MAP NO.	ASSESSMENT REPORT	X	DOCUMENT NO.: 091967
	PROSPECTUS		MINING DISTRICT: Whitehorse
	CONFIDENTIAL	X	TYPE OF WORK: Drilling, Trenching, Geochemistry
115 I 12	OPEN FILE		

REPORT FILED UNDER: Noranda Exploration Co. Ltd.

DATE PERFORMED: May - June 1987 DATE FILED: Nov. 22, 1987

LOCATION: LAT.: 62°33'N AREA: Hayes Creek

LONG.: 137°57'W VALUE $: 25,000.00

CLAIM NAME & NO.: TORO 1-56 YA 82449-YA82472

WORK DONE BY: A. Starr

WORK DONE FOR: Noranda Exploration Co. Ltd.

DATE TO GOOD STANDING		REMARKS: ~~#67 NIT~~ #19 TAD

091967

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

M.R. file no. 340-13-2
R.M.M.R. file no.
Date forwarded 23 November 1987

TRANSMITTAL FORM

From ▶ Mining Recorder at: Whitehorse

To ▶ Regional Manager, Mineral Rights at Whitehorse, Y.T.

RECEIVED
NOV 23 '87
REGIONAL GEOLOGY OFFICE

For action are:

- ☐ NEW APPLICATION FOR PLACER LEASE TO PROSPECT — Name
- ☐ RENEWAL APPLICATION PLACER LEASE TO PROSPECT — Name — Lease no.
- ☐ AFFIDAVIT OF EXPENDITURE ON PLACER LEASE — Name — Lease no.
- ☐ SECURITY DEPOSIT
- ☐ FINANCIAL ABILITY
- ☐ ASSIGNMENT OF PLACER LEASE NO. — From — To
- ☐ GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT — Owner
- ☑ DIAMOND DRILL LOGS — Claims: Toro 1-56 YA82449 - etc — Claim sheet no.
- ☑ QUARTZ ASSESSMENT REPORT — Claims — Claim sheet no.

Type of report: Diamond Drilling & Geochemical — Submitted by: Noranda

Cls. work performed on: Toro 5-68 YA82458 YA82454, YA82456 etc — $ req. for ren. application: $25,000.00

Signature

Date returned

REPLY ACTION

Approved for amount required

Signature

802-6027-26 (6-86)

GEOCHEMICAL AND DRILLING REPORT

ON THE TORO CLAIMS

May 14 - June 17, 1987

N.T.S. 115I/12

62 33'N, 137 57'W

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 25 000.

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

A.M. Starr

RECEIVED
NOV 20 1987
MINING
RECORDER'S OFFICE
WHITEHORSE, Y.T.

091967

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GEOCHEMICAL AND DRILLING REPORT

ON THE TORO CLAIMS

May 14 - June 17, 1987

N.T.S. 115I/12

62 33'N 137 57'W

0.1 SUMMARY

In May and June of 1987 soil sampling, trenching and drilling were carried out on the Toro claims to follow up anomalies in Au, Ag and As from the 1986 programme. A limited VLF and Mag survey was also carried out. The results of the soil sampling are remarkably consistent with the 1986 sampling, with values of up to 815 ppb Au, 18.0 ppm Ag, and 530 ppm As. The results of the overburden trenching are also encouraging, with consistently high values in Au, Ag and As in several trenches. Although intense alteration of the underlying quartz monzonite porphyry was encountered in all of the drill holes, the Au values are generally low. Resampling of one 0.5 m section of old drill core resulted in 3100 ppb Au, 20.0 ppm Ag and 2.68% Zn.

GEOCHEMICAL AND DRILLING REPORT ON THE TORO CLAIMS

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND AND OWNERSHIP

The Toro 1-24 (YA 82449 - YA 82472) claims were staked in 1984 by David H. Waugh to cover an area thought to be favourable for a high tonnage, low grade precious metal deposit. They cover part of the old Tad property, staked in 1969 by International Mine Serves to cover lead-zinc and molybdenum mineralization. During the 1986 field season Noranda carried out soil sampling and re-analysis of old drill core with encouraging results. An additional 22 claims (Toro 25-46, YA 96544 - YA 96565) were staked in November 1986, and the Toro 47-56 claims were staked in May 1987. In January of 1987 Noranda acquired the Toro property through an option agreement.

