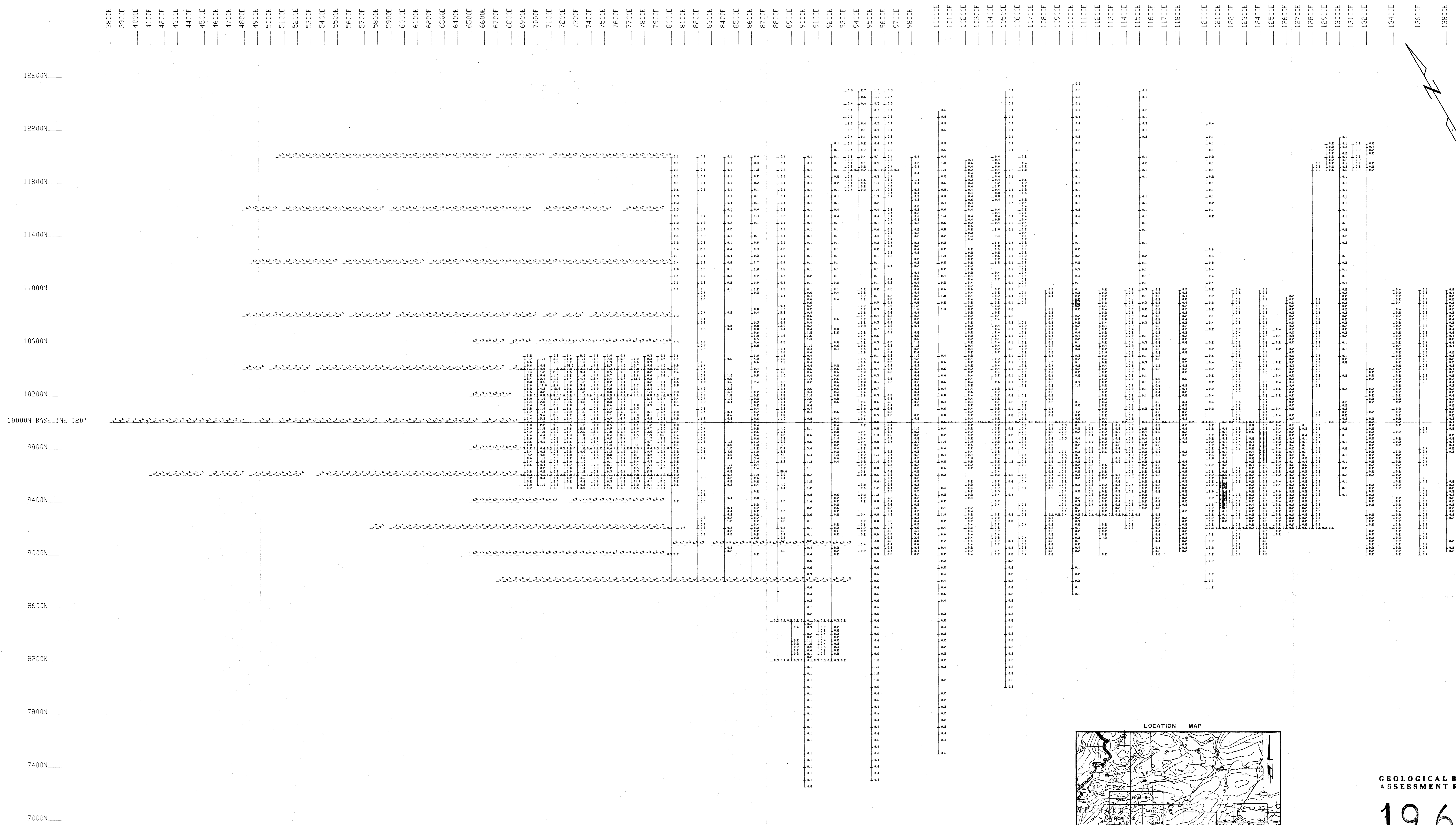


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627

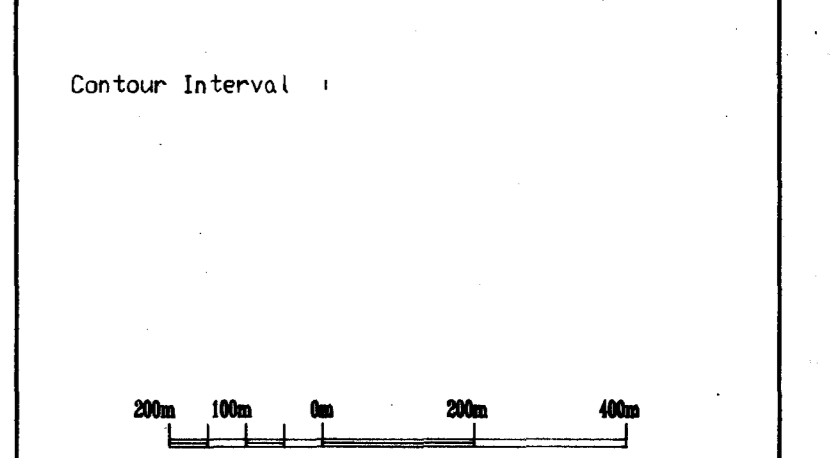


**HC GRID**  
**SOIL GEOCHEMICAL SURVEY**  
 PPM Cu  
 PROJECT: HOLY CROSS PROJECT # : 253  
 BASELINE AZIMUTH : 120 Deg.  
 SCALE = 1:10000 DATE : / /  
 SURVEY BY : M SAVELL NTS : 93 F/14, 15  
 FILE: C253HC  
**FIG. 9**  
 NORANDA EXPLORATION

