

LOG NO: 1006

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ACTION:

FILE NO:

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

HOLY CROSS PROPERTY

HC - 1, 2, 3, 4, 5 MINERAL CLAIMS

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

Situated at Coordinates: $53^{\circ} 47'$
 $124^{\circ} 56'$

NORANDA EXPLORATION COMPANY, LIMITED
(no personal liability)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,807

BY: WILLIAM DONALDSON

SEPTEMBER, 1988

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SUMMARY:

This report describes the geological and geochemical surveys done by Noranda between May 28, 1988 and June 21, 1988 to assess the HC-1 to HC-5 mineral claims near Holy Cross Mountain, B. C. The claims were staked in June and October, 1987 to secure an area in which an anomalous gold value in a rhyolite dome was indicated by earlier recon work.

The property is underlain by andesites, rhyolites, tuffs and minor sediments of the Ootsa Lake Group and andesite, basalt, tuff and gabbro of the Endako Group.

Geological mapping, rock and stream sediment sampling on the HC claim group has outlined several sites of epithermal veins, areas of pervasive silicification which contains low, but anomalous gold values, and areas of kaolinite alteration with associated base metal dispersion halos.

Recommendations for further property work include continued geological mapping and geochemical sampling, a magnetometer survey, possible till sampling, and stripping and/or trenching.

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.

This report describes the subsequent geological and geochemical surveys undertaken between May 28, 1988 and September 1, 1988. All work was performed by employees of Noranda Exploration Company, Limited.

LOCATION AND ACCESS:

The HC claims are situated approximately 33 kilometers 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 kilometers east of the town of Fraser Lake on Highway 16. Following this road for 38 kilometers will bring one to the claim group. Several secondary logging roads branch off the main road, and cross the western half of the claim group.

PHYSIOGRAPHY AND VEGETATION:

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

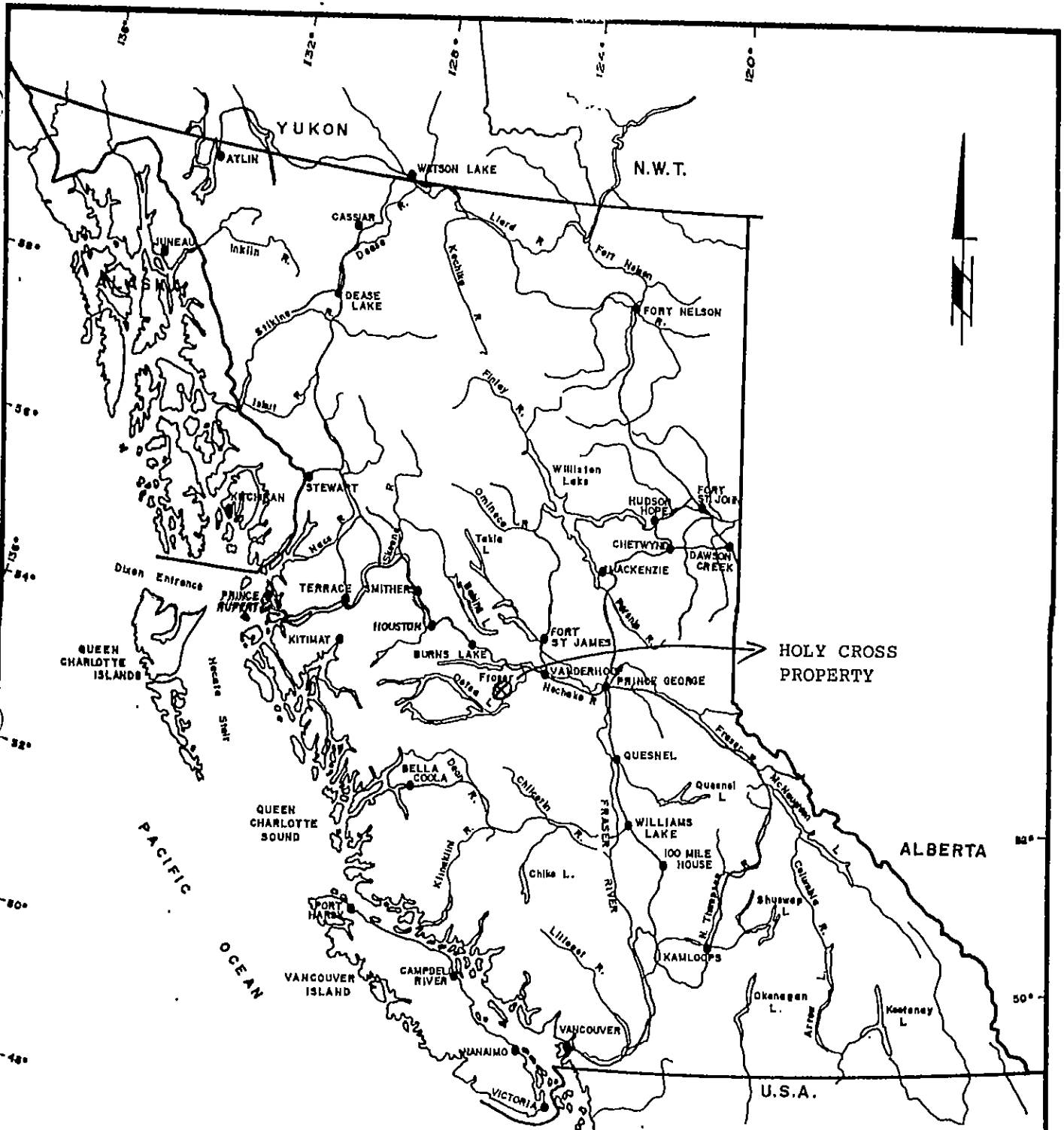
Vegetation consists of mature spruce and pine. Creeks are covered by devils club and skunk cabbage. Berry bushes occur in clearcuts.

CLAIM STATISTICS:

The Holy Cross property consists of five claims, HC1-5, made up of 94 claim units (Figure 2). Upon acceptance of this report, the claims will be in good standing until the indicated expiry date.

TABLE 1 - CLAIM STATISTICS

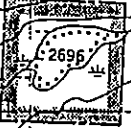
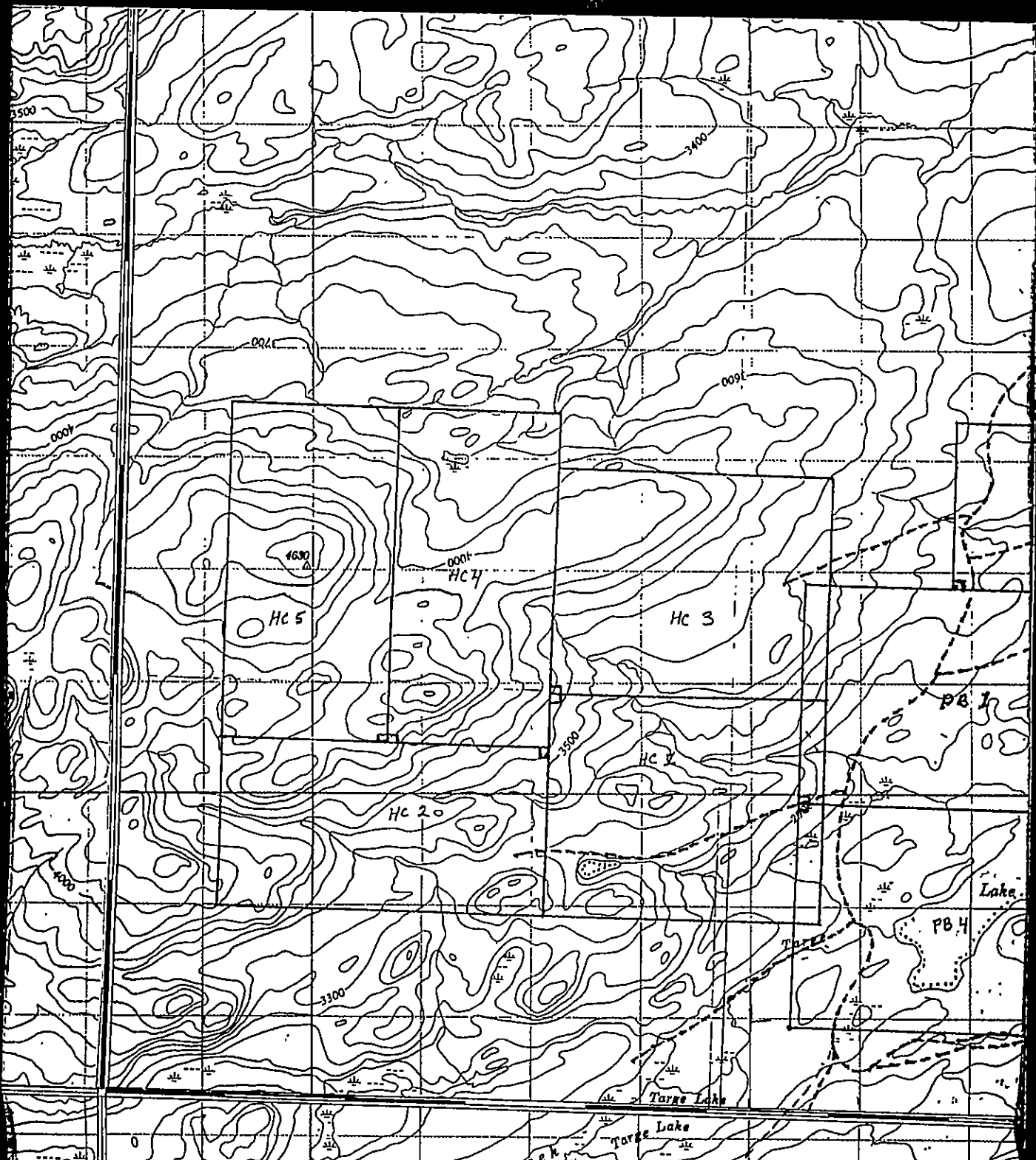
<u>NAME</u>	<u>RECORD #</u>	<u>UNITS</u>	<u>RECORD DATE</u>	<u>EXPIRY DATE</u>
HC-1	8469	20	June 22, 1987	June 22, 1988
HC-2	9015	18	Oct. 13, 1987	Oct. 13, 1988
HC-3	8470	20	June 22, 1987	June 22, 1988
HC-4	9016	18	Oct. 13, 1987	Oct. 13, 1988
HC-5	9017	18	Oct. 13, 1987	Oct. 13, 1988



0 100 200 KILOMETRES
SCALE: 1:8,000,000

REVISED	HOLY CROSS PROPERTY	
	LOCATION MAP	
PROJ No. <u>253</u>	SURVEY BY: <u>B Donaldson</u>	DATE: <u>June 88</u>
NTS.	DRAWN BY: <u>B.K.B.</u>	SCALE: <u>1:8,000,000</u>
DWG. No 1	NORANDA EXPLORATION	
	OFFICE: <u>PRINCE GEORGE, B.C.</u>	

VANAL 11827



RI 16
TARGE CREEK
IR 16

REVISED	HOLY CROSS PROPERTY	
	CLAIM SKETCH	
	HC 1 to 5 Claims	
PROJ. No. 253	SURVEY BY: B Donaldson	DATE: June 88
N.T.S. 93F15	DRAWN BY: B. Donaldson	SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION	
	OFFICE: Prince George BC	

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.

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:

The HC-1 through HC-5 claim groups are underlain by rocks of the Ootsa Lake and the Endako Group. The Endako Group was observed only in the southern portion of HC-1 and HC-2. The reader is referred to the 1:10,000 geological map (Figure 3).

The majority of Ootsa Lake Group outcrops occur within a 900 meter wide, southeast trending band that extends from the northwest corner of HC-5 to the southeast corner of HC-1. The Ootsa Lake Group has been subdivided into four rock units.

① The first and oldest unit consists of massive maroon to grey colored andesite, porphyritic andesite and massive basalt.

The andesite is massive, maroon-to-grey colored and fine grained. The ground mass is composed of biotite, hornblende, epidote and feldspar (Tipper, 1963).

The porphyritic andesite is maroon colored, with less than 15% plagioclase phenocrysts, up to 3 mm in length.

Up to 2% disseminated specular hematite occurs in the andesites. At L12250E, 11000N, several hematite veins to 10 cm width cut a porphyritic andesite. Trace pyrite and malachite have been observed in the andesites.

Randomly oriented 2-10 mm milky-white quartz veins cut the andesites. Veining is not abundant, and mineralization does not occur in the veins. Minor calcite and epidote veins fill fractures.

Alteration includes chlorite (to 4%) and kaolinite. Kaolinite alteration results in a bleached buff to tan-purple color in the andesites. In altered porphyritic andesites, plagioclase crystals have been completely altered to kaolinite. This type of alteration is typical of an epithermal model. The best example of the kaolinite alteration occurs in the northwest corner of HC-5.