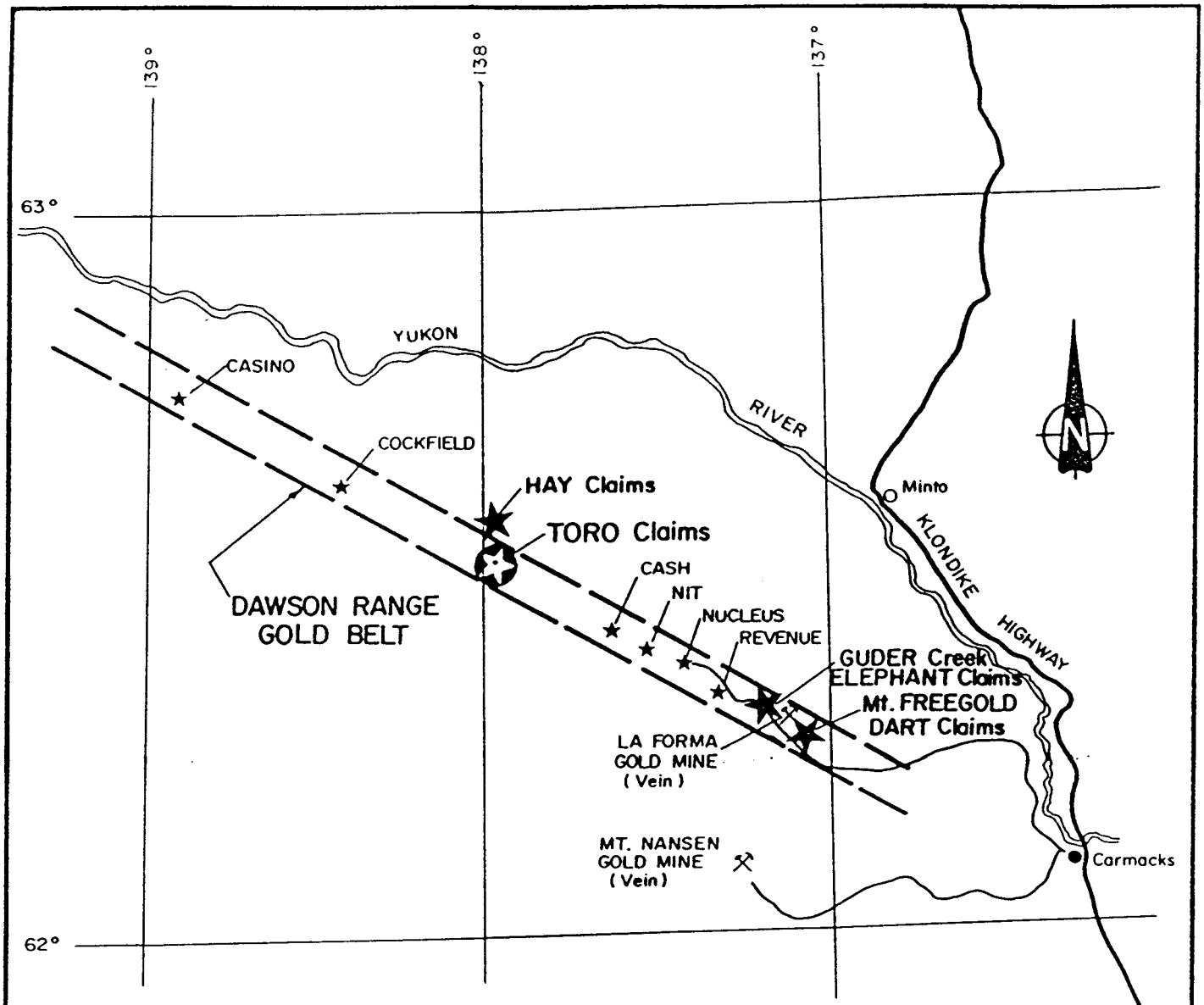
1.2 LOCATION AND ACCESS

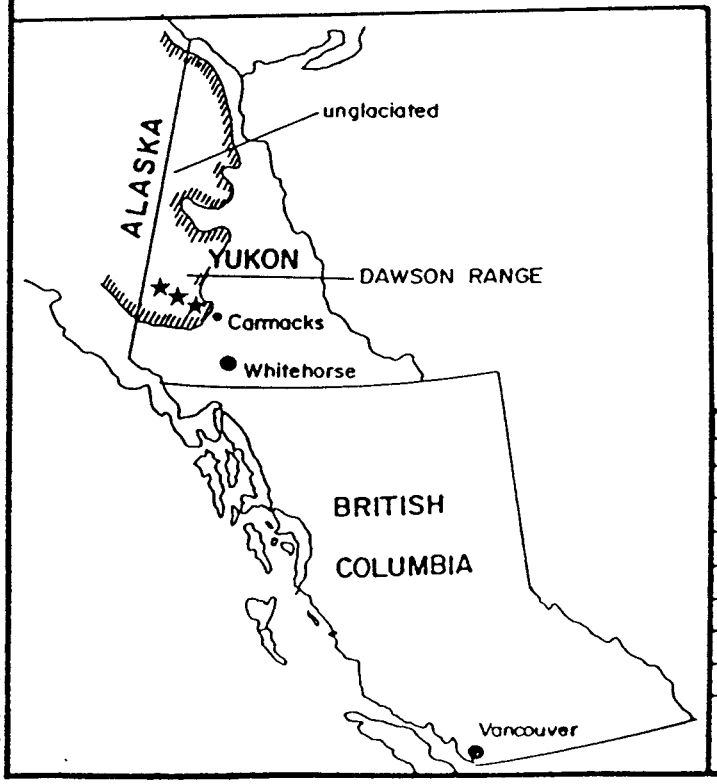
The Toro 1-56 quartz claims are situated at UTM coordinates 6940000N, 349000E, Zone 7, (62 33'N, 137 57'W), on map sheet 115 I/12, in the Dawson Range area, Whitehorse Mining District. The claims are located 250 air kilometres NW of Whitehorse, 105 air kilometres NW of Carmacks, and 55 air kilometres W of the Minto airstrip (Fig. 1 & 2). A 42 kilometre cat road connects the property to the end of the Freegold Road, 100 kilometres from Carmacks. A winter airstrip with two runways, constructed in 1969, lies across the creek from the Toro camp on Hayes Creek.

1.3 PHYSIOGRAPHY AND VEGETATION

The Toro property lies in the foothills of the Dawson Range, 15 km NW of Prospector Mountain. Maximum relief is about 520 m (1700 ft.) from Hayes Creek (elev. 760 m or 2500 ft.) to the top of the ridge W of camp. The valley of Hayes Creek is broad and flat, filled with thick fluvial deposits. Smaller tributaries occupy steep sided V shaped valleys typical of unglaciated terrain. The gently rounded tops and steeper lower slopes of the hills suggest a dissected peneplain. Outcrop is rare.

A well developed regolith has formed over the altered and deeply weathered bedrock in many areas. Soil development is good over south facing slopes and drier areas. Elsewhere thick moss overlies a frozen organic horizon underlain by regolith or fluvial deposits. The wide valley of Hayes Creek is mainly boggy, underlain by permafrost, except where drier sand and gravel deposits allow the development of stands of spruce, pine and poplar. Even with the ripper on the D-8 Cat it was not possible to penetrate the thick, frozen organic deposits in some areas.



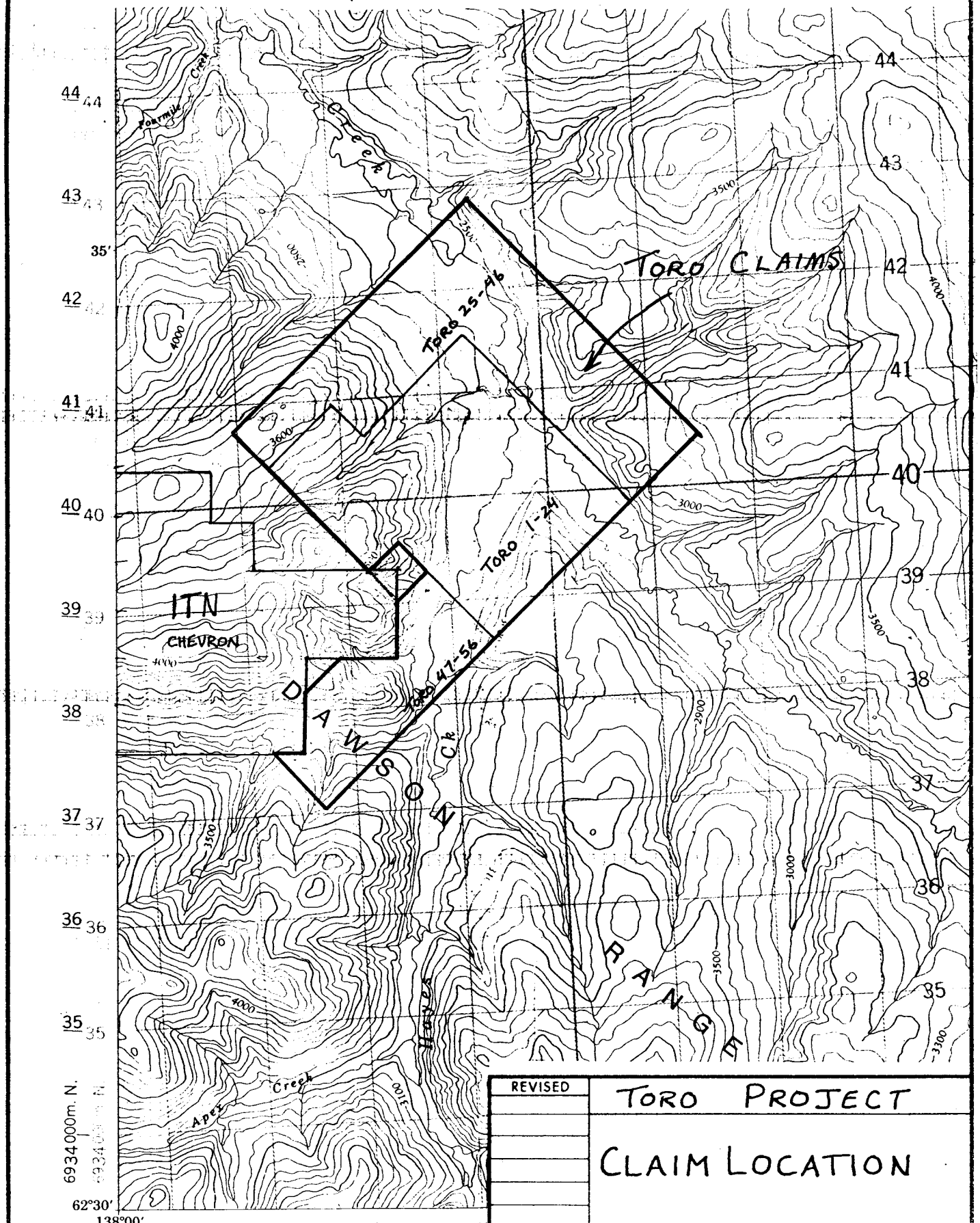


0 10 20 40 60 kilometers
Scale 1:1,000,000

Fig. 1

REVISED	TORO Claims
	TAD GOLD PORPHYRY
	Dawson Range
	LOCATION MAP
PROJ. No. 320	SURVEY BY: _____ DATE: _____
N.T.S. 115 I 12	DRAWN BY: _____ SCALE: 1:1,000,000
DWG. No. 1	NORANDA EXPLORATION
	OFFICE: Whitehorse