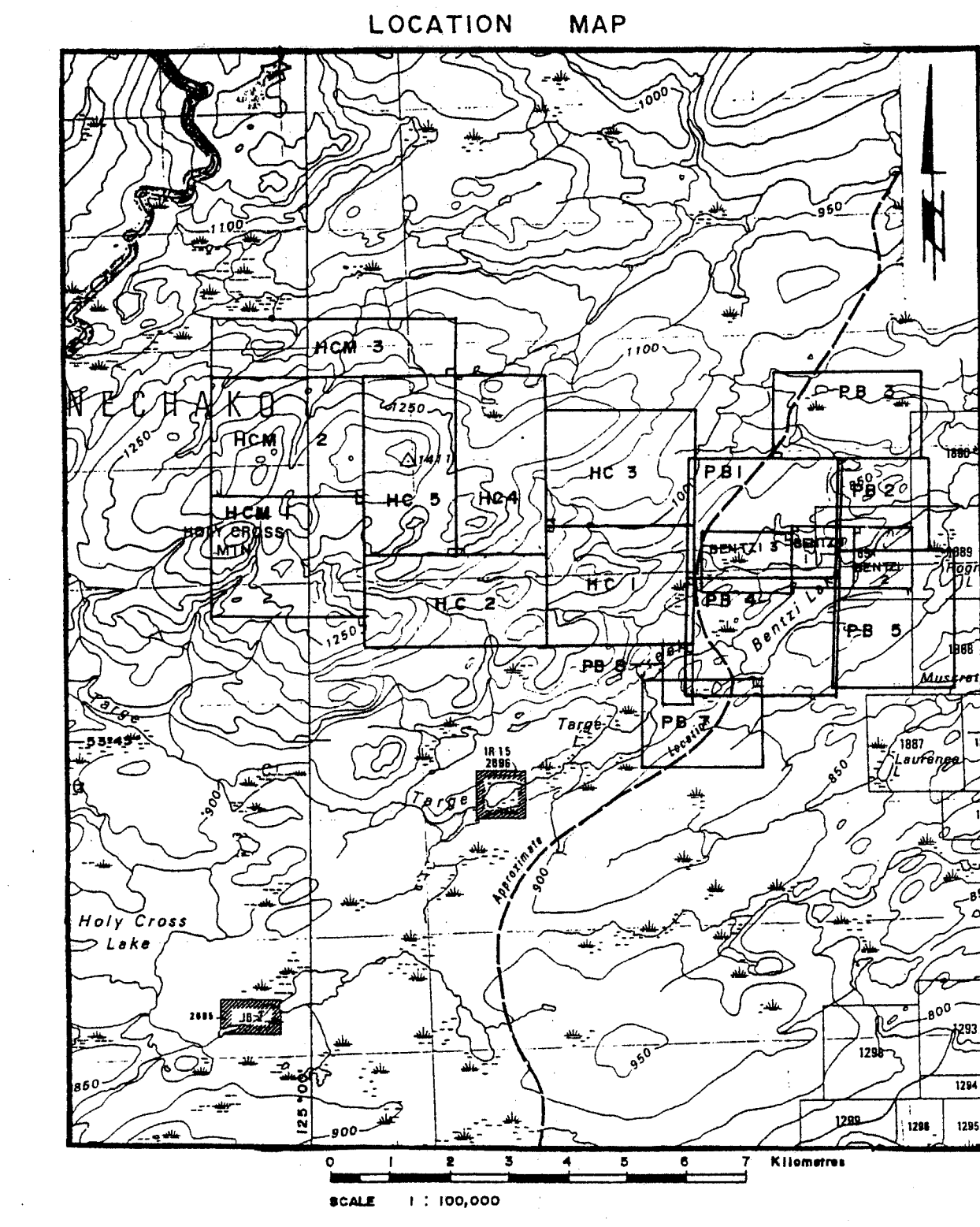
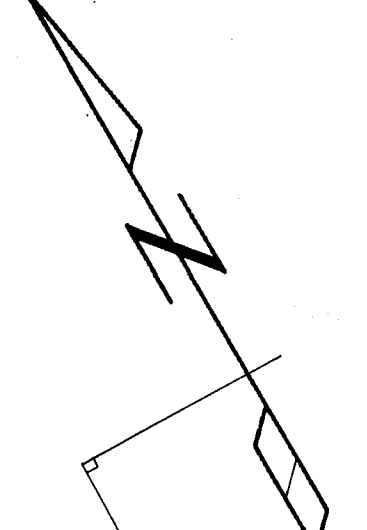
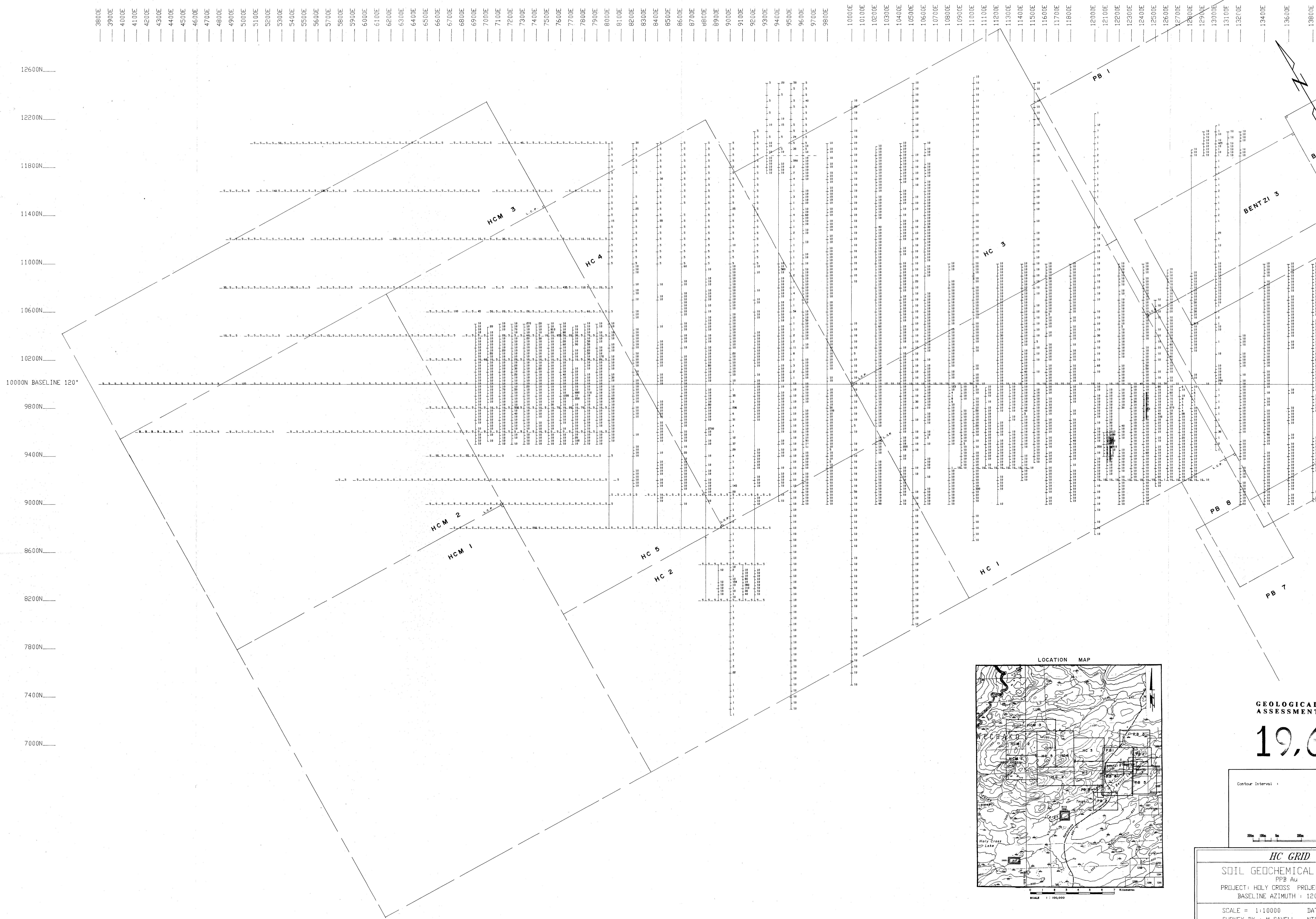


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627

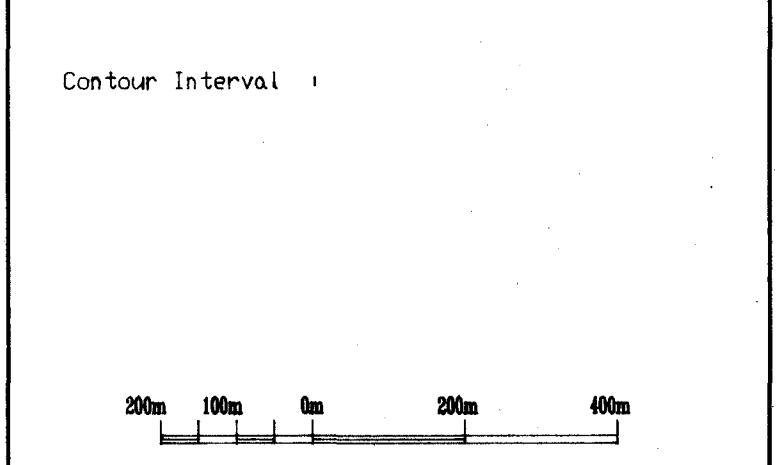


**HC GRID**  
**SOIL GEOCHEMICAL SURVEY**  
 PPM Ag  
 PROJECT: HOLY CROSS PROJECT # : 253  
 BASELINE AZIMUTH : 120 Deg.  
 SCALE = 1:10000 DATE : / /  
 SURVEY BY : M SAVELL NTS : 95/14, 15  
 FILE: C253HC  
**FIG. 8 NORANDA EXPLORATION**