Basalts are not as abundant as the andesites. The basalts are massive, grey in color, very fine-grained and vesicular. Vesicles in the basalts at L12200E, 11000N are filled by epidote. The vesicles are less than 4 mm in diameter. No mineralization, veining or alteration was noted in the basalts. Trace carbonate occurs in the ground mass.

② The second unit within the Ootsa Lake Group consists of flow-banded rhyolite and rhyolite breccia. The rhyolites are found in three dome-like hills at L7000E-L7800E, L11000E-L11200E and L11400E-L11600E, all on or near baseline 10000N.

The rhyolites are pink-to-maroon colored, aphanitic to very fine-grained and pervasively silicified. Flow banding and brecciation was noted on all domes. The average strike of flow

banding varies from 120 to 170 degrees, with dips of 70 to 80 degrees west. Rhyolitic breccia (primary) varies in width from 20 cm to 3 meters, with angular breccia clasts to 4 cm in length.

Veins of 2 to 5 mm quartz, drusy quartz, chalcedony and up to 2 cm veins of jasper cut the rhyolite. Quartz jointing strikes 015 and 060 degrees, and dips at 80 degrees west. The jasper veins strike 040 to 060 degrees and may contain up to 1% specular hematite. Jasper veins cutting the rhyolite breccia are also brecciated, suggesting syn-emplacment.

Mineralization within the rhyolites consists of less than 1% specular hematite and trace pyrite. Alteration consists of patchy kaolinite alteration on the two domes at L11000E to 11600E. Pervasive kaolinite alteration is present on the rhyolite dome at L7000E to L7800E.

③ The third unit within the Ootsa Lake Group consists of andesitic to dacitic tuff, felsic lapilli and crystal tuff. These volcanic rocks are the least abundant on the HC claim group.

The andesitic to dacitic tuffs are green-to-maroon colored and fine grained. Plagioclase crystals are up to 2 mm in length; several have been altered to kaolinite. There is no visible mineralization or veining in these rocks.

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.

④ The final unit within the Ootsa Lake Group consists of a sedimentary unit. No sedimentary outcrops have been observed on the property. Several conglomerate float samples consisting of stream gravels and sands occur. The conglomerate clasts are poorly sorted, with well rounded clasts ranging in size from coarse sand to 3 cm pebbles. Pebble density ranges from 5% to 60%. The clasts are composed of milky quartz, smokey quartz and chalcedony. No visible mineralization was noted in the conglomerates.

711
660

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

The first unit consists of a massive basalt and massive 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 (= 2 mm diameter). The andesites are green colored, in an aphanitic matrix. Locally, 1%

disseminated hematite occurs. There are up to 10%, square shaped, \leq 3 mm feldspar phenocrysts and 5%, \leq 1 mm mafic crystals. Minor epidote also is present.

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.

LITHOGEOCHEMISTRY:

Noranda Exploration Company, Limited was interested in the economic potential for gold, silver and base metal mineralization, and thus geochemical analysis was directed toward these metals and their associated indicator elements.

One hundred and ninety-six rock grab and chip samples were collected from the Holy Cross property for geochemical analysis. A rock sample location map is presented in the back of this report (Figure 4). Assay certificates are included in Appendix IV.

The samples were shipped to and analysed at Noranda's geochem lab at 1050 Davie Street, Vancouver, B. C. The samples were analysed for gold by atomic absorption and 30 element ICP technique. The details of the analytical procedure appear in Appendix III.

To follow is a summary of statistics of the main analytical results received to date.

Copper: Background levels fall within the range of 2 to 20 ppm. Values as high as 20726 ppm Cu have been obtained, however, values above 2000 ppm are localized.

Zinc: Background levels fall within the range of 2 to 80 ppm. Values as high as 1150 ppm Zn have been obtained, however, the anomalous norm is around 400-600 ppm Zn.

Lead: Background levels fall within the range of 1 to 20 ppm. Values as high as 473 ppm Pb have been obtained, however, the anomalous norm is round 100-160 ppm Pb.

Silver: Values over 1.0 ppm are considered to be anomalous and values below this are considered to be background. The highest values obtained are 10.7, 12.8, 15.8, 18.0 and 23.6 ppm Ag. All silver values are localized.

Gold: Values over 100 ppb are considered to be anomalous. Anomalous values of 128, 153, 230 and 310 ppb Au were recorded, all from a rhyolite or rhyolite breccia, with quartz veining and up to 1% pyrite.

GEOCHEMICAL SURVEY:

Stream Sediments:

Stream sediments were collected wherever a road or grid line crossed a creek. Silt samples were collected from the active stream channel, placed in high wet-strength Kraft paper envelopes and shipped to Vancouver, B. C., where they were analysed by the methods described in Appendix III.

A total of 26 silt samples were collected and analysed. Gold values were below 10 ppb except for a 20, 36 and 80 ppb gold; all were below the arbitrary significantly anomalous value of 100 ppb. Silver values were at or below detectable limits, except for sample #35360, which contained 1.4 ppm Ag. Lead values fall between 6 and 28 ppm, except for sample #35360, which contained 75 ppm Pb. Zinc is relatively anomalous, with half of all values, being between 105 and 247 ppm Zn. Copper values are slightly above background (30 ppm) with 18 samples between 32 and 163 ppm Cu.

Five panned concentrates were obtained from 20 litre gravel samples collected from the easterly flowing creek across the northern portion of HC-1. The panned heavy mineral concentrates (20 to 40 grams) were shipped to Noranda's Vancouver lab and analysed as described in Appendix III. Samples were collected at 500 meter intervals, going downstream. Gold values were 110, 120, 100, 10, 380 ppb, respectively. Copper, lead, zinc and silver values were all at background levels.

CONCLUSIONS:

Geological mapping, rock and stream sediment sampling on the HC claim group has outlined several sites of epithermal veins, areas of pervasive silicification which contain low but anomalous gold values, and area of kaolinite alteration with associated base metal dispersion halos.

Rhyolites underwent epithermal activity and they display characteristics typical of shallow level, low temperature emplacement such as drusy quartz, chalcedony, silicification and brecciation.

Kaolinite alteration (characteristic of epithermal deposits) occurs in the Dotsa lake Group andesites and rhyolites. Areas with kaolinite alteration contain several base metal (Cu, Pb, Zn) and silver dispersion halos.

Approximately 5% of the Holy Cross grid contains outcrop. Most exposure occurs within a 900 meter wide band trending southeast from the northwest corner of HC-5 to the southeast corner of HC-1. Exposure is minimal outside of this band and it is the authors opinion that soil geochemistry may be an effective aid to define anomalous halos.

Gold lithogeochemical assay results have not been encouraging. The results suggest greater than 100 ppb gold values are obtained from the rhyolites. As the rhyolites are pervasively silicified and thus non-permeable, any gold is probably associated with the epithermal quartz veins.

RECOMMENDATIONS:

The following work is recommended on the HC claim group:

1. Continued mapping and geochemical sampling to define in more detail the geological relationships on the property.
2. A magnetometer survey on every 200 meter line for 1 kilometer north and south of Baseline 10000N to possibly define any structural breaks or magnetically mineralized highs.
3. Possible till sampling and panning to possibly outline any paleoplacer deposits.
4. If the conglomerate float is anomalous, then trace the float to the source area.

5. Stripping an/or trenching of any geochemically anomalous soil halos where surficial rock sampling has not yielded encouraging results.
6. Diamond drilling of any favourably anomalous areas, in conjunction with geophysical results.

REFERENCES:

- Gravel, J. and Allen, D.G. (1983): Geological and Geochemical Report on the Copley Lake Property, COP 1 to 3 claims for Abo Oil Corporation. B.C. Mining Assessment Report #11850.
- Tipper, H.W. (1963): Nechako River Map Area. Geological Survey of Canada, Memoir 324.

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, William Stratton Donaldson, do hereby certify:

1. that I am a geologist and reside at 1139 Edgeland Place, Ottawa, Ontario, K2C 2J9
2. that I graduated from Carleton University (Ottawa, Ontario) in 1985 with a Bachelor of Science (Honours) degree in Geology.
3. that I have practiced my profession continuously since graduation.
4. that this Geological and Geochemical Report on the Holy Cross Property, Omineca Mining Division, British Columbia is based on my personal knowledge of the geology of the area and on a review of published and unpublished information on the property and surrounding area.

William Donaldson

W. S. Donaldson
B. Sc. (Honours)
September 9, 1988

APPENDIX II

STATEMENT OF COSTS

PROPERTY: HOLY CROSS (HC 1-5 CLAIMS)

SEPTEMBER, 1988

REPORTS: GEOLOGICAL, GEOCHEMICAL

1. WAGES:		
No. of days - 45 mandays		
Rate per day - \$128.47		
TOTAL WAGES:		\$ 5,781.15
2. FOOD & ACCOMMODATION:		
No. of days - 45 mandays		
Rate per day - \$26.56		
TOTAL FOOD & ACCOMMODATION:		\$ 1,195.20
3. TRANSPORTATION:		
No. of days - 45 mandays		
Rate per day - \$21.83		
TOTAL TRANSPORTATION:		\$ 982.40
4. EQUIPMENT & SUPPLIES:		
No. of days - 45 mandays		
Rate per day - \$11.08		
TOTAL EQUIPMENT & SUPPLIES:		\$ 498.40
5. ANALYSIS:		
5 pans @ \$8.50	\$ 42.50	
(Au, Ag, Cu, Pb, Zn, As)		
26 silts @ \$11.50	\$ 301.60	
(Au & 30 element ICP)		
196 rocks @ \$13.75	\$2,695.00	
(Au & 30 element ICP)		
TOTAL ANALYSIS:		\$ 3,039.10
6. REPORT PREPARATION:		
Author	\$ 400.00	
Drafting	\$ 200.00	
Typing	\$ 100.00	
TOTAL REPORT PREPARATION:		\$ <u>700.00</u>
TOTAL COSTS		\$12,196.25

APPENDIX III

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

Revised:01/86

The methods listed are presently applied 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 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 attacked 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 - 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 - 0.01 (10PPB)
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	

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Tb PPM	Sr PPM	Cd PPM	Sb PPM	Hf PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Va %	K %	W PPM	Au* PPM
34631	19	18	6	33	.4	18	5	230	1.74	23	5	ND	2	23	1	3	2	16	.08	.020	4	40	.08	144	.01	2	.60	.01	.10	1	5
34632	1	20	14	76	.4	8	16	2197	3.65	10	5	ND	3	194	1	2	2	67	2.21	.112	11	8	.72	28	.12	2	2.89	.06	.19	1	1
34634	2	29	4	36	.2	17	2	137	1.15	13	5	ND	1	17	1	2	2	8	.11	.022	2	30	.07	182	.01	5	.34	.01	.06	1	2
34635	1	7	4	66	.1	22	9	345	3.30	6	5	ND	5	28	1	2	2	71	.11	.035	14	18	.05	54	.01	6	.48	.01	.07	1	1
37911	1	3	3	7	.1	3	1	35	2.54	2	5	ND	3	4	1	2	2	18	.12	.043	4	25	.01	181	.02	7	.19	.01	.17	1	1
37912	1	2	7	119	.3	6	16	1500	5.37	2	5	ND	4	19	1	2	2	99	2.09	.070	19	12	1.98	36	.05	12	1.75	.02	.03	1	1
37913	1	5	11	216	.3	19	21	996	5.59	5	5	ND	2	68	1	2	2	153	1.71	.061	6	11	2.50	44	.19	21	2.63	.07	.03	1	6
37914	2	2	4	22	.1	3	2	423	2.19	3	5	ND	4	5	1	3	2	20	.14	.049	19	8	.04	94	.01	2	.29	.01	.21	8	1
37915	1	168	11	170	.4	1	17	1543	6.34	2	5	ND	3	72	1	2	2	148	1.41	.080	8	4	1.84	201	.06	2	2.44	.09	.56	1	1
SYD C/AU-2	18	57	38	127	6.5	68	27	1037	3.90	38	21	6	36	47	17	17	20	55	.47	.085	37	55	.87	173	.06	38	1.86	.06	.14	11	480