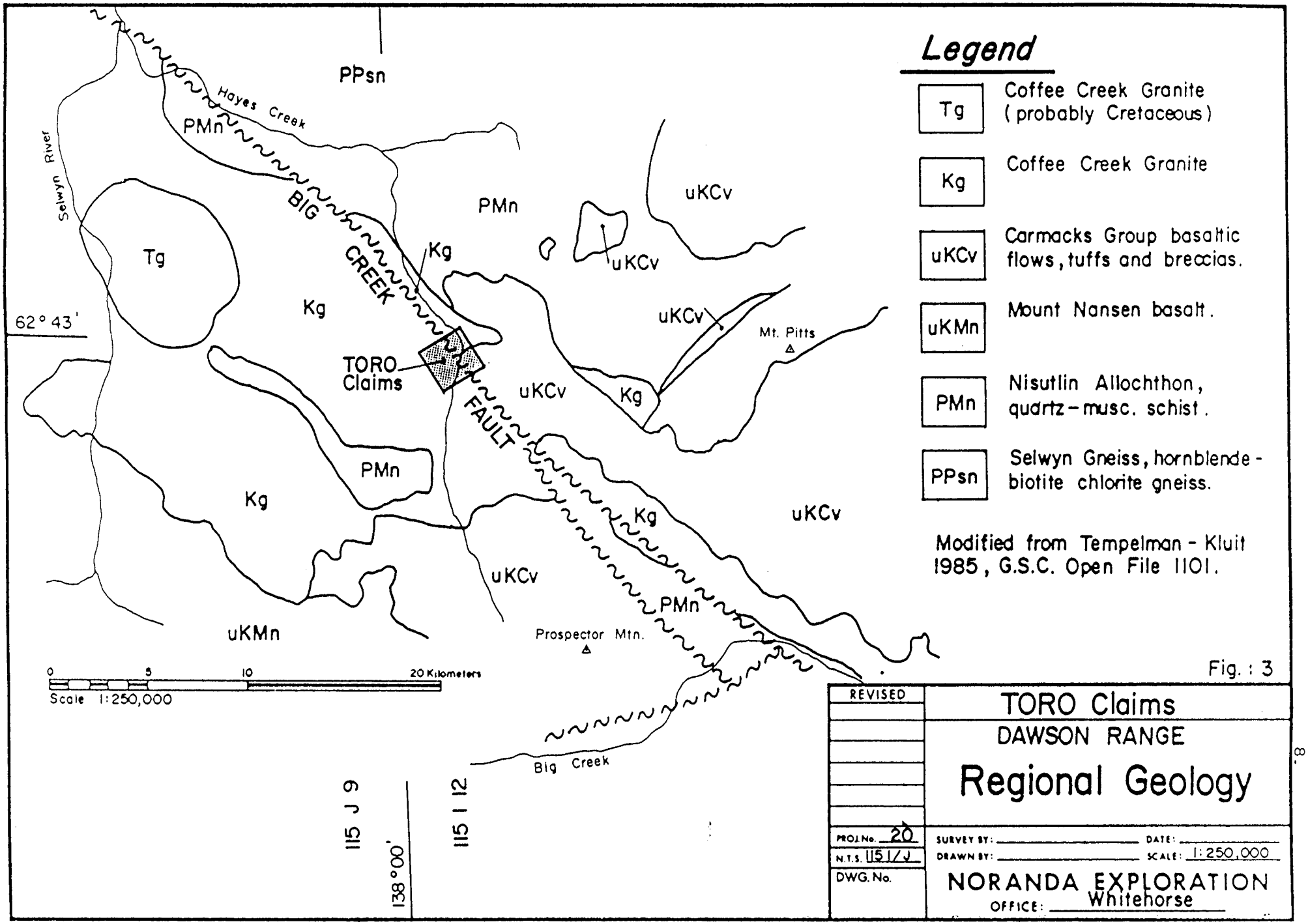
VANCAL 11927



REVISED	TORO PROJECT
	CLAIM LOCATION
PROJ. No. 320	SURVEY BY: _____ DATE: July, 1987
N.T.S. 115I/12	DRAWN BY: A.S. SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION
	OFFICE: _____

VANCAL 11927

VANCAL 11928



Legend

- Tg — Coffee Creek Granite (probably Cretaceous)
- Kg — Coffee Creek Granite
- uKCv — Carmacks Group basaltic flows, tuffs and breccias.
- uKMn — Mount Nansen basalt.
- PMn — Nisutlin Allochthon, quartz-musc. schist.
- PPsn — Selwyn Gneiss, hornblende-biotite chlorite gneiss.

Modified from Tempelman-Kluit 1985, G.S.C. Open File 1101.

Fig. : 3

REVISED	TORO Claims
	DAWSON RANGE
	Regional Geology
PROJ. No. 20	SURVEY BY: DATE:
N.T.S. 115 I/J	DRAWN BY: SCALE: 1:250,000
DWG. No.	NORANDA EXPLORATION
	OFFICE: Whitehorse

Vegetation varies from mature pine, spruce, birch and poplar stands on southerly slopes and drier areas, to open mossy bogs, buckbrush and stunted black spruce on northerly slopes and wet areas. Poplar, willow and spruce are common along the margins of Hayes Creek.

1.4 HISTORY OF THE CLAIMS

Old placer workings occur along Hayes Creek, several old pits and cabins can still be seen on the Toro property. Some of these are reported to date back to 1898.

The discovery of Pb-Zn mineralization along Hayes Creek in 1969 led to the staking of the 267 Tad claims by International Mine Services. An extensive grid was put in and soil, magnetometer, and I.P. surveys were followed by trenching and drilling. Eighteen holes, totalling 8880 ft. (2708 m), were drilled (Waugh, 1971). The geologist on the property was D. Waugh, who restaked part of the property as the Toro claims in 1984.

Recent placer work in the area by G. Wilson includes active work on placer claims on a small creek on the south side of the Toro property and some work in the past on a small creek which runs past DDH T-87-4. It is possible to pan fine colours from Hayes Creek where it runs past the Toro camp.

1.5 WORK PROGRAMME

In May of 1987 a new grid was put in on the Toro property utilizing a D-8 cat (Fig. 4). The new baseline is oriented north-south, following the large Au anomaly delineated by the 1986 sampling. Cross lines are spaced at 100 m intervals, and extend 200 m W and 300 m E in the central portion of the grid. A total of 213 soil samples were collected at 25 m intervals, with an additional 64 samples collected from overburden trenches. Limited VLF and Mag surveys were conducted, totalling 4 km of VLF and 2.5 km of Mag.

Following this initial work 4 diamond drill holes totalling 372 m were drilled. The locations were selected using the 1986 and 1987 geochemical data in conjunction with the geochemical, geophysical and drilling results from the Tad claims. All of the drill core was split and analyzed, most samples were 1.5 m in length. A total of 211 drill core samples were taken. Holes T-87-1 and T-87-2 were analyzed for gold and silver, Holes T-87-3 and T-87-4 were analyzed for gold, silver and arsenic. Sixteen rock samples were taken from the trenches and from old drill core.

The following is a list of personnel on the Toro project in 1987:

Craig Hart 707 Cook Street, Whitehorse, Yukon	Geologist	May 16-31
Alison Starr 956 W 14th Avenue, Vancouver, B.C.	Geologist	June 1-17
Rob Copland 504-1433 Harwood Street, Vancouver, B.C.	Field Assistant	May 16-June 15
Tim Daly General Delivery, Whitehorse, Yukon	Field Assistant	May 21-27
Merv Tew General Delivery, Carmacks, Yukon	Camp Set Up	May 14-22
Mike Roddan 15-528 Range Road, Whitehorse, Yukon	Cook	May 14-June 15

CHAPTER TWO: GEOCHEMISTRY

2.1 SOIL SAMPLING

Two hundred and thirteen soil samples were collected at 25 m intervals on the new grid, along approximately 5 kilometres of lines. In addition 64 samples were taken at 5 or 10 m intervals from overburden trenches. Collection of deep soil samples was made easier by use of the ripper on the Cat while putting in the lines. Wherever possible samples were taken from the B horizon or from the maximum depth in the regolith, a few consist of grey clayey soil or dark organic material. All samples were analyzed for gold, silver and arsenic.

RESULTS

The anomalous areas detected in 1986 sampling were confirmed by 1987 sampling. The new grid, with closer sample spacing, gave a better picture of the actual size of the anomalous areas (Fig. 4 to 7). A large proportion of the samples taken were anomalous in Au, Ag, and/or As, as shown in Table 1 below and Appendix 4. The threshold values used in Table 1 were chosen arbitrarily.

TABLE 1

ELEMENT	THRESHOLD VALUE	NUMBER OF SAMPLES OVER THRESHOLD	PERCENTAGE OF TOTAL
Au	20 ppb	101	47%
	50	45	21%
	100	20	9%
	200	6	3%
Ag	1.0 ppm	139	65%
	2.0	85	40%
	5.0	34	16%
	10.0	6	3%
As	40 ppm	142	67%
	100	63	30%
	150	32	15%
	250	12	6%

Two main anomalous areas were defined by the soil geochemistry (Fig.4). Area 1 is a roughly linear anomaly with high Au values. Silver values show a correlation with the gold, and a small area of high As values lies at the southern extremity. Area 2, to the north, is a large area with high Au, Ag, and As values. The Ag and As values are much higher in proportion to the Au values than in Area 1. The Area 2 anomaly actually consists of several smaller anomalous zones.

2.2 OVERBURDEN TRENCHING

Ten trenches were sampled, generally at 5 or 10 m intervals. Sixty-four overburden samples and 4 rock samples were taken (Fig.8).

RESULTS

Values well over those considered anomalous in the soil sampling were encountered in most of the trenches (Appendix 2). Six of the 10 trenches have highly anomalous values in Au, Ag and/or As. In this case highly anomalous is defined as >300 ppb Au, >10.0 ppm Ag, or >500 ppm As.

The results from the trenches agree fairly well with the soil geochemistry, although the anomalies from the trenches tend to be higher than from nearby soils. Low to moderate values from trenches closely match adjacent soil lines.

Trenches A, B, C, 87-1, 87-3 and 87-4 all had highly anomalous values in Au, Ag, and/or As. All of these except 87-4 are in the central anomalous portion of the grid (Area 2). 87-4 is just above DDH T-87-2 on L.9200N (Area 1). Trenches B, 87-1 and 87-4 gave the highest and most consistent values in Au and Ag.

Trenches E, F, 87-2 and 87-5 have only moderately anomalous or low Au, Ag, and As values. These trenches are all in the southern portion of the grid, near Area 1, where Ag and As values are generally low, and are outside the areas of high gold values. 87-5 is near the collar of DDH T-87-1, dug while retrieving the casing. No soil samples were taken previously due to the thickness of the frozen organic layer. It had the lowest values found in any of the trenches.