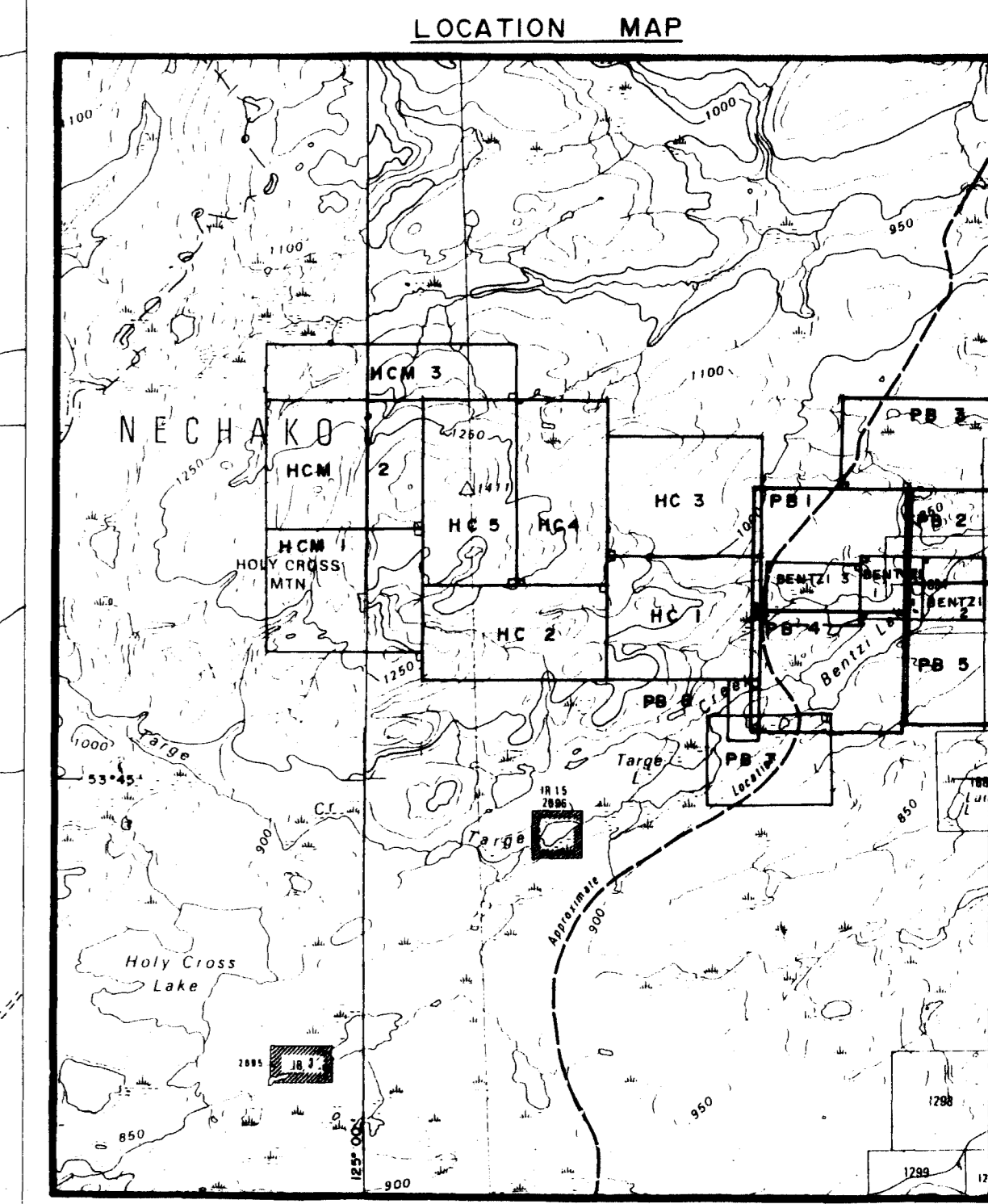


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627



**HC GRID**  
 SOIL GEOCHEMICAL SURVEY  
 PPB Au  
 PROJECT: HOLY CROSS PROJECT # : 253  
 BASELINE AZIMUTH : 120 Deg.  
 SCALE = 1:10000 DATE : / /  
 SURVEY BY : M SAVELL NTS : 9327/14,15  
 FILE: C253HC  
**FIG. 7** NORANDA EXPLORATION



**LEGEND**

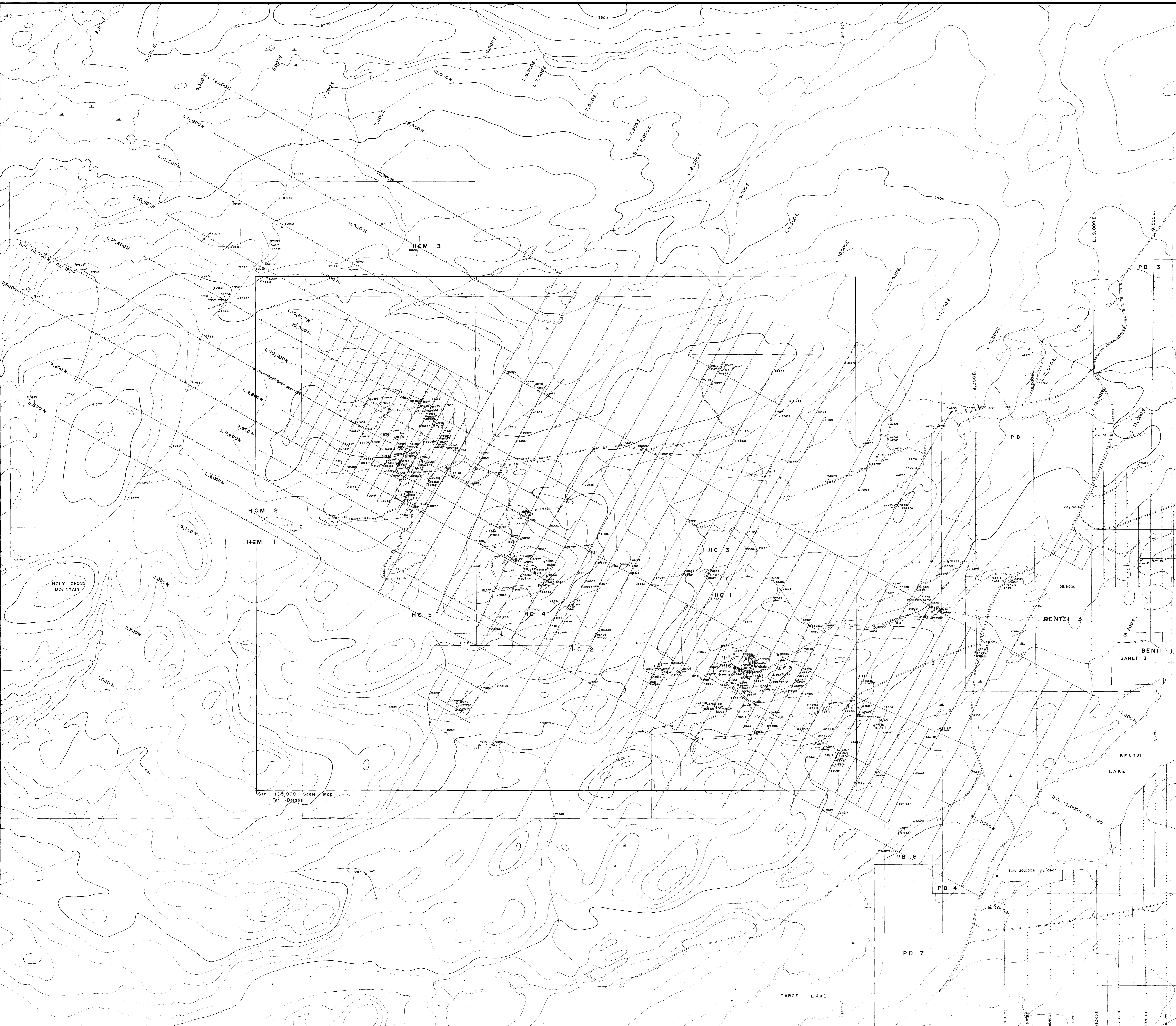
- 34823 \* ROCK SAMPLE LOCATION
- 16344 \* FLOAT SAMPLE LOCATION
- 31554 \* SILT SAMPLE LOCATION
- 35879 \* SOIL SAMPLE LOCATION
- 35388 Δ PAN SAMPLE LOCATION

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,627**

SCALE 1:10,000

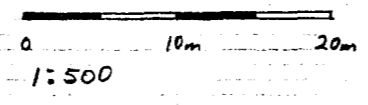
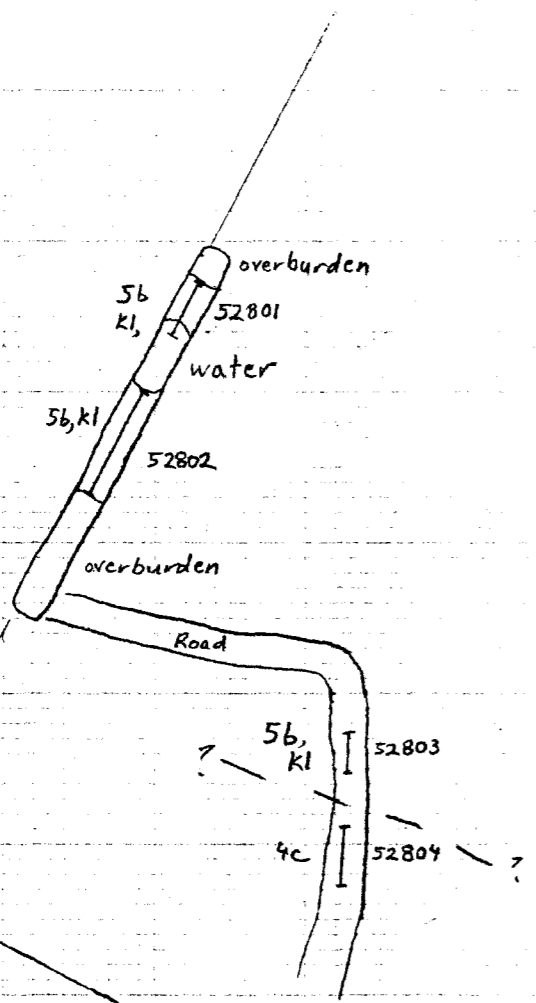
REVISED	HOLY CROSS	
M.S. Jan., 1990	HC CLAIMS	
	ROCK, FLOAT, SILT, PAN AND SOIL	
	SAMPLE LOCATIONS	
PROJ. No. 252	SURVEY BY: C.C., B.D., C.G.	DATE: 2/1989 - 1/1989, 1989
DWG. No.	DRAWN BY: S.K.B.	SCALE: 1:10,000
FIG. 4	NORANDA EXPLORATION	
	OFFICE: PRINCE GEORGE, B.C.	