NORANDA EXPLORATION PROJECT 253 8808-032 FILE # 88-3315

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Yi PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	St PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Cr %	P %	La PPM	Ce PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Zn* PPM
31662	1	4	2	9	.1	1	1	118	1.44	6	5	ND	2	4	1	2	2	6	.07	.012	25	1	.02	176	.01	2	.31	.01	.19	1	1
31663	1	5	2	19	.1	2	2	134	1.31	20	5	ND	2	6	1	2	2	5	.07	.010	17	2	.02	521	.01	4	.28	.01	.19	2	1
31664	1	4	2	7	.1	1	1	101	.91	6	5	ND	2	5	1	2	2	4	.03	.007	30	1	.01	480	.01	3	.36	.01	.20	1	1
31665	1	4	3	27	.1	2	1	613	1.07	6	5	ND	2	4	1	2	2	5	.06	.011	18	2	.02	179	.01	2	.42	.01	.20	1	2
31666	1	6	2	9	.1	2	1	111	1.22	2	5	ND	3	7	2	4	2	6	.06	.012	27	2	.01	830	.01	14	.37	.01	.22	2	1
31667	1	8	2	16	.1	2	1	144	1.49	2	5	ND	3	2	1	2	3	4	.06	.014	18	2	.01	84	.01	2	.33	.01	.20	1	1
31668	2	4	2	7	.2	1	1	68	.87	14	5	ND	3	10	1	2	2	4	.05	.010	19	3	.01	1449	.01	4	.34	.01	.18	1	4
31669	1	3	2	8	.1	1	1	99	1.20	4	5	ND	2	4	1	2	2	4	.06	.010	18	2	.01	392	.01	2	.34	.01	.19	1	1
31670	1	4	2	8	.1	1	1	81	1.34	2	5	ND	2	4	1	2	2	7	.05	.012	26	1	.01	170	.01	2	.35	.01	.19	1	1
31671	1	15	2	15	.1	2	1	128	1.26	2	5	ND	2	6	1	2	2	6	.06	.013	23	1	.01	359	.01	2	.34	.01	.21	2	1
31672	1	3	5	18	.1	3	3	437	.70	2	5	ND	1	19	2	2	2	3	.15	.009	43	4	.01	2526	.01	2	.22	.01	.15	1	2
32060	1	97	2	87	.3	6	16	1375	3.79	2	5	ND	1	23	1	2	2	42	2.81	.071	9	19	1.38	40	.01	2	2.24	.01	.10	1	1
32061	36	2688	20	37	6.8	2	8	222	14.18	17	7	ND	3	6	1	8	3	49	.03	.016	2	1	.17	114	.01	6	.49	.01	.13	40	4
32062	10	47	13	168	.6	20	104	2046	11.12	4	5	ND	2	7	1	2	2	134	.20	.085	9	57	1.52	410	.07	4	2.44	.01	.11	1	1
32063	1	23	12	131	.4	11	19	1061	5.65	3	5	ND	1	158	1	2	3	169	3.09	.071	10	15	2.04	90	.15	3	3.16	.20	.09	1	1
32064	2	127	4	74	.2	3	16	1873	3.87	2	5	ND	1	31	3	3	2	25	4.07	.053	16	6	.32	75	.01	2	1.04	.01	.11	1	1
32065	3	29	17	178	.6	15	36	1783	10.28	13	5	ND	2	8	1	2	5	121	.20	.079	13	50	1.58	123	.06	2	2.26	.01	.15	2	2
32066	1	4	9	104	.4	40	27	1141	9.47	4	5	ND	1	49	1	2	2	195	.76	.050	3	46	2.98	879	.15	2	2.39	.11	1.55	1	1
32068	6	17	24	13	.2	1	1	33	.86	24	5	ND	5	19	2	2	2	2	.07	.010	25	2	.01	1075	.01	2	.29	.01	.24	1	50
32069	1	5	18	10	.2	1	1	68	.91	39	5	ND	6	17	3	2	2	4	.06	.011	43	2	.03	848	.01	2	.35	.01	.22	2	10
32070	3	6	4	6	.1	1	1	43	.70	7	5	ND	6	9	2	2	2	4	.06	.008	26	1	.01	150	.01	3	.35	.01	.22	1	1
32071	28	6	8	6	.4	1	1	73	.77	27	5	ND	7	17	1	4	2	4	.04	.007	27	2	.02	545	.01	2	.34	.01	.21	1	58
32072	13	3	17	9	.2	1	1	40	.78	126	5	ND	6	16	2	13	2	3	.07	.011	29	1	.02	182	.01	2	.33	.01	.24	1	410
32073	2	2	6	16	.1	1	1	50	.76	5	5	ND	5	20	3	2	2	3	.12	.017	29	2	.02	451	.01	2	.34	.01	.20	3	52
32074	21	2	2	6	.1	1	1	37	.49	11	5	ND	6	12	3	2	3	2	.06	.010	31	1	.01	79	.01	2	.33	.01	.20	2	3
32075	2	4	6	5	.1	1	1	37	.40	2	5	ND	5	4	1	2	2	1	.02	.005	16	2	.01	50	.01	5	.27	.01	.16	1	1
34615	1	22	4	58	.1	33	8	339	3.37	6	5	ND	2	87	2	2	2	37	.02	.036	9	19	.02	1593	.01	3	.46	.01	.06	1	1
34616	1	15	2	26	.1	9	6	82	1.55	4	5	ND	2	88	1	2	2	36	.01	.011	7	21	.01	1322	.01	2	.33	.01	.05	1	1
34617	4	12	9	285	.3	137	18	317	12.39	20	5	ND	3	52	2	2	2	50	.02	.146	5	22	.01	2145	.01	2	.37	.01	.05	1	1
34620	5	29	10	356	1.2	239	172	32819	20.10	55	5	ND	4	37	8	2	2	65	.04	.236	3	42	.01	19350	.01	3	.54	.01	.12	1	1
34626	1	4	140	37	.4	2	3	60	.92	9	5	ND	1	31	1	2	2	3	.05	.010	12	2	.02	939	.01	2	.38	.01	.17	1	13
34627	15	145	14	11	.6	4	3	422	1.37	46	5	ND	6	20	1	5	3	6	.04	.008	11	2	.02	815	.01	2	.40	.01	.18	1	12
34628	1	15	7	12	.1	3	2	216	1.22	2	5	ND	3	8	2	2	2	6	.05	.013	25	3	.01	1522	.01	2	.31	.01	.19	1	2
34629	1	17	3	20	.1	7	3	281	1.86	9	5	ND	1	12	1	2	3	14	.07	.010	6	7	.07	117	.01	2	.74	.01	.08	1	3
34630	41	26	18	23	.1	8	3	109	6.98	239	5	ND	2	44	1	5	2	47	.13	.030	8	10	.07	402	.01	2	.81	.01	.14	2	1
STD C/AU-R	18	57	34	132	7.1	66	27	1022	4.05	40	19	8	36	45	18	18	21	55	.47	.092	39	58	.89	173	.06	38	1.94	.06	.13	12	510

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8808-066

Project No. : 253 Sheet: 1 of 1 Date rec'd: AUG12
Material : 1 ROCK Geol.: M.S. Date compl: AUG22
Remarks :

Values in PPM, except where noted.

T. T. No.	SAMPLE No.	Ag	PPB Au
167	36259	0.2	10

file

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AUG 25 1988
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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

8806-071

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 CA P LA CR NG BA YI B W AND LIMITED FOR NA K AND AL. AN DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK/SILT AUP ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE

DATE RECEIVED: JUN 21 1988

DATE REPORT MAILED: June 29/88

ASSAYER: C. Leong D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT-88-06-071-253 File # 88-2225

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Mn	Co	Ni	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	N	Al	K	X	Y	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	PPM	PPM	
PR253 34901	2	5	9	20	.8	1	1	30	.32	41	5	ND	1	3	1	2	2	2	.04	.006	16	1	.01	26	.01	2	.21	.01	.13	1	128
PR253 34902	92	3	72	16	4.1	1	1	36	.66	133	5	ND	1	9	1	11	2	2	.03	.004	19	1	.01	63	.01	9	.17	.01	.13	1	100
PR253 34903	3	5	7	7	.2	1	1	35	.78	6	5	ND	2	4	1	2	2	3	.01	.006	5	1	.01	281	.01	13	.15	.01	.14	1	6
PR253 34904	1	77	66	645	.7	22	21	2084	7.45	9	5	ND	3	67	1	2	3	168	2.20	.209	42	33	2.36	51	.09	2	1.71	.01	.05	1	4
PR253 34905	1	3	9	30	.1	1	1	196	1.43	5	5	ND	3	7	1	2	2	5	.05	.020	28	1	.03	55	.01	2	.37	.01	.21	3	3
PR253 34906	1	2	4	29	.1	1	1	122	.91	2	5	ND	1	3	1	2	2	4	.04	.016	35	2	.03	32	.01	5	.36	.01	.22	1	3
PR253 34907	1	33	10	90	.3	7	15	1543	5.12	10	5	ND	1	117	1	2	2	72	3.67	.322	18	4	.48	159	.10	15	1.31	.02	.20	1	5
PR253 34908	1	79	13	16	1.0	1	2	58	.58	40	5	ND	2	23	1	2	2	2	.09	.029	21	1	.02	281	.01	2	.27	.01	.21	1	7
PR253 34909	1	2	9	11	.1	1	1	199	2.23	5	5	ND	2	9	1	2	2	27	.20	.040	31	5	.03	50	.01	9	.35	.01	.22	3	3
PR253 34910	2	2	5	9	.3	1	1	43	.63	8	5	ND	1	9	1	2	2	3	.08	.018	16	1	.03	52	.01	4	.31	.01	.19	1	5
PR253 34911	1	3	9	41	.2	2	7	1123	2.82	4	5	ND	3	11	1	2	2	21	.98	.069	20	2	.33	594	.02	4	.39	.01	.23	13	5
PR253 34912	1	11	8	6	.1	1	2	57	1.66	101	5	ND	2	5	1	2	2	7	.02	.014	8	2	.01	361	.01	8	.30	.01	.24	3	2
PR253 34913	1	5	7	5	.1	1	2	26	.74	199	5	ND	1	11	1	2	2	7	.02	.031	3	2	.01	1031	.01	3	.28	.01	.24	1	4
PR253 55394	1	8	18	29	.1	5	3	771	.82	7	5	ND	9	40	1	2	2	7	.27	.027	27	5	.10	185	.01	5	1.74	.45	.28	1	6
SILT → PR253 35360	18	163	75	247	1.4	10	12	1553	2.56	24	5	ND	1	88	1	2	2	49	1.30	.089	42	10	.47	409	.02	2	2.26	.01	.14	1	36
STD C/AU-2	14	60	42	133	6.3	68	29	1067	4.05	41	18	7	36	50	18	18	19	58	.49	.084	40	57	.93	180	.07	38	1.99	.06	.14	11	500

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C 4 1/2 8 1/2

Holy Cross (FS)

8807-090

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 1ML 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 NH FE SE CR P LA CE MG BA YI B W AND LIMITED FOR NA K AND AL. NO DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AUP ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 25 1988 DATE REPORT MAILED: July 30/88 ASSAYER: C. Long D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8807-090 253 File # 88-2975 Page 1

Table with columns: SAMPLE#, No, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, Al, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Na, Ti, B, Al, Na, K, W, Au*, and PPM values for each element.