2.3 OVERBURDEN TRENCH SUMMARIES

TRENCH A 9775N, 19800E

Samples: 91583, 84

Anomalous in Au, highly anomalous in Ag and As. Sample 19584 has 100 ppb Au, 11.0 ppm Ag and 500 ppm As.

TRENCH B 9790N, 19980E

Samples: 91576-80, Rock 91581, 82.

Highly anomalous in Au, Ag, and As, with up to 330 ppb Au, 18.0 ppm Ag and 2700 pom As. The rock samples are nigh in Ag, As, Zn, Pb and Cu.

TRENCH C 9700N, 19950E

Samples: 91585-90, Rock 91591

Highly anomalous in Au, Ag, and As. Values not as consistent, but up to 430 ppb Au, 17.0 ppm Ag and 1400 ppm As are present. High Zn, Pb and Ag are present in the rock sample.

TRENCH E 9390N, 20175E

Samples: 91592-96, Rock 91597

Maximum values are 110 pob Au, 3.4 ppm Ag and 70 ppm As, but all are above background levels. The rock sample has 1.4 ppm Ag, 60 ppm As, and low base metal values.

TRENCH F 9405-9500N, 20175E

Samples: 5 m intervals.

The sampling shows low Au, Ag and As levels, with a few moderately anomalous samples. Maximum values are 230 ppb Au, 2.8 ppm Ag and 100 ppm As.

TRENCH 87-1 9700-9730N, 20000E

Samples: 5 m intervals.

Anomalous Au, As, and highly anomalous Ag, with up to 170 ppb Au, 17.0 ppm Ag and 320 ppm As. Values are very consistent.

TRENCH 87-2 9320-9345N, 20200E

Samples: 5 m intervals.

Moderately anomalous in Au and Ag. The highest values are 150 ppb Au, 3.0 ppm Ag and 88 ppm As.

TRENCH 87-3 9900N, 20020-20080E

Samples: 10 m intervals.

Highly anomalous in As, Ag is also quite high, Au values are fairly low in comparison. Maximum values are 100 ppb Au, 9.8 ppm Ag and 960 ppm As. Values are consistent.

TRENCH 87-4 9200N, 20185-20195E. Above DDH T-87-2

Samples: 5 m intervals.

Highly anomalous in Au, moderately anomalous in Ag and As. The highest values are 390 ppb Au, 5.2 ppm Ag and 100 ppm As.

TRENCH 87-5 9200N, 20260-20270E. Near DDH T-87-1

Samples: 5 m intervals.

Above background values of Ag and As present, up to 20 ppb Au, 2.2 ppm Ag and 120 ppm As.

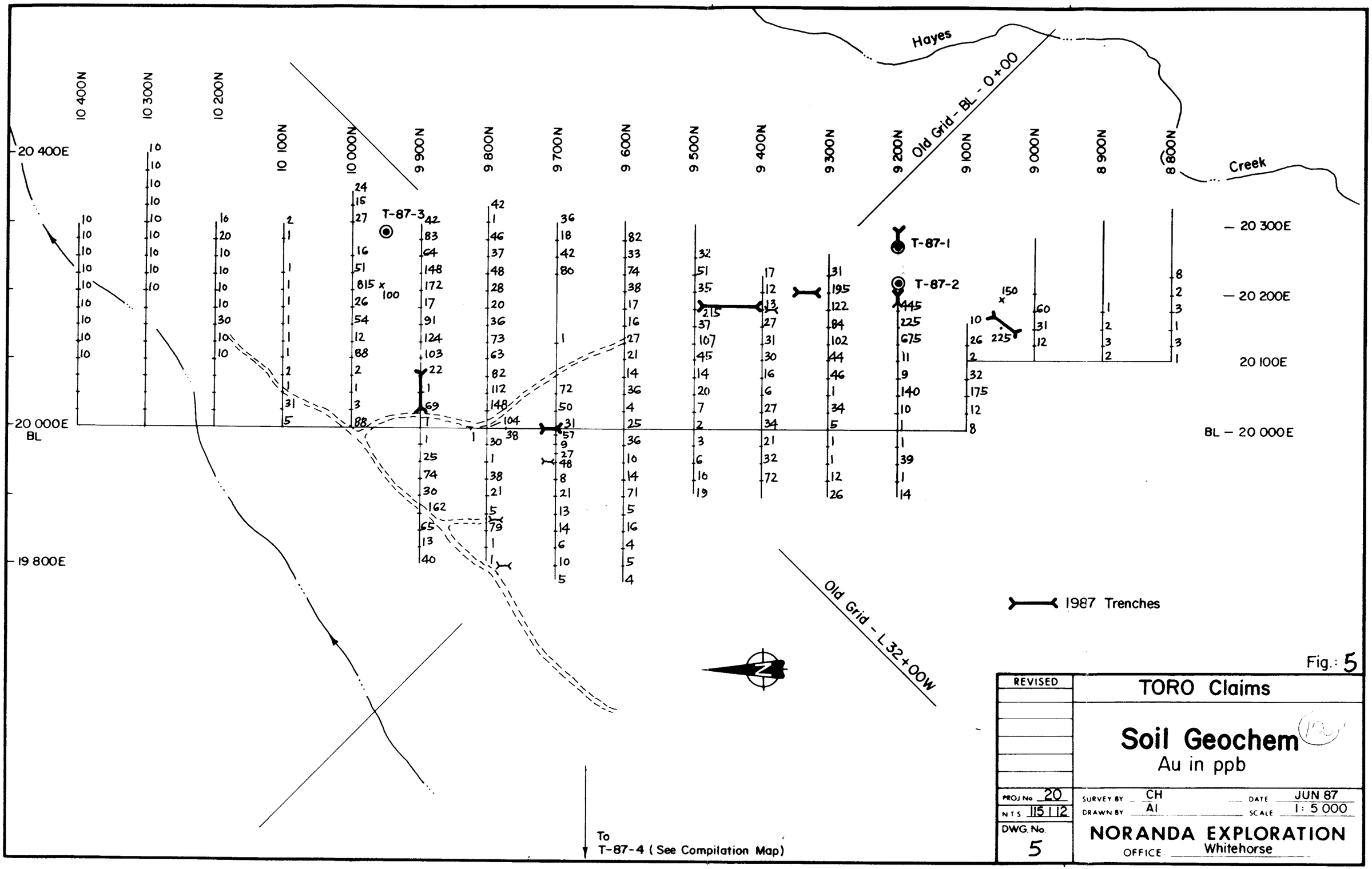


Fig.: 5

REVISED	TORO Claims
	Soil Geochem (12)
	Au in ppb
PROJ No 20	SURVEY BY CH — DATE JUN 87
NTS 115 I 12	DRAWN BY AI — SCALE 1: 5 000
DWG. No. 5	NORANDA EXPLORATION
	OFFICE Whitehorse

YANL AI 1925

PJA

Hayes

Old Grid - BL - 0+00

Creek

10 400N | 10 300N | 10 200N | 10 100N | 10 000N | 9 900N | 9 800N | 9 700N | 9 600N | 9 500N | 9 400N | 9 300N | 9 200N | 9 100N | 9 000N | 8 900N | 8 800N

20 400E

20 000E
BL

19 800E

T-87-3

T-87-1

T-87-2

— 20 300E

— 20 200E

20 100E

BL — 20 000E

Old Grid - L32+00W

1987 Trenches

To
T-87-4 (See Compilation Map)