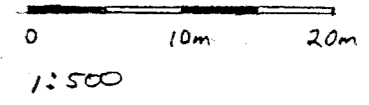
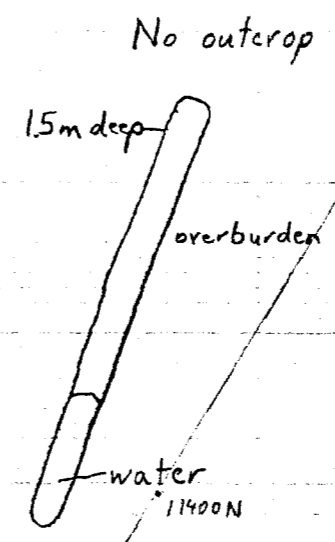
52806  
5c, sc

11400N



TRHC #10

TRENCH HC-10		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
52801	rock	4.0	10	0.1	5
52802	"	5.0	4	0.1	1
52803	"	2.5	17	0.1	1
52804	"	3.5	11	0.1	1
52806	grab	4	4	0.1	1



TRHC #11

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

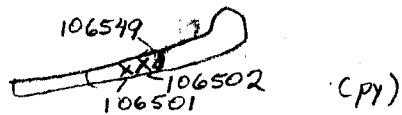
# 19,627

REVISED July '89 RB	Holy Cross	
	Geology and Sample Plan: TRHC #10, #11	
PROJ. No. 253	SURVEY BY: R. Barber	DATE: May 1989
N.T.S. 93E/15	DRAWN BY: RB	SCALE: 1:500
DWG. No. FIG. 13	<b>NORANDA EXPLORATION</b> OFFICE: PRINCE GEORGE, B.C.	

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 19,627

TRENCH 12



8050E

0 5 10 m

TRENCH HC-12		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106501	rock	grab	94	0.4	6
106502	"	"	84	0.9	5
106549	HMC	"	530	0.4	510

TRENCH HC-13		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106503	rock	1.0	179	0.1	1
106504	"	2.0	291	1.8	27
106550	HMC	"	340	2.0	1690

TRENCH 13

106550

chloritic hornfels, py  
106504

7 (hornfels)

106503

L/0000N

8150E

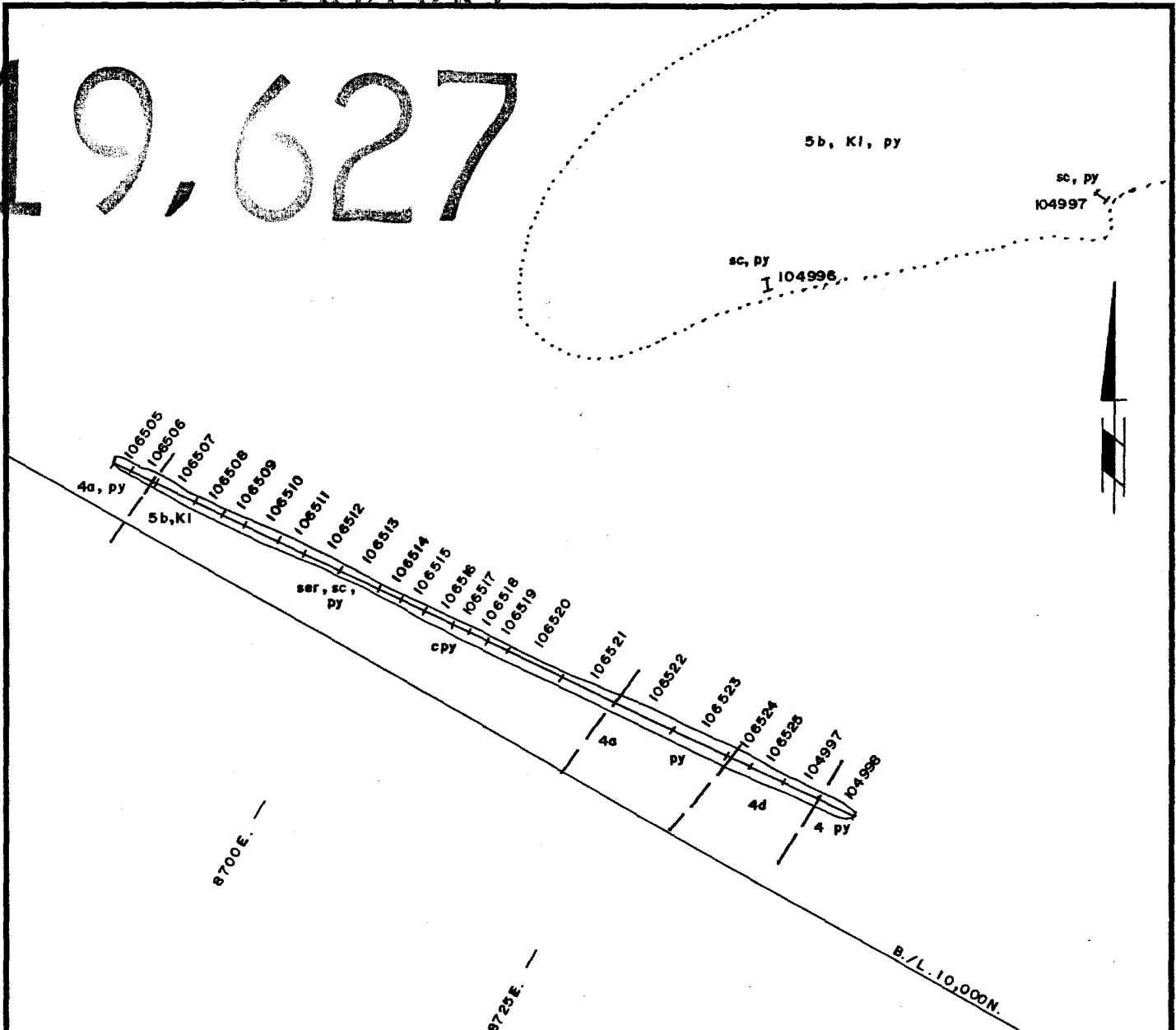
8175E

REVISED	HOLY CROSS	
	TRENCH Nos 12, & 13	
PROJ. No. 253	SURVEY BY: R.B.	DATE: Dec 20 1989
N.T.S. 93E/14	DRAWN BY: R.B.	SCALE: 1:500
DWG. No.	NORANDA EXPLORATION	
FIG. 14	OFFICE: PRINCE GEORGE, B.C.	

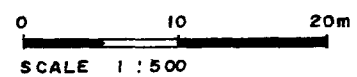


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19.627



TRENCH HC-14		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106505	rock	1.5	285	2.4	4
106506	"	2.3	907	7.8	14
106507	"	3.7	148	3.4	11
106508	"	2.5	78	2.0	25
106509	"	2.0	214	2.9	15
106510	"	3.0	108	3.4	27
106511	"	2.5	57	2.0	13
106512	"	3.0	18	0.5	9
106513	"	3.5	98	1.5	13
106514	"	2.0	380	5.8	240
106515	"	2.0	222	0.5	13
106516	"	2.5	770	2.1	21
106517	"	1.5	609	1.5	74
106518	"	1.5	522	9.0	25
106519	"	2.0	36	0.2	13
106520	"	5.0	44	1.0	8
106521	"	5.0	102	0.5	5
106522	"	5.0	223	0.5	2
106523	"	5.0	58	0.3	5
106524	"	2.0	163	0.1	2
106525	"	3.0	261	0.3	4
104995	"	1.0	116	2.6	6
104996	"	1.0	16	1.1	7
104997	"	3.0	215	0.1	1
104998	"	3.0	197	0.8	2