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Aug 2/88 DM

NORANDA EXPLORATION PROJECT 8807-090 253 FILE # 88-2975

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	V	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	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	PPM
032051	15	17	24	8	1.1	4	2	42	.94	4	5	ND	4	16	1	2	2	1	.02	.007	16	11	.01	637	.01	5	.26	.01	.15	1	3
032052	125	12	157	7	2.7	1	2	42	1.59	17	5	ND	1	18	1	7	3	2	.01	.009	4	2	.01	153	.01	6	.19	.01	.17	2	17
032053	3	203	176	15	6.2	1	2	48	.99	4	5	ND	1	8	1	2	2	3	.01	.011	11	4	.01	352	.01	3	.17	.01	.13	3	3
032054	23	4	43	32	5.3	1	3	47	2.25	48	5	ND	2	38	1	6	2	5	.01	.009	20	2	.02	1224	.01	6	.30	.01	.19	1	7
032055	19	17	26	3	.9	2	1	45	.59	23	5	ND	1	9	1	4	3	1	.01	.003	8	2	.01	528	.01	10	.15	.01	.15	1	1
032056	2	12	16	8	.2	1	3	53	1.00	3	5	ND	3	13	1	2	2	2	.03	.029	19	1	.01	1574	.01	6	.31	.01	.21	1	1
032057	1	7	15	5	.3	2	2	31	.85	2	5	ND	5	23	1	2	3	3	.01	.018	27	2	.01	660	.01	8	.31	.01	.24	1	1
032058	1	9	8	47	.1	2	4	409	1.87	2	5	ND	1	6	1	2	2	3	.09	.043	24	3	.36	465	.01	6	.94	.01	.23	1	1
032059	1	5	18	11	.1	3	2	145	1.79	3	5	ND	4	4	1	2	2	3	.01	.010	21	3	.01	72	.02	6	.29	.01	.15	2	1
036987	1	12	7	16	.3	4	3	186	.62	2	5	ND	2	4	1	2	2	4	.04	.004	10	4	.04	100	.01	9	.33	.01	.15	2	2
036908	4	8	13	9	.1	3	3	71	6.01	4	5	ND	1	4	1	3	2	16	.01	.003	3	3	.01	39	.01	5	.28	.01	.13	41	1
036909	1	28	11	17	.1	3	3	197	1.33	2	5	ND	2	3	1	3	2	7	.01	.009	17	4	.02	51	.01	6	.26	.01	.15	4	1
036910	1	5	4	5	.1	1	2	128	1.15	2	5	ND	4	4	1	2	2	4	.07	.020	21	3	.02	73	.01	4	.28	.01	.23	1	1
036911	1	10	10	17	.1	3	2	145	1.10	2	8	ND	2	4	1	4	2	7	.04	.017	14	1	.01	522	.01	6	.29	.01	.20	2	2
036912	2	16	4	86	.1	24	10	676	3.88	2	5	ND	5	37	1	2	4	79	.69	.165	34	46	.64	66	.14	9	.48	.06	.10	1	2
036913	1	3	4	6	.1	2	1	95	1.20	2	5	ND	3	2	1	2	4	8	.04	.017	22	3	.02	129	.01	3	.29	.01	.21	2	1
036914	1	3	6	6	.1	4	1	776	1.40	2	5	ND	6	23	1	2	2	7	1.26	.017	44	4	.03	30	.01	5	.28	.01	.17	1	1
036915	1	77	10	105	.1	32	26	1211	6.26	37	5	ND	1	64	1	2	2	155	1.93	.079	11	15	2.34	42	.19	21	3.53	.05	.06	1	2
036916	1	5	2	20	.1	4	1	189	1.01	2	5	ND	4	3	1	3	3	4	.06	.019	24	2	.01	51	.01	9	.27	.01	.20	1	1
036917	1	5	9	5	.2	3	1	39	.29	3	5	ND	2	14	1	3	2	2	.06	.020	18	2	.03	1118	.01	9	.33	.01	.20	1	1
036918	1	4	7	10	.1	2	1	113	1.32	2	5	ND	3	3	1	4	3	7	.05	.019	16	3	.01	112	.01	2	.30	.01	.20	1	3
036919	1	4	3	8	.1	4	1	50	.93	2	5	ND	2	3	1	2	2	6	.04	.020	22	5	.02	141	.01	3	.30	.01	.20	1	1
036920	1	3	4	4	.1	2	1	49	.64	2	6	ND	2	2	1	2	2	3	.01	.011	15	3	.01	49	.01	3	.27	.01	.19	1	20
STD C/AD-2	18	62	35	130	7.1	68	27	1091	4.11	39	17	9	37	48	17	18	19	57	.46	.087	39	57	.92	176	.06	33	2.00	.06	.14	12	480

Holy Cross (FS)

8808-012

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 NA FE SR CA P LA CE MG BA YI B Y AND LIMITED FOR NA K AND AL. AN DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK Au* ANALYSIS BY ACID LEACH/AA FROM 10 GR SAMPLE.

DATE RECEIVED: AUG 2 1988 DATE REPORT MAILED: Aug 8/88 ASSAYER: D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8808-012-253 File # 88-3180

Table with columns: SAMPLE#, No, Cu, Pb, Zn, Ag, Yt, 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 PPM. Rows include sample numbers 09473, 09474, 09475, 19976, 19977, 19978, 19979, 36921, 36922, 36923, 36924, 36925, 37906, 37907, 37908, 37909, 30851, 30852, and STD C/AU-2.

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9/1/88

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: HOLY CROSS

CODE : 8807-060

Project No. : 253 Sheet: 1 of 1 Date rec'd: JUL14
 Material : 6 RX & Geol. : D.M. Date compl: JUL26
 Remarks : 24 SOILS

Values in PPM, except where noted.

T.T. No.	SAMPLE No.	PPB Au
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25	36256	10
26	36257	10
27	36258	10
28	16364	10
29	16365	10
30	16366	520

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 JUL 29 1988
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Rocks -

HOLY CROSS (D.M.)

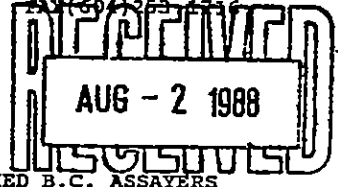
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8807-060

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1736

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 V AND LIMITED FOR NA K AND AL. AN DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: Pulv AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.



DATE RECEIVED: JUL 22 1988 DATE REPORT MAILED: July 26/88 ASSAYER: C. Long D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8807-060 253 File # 88-2904

SAMPLE# No Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Cr P La Cr Mg Ba Ti B Al Na K V Au* PPM PPM PPM PPM PPM PPM PPM % PPM PPM PPM PPM PPM PPM PPM PPM % % PPM PPM % PPM % PPM % % % PPM PPM

Table with 30 columns for elements and 4 rows of data (16365, 16366, STD C/AU-2).

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ACHE 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 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 HM PB CA P LA CR NG NA 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: JUN 10 1988

DATE REPORT MAILED: June 14/88

ASSAYER: C. Leong D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Pb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	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	PPM	PPM	PPM	PPM	PPM	PPM
31551	1	28	37	44	.3	3	6	426	1.25	2	6	ND	2	15	1	2	2	12	.87	.022	5	3	.05	924	.01	2	.44	.01	.20	2	1
31552	1	7	6	21	.5	1	2	286	1.32	4	5	ND	2	7	1	2	4	5	.02	.008	12	1	.02	795	.01	11	.35	.01	.20	4	1
31553	16	17	37	54	.2	3	5	552	1.47	3	7	ND	1	4	1	2	3	2	.03	.023	14	2	.07	422	.01	10	.71	.01	.24	1	6
31555	1	4	2	277	.2	62	24	3344	5.48	11	5	ND	1	15	1	2	2	101	1.62	.049	2	137	4.23	34	.13	12	2.65	.02	.04	1	5
31556	1	3	8	403	.3	63	23	5674	4.87	12	5	ND	2	64	1	4	5	121	1.72	.057	4	104	3.32	107	.12	23	2.72	.10	.11	1	1
31557	1	4	2	17	.1	2	2	141	2.60	2	5	ND	5	5	1	2	2	11	.10	.035	20	2	.05	157	.01	15	.39	.01	.22	1	7
31558	1	3	2	573	.2	9	28	4121	6.78	11	5	ND	1	58	1	4	2	185	2.83	.079	8	6	3.36	71	.01	16	2.69	.02	.11	1	3
31559	1	12.	14	48	.2	2	5	378	5.88	16	5	ND	3	14	2	4	2	133	.07	.073	4	9	.14	227	.07	2	.94	.01	.25	3	12
31560	1	4	8	57	.2	1	4	618	3.21	3	5	ND	5	4	1	2	4	15	.11	.051	13	1	.13	62	.03	11	.60	.01	.22	4	5
31561	2	6	17	14	.5	1	1	57	1.45	25	5	ND	1	27	2	2	3	7	.03	.031	23	1	.02	249	.01	9	.30	.01	.29	1	30
31562	3	4	17	7	.5	2	1	37	.80	80	7	ND	2	18	1	2	2	3	.03	.037	12	1	.01	139	.01	6	.38	.01	.25	1	1
31563	5	13	38	43	.3	1	1	64	2.23	61	5	ND	1	12	1	2	2	7	.02	.040	14	1	.02	229	.01	17	.36	.01	.29	2	1
31564	3	8	38	25	.1	2	1	93	2.33	48	5	ND	1	16	1	3	4	9	.02	.038	17	1	.02	511	.01	3	.29	.01	.23	2	19
31565	1	63	5	78	.1	12	16	501	4.50	10	5	ND	1	140	1	2	2	168	1.66	.158	10	15	1.02	74	.12	21	2.29	.24	.21	1	7
31567	1	27	3	81	.1	5	12	745	4.71	6	5	ND	2	175	1	2	5	119	1.86	.171	13	10	1.01	319	.31	11	2.39	.08	.15	1	6
31568	1	34	4	55	.1	5	12	798	5.00	6	5	ND	2	177	1	2	5	122	1.59	.161	13	9	1.04	486	.22	2	2.43	.06	.12	1	1
31569	1	24	20	79	.1	7	7	868	2.39	2	5	ND	5	32	1	3	2	28	.82	.052	18	8	.56	148	.01	10	.69	.02	.18	1	1
31570	1	14	14	294	.1	11	23	3738	5.68	6	5	ND	1	53	1	2	3	132	6.10	.065	11	13	.81	104	.02	13	1.49	.02	.25	1	2
31571	1	2	6	13	.1	1	2	921	2.23	10	5	ND	5	28	1	2	2	24	2.26	.055	29	2	.10	92	.01	5	.55	.01	.26	1	196
34914	1	15	16	18	.2	2	1	159	1.80	4	5	ND	4	7	2	4	2	9	.04	.006	20	1	.02	146	.01	2	.27	.01	.18	5	1
34915	5	18	3	29	.1	2	1	54	.77	45	5	ND	3	8	1	3	2	2	.04	.006	19	1	.01	314	.01	10	.29	.01	.20	2	2
34916	2	3	14	13	.1	1	1	631	1.41	2	5	ND	8	7	2	3	2	5	.07	.007	16	1	.03	72	.01	2	.35	.01	.20	3	8
34917	1	4	7	15	.5	3	4	1623	2.45	3	5	ND	5	7	1	2	2	41	.27	.067	5	2	.10	83	.01	9	.46	.01	.21	3	2
34918	1	100	13	50	.1	3	9	1279	2.25	27	5	ND	2	8	1	2	2	20	.19	.071	6	2	.06	540	.01	2	.57	.01	.29	2	13
34919	1	29	21	21	.5	1	6	85	3.49	28	5	ND	6	6	3	3	2	15	.04	.033	19	1	.02	364	.01	3	.49	.01	.24	4	1
34920	1	8	10	179	.1	12	18	2669	7.62	5	6	ND	3	13	2	4	2	114	.49	.087	15	18	.45	218	.04	2	1.16	.01	.25	1	1
34921	8	7	8	51	.2	5	7	1073	15.56	2	7	ND	2	23	1	6	2	151	.20	.046	6	6	.11	1297	.03	5	.47	.01	.16	24	17
34922	1	4	5	154	.1	75	27	1513	4.08	18	5	ND	1	58	1	6	6	111	2.21	.059	3	151	4.25	40	.16	11	2.32	.02	.03	1	1
34923	1	8	2	104	.2	19	23	1841	5.18	6	3	ND	2	66	1	2	2	129	3.37	.085	14	40	1.85	124	.01	2	2.22	.04	.20	1	8
34924	1	4	15	101	.2	2	7	1191	2.31	2	5	ND	2	8	1	2	2	4	.12	.048	22	4	.32	415	.01	2	.91	.01	.25	1	6
34925	1	12	7	92	.3	2	5	932	1.95	3	5	ND	2	4	1	2	2	2	.04	.021	22	2	.13	123	.01	2	.85	.01	.28	2	1
34926	1	6	25	7	.2	2	1	89	1.71	2	5	ND	4	10	1	6	2	7	.02	.007	21	2	.01	127	.01	5	.21	.01	.18	9	4
34927	1	15	22	24	.3	1	2	261	1.16	7	5	ND	5	3	1	2	2	6	.01	.013	16	2	.03	52	.01	2	.38	.01	.17	2	1
34928	6	10	12	4	.5	1	1	65	.66	6	5	ND	4	5	2	2	2	1	.01	.007	17	2	.01	81	.01	3	.19	.01	.18	1	7
34929	1	10	23	107	.9	1	6	607	3.46	2	5	ND	3	10	1	2	2	16	.15	.056	15	2	.14	203	.03	14	.61	.01	.23	5	10
34930	1	18	2	157	.1	1	8	2631	4.47	2	5	ND	3	-11	1	2	2	25	.33	.135	13	3	.62	425	.09	2	1.43	.01	.21	1	5
STD C/AD-R	18	59	39	132	6.5	68	29	1065	6.02	39	17	8	37	47	17	20	17	58	.47	.095	40	61	.92	177	.07	33	1.92	.07	.16	10	520