Fig. : 6

REVISED

TORO Claims

Soil Geochem
Ag in ppm

PROJ No	20	SURVEY BY	CH
NTS	115 I 12	DRAWN BY	AI
DWG No	6	DATE	JUN 87
		SCALE	1: 5 000

NORANDA EXPLORATION
OFFICE Whitehorse

VANCAL 11925

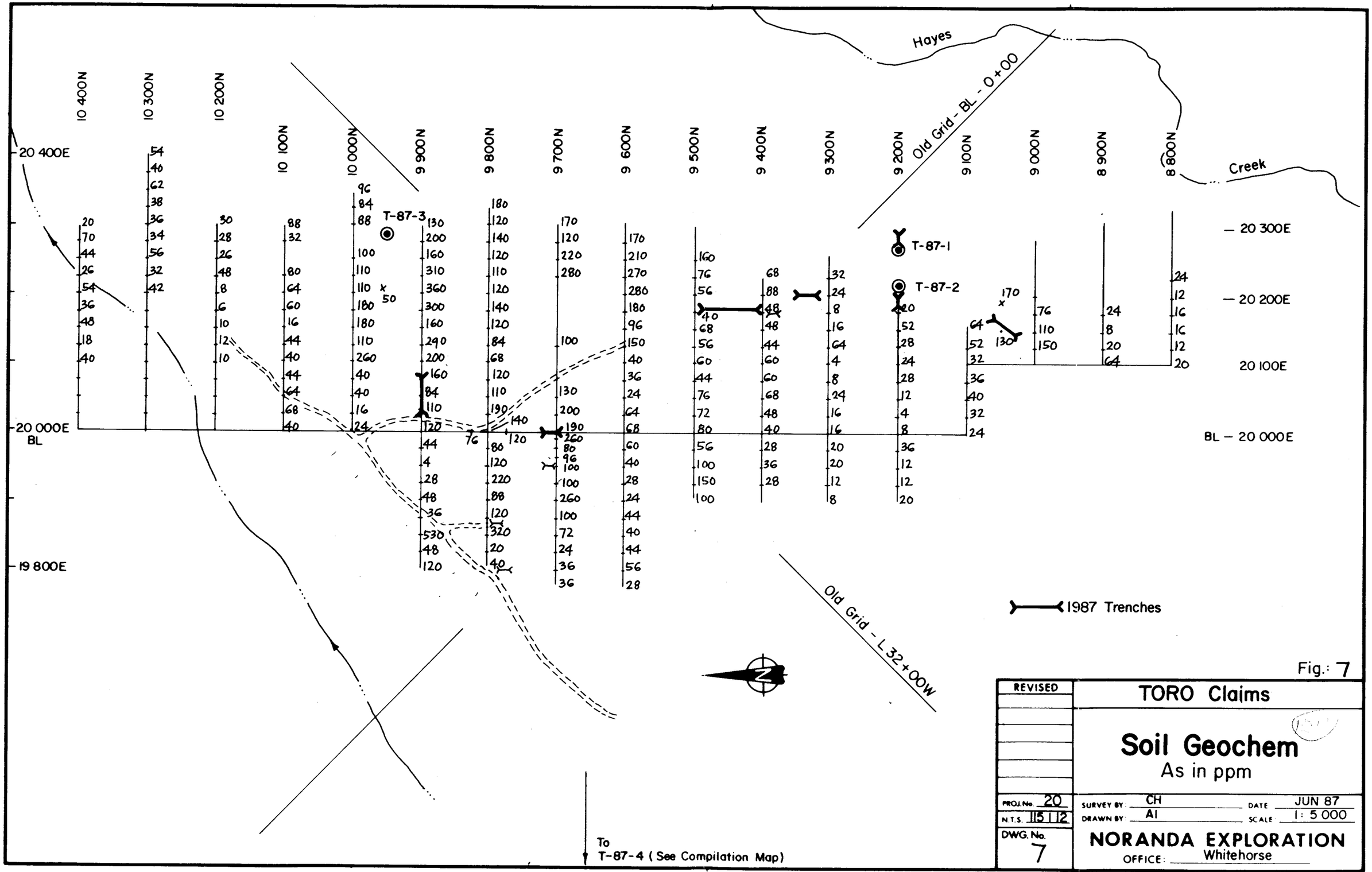


Fig.: 7

REVISED

TORO Claims

Soil Geochem

As in ppm

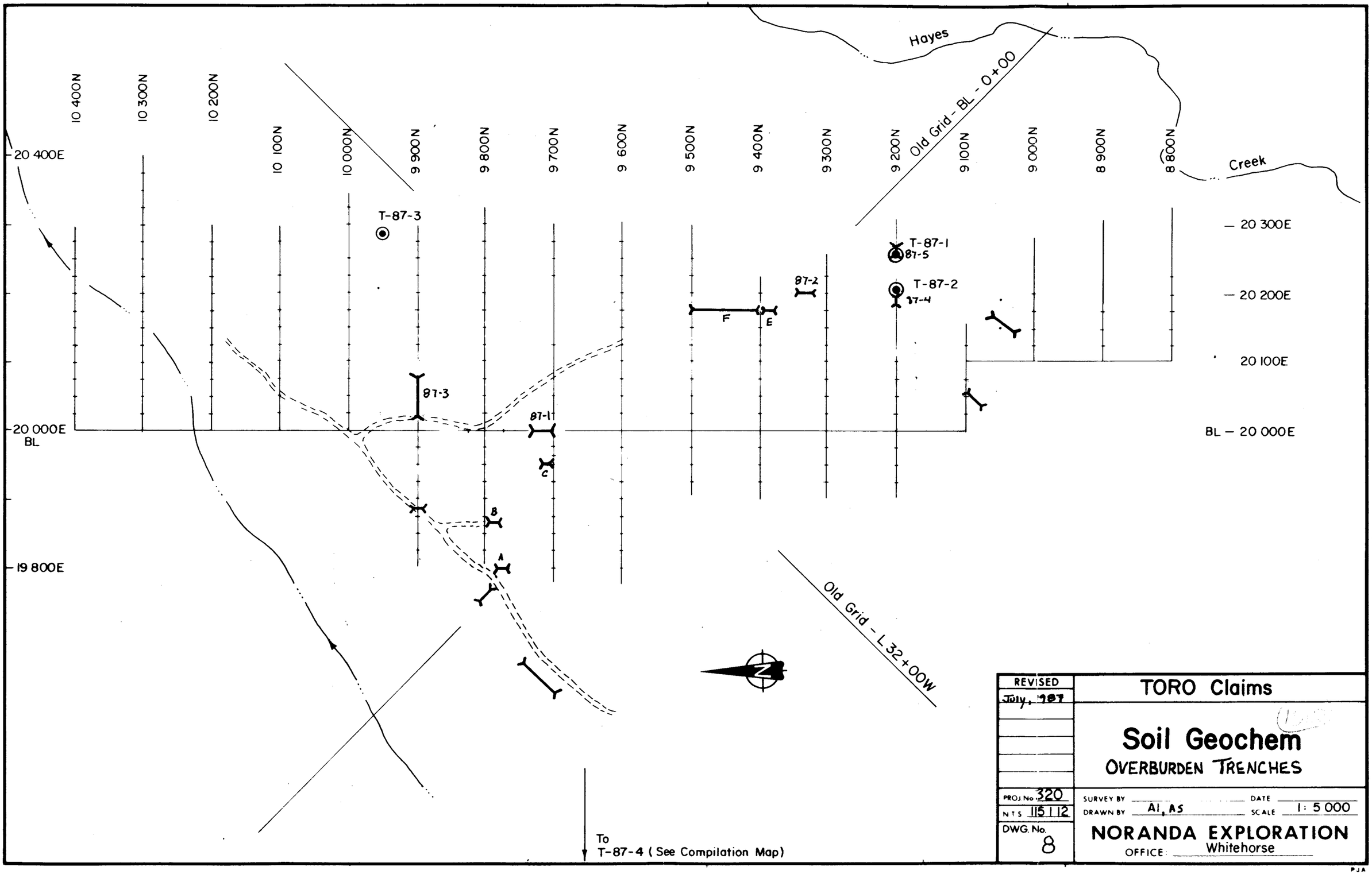
PROJ. No. 20
N.T.S. 115 I 12
DWG. No. 7

SURVEY BY: CH
DRAWN BY: AI
DATE: JUN 87
SCALE: 1 : 5 000

NORANDA EXPLORATION
OFFICE: Whitehorse

VANCAL 11826

PJA



REVISED	TORO Claims
July, '87	
	Soil Geochem
	OVERBURDEN TRENCHES
PROJ No. 320	SURVEY BY _____ DATE _____
NTS 115 I 12	DRAWN BY AI, AS SCALE 1: 5 000
DWG. No. 8	NORANDA EXPLORATION
	OFFICE: Whitehorse

VANCAL 11925

PJA

CHAPTER THREE: DRILLING

3.1 1987 DRILLING

Three drill targets were selected on the basis of the sizeable Au, Ag, and As geochem anomalies from 1986 and 1987 sampling. Also taken into consideration were the Zn, Mag and I.P. anomalies from 1969-1971 work.

Four NQ diamond drill holes totalling 372 m were drilled between May 31 and June 14, 1987 (Fig.4). The entire core was split and analyzed for Au and Ag in DDH T-87-1 and 2, and for Au, Ag, and As in DDH T-87-3 and 4. The sample interval is 1.5 m, with few exceptions.

DRILL TARGETS

1. DDH T-87-1 and 2

An open ended gold soil anomaly, with values from 225 to 675 ppb Au coincides with a narrowing I.P. anomaly of greater than 8 milliseconds.

2. DDH T-87-3

Gold, silver and arsenic soil anomalies cover a large area. This is only 100 m from the best results from a re-analyzed drill hole. Gold values in soil range up to 815 ppb.

3. DDH T-87-4

Gold, arsenic and silver soil anomalies coincide with a 400 m wide I.P. anomaly. Arsenic values up to 900 ppm occur.

The four drill holes encountered a quartz monzonite porphyry, referred to as the Tad porphyry or Unit 1 in D.H. Waugh's reports for International Mine Services. This porphyry is often highly altered, faulted, sheared and brecciated, but the original mineralogy can be seen to be essentially the same in all holes: 10-15% anhedral grey quartz phenocrysts, 30% subhedral to anhedral feldspar phenocrysts, 50-60% fine grained quartz-feldspar matrix, and 5-10% mafic minerals which are partially or completely altered to chlorite and/or sericite. The mafic minerals were originally mostly biotite, as evidenced by remnant textures and rare unaltered patches.