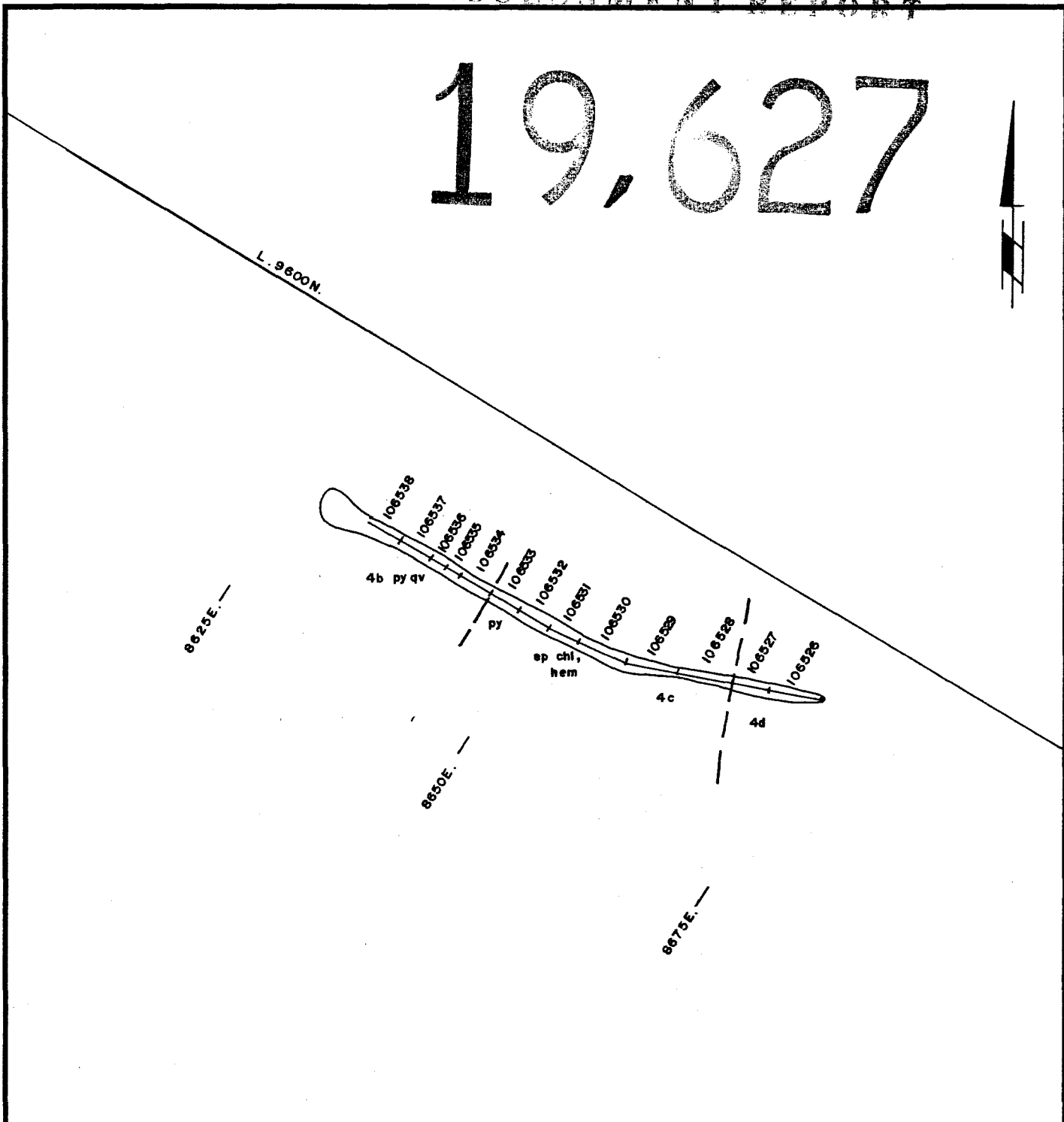


REVISED	<b>HOLY CROSS</b>	
	<b>TRENCH PLAN N<sup>o</sup> 14</b>	
PROJ. No. <u>253</u>	SURVEY BY: <u>R. B.</u>	DATE: <u>Aug. 89</u>
N.T.S. <u>93F/14</u>	DRAWN BY: <u>S. K. B.</u>	SCALE: <u>1:500</u>
DWG. No.	<b>NORANDA EXPLORATION</b>	
FIG. 15	OFFICE: <u>PRINCE GEORGE, B.C.</u>	

VANCAL 11927

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627



TRENCH HC-15		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106526	rock	5.0	8	0.1	4
106527	"	2.5	4	0.3	3
106528	"	5.0	18	0.2	4
106529	"	5.0	16	0.1	21
106530	"	5.0	10	0.1	4
106531	"	4.5	8	0.1	24
106532	"	3.0	9	0.5	35
106533	"	3.0	15	1.0	94
106534	"	3.0	13	0.6	7
106535	"	1.5	22	0.4	5
106536	"	1.5	26	1.1	3
106537	"	3.0	32	1.2	2
106538	"	3.0	36	0.4	5

0 10 20m  
SCALE 1 : 500

REVISED	HOLY CROSS	
	TRENCH PLAN N <sup>o</sup> 15	
PROJ. No. 253	SURVEY BY: R.B.	DATE: AUG. 89
N.T.S. 93 F/ H	DRAWN BY: S.K.B.	SCALE: 1 : 500
DWG. No. FIG. 16	NORANDA EXPLORATION	
	OFFICE: PRINCE GEORGE, B.C.	

VANGAL 1192Z

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

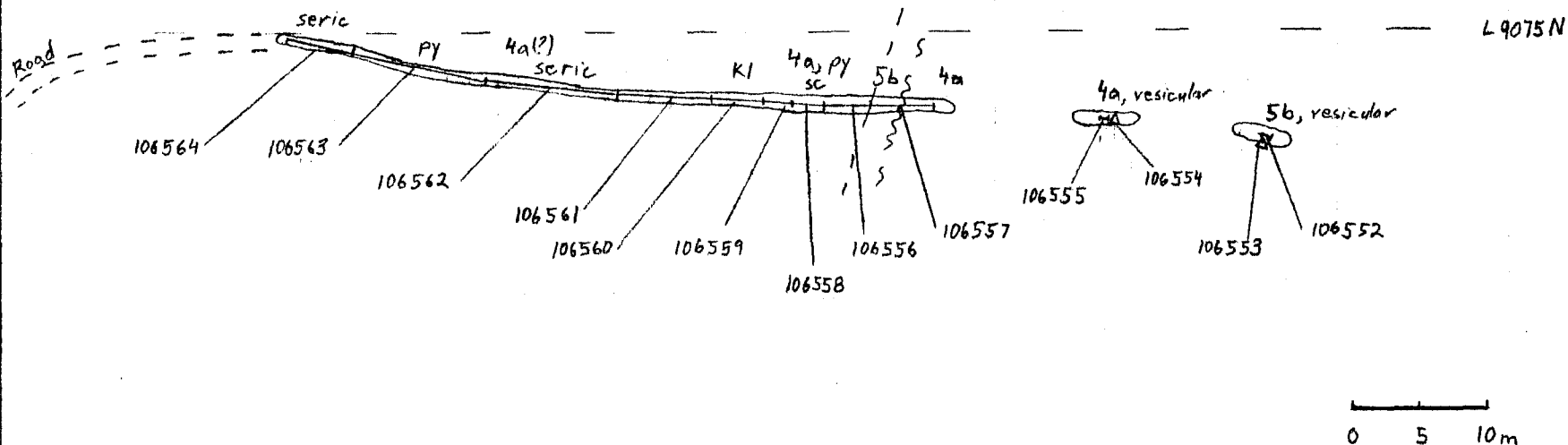
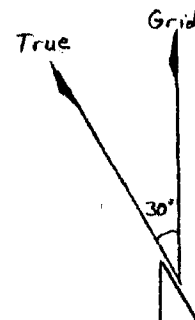
VANCAL 11928

# 19,627

8150E

8175E

8200E

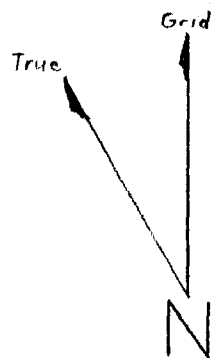


TRENCH HC-16		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106552	rock	2.0	12	0.4	5
106553	HMC		10	0.2	5
106554	HMC		14	0.2	5
106555	rock	4.0	22	0.6	3
106556	"	5.0	8	0.5	2
106557	"	2.0	4	0.5	2
106558	"	2.0	8	0.6	6
106559	"	2.0	4	0.6	1
106560	"	4.0	6	0.6	1
106561	"	7.0	4	0.6	2
106562	"	10.0	4	0.6	13
106563	"	10.0	4	0.7	1
106564	"	5.0	6	0.8	1

REVISED	Holy Cross	
	Trench TRHC #16	
PROJ. No. 253	SURVEY BY: RB	DATE: Nov 8, 1989
N.T.S. 1:500	DRAWN BY: RB	SCALE: 1:500
DWG. No. FIG. 17	NORANDA EXPLORATION	
	OFFICE: PG	