NORANDA EXPLORATION PROJECT-8806-026 253 FILE # 88-1887

SAMPLE#	Ko	Cu	Pb	Zn	Ag	Ml	Co	Mn	Fe	As	U	Au	Yb	Str	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Am*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
34931	3	9	5	32	.1	2	6	534	3.08	2	5	ND	1	18	1	2	2	12	.20	.077	12	2	.09	2376	.01	6	.83	.01	.29	3	1
34932	1	4	2	84	.1	2	5	963	2.97	5	5	ND	1	10	1	2	2	32	.49	.244	18	1	.07	174	.01	2	1.21	.01	.25	2	1
34933	1	3	5	12	.1	1	3	1852	1.47	9	5	ND	2	13	1	6	3	12	.06	.006	3	1	.03	599	.01	8	.53	.01	.23	2	5
34934	1	19	2	66	.1	3	7	1083	3.06	6	5	ND	1	141	1	2	2	43	3.40	.143	18	6	.47	125	.02	2	1.41	.03	.21	1	1
34935	1	2	2	15	.1	1	2	390	2.10	3	5	ND	1	27	1	4	2	15	.18	.022	2	1	.09	125	.01	4	.76	.01	.16	3	1
→ 34940	2	2221	21	73	1.0	1	3	649	3.46	6	5	ND	6	13	1	2	2	5	.06	.026	13	2	.15	1009	.01	2	.90	.01	.24	1	370
34941	1	12	2	10	.1	1	1	56	.88	48	5	ND	1	8	1	6	3	3	.04	.005	6	1	.01	212	.01	2	.20	.01	.21	1	4
34942	5	7	2	7	.1	1	1	103	1.05	18	5	ND	2	6	1	2	2	6	.03	.007	12	1	.01	101	.01	2	.22	.01	.14	1	6
34943	1	13	3	9	.4	2	1	65	.59	16	5	ND	2	9	1	4	2	4	.01	.007	13	1	.01	249	.01	6	.29	.01	.17	1	46
34944	6	9	27	5	.2	2	1	99	9.34	22	5	ND	4	6	1	37	2	41	.01	.007	4	3	.01	302	.01	3	.10	.01	.06	90	4
34945	1	9	2	5	.1	1	1	65	.75	8	5	ND	2	5	1	2	3	3	.01	.006	7	1	.01	186	.01	11	.18	.01	.17	1	7
35362	11	253	8	100	.3	1	25	1164	6.72	12	5	ND	2	7	1	2	2	56	.31	.117	11	6	.91	49	.14	2	1.77	.02	.16	1	3
35363	1	114	2	115	.3	32	24	1195	6.13	51	5	ND	2	46	1	4	2	160	2.26	.087	11	21	2.37	35	.24	21	3.24	.03	.07	1	1
35367	2	13	4	6	.2	3	1	81	.66	8	5	ND	3	6	1	2	5	4	.02	.006	29	3	.02	62	.01	13	.21	.01	.18	1	1
35368	2	16	26	10	.3	2	1	60	1.27	20	5	ND	3	7	1	11	2	5	.02	.005	13	4	.02	234	.01	5	.26	.01	.20	4	3
35369	1	9	5	5	.1	2	1	49	.51	11	5	ND	2	5	1	2	2	3	.01	.003	15	3	.01	75	.01	7	.32	.01	.21	1	3
35370	3	14	197	14	.8	2	1	102	.83	25	5	ND	2	12	1	2	6	2	.01	.010	17	3	.01	724	.01	5	.21	.01	.14	1	6
35371	3	7	8	4	.2	5	1	46	1.14	36	5	ND	4	4	1	6	3	5	.01	.003	12	7	.01	124	.01	6	.23	.01	.19	2	13
35372	1	4	7	4	.4	2	1	58	.85	35	5	ND	2	4	1	7	2	3	.01	.003	13	2	.01	122	.01	6	.21	.01	.18	1	10
35373	125	16	473	13	3.4	1	1	58	2.46	147	5	ND	1	13	1	24	3	6	.01	.017	10	2	.01	658	.01	2	.15	.01	.13	7	48
35374	1	19	12	1150	.1	18	19	5475	6.17	30	5	ND	4	28	2	2	2	127	1.73	.288	36	25	2.11	138	.05	2	2.00	.02	.12	1	3
35375	22	9	457	12	3.1	1	1	100	1.22	41	5	ND	2	10	1	6	2	7	.01	.015	5	3	.02	135	.01	5	.19	.01	.18	1	310
STD C/AU-2	17	58	38	132	7.2	67	28	1067	3.85	38	17	8	36	47	17	15	18	57	.45	.091	39	57	.89	173	.07	35	1.84	.07	.15	11	525

NORANDA EXPLORATION PROJECT 253 8808-032 FILE # 88-3315

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Pb	As	V	Cr	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Bz	Ti	B	Al	Na	K	W	Au ^g
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	PPM	PPM	
09463	7	6	8	46	.2	2	2	21	1.41	2	5	ND	3	5	1	2	3	1	.01	.002	18	19	.01	70	.01	3	.36	.01	.28	1	7
30833	1	6	13	66	.1	1	5	1113	2.88	2	5	ND	1	174	1	2	2	26	3.80	.102	17	5	.39	116	.06	3	1.22	.01	.27	1	1
30854	1	68	19	19	2.8	1	1	147	1.96	2	5	ND	2	19	1	2	2	1	.02	.015	13	8	.06	173	.01	3	.61	.01	.20	1	14
30855	83	14	100	9	1.4	2	1	26	1.65	5	5	ND	2	17	1	2	2	1	.82	.005	13	10	.04	354	.01	3	.30	.01	.22	1	11
30856	3	60	156	47	.9	2	1	25	2.53	2	5	ND	1	3	1	2	2	1	.01	.010	6	23	.01	159	.01	2	.19	.01	.18	1	3
30857	4	9	13	3	.8	4	1	53	.76	2	5	ND	1	10	1	2	3	1	.01	.002	4	22	.01	1286	.01	3	.06	.01	.04	2	2
30858	1	2	2	75	.1	1	1	681	.62	2	5	ND	4	4	1	2	3	1	.10	.015	24	6	.04	186	.01	2	.45	.01	.24	1	1
30859	6	16	90	11	3.2	4	1	55	2.30	148	5	ND	1	12	1	4	2	12	.02	.008	5	21	.02	140	.01	2	.18	.01	.36	1	12
30860	1	879	9	74	.7	5	16	1515	11.72	2	5	ND	1	7	1	2	2	344	.15	.048	3	16	1.06	48	.17	2	1.92	.01	.10	1	1
30861	15	173	61	37	.2	4	5	279	3.00	13	5	ND	1	4	1	2	2	6	.01	.032	2	16	.02	399	.01	2	.26	.01	.09	1	1
30862	78	333	109	8	4.2	4	3	71	2.66	6	5	ND	2	10	1	2	3	19	.02	.003	2	28	.02	160	.01	4	.21	.01	.19	1	10
30863	56	239	260	39	19.1	4	3	43	4.52	10	5	ND	1	8	1	4	4	32	.01	.028	3	13	.01	353	.01	2	.29	.01	.13	3	17
30864	3	43	54	42	30.3	4	2	75	1.91	5	5	ND	2	10	1	3	2	4	.02	.028	11	34	.01	798	.01	2	.22	.01	.11	1	8
30865	4	15	44	19	.5	5	1	67	1.07	31	5	ND	2	8	1	2	3	5	.01	.005	5	19	.01	570	.01	2	.22	.01	.17	1	4
30867	1	10	12	18	.1	2	1	158	1.58	6	5	ND	2	6	1	2	3	7	.02	.012	14	19	.07	130	.01	2	.44	.01	.19	1	1
30868	3	10	8	7	.7	3	1	74	1.86	2	5	ND	2	5	1	2	2	3	.01	.003	7	14	.01	1000	.01	2	.19	.01	.18	2	1
30869	14	17	32	75	.5	1	1	119	4.13	19	5	ND	3	4	1	3	3	5	.01	.036	5	17	.01	87	.01	2	.30	.01	.18	3	8
30870	8	24	48	11	1.7	7	2	33	1.22	317	5	ND	3	5	1	3	2	1	.01	.004	6	19	.01	129	.01	4	.21	.01	.20	1	3
30871	4	6	12	28	.1	1	1	92	1.64	2	5	ND	6	10	1	2	2	4	.03	.033	17	12	.06	73	.01	2	.55	.01	.25	1	1
30872	15	14	19	10	.5	14	1	177	1.34	11	5	ND	1	3	1	2	2	12	.01	.005	5	47	.05	31	.01	2	.40	.01	.06	1	5
30874	2	3	3	10	.1	4	1	218	1.05	2	5	ND	2	5	1	2	3	4	.05	.010	17	33	.01	429	.01	4	.22	.01	.15	1	1
30875	7	8	25	44	.3	8	3	63	2.96	7	5	ND	1	17	1	19	2	11	.02	.005	11	31	.01	1741	.01	2	.23	.01	.12	26	1
30901	5	10	24	15	.4	4	1	42	.87	10	5	ND	1	8	1	8	2	6	.02	.007	13	27	.01	123	.01	3	.28	.01	.16	6	5
30903	1	7	13	129	.4	2	10	1982	5.47	2	5	ND	1	27	1	2	2	89	1.30	.130	21	9	1.90	53	.06	3	1.67	.02	.05	1	1
30904	1	45	7	116	.3	4	18	2547	5.61	2	5	ND	1	234	1	2	2	122	2.73	.265	17	9	.59	79	.11	2	2.77	.24	.18	1	1
31651	2	38	4	22	.1	4	2	285	1.10	3	5	ND	2	4	2	5	2	6	.05	.014	16	12	.02	413	.01	2	.28	.01	.18	2	1
31652	1	3	2	7	.1	3	1	63	.86	2	5	ND	1	5	1	2	3	6	.06	.012	16	21	.01	454	.01	2	.32	.01	.17	1	1
31653	2	2	2	9	.1	4	1	60	.88	2	5	ND	2	3	2	2	3	6	.05	.013	16	14	.01	175	.01	2	.32	.01	.18	2	1
31654	2	3	2	7	.1	4	1	102	.88	2	5	ND	2	5	2	2	2	6	.05	.009	18	22	.01	504	.01	2	.32	.01	.18	2	1
31655	2	2	5	7	.1	4	1	76	.82	11	5	ND	2	6	1	2	3	7	.05	.011	29	13	.02	810	.01	3	.34	.01	.19	2	1
31656	1	3	2	8	.1	3	1	121	.78	2	5	ND	3	4	1	2	2	5	.05	.010	20	19	.01	174	.01	3	.38	.01	.23	1	1
31657	3	7	6	9	.1	4	2	85	1.10	2	5	ND	2	16	1	4	2	6	.05	.013	12	15	.01	1785	.01	2	.29	.01	.17	2	2
31658	1	9	2	8	.1	3	2	117	.87	2	5	ND	2	7	1	3	2	6	.04	.012	15	18	.01	958	.01	3	.33	.01	.19	1	1
31659	3	5	4	8	.2	5	1	76	.81	2	5	ND	2	5	2	3	3	6	.06	.012	24	14	.01	351	.01	3	.37	.01	.19	1	1
31660	2	3	2	6	.1	3	1	58	.90	2	5	ND	3	3	1	2	2	7	.05	.011	20	21	.01	159	.01	2	.31	.01	.18	1	1
31661	3	3	2	7	.1	3	1	63	.94	2	5	ND	3	8	2	2	2	6	.05	.011	20	14	.01	858	.01	4	.30	.01	.18	2	1
STD C/AU-2	18	58	41	132	7.0	67	28	1021	4.07	42	18	8	37	47	17	18	20	39	.19	.036	41	61	.93	187	.07	37	2.04	.06	.14	12	475

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 MG BA TI B V AND LIMITED FOR NA K AND AL. AN DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU ANALYSIS BY ACID LEACH/AA FROM 10 GR SAMPLE.

RST = 16824

DATE RECEIVED: JUL 20 1988 DATE REPORT MAILED: July 25/88 ASSAYER: C. Long, D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8807-077 253 File # 88-2833

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, Ti, B, Al, Na, K, W, Au. Rows contain analytical data for various samples like 16367, 16370, 36261, etc.

Handwritten signature or initials.