Considerable differences in texture and colour of the porphyry are due to variable alteration. The alteration seen includes intense argillic and sericitic, potassic, silicic, weak but pervasive carbonate alteration, and chloritic or sericitic alteration of mafic minerals.

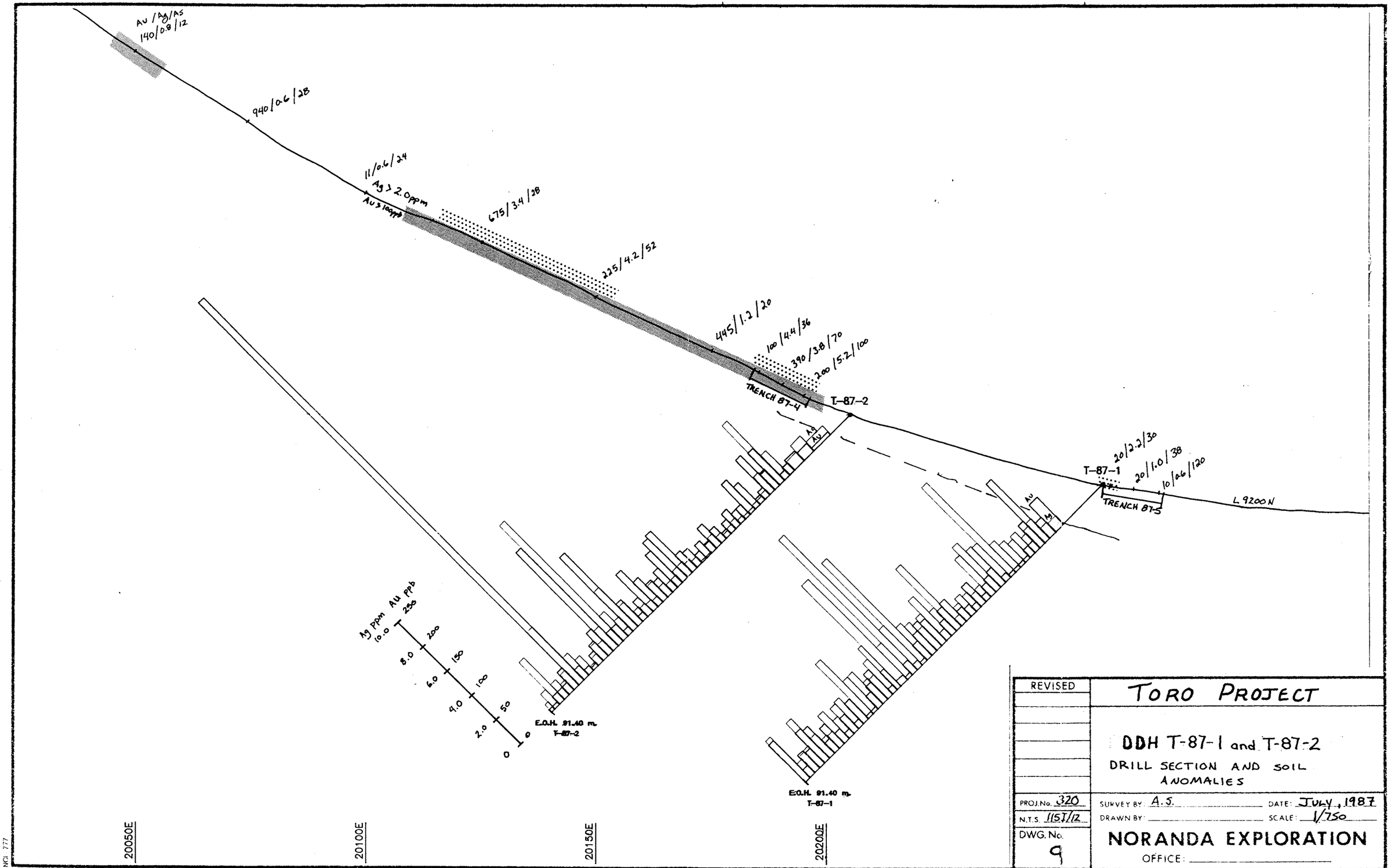
The geochemical results for the drill core do not show any economic grades or widths. The highest values in the core are 780 ppb Au, 13.0 ppm Ag and 600 ppm As. All of the holes have anomalous zones of Au, Ag, and As. (Fig. 11-16, Appendix 3,4)

As shown in figures 9 and 10, the drill holes are all located downhill from the soil anomalies. These anomalies may also be expected to have undergone a certain amount of downslope movement. These facts, plus the lack of information on the orientation of possible gold bearing zones, lead to the conclusion that it would be possible to drill under the source of the anomalies. This is least likely with DDH T-87-2, which also carried the highest gold values.

3.2 RESAMPLING OF OLD CORE

In 1986 portions of drill core from some of the holes drilled on the TAD claims in 1969 and 1970 were sampled and analyzed for Au, Ag and in some cases base metals. Drill holes T-2, T-12 and T-14 all have values of greater than 1 gm/t over widths greater than 6 m. Nearby holes T-4 and T-10 have maximum values of 35 and 140 ppb Au respectively, over the widths sampled. Samples taken from drill holes T-1, 5 and 8, all close to soil anomalies, have maximum values of 45, 150 and 220 ppb Au respectively. Since sample widths were up to 16 m, narrower zones with higher values may exist within these sample intervals.

In 1987 five more samples of old drill core were taken. One of these (D27428 - 0.5 m sample from 186 feet in T-2) carries 3100 ppb Au, 20.0 ppm Ag and 2.68% Zn (Appendix 4), or approximately 3 gm/t gold.



REVISED	TORO PROJECT
	DDH T-87-1 and T-87-2
	DRILL SECTION AND SOIL ANOMALIES
PROJ. No. 320	SURVEY BY: A.S. DATE: JULY, 1987
N.T.S. 115I/12	DRAWN BY: SCALE: 1/250
DWG. No. 9	NORANDA EXPLORATION
	OFFICE:

NCI 777

P.u.A.

(127)

20050E

20100E

20150E

20200E

20250E

20300E

Au > 100 ppb
As > 150 ppm
Ag > 5.0 ppm

T-87-3

L 9950 N

Ag
Au

Ag ppm Au ppb
10.0 250
8.0 200
6.0 150
4.0 100
2.0 50
0 0

E.O.H. 77.70 m.
T-87-3

REVISED

TORO PROJECT

DDH T-87-3

DRILL SECTION AND SOIL ANOMALIES

PROJ. No. 320
N.T.S. 115 I/12
DWG. No. 10

SURVEY BY: A. S. DATE: JULY 1987
DRAWN BY: SCALE: 1:750

NORANDA EXPLORATION
OFFICE:

P.J.A.

VANCAL - 9581

(121)

3.3 DRILL HOLE SUMMARIES

T-87-1

LOCATION	AZIMUTH	ANGLE	DEPTH
L.9200, 20260E	270	-45	91.4 m

Most of the porphyry encountered in this hole is bleached and pyritic with silicified zones, fine early stage quartz veins, carbonate filled fractures and numerous sheared and fractured zones. Very fine grained molybdenite is associated with the quartz veins and sphalerite occurs in streaks and on fractures. Higher silver values are associated with the molybdenite and sphalerite. Gold and silver values are elevated throughout the hole, but not approaching economic levels. In particular the silver values, which range from 0.6 to 11.0 ppm, are the highest found in any of the holes. The highest gold is 120 ppb, but values between 30 and 60 ppb are common. Gold and silver values show a weak or negative correlation.

T-87-2

LOCATION	AZIMUTH	ANGLE	DEPTH
L.9200N, 20205E	270	-45	91.4 m

Although only 55 m from T-87-1 this hole showed distinct differences. An oxidized horizon was encountered, with heavy limonite staining and pyrolusite, from the base of the overburden at 6 m to 24 m. Core recovery was poor over this interval. Precious metals were not significantly enriched in the oxidized zone. Pyrite is less common than in T-87-1, although sphalerite streaks are more common. Silicified zones are rare, and there are few of the fine quartz veins bearing molybdenum seen in T-87-1. The core is generally softer and more broken up. The porphyry encountered in most of T-87-2 appears unchanged in composition, but the texture is highly variable. Large and small rounded or subrounded patches or clasts of coarse textured porphyry occur in a fine grained greenish matrix, which sometimes has a sheared or foliated appearance. The matrix appears to be of the same composition, and may have quartz and feldspar phenocrysts. The transition between "clast" and "matrix" may be sharp or gradual. Where this is a breccia, a xenolithic or a cataclastic texture is uncertain. The same texture is seen in the last 15 m of T-87-1.