# GEOLOGICAL BRANCH ASSESSMENT REPORT

# 19,627

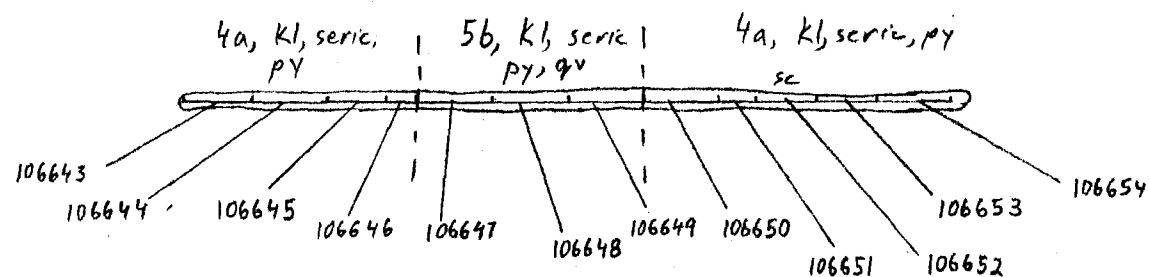


7475E

7500E

7525E

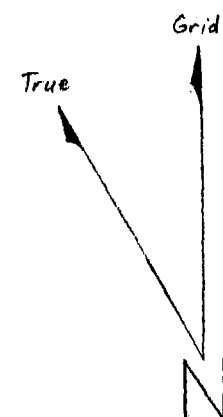
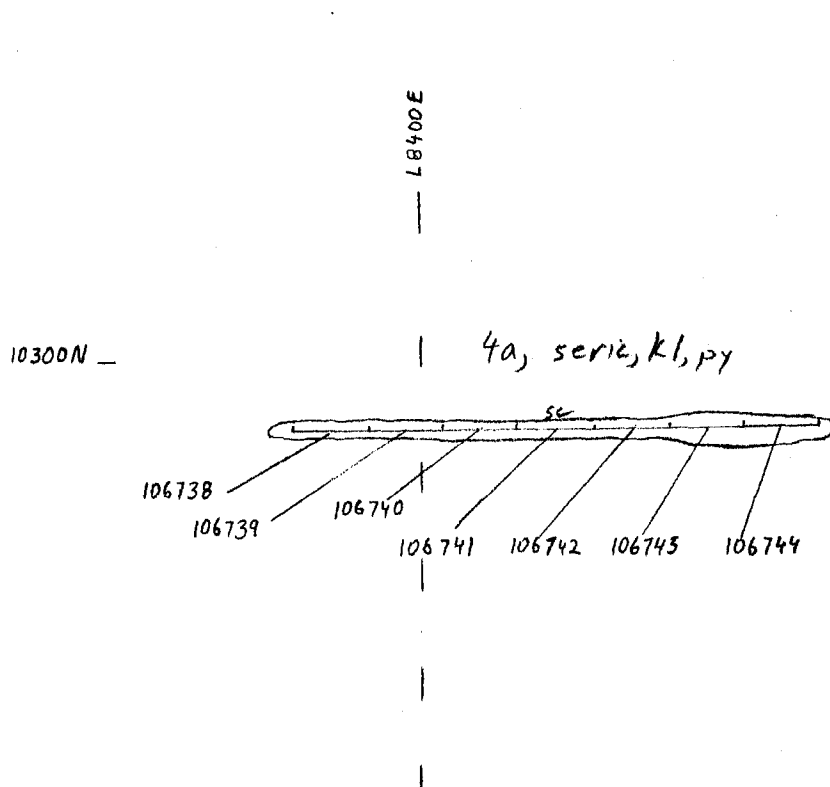
L10400N



TRENCH HC-22	ANALYTICAL RESULTS				
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106643	ROCK	5.0	72	0.4	7
106644	"	5.0	26	0.6	3
106645	"	4.0	24	1.2	6
106646	"	2.0	24	0.4	4
106647	"	5.0	20	0.2	3
106648	"	5.0	28	0.2	3
106649	"	5.0	28	0.4	1
106650	"	5.0	40	0.2	3
106651	"	2.5	148	1.6	32
106652	"	4.0	88	3.0	12
106653	"	4.0	92	2.2	13
106654	"	5.0	220	4.6	35

0    5    10m

REVISED	<p style="font-size: 1.2em;">Holy Cross</p> <p style="font-size: 1.2em;">Trench Plan: TRHC# 22</p>	
PROJ. No. <u>253</u>	SURVEY BY: <u>RB</u>	DATE: <u>Nov 9, 1989</u>
N.T.S. <u>93F/14</u>	DRAWN BY: <u>RB</u>	SCALE: <u>1:500</u>
DWG. No.	NORANDA EXPLORATION	
Fig. 21	OFFICE: <u>PG</u>	



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627

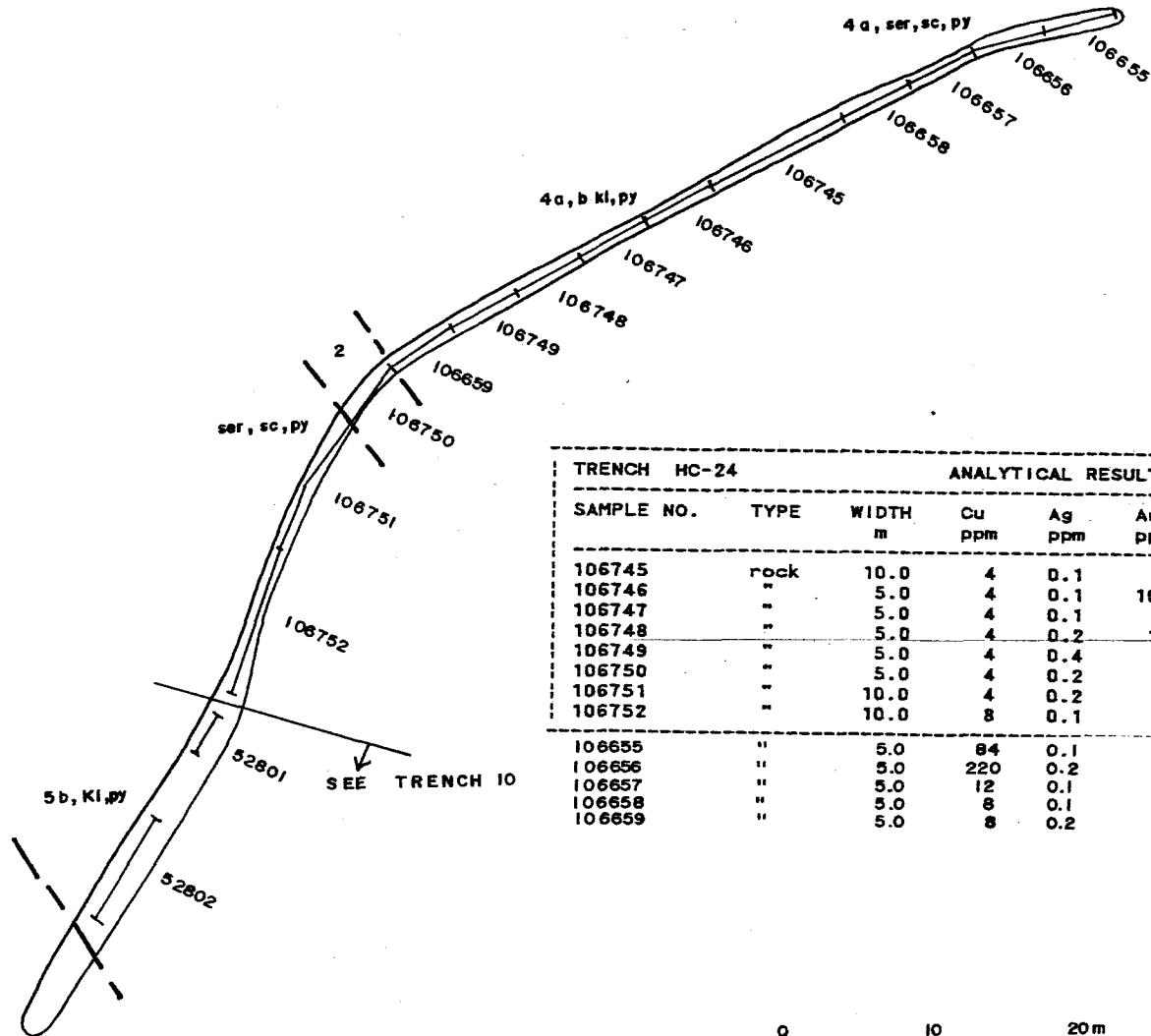
0 5 10m

TRENCH HC-23		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106738	rock	5.0	36	0.2	3
106739	"	5.0	24	0.2	2
106740	"	5.0	36	0.2	2
106741	"	5.0	56	0.1	2
106742	"	5.0	52	0.4	1
106743	"	5.0	48	0.2	6
106744	"	5.0	40	0.1	1

REVISED	Holy Cross	
	Trench Plan: TRHC #23	
PROJ. No. 253	SURVEY BY: RB	DATE: Nov 9/89
N.T.S. 93E/14	DRAWN BY: RB	SCALE: 1:500
DWG. No. FIG. 22	NORANDA EXPLORATION OFFICE: PRINCE GEORGE, B.C.	