Copy to Del

RECEIVED JUL 29 1988

Soil ✓

NORANDA EXPLORATION PROJECT-8806-026 253 FILE # 88-2156

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Hg PPM	Se PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	Ka PPM	Cr PPM	Mg %	Ba PPM	Tl %	B PPM	Al %	Na %	K %	W PPM
31576	14	59	21	78	1.6	7	7	269	6.29	183	5	ND	4	14	1	2	2	71	.06	.153	12	15	.36	239	.02	2	2.91	.01	.18	1
31577	3	35	12	146	.4	12	8	1428	3.48	18	5	ND	2	18	1	3	2	70	.18	.123	10	20	.19	257	.08	5	2.48	.01	.09	1
31578	1	21	12	102	.6	13	8	317	3.38	2	5	ND	2	27	1	2	4	67	.27	.144	12	18	.38	278	.08	4	3.15	.01	.08	1
31579	12	20	19	101	1.3	7	6	731	4.14	41	5	ND	1	9	1	3	10	72	.04	.127	10	16	.13	445	.05	2	1.86	.01	.06	1
31580	3	49	12	71	1.1	8	7	300	3.62	15	5	ND	1	12	1	2	2	72	.11	.104	13	19	.30	156	.06	5	3.02	.01	.05	1
31581	1	15	9	108	.5	10	8	1767	3.06	4	5	ND	2	25	1	2	6	66	.20	.082	14	19	.27	252	.07	11	2.40	.01	.07	1
STD C	18	62	39	132	6.6	69	29	1067	3.98	40	18	8	36	47	18	16	18	59	.45	.081	40	60	.91	180	.07	34	1.91	.06	.14	12

Silt

NORANDA EXPLORATION PROJECT-8806-026 253 FILE # 88-2156

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	Ti	B	Al	Na	K	W
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM
30776	1	68	10	182	1.0	38	6	1612	2.92	12	16	ND	1	110	2	6	6	42	1.44	.078	16	28	.52	252	.06	12	1.46	.02	.08	1
31554	1	44	13	105	.2	8	7	877	3.01	6	5	ND	1	50	1	2	3	57	.53	.046	17	14	.41	203	.06	3	1.41	.02	.06	2
31556	2	96	16	158	.7	13	8	2283	3.38	7	5	ND	1	67	1	2	3	56	.67	.052	22	16	.46	375	.04	2	2.16	.01	.10	1
34936	1	52	10	258	.2	6	2	958	2.04	8	10	ND	1	180	2	2	8	30	2.42	.058	18	18	.36	208	.04	16	1.46	.02	.06	1
34937	1	63	14	114	.2	9	7	1275	3.18	11	5	ND	1	60	1	2	5	61	.64	.053	19	14	.43	265	.06	6	1.63	.03	.08	1
34938	1	129	11	95	.7	21	9	986	1.07	5	5	ND	1	87	1	2	2	70	.91	.059	28	23	.55	786	.04	6	3.48	.02	.15	1
34939	1	29	12	65	.4	10	7	682	3.29	6	5	ND	1	87	1	2	5	72	.99	.072	23	14	.50	165	.07	2	1.99	.04	.07	1
35302	1	11	4	68	.1	22	7	538	3.55	5	5	ND	1	28	1	2	3	66	.40	.045	11	22	.59	86	.10	19	1.02	.02	.05	1
35303	1	11	9	68	.2	25	7	441	2.64	5	5	ND	2	32	1	4	2	43	.39	.038	11	19	.47	95	.07	10	.95	.01	.04	1
35307	1	12	6	61	.1	22	7	435	2.76	6	5	ND	1	36	1	2	2	49	.44	.043	12	19	.45	104	.08	2	.99	.02	.04	1
35309	1	12	6	60	.3	26	5	1248	2.57	7	5	ND	1	34	1	5	2	38	.45	.048	11	16	.47	135	.06	5	1.01	.01	.02	1
35311	2	37	7	92	.4	34	8	4802	2.87	4	5	ND	1	179	2	2	2	28	1.43	.099	11	23	.37	413	.02	5	1.24	.01	.04	1
35313	2	28	2	63	.3	24	5	407	2.89	2	5	ND	1	86	1	2	3	21	.95	.065	9	17	.35	192	.03	8	.94	.01	.05	1
35316	1	10	6	71	.1	16	7	462	2.62	2	5	ND	2	35	1	2	3	46	.42	.039	11	18	.46	81	.08	2	.93	.01	.04	1
35361	3	79	28	152	.4	12	8	2435	3.92	51	5	ND	1	74	1	2	4	65	.97	.081	27	14	.45	246	.04	4	1.38	.02	.09	1
35364	2	86	14	131	.3	11	8	1373	3.56	8	5	ND	1	55	1	2	2	64	.57	.048	19	15	.47	333	.05	3	2.01	.02	.09	1
35365	5	64	17	82	.1	7	7	10288	2.93	21	5	ND	1	76	1	2	2	59	.89	.054	20	13	.35	494	.06	2	1.31	.02	.05	1
35366	1	32	8	62	.1	11	7	523	3.07	7	5	ND	1	73	1	2	4	80	.49	.030	19	22	.38	163	.10	2	1.26	.04	.06	1
35382	2	77	21	133	.4	8	8	1324	3.52	9	5	ND	1	53	1	2	2	61	.49	.045	18	14	.43	272	.05	3	1.91	.02	.10	2
35383	1	88	13	124	.3	11	8	1348	3.40	6	5	ND	1	59	1	2	2	61	.57	.048	19	15	.48	379	.05	3	2.15	.02	.11	1
35384	1	21	13	77	.1	8	7	974	2.78	13	5	ND	1	42	1	2	2	59	.46	.056	15	14	.36	120	.07	7	.97	.03	.05	1
35385	2	50	18	94	.4	10	7	1325	3.12	12	5	ND	1	56	1	2	2	61	.57	.055	18	15	.42	237	.06	7	1.43	.03	.07	1
35386	1	52	12	101	.2	9	7	902	3.08	6	5	ND	1	52	1	2	4	59	.58	.049	18	13	.42	215	.06	3	1.42	.02	.06	1
35387	1	39	9	99	.1	10	7	867	2.94	8	5	ND	1	51	1	2	2	59	.56	.052	17	12	.42	182	.07	4	1.29	.03	.06	1
STD C	18	62	42	132	6.5	69	30	1070	4.11	40	21	7	36	48	18	17	18	60	.48	.084	41	59	.92	179	.07	31	1.98	.07	.14	12

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	V	Au	Th	Sr	Cd	Sb	Bi	Y	Ca	P	La	Cr	Mg	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	PPM	
30866 P	1	21	8	91	.2	11	9	968	3.61	3	5	ND	2	110	3	3	2	79	.92	.074	18	18	.60	194	.10	3	1.86	.08	.10	1	7
30873 P	1	19	7	101	.1	11	9	1428	3.86	2	5	ND	2	97	2	2	2	84	.83	.076	18	18	.55	187	.10	5	1.73	.06	.09	1	1
30962 P	1	12	4	71	.1	3	7	476	4.08	2	5	ND	2	105	2	2	3	53	.91	.148	17	7	.36	68	.10	3	1.45	.10	.08	1	1
32067 P	1	9	12	49	.1	5	5	369	2.55	1	5	ND	2	60	1	2	2	44	.53	.065	14	11	.34	100	.08	5	1.03	.04	.08	1	1
36263 P	4	47	15	139	.4	9	8	3425	3.88	48	5	ND	1	76	1	2	2	55	.88	.089	24	14	.39	393	.04	5	1.50	.03	.12	1	1
37910 P	1	35	17	99	.2	9	8	1387	4.04	5	5	ND	2	46	2	2	2	97	.47	.072	16	17	.39	169	.11	3	1.23	.03	.08	1	1
37916 P	1	9	6	64	.1	5	6	548	3.38	3	5	ND	3	48	2	2	2	53	.49	.081	16	11	.37	100	.08	6	1.04	.04	.10	1	1
STD C/AU-S	18	57	38	128	7.1	68	27	1019	3.36	38	17	7	37	49	17	18	21	55	.46	.091	39	57	.86	174	.07	37	1.90	.06	.14	12	46

SAFETY MEMORANDUM VANCOUVER LABORATORY

NO. *****

PROPERTY/LOCATION: ~~10-7-88888~~

CODE : 8806-026

Project No. : 115008

Sheet: 1 of 8

Date rec'd: JUN. 09

Material : 368 SOILS &

Geol.: C.G.

Date compl: JUN. 17

Remarks : 30 SILTS & 5 PANS

Values in PPM, except where noted.

TST. No.	SAMPLE No.	PPB Au
32	SILT 30776	10
33	31554	10
34	31566	10
35	34936	10
36	34937	10
37	34938	10
38	34939	10
39	35302	10
40	35303	10
41	35307	10
42	35309	10
43	35311	10
44	35313	10
45	35316	10
46	35381	10
47	35384	10
48	35385	80
49	35386	20
50	35382	10
51	35383	10
52	35384	10
53	35385	10
54	35386	10
55	35386	10
56	SILT 35387	10

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JUL 05 1988

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NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: CENTRAL RECCE
93F/15

CODE : 8706-059

Project No. : 277 Sheet: 1 OF 1 Date rec'd: JUN. 15
Material : SILT & PAN Geol.: LE/CC Date compl: JUN. 23
Remarks :

Values in PPM, except where noted.

T. T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	PPB Au
144	SILT 7918	36	60	1	0.4	4	10
145	7919	170	680	8	1.2	8	10
146	7920	72	120	4	0.8	8	10
147	7922	66	160	4	0.6	8	10
148	7924	28	110	2	0.4	8	10
149	SILT 7926	20	110	1	0.2	8	10

T. T. No.	SAMPLE No.	Sample wt. (g)	PPB Au	Cu	Zn	Pb	Ag	As
46	PAN 7917	17.5	10	16	82	1	0.2	2
47	7921	32.5	370	22	190	4	0.2	2
48	7923	35.7	460	24	100	2	0.2	2
49	PAN 7925	22.1	10	16	150	1	0.2	2

N.B. Pan-con: entire sample used for Au determination.
*Cu, Zn, Pb, Ag, As values obtained from Aqua Regia sol'n.

RON

RECEIVED
JUL - 9 1957
RESULTS

ORIGINAL

obh189 le min 36

District _____

6 Silts
4 PANS

RECORD OF SAMPLE TRANSMITTAL

Lab Code 8706-059

NORANDA EXPLORATION COMPANY, LIMITED
P.O. BOX 2380
1050 DAVIE STREET
VANCOUVER, B.C.
V6B 3T5

Date Shipped: June May 15 (By hand)

Date Received: June May 15, 1987

Shipped Via: _____

No. of Cartons: _____

No. of Samples: 10 (4 pans, 6 silts)

Geologist: L. Erdman / C. Cook

Date: May 15, 1987

MATERIAL:

soil Pan

SILT

ROCK

Project Central Recc No. 277

SAMPLE NOS./COORDS.		N.T.S. NOS.	G.C.I. NOS.	ADD ELEMENT	SAMPLE NOS./COORDS.		N.T.S. NOS.	G.C.I. NOS.	ADD ELEMENT
FROM/LINE	TO/STATION				FROM/LINE	TO/STATION			
<u>SILTS</u>									
<u>07918</u>	<u>07920</u>	<u>93F/15</u>	<u>54133</u>						
<u>07922</u>		<u>93F/15</u>	<u>"</u>						
<u>07924</u>		<u>93F/15</u>	<u>"</u>						
<u>07926</u>		<u>93F/15</u>	<u>54133</u>						
<u>PANS</u>									
<u>07917</u>		<u>93F/15</u>	<u>54133</u>						
<u>07921</u>		<u>"</u>	<u>"</u>						
<u>07923</u>		<u>"</u>	<u>"</u>						
<u>07925</u>		<u>93F/15</u>	<u>54133</u>						