This hole has the two highest single gold values (780 and 200 ppb) as well as the highest overall gold values. Silver values are much lower than in T-87-1, and there is a fairly good correlation between gold and silver.

T-87-3

LOCATION	AZIMUTH	ANGLE	DEPTH
L.9950N, 20280E	270	-45	77.7 m

The core from T-87-3 is very badly fractured and sheared, core recovery was poor. Due to very poor drilling the hole was stopped at 77.7 m. Intense bleaching and alteration is common, with epidote, hematite, chlorite and clay minerals. Limonite and manganese staining are associated with fractures in the upper 50 m. Some silicified zones are present. Pink colouration in some places may be due either to very finely disseminated hematite or potassic alteration.

This hole encountered 2 anomalous zones. The upper zone, from 9.4 m to 26.5 m, has high Au, Ag, and As values. The core is highly altered, soft, clayey and bleached, with yellow staining. Arsenic values are up to 600 ppm, silver to 5.4 ppm, and gold to 130 ppb. These high values may be due to concentration in the oxidized horizon. the lower zone, from 53 to 72.5 m includes the highest silver value (13.0 ppm) from all the holes and has high silver values throughout. Arsenic values are also elevated but not particularly high, while gold values are not as low as elsewhere in the hole. This zone is badly crushed and sheared, pale grey to white, often clayey, with streaks of pyrite and some sphalerite.

T-87-4

LOCATION	AZIMUTH	ANGLE	DEPTH
L.9650N, 19080E	135	-45	111.6 m

The quartz monzonite porphyry appears "granitic", with pink white or greenish coloured feldspars and chloritized biotite. There is little pyrite, and the core is generally competent. Heavy limonite staining and pyrolusite are associated with fractures down to about 68 m. Occasional clots of chlorite, epidote and hematite may contain pyrite, and rarely chalcopyrite and galena. The colour varies from pinkish to greenish or grey, these colour changes appear to be related to narrow shears or fractures. Beginning at 71.0 m thin grey cryptocrystalline quartz veins occur in light greenish or grey altered sections. The quartz veins contain very fine grained disseminated sulphides, probably pyrite and arsenopyrite.

Gold, silver and arsenic values are very low in the top of the hole. The highest values are directly associated with the quartz veining, which occurs between 71 and 109.6 m. From 104 to 109.6 m is a zone of more intense alteration, with crosscutting quartz veins, open spaces, and increased pyrite content. The highest gold and silver values from T-87-4 (160 ppb Au, 5.2 ppm Ag) come from this zone. Arsenic values up to 230 ppm are associated with the quartz veining.

CHAPTER FOUR: SUMMARY AND CONCLUSIONS

The results of the 1986 and 1987 geochemical sampling on the Toro claims indicate at least two major areas with highly anomalous gold, silver and arsenic in soils. The four drill holes encountered an intensely altered quartz monzonite porphyry. Although there are zones anomalous in gold, silver and arsenic in the drill core, no economic intersections were encountered. In general Au, Ag and As values are somewhat lower than those from the soil samples. Resampling of old drill core in 1986 and 1987 indicates that higher gold values do occur (up to 2.09 gm/t over 2 m). Significant enrichment of the oxidized zone is not indicated in the 1987 drill holes, although core recovery was particularly poor in these zones.

The question remains whether the soil anomalies are a result of concentration of metals in the overburden, or an indication of higher values in the underlying rocks. Due to lack of information on the structure or orientation of the potential mineralization, and to possible downslope movement of the soil anomaly, the 1987 drilling programme may not have adequately tested the anomalies. If any further drilling is contemplated it is recommended that a more detailed soil sampling programme and possibly deep overburden samoling be carried out first. A geophysical programme might also help to define favourable areas and structures prior to drilling.

Alison M. Starr
Geologist

REFERENCES

Hart, C.J.R. 1986
Geological and Geochemical Report on the Toro 1-46 Claims.

Waugh, D.H. 1971
A Property Report on the Tad Claim Group
International Mine Services Ltd.

AVANCAR - 4385

TORO Claims

Compilation

091967

(1215)

TORO 1-56 Claims (Boundaries Approx.)

Creek

Hayes

Camp

AREA 1

AREA 2

T-87-1
T-87-2
T-87-3
T-87-4
T-1
T-2
T-3
T-5
T-8
T-10
T-14

TR 87-1
TR 87-2
TR 87-3
TR 87-4
TR 87-5
TR A
TR B
TR C
TR E
TR F

BL - 19 800E
BL - 20 000E
BL - 20 200E
BL - 20 300E
20 100E
BL - 20 000E
BL - 120N (Old Grid)

349 000 m E

10 400N
10 200N
10 000N
9 800N
9 600N
9 400N
9 200N
9 000N
8 800N

69 40 000 m. N

62° 33'

137° 55'

127N
114N
16W
8W
4W
32W
24W
56W
48/52W
44W
36W
64W

Au > 100 ppb

Ag > 5.0 ppm

As > 1.50 ppm

138° 00'
137° 30'
62° 45'
62° 30'

115 J 9	115 I 12	115 I 11
	Map Area	
	115 I 5	

0 50 100 200 400 metres

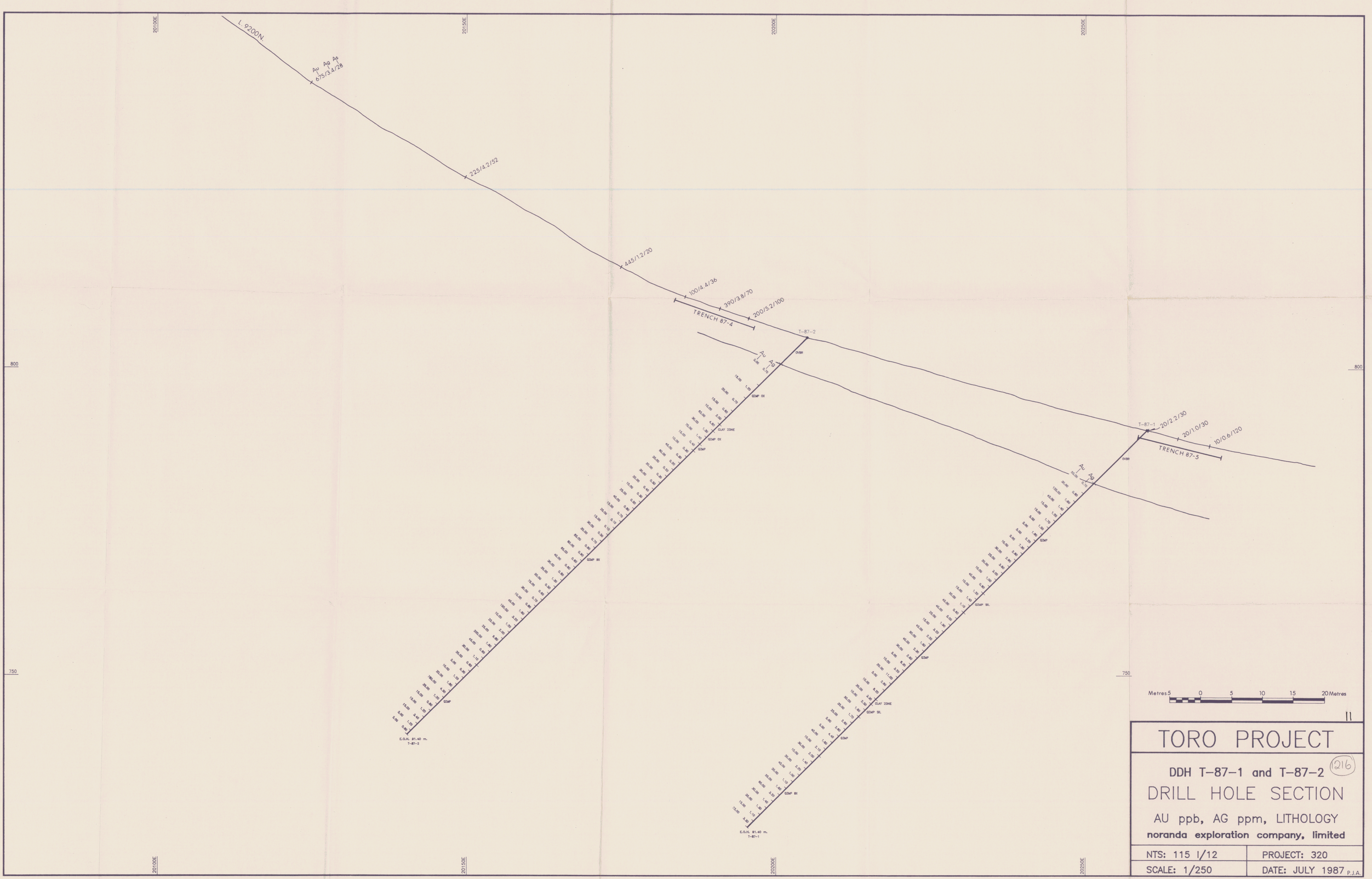
Fig.: 4

REVISED
July, 1987

PROJ. No. 320
N.T.S. 115 I 12
DWG. No. 4

SURVEY BY: CH, AS — DATE: JUN 87
DRAWN BY: AI, AS — SCALE: 1:5000

NORANDA EXPLORATION
OFFICE: Whitehorse



11

TORO PROJECT

(216)

DDH T-87-1 and T-87-2

DRILL HOLE SECTION

AU ppb, AG ppm, LITHOLOGY

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987 P.J.A.