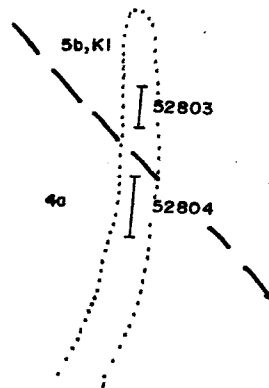
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627



TRENCH HC-24		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106745	rock	10.0	4	0.1	1
106746	"	5.0	4	0.1	103
106747	"	5.0	4	0.1	1
106748	"	5.0	4	0.2	10
106749	"	5.0	4	0.4	5
106750	"	5.0	4	0.2	5
106751	"	10.0	4	0.2	2
106752	"	10.0	8	0.1	5
106655	"	5.0	84	0.1	4
106656	"	5.0	220	0.2	5
106657	"	5.0	12	0.1	4
106658	"	5.0	8	0.1	1
106659	"	5.0	8	0.2	6

0 10 20m  
SCALE 1 : 500



REVISED	HOLY CROSS	
	TRENCH PLAN N <sup>o</sup> 24	
PROJ. No. 253	SURVEY BY: R.B.	DATE: Aug, 89
N.T.S. 93 F/14	DRAWN BY: S.K.B.	SCALE: 1 : 500
DWG. No.	NORANDA EXPLORATION	
FIG. 23	OFFICE: PRINCE GEORGE, B.C.	

11575N-

106660  
106661

1066675

106662

106663

4a

106664

106676

11550N-

106677

106678

106679

106680

106681

11525N-

106753

4a,  
prop, spec

106754

106755

11500N-

4b,  
spec.

106756

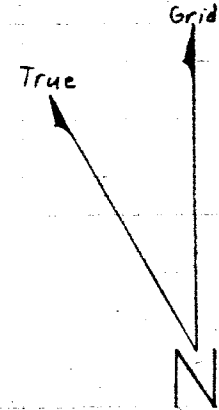
106757

106758

106759

L 10.000E

0 5 10m

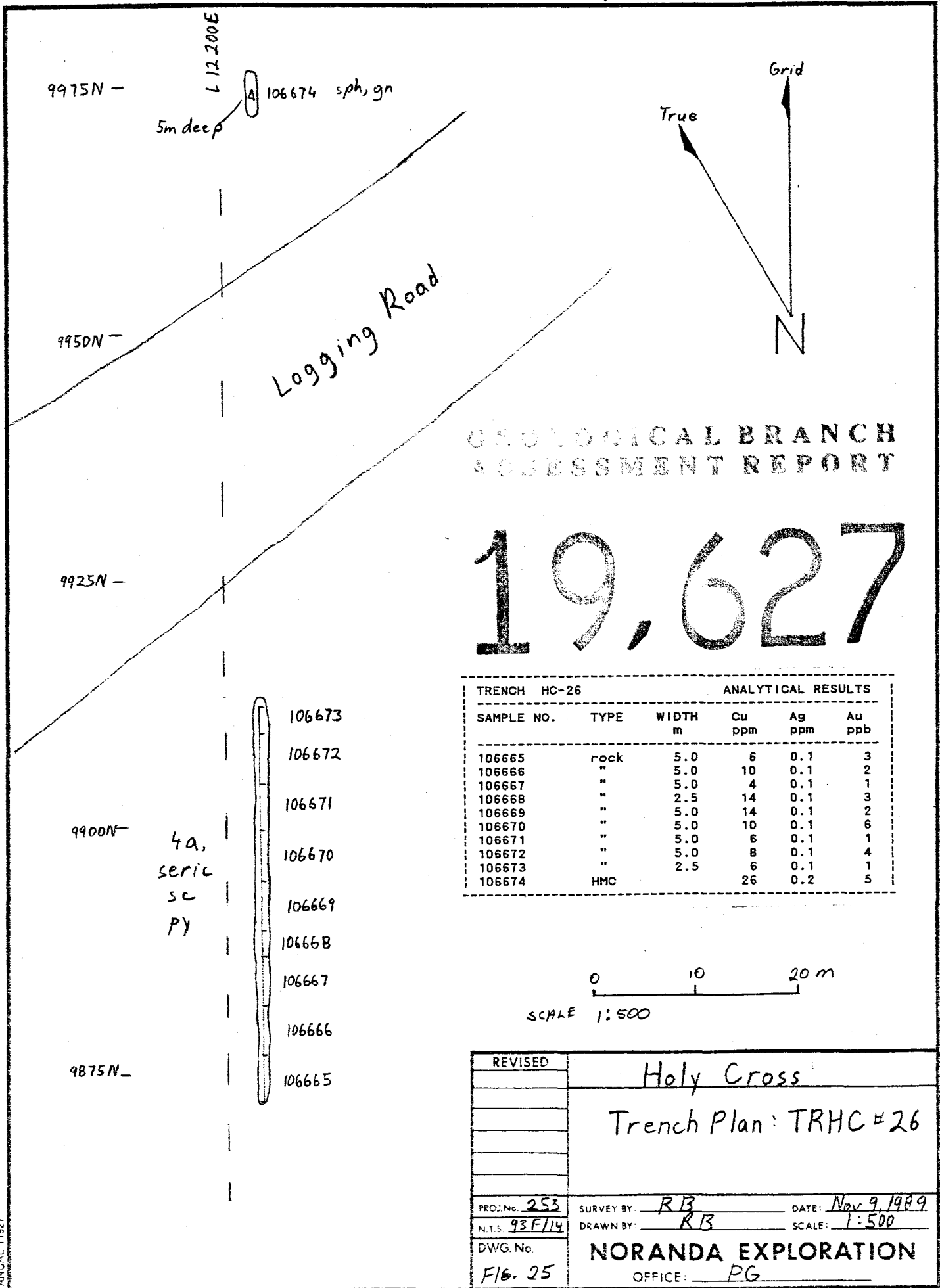


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627

TRENCH HC-25		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106660	rock	4.0	192	0.4	1
106661	"	2.0	94	0.4	1
106662	"	5.0	126	0.6	23
106663	"	3.0	52	0.1	2
106664	"	2.0	32	0.1	4
106675	"	5.0	128	0.4	5
106676	"	5.0	24	0.1	3
106677	"	5.0	18	0.1	1
106678	"	5.0	18	0.1	3
106679	"	5.0	18	0.1	3
106680	"	5.0	12	0.1	3
106681	"	5.0	76	0.3	1
106753	"	5.0	132	2.0	11
106754	"	10.0	140	6.8	19
106755	"	5.0	140	1.2	2
106756	"	5.0	24	0.8	2
106757	"	5.0	44	0.6	1
106758	"	5.0	48	2.2	1
106759	"	5.0	140	2.2	8

REVISED	Holy Cross	
	Trench Plan: TRHC #25	
PROJ. No. 253	SURVEY BY: KB	DATE: Nov 9 1989
N.T.S. 93 F/14	DRAWN BY: KB	SCALE: 1:500
DWG. No. FIG. 24	NORANDA EXPLORATION	
	OFFICE: PG	