MINI
CBC
277
SOIL
054

CBC 277
Silt Y8706-059
Pan J

ANALYTICAL INSTRUCTIONS

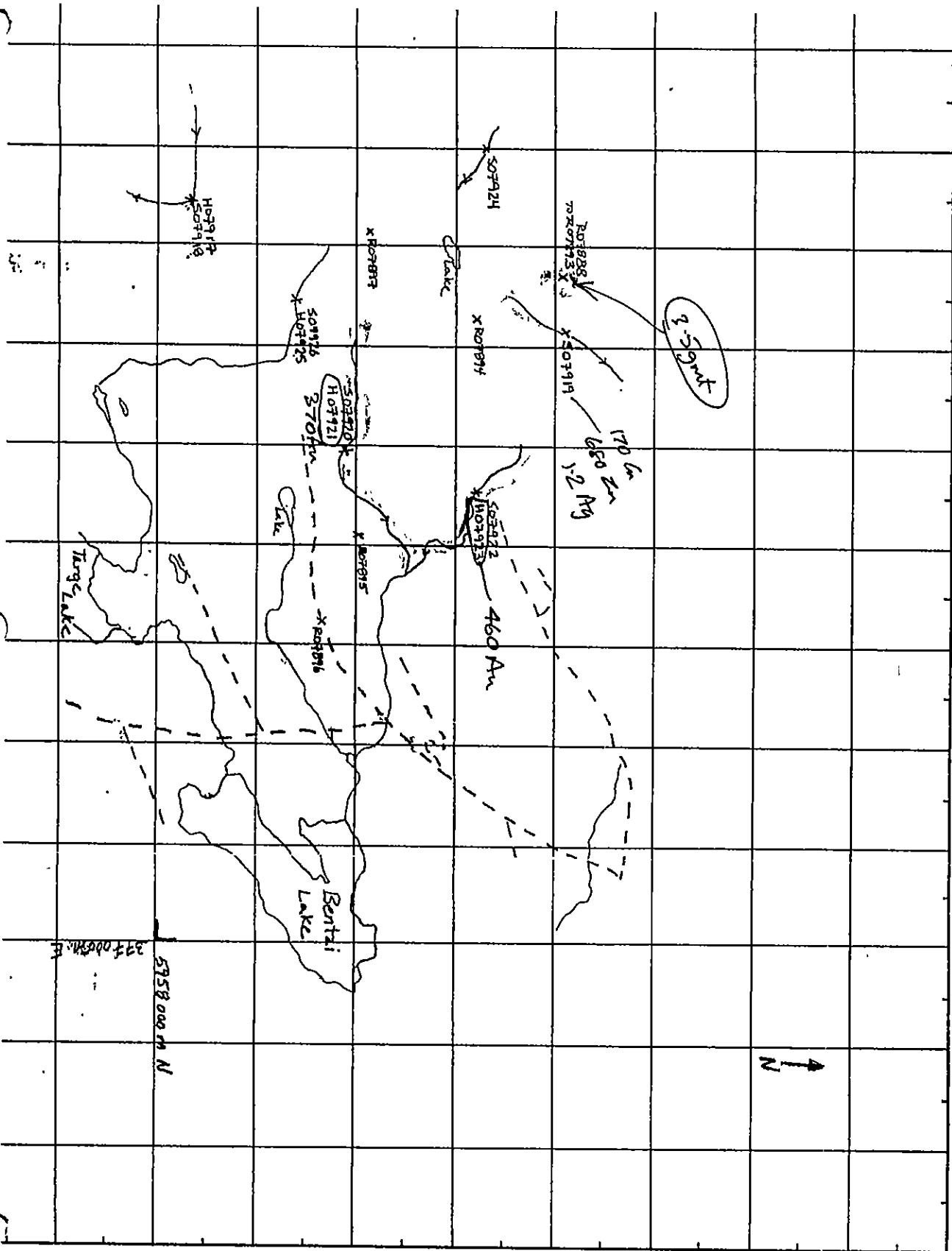
ALL SAMPLES: (Cu, Pb, Zn, Mo, Ag)

(Cu, Pb, Zn, ~~Mo~~, Ag) + As + Au

(Cu, Pb, Zn, Mo, Ag) + AS NOTED

SPECIAL INSTRUCTIONS OR REMARKS:

RESULTS TO: L. Erdman
W. Mercer



No. of SAMPLES 10 SAMPLE No's. Silt: 07918, 07919, 07920, 07922, 07924, 07926
Heavy: 07917, 07921, 07923, 07925 Rock 07888 - 07897
 PROJECT: 277 DATES SAMPLED 20/05/87 to 07/06/87 COLLECTORS: ERDMAN, COOK
 REMARKS HOLY CROSS MTN AREA
 SCALE 1:50,000 N.T.S. No. 93 F/15 51122

SAMPLE
No.

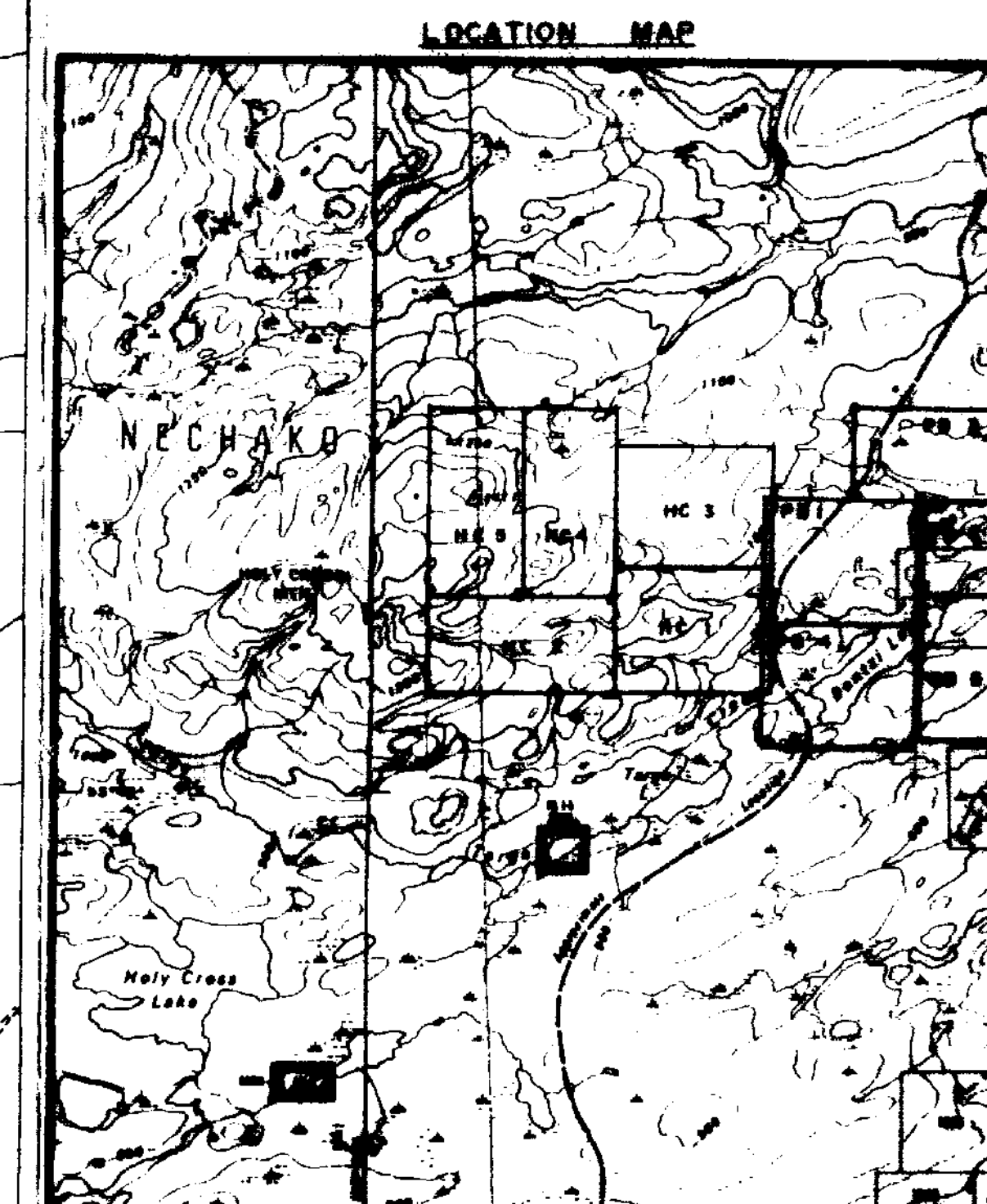
PPB
Au

BB06-026
Pg. 8 of 8

	SAMPLE No.	PPB Au
30	SOIL 31576	10
31	31577	10
32	31578	10
33	31579	10
34	31580	10
35	SOIL 31581	10

T. T. No.	SAMPLE No.	wt. (g)	PPB Au	Cu	Zn	Pb	Ag	Mo	Fe	Mn
80	PAN	34851	27.1	110	35	120	12	0.6	2	860
81		34852	30.2	120	32	140	8	0.6	2	630
82		34853	19.6	100	16	110	8	0.6	1	360
83		34854	24.5	10	16	100	8	0.6	1	410
84	PAN	34855	12.7	380	8	88	4	0.4	1	270

N.B. Pan-con: entire sample used for Au determination.
*Cu, Zn, Pb, Ag values obtained from Aqua Regia sol'n.



LEGEND

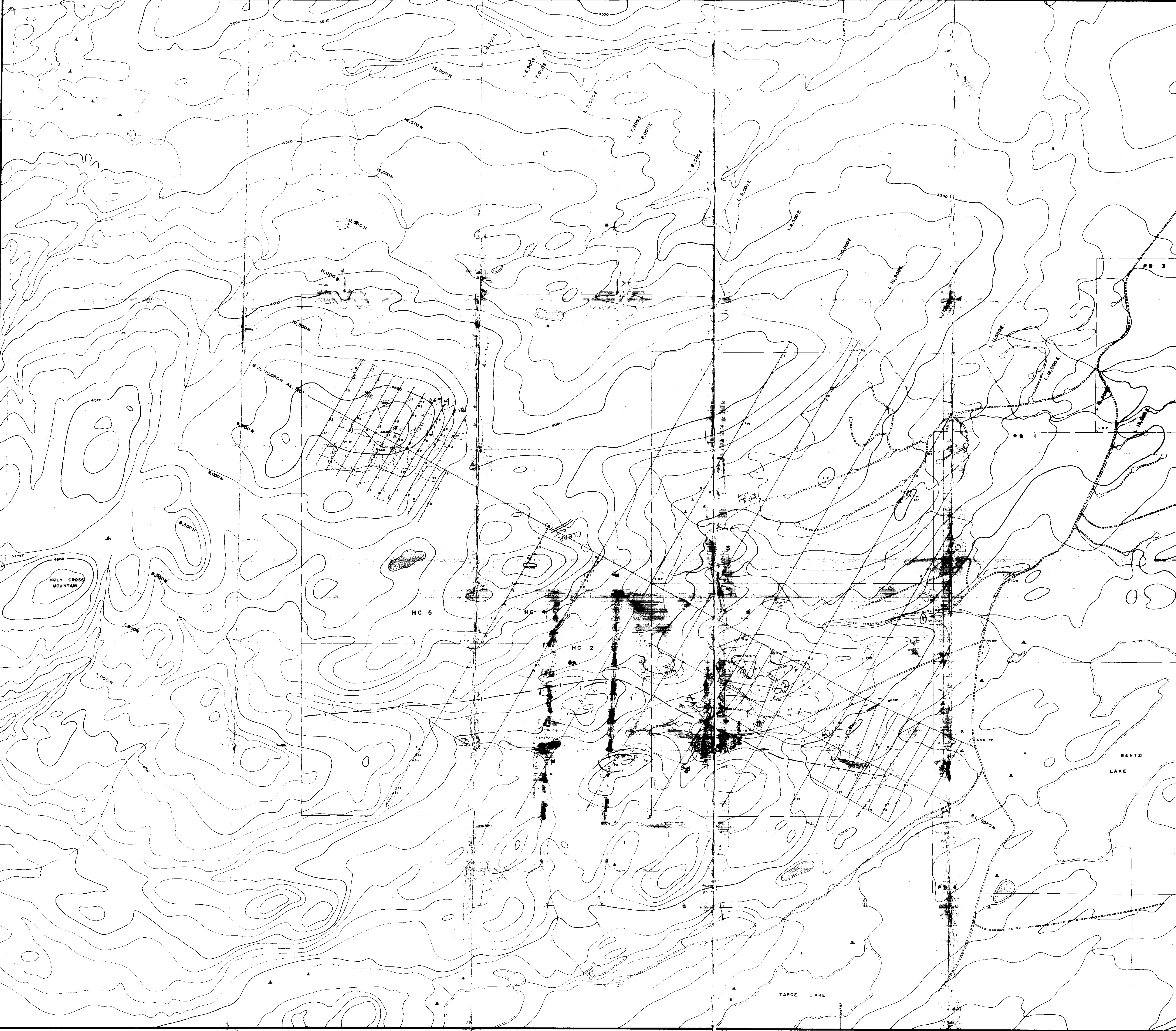
- ROCK TYPES**
- ENDARO GROUP (Miocene and (?) Later)**
- 5a** Massive Andesite, Massive Basalt
 - 5b** Andesitic Tuffs
 - 5c** Diabase, Gabbro
- DOYFA LAKE GROUP (Upper Cretaceous to Oligocene)**
- 4** Conglomerate, Sediments
 - 3** Andesitic to Dacitic Tuff, Felsic Lapilli and Crystal Tuff
 - 2** Flow-banded Rhyolite, Rhyolite Breccia
 - 1** Massive Maroon to Grey Andesite, Porphyritic Andesite, Massive Basalt
- hem - hematite
 py - pyrite
 ep - epidote
 qv - quartz vein
- SYMBOLS**
- ▲ Strike, dip of flow-banding in rhyolite
 - ⊥ Fault
 - Joints
 - X large o/c, small o/c
 - Float
 - extent of float
 - Geological Contact (inferred)
 - Logging Road

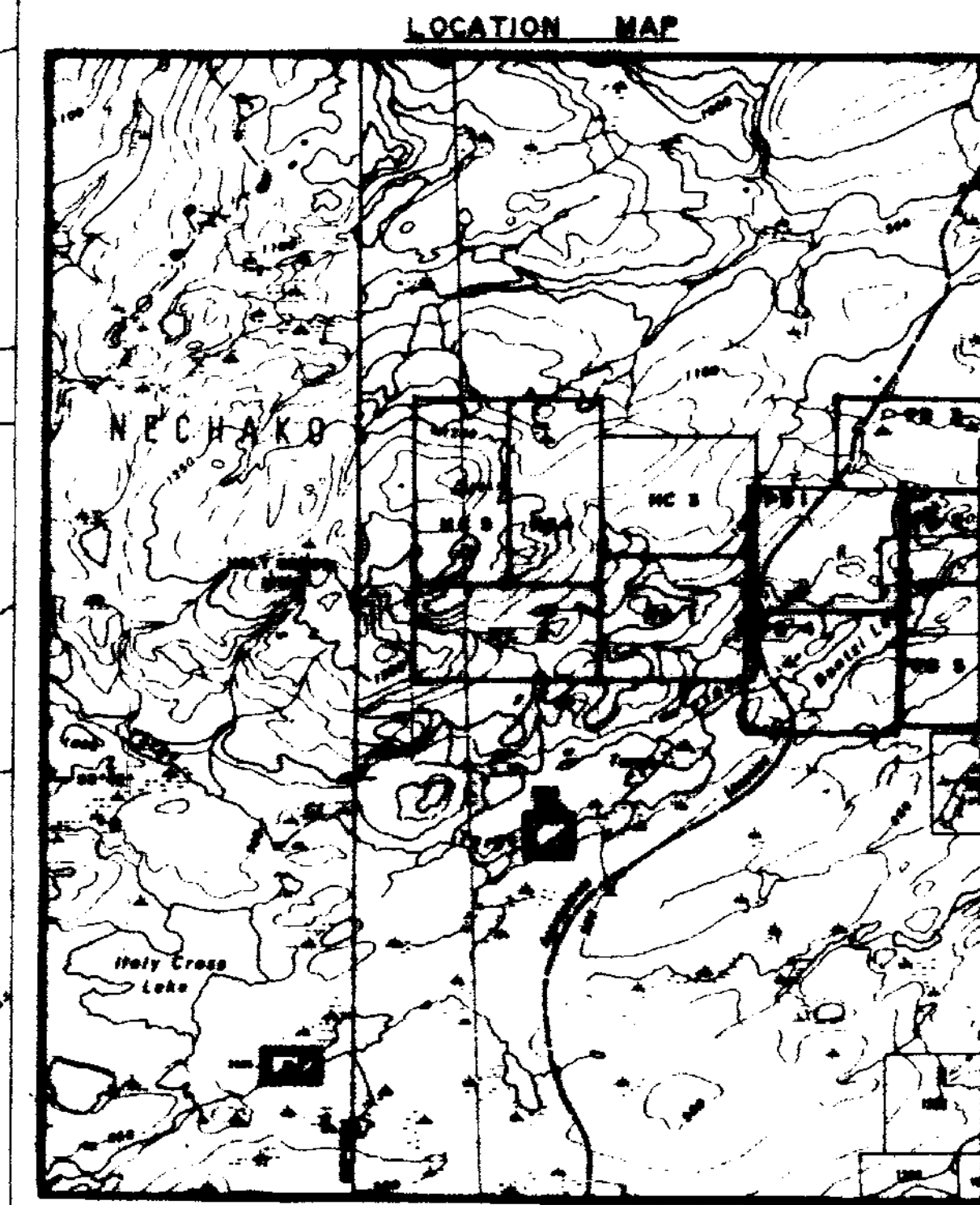
GEOLOGICAL BRANCH
 ASSESSMENT REPORT

17,807

SCALE 1:10,000

REVISED	HOLY CROSS	
	HC CLAIMS	
	GEOLOGY MAP	
PROJ. No. P.P.3	SURVEY BY: S.D.	DATE: JULY, 1959
DWG. No.	DRAWN BY: S.S.P.	SCALE: 1:10,000
FIG. 3	NORANDA EXPLORATION	





LEGEND

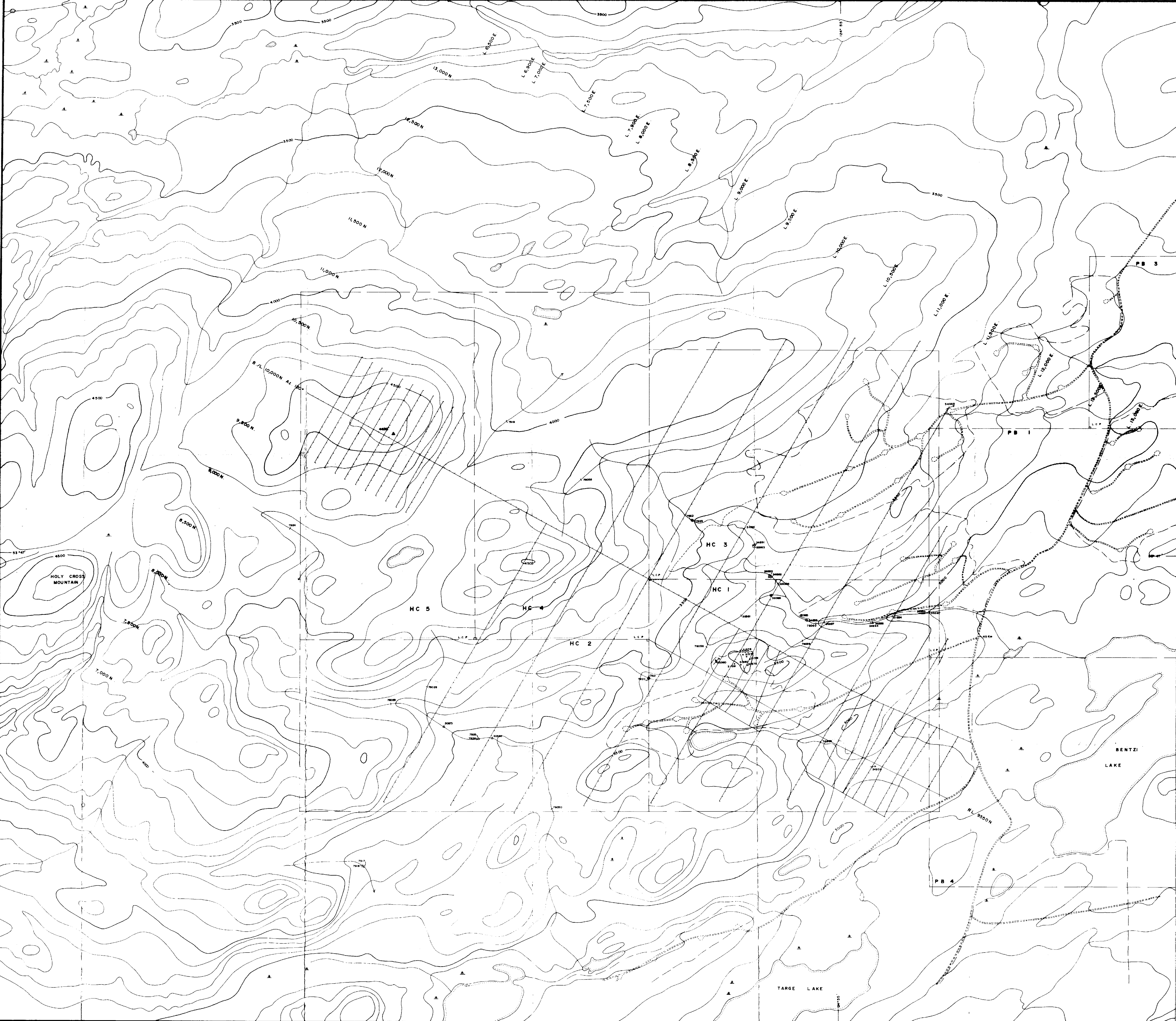
- ▲ Silt Sample Location
- Heavy Mineral Sample Location (S91)
- Soil Sample Location

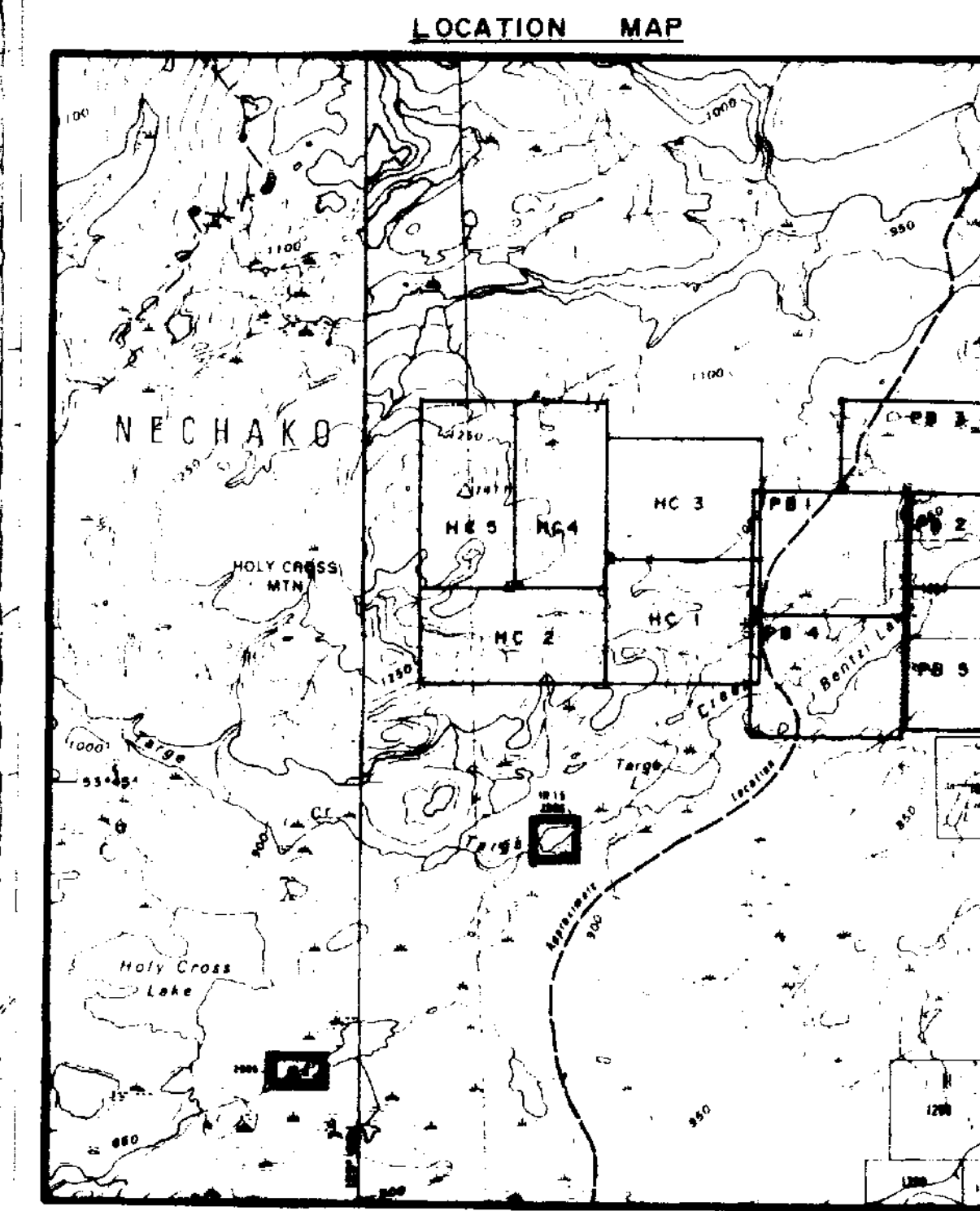
GEOLOGICAL BRANCH
ASSESSMENT REPORT

17-807

SCALE 1:10,000

REVISED	HOLY CROSS	
	HC CLAIMS	
	SOIL, SILT AND PAN	
	SAMPLE LOCATIONS	
PROJ. No. 2-93	SURVEY BY: B.D., C.S.	DATE: JUNE, 1999
DWG. No. 17-807/11,15,16	DRAWN BY: B.S.R.	SCALE: 1:10,000
FIG. 5	NORANDA EXPLORATION	
	OFFICE: PRINCE GEORGE, B.C.	





SCALE 1:100,000

LEGEND

- ▲ ROCK SAMPLE LOCATION
- FLOAT SAMPLE LOCATION

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,807

SCALE 1:10,000

REVISED	HOLY CROSS	
	HC CLAIMS	
	ROCK AND FLOAT SAMPLE	
	LOCATIONS	
PROJ. No. 253	SURVEY BY: B. G.	DATE: JULY, 1988
N.T.S. 83/10/14, 15	DRAWN BY: S. H. B.	SCALE: 10,000
DWG. No.	NORANDA EXPLORATION	
FIG. 4	OFFICE: PRINCE GEORGE, B.C.	