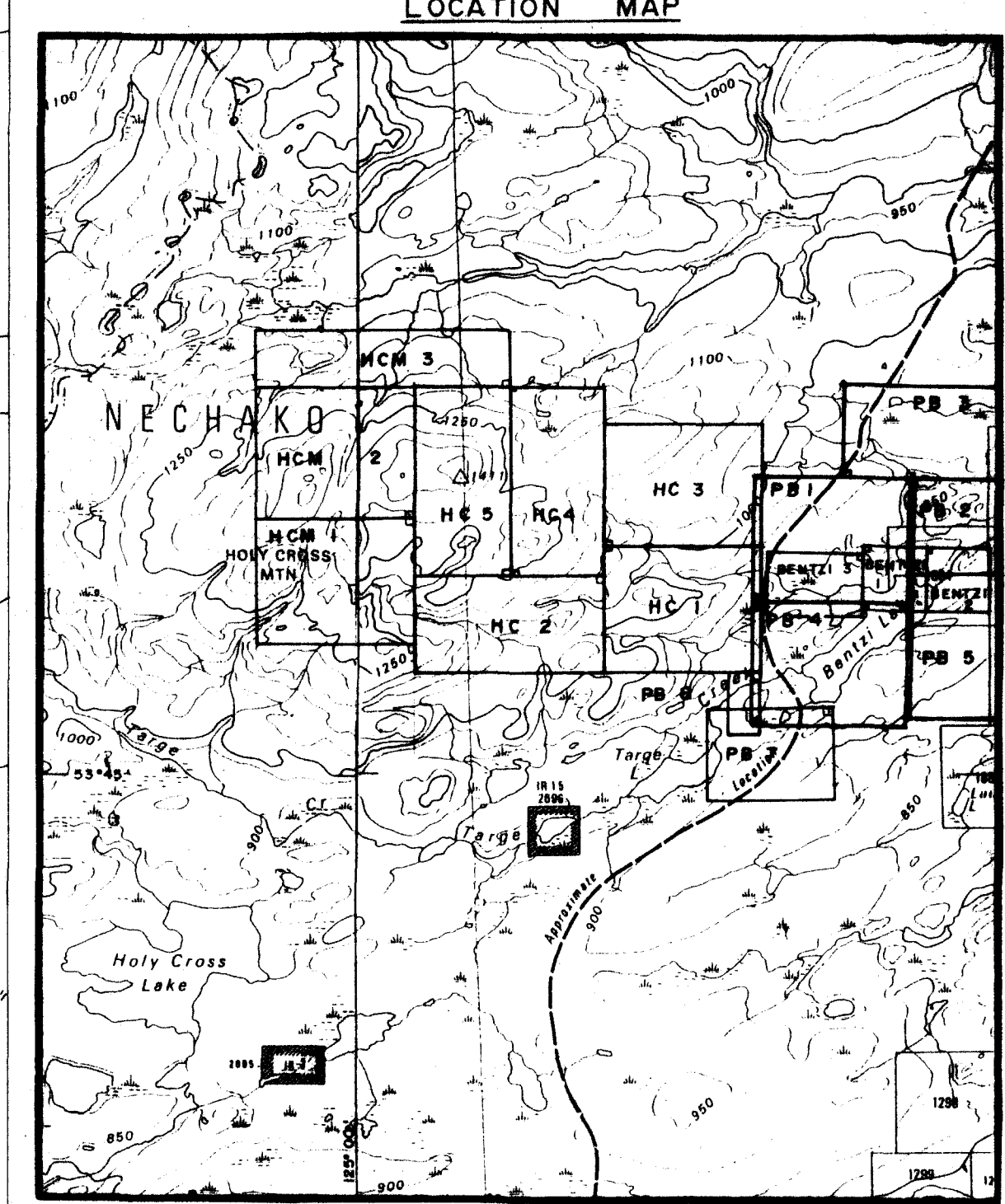
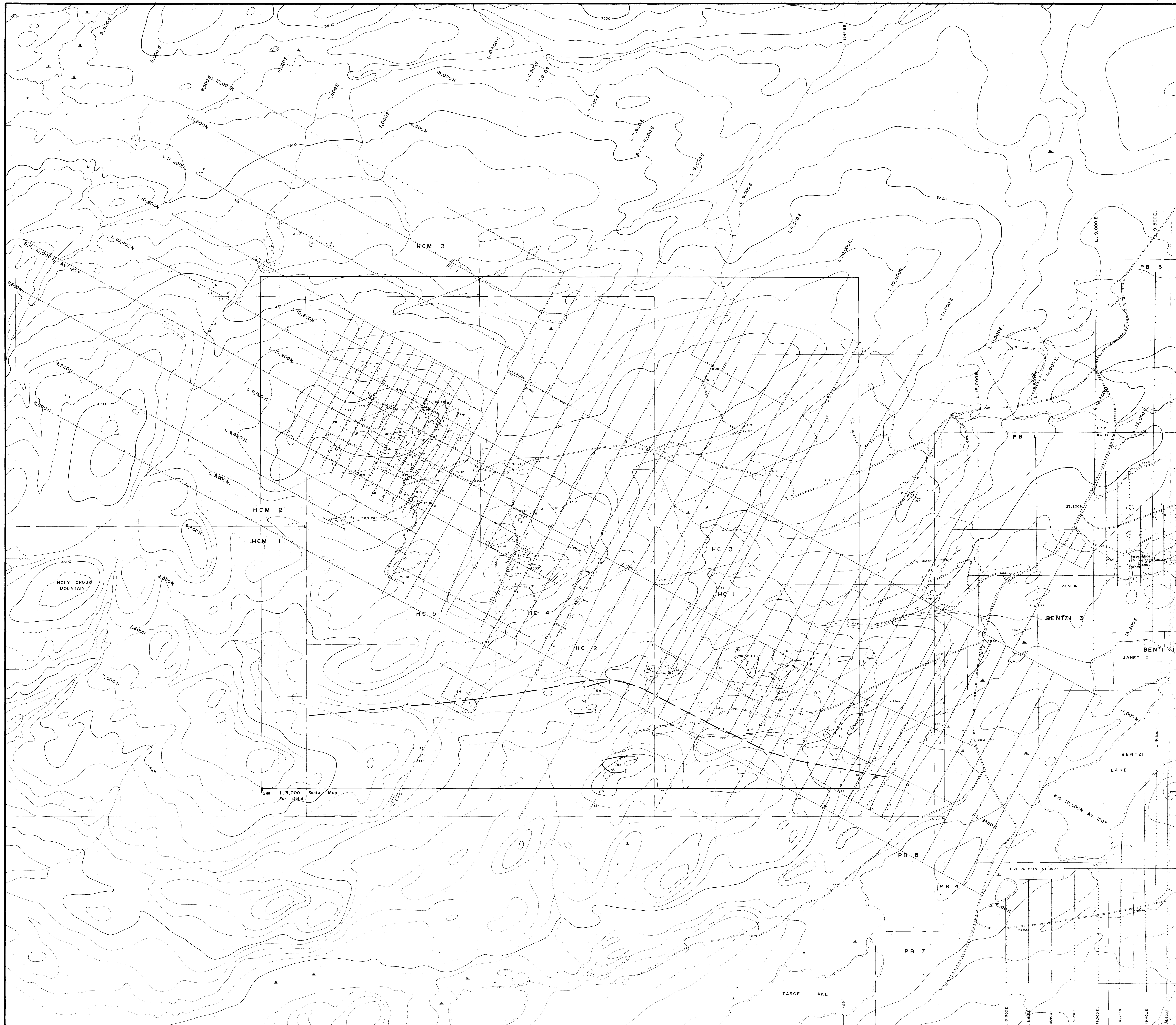


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,627

TRENCH HC-26		ANALYTICAL RESULTS			
SAMPLE NO.	TYPE	WIDTH m	Cu ppm	Ag ppm	Au ppb
106665	rock	5.0	6	0.1	3
106666	"	5.0	10	0.1	2
106667	"	5.0	4	0.1	1
106668	"	2.5	14	0.1	3
106669	"	5.0	14	0.1	2
106670	"	5.0	10	0.1	6
106671	"	5.0	6	0.1	1
106672	"	5.0	8	0.1	4
106673	"	2.5	6	0.1	1
106674	HMC		26	0.2	5





SCALE 1:10,000

**LEGEND**

- BACK TYPES**
- 0 INMAD GROUP
    - vesicular basalt
    - massive andesite
    - andesite tuff
    - diabase gabbro
  - 7 POST-OCTA LAKE IMPROVED ROCKS
    - Granitic Rocks: syenite, monzonite, hornfels
    - diorite
    - massive, medium grained, grey green
    - massive, hornblende
  - 5 OCTA LAKE GROUP
    - albite breccia
    - banded rhyolite
    - felsic tuff, lapilli tuff
    - felsic crystal tuff
  - 4
    - andesite, massive, maroon to grey in color
    - andesitic tuff, lapilli
    - andesite, pleistocene - postglacial
  - 3 Basalt
  - 2 Fine grained sediments
  - 1 Conglomerate
- ASSOCIATIONS**
- hm basaltic
  - py pyrite
  - sp sphalerite
  - wt wolframite
  - an arsenic
  - st stibnite
  - ep epidote
  - ca calcite
  - ba barite
  - per perovskite
  - se sericite

- SYMBOLS**
- seasonal creek
  - outcrop limit
  - ▲ swamp, marsh
  - trench
  - claim post, i.p. post
  - rock sample location
  - soil sample location
  - float sample location
  - road

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**19,627**

SCALE 1:10,000

REVISED	HOLY CROSS
M 5 Jan, 1990	HC CLAIMS
	GEOLOGY MAP
PROJ. No. 253	SURVEY BY: C.C., B.D., M.S. DATE: JULY, 1988, 1989
N.T.S. 15/6/11, 14, 15	DRAWN BY: S.K.B. SCALE: 1:10,000
DWG No.	<b>NORANDA EXPLORATION</b>
FIG. 3	OFFICE: PRINCE GEORGE, B.C.