091967

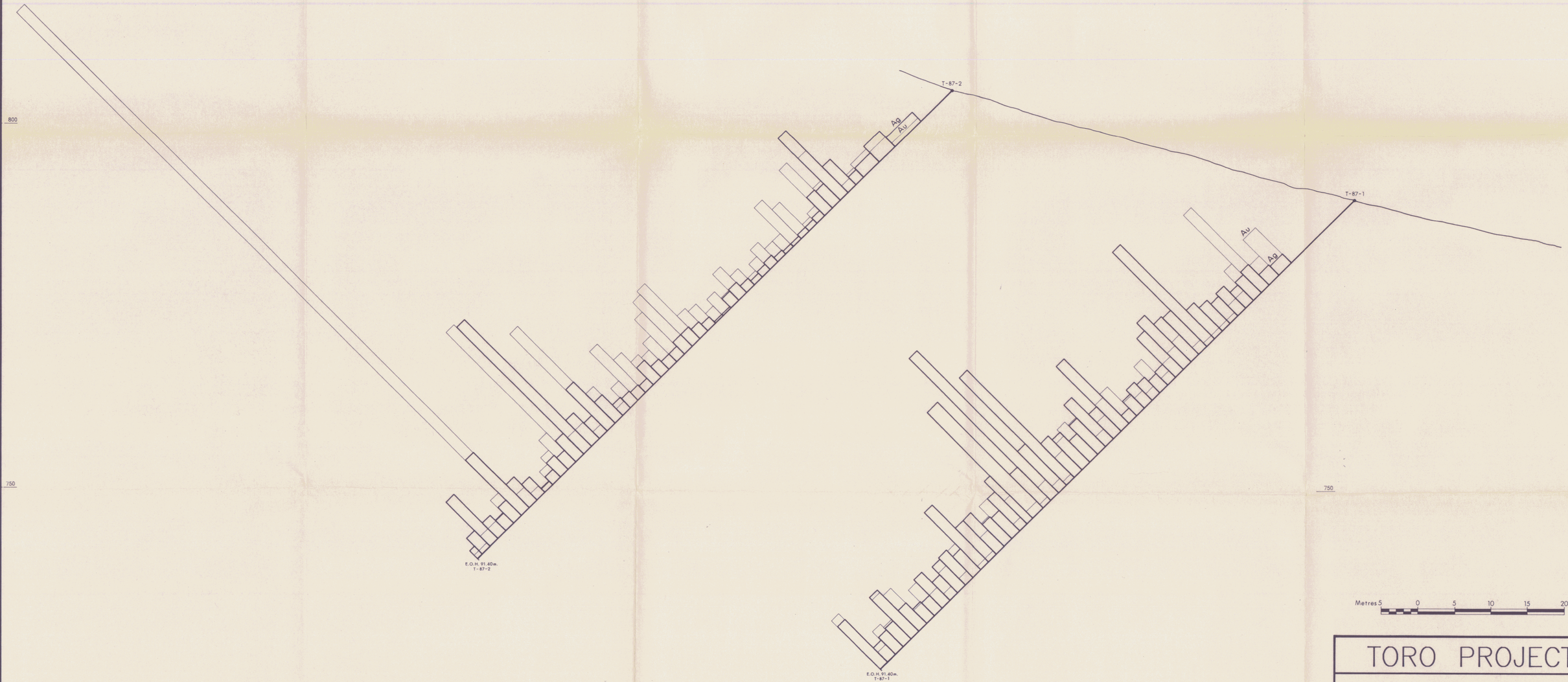
20100E 20150E 20200E 20250E

PLAN VIEW

9200N T-87-2 T-87-1 9200N

800 800

750 750



SCALE:
Au - 0.05cm. = 1ppb
Ag - 1.00cm. = 1ppm

Metres 5 0 5 10 15 20 Metres

12

TORO PROJECT

DDH T-87-1 and T-87-2

DRILL HOLE SECTION

AU, AG HISTOGRAM

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987 P.J.A.

20100E 20150E 20200E 20250E

091967



13

TORO PROJECT

DDH T-87-3 (1218)

DRILL HOLE SECTION

AU ppb, AG, AS ppm, LITHOLOGY

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987 P.J.A.

091967

20150E

20200E

20250E

20300E

PLAN VIEW

9950N

T-87-3

805

800

750

Au

Ag

As

E.O.H. 77.70 m.
T-87-3

SCALE:

Au - 0.05 cm. = 1 ppb

Ag - 1.00 cm. = 1 ppm

As - 0.05 cm. = 1 ppm

Metres 5 0 5 10 15 20 Metres

19

TORO PROJECT

DDH T-87-3 (129)

DRILL HOLE SECTION

AU, AG, AS HISTOGRAMS

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987 P.J.A.

991967

19050E

19100E

19150E

19200E

PLAN VIEW

9650N

T-87-4

112.50N

140/4.6/570

L-56W

T-87-4

140/4.6/570

9650N

900

850

E-W SECTION PROJECTED
ONTO L.9650 N.

E.O.H. 111.80 m.
T-87-4

19200E

Metres 5 0 5 10 15 20 Metres

TORO PROJECT 15

1220

DDH T-87-4

DRILL HOLE SECTION

AU ppb, AG, AS ppm, LITHOLOGY

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987 P.J.A.

091967

19050E
19100E
19150E
19200E

930

T-87-4

Au

Ag

As

E.O.H. 111.80 m.
T-87-4

900

850

19050E
19100E
19150E
19200E

SCALE:

Au - 0.05cm. = 1ppb

Ag - 1.00cm. = 1ppm

As - 0.05cm. = 1ppm

Metres 5 0 5 10 15 20 Metres

16

TORO PROJECT

DDH T-87-4 (1981)

DRILL HOLE SECTION

AU, AG, AS HISTOGRAMS

noranda exploration company, limited

NTS: 115 I/12	PROJECT: 320
SCALE: 1/250	DATE: JULY 1987

091967

APPENDIX ONE

SOIL GEOCHEMISTRY RESULTS

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 8800.0N Azimuth: 90 Deg. Number of Stations: 6

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20100.0E	1	0.8	20	nil	nil	nil	nil	nil	nil
20125.0E	3	0.6	12	nil	nil	nil	nil	nil	nil
20150.0E	1	0.2	16	nil	nil	nil	nil	nil	nil
20175.0E	3	0.2	16	nil	nil	nil	nil	nil	nil
20200.0E	2	0.2	12	nil	nil	nil	nil	nil	nil
20225.0E	8	0.2	24	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 8900.0N Azimuth: 90 Deg. Number of Stations: 4

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20100.0E	2	6.0	64	nil	nil	nil	nil	nil	nil
20125.0E	3	1.4	20	nil	nil	nil	nil	nil	nil
20150.0E	2	0.8	8	nil	nil	nil	nil	nil	nil
20175.0E	1	0.6	24	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9000.0N Azimuth: 90 Deg. Number of Stations: 3

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20125.0E	12	1.4	50	nil	nil	nil	nil	nil	nil
20150.0E	31	1.2	110	nil	nil	nil	nil	nil	nil
20175.0E	60	1.4	76	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9050.0N Azimuth: 90 Deg. Number of Stations: 1

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20150.0E	225	0.8	130	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9100.0N Azimuth: 90 Deg. Number of Stations: 7

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20000.0E	8	0.8	24	nil	nil	nil	nil	nil	nil
20025.0E	12	0.4	32	nil	nil	nil	nil	nil	nil
20050.0E	175	1.4	40	nil	nil	nil	nil	nil	nil
20075.0E	32	0.8	36	nil	nil	nil	nil	nil	nil
20100.0E	2	0.4	32	nil	nil	nil	nil	nil	nil
20125.0E	26	1.2	52	nil	nil	nil	nil	nil	nil
20150.0E	10	1.4	64	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9200.0N Azimuth: 90 Deg. Number of Stations: 12

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19900.0E	14	0.4	20	nil	nil	nil	nil	nil	nil
19925.0E	1	0.6	12	nil	nil	nil	nil	nil	nil
19950.0E	39	0.6	12	nil	nil	nil	nil	nil	nil
19975.0E	1	0.6	36	nil	nil	nil	nil	nil	nil
20000.0E	1	1.4	8	nil	nil	nil	nil	nil	nil
20025.0E	10	0.6	4	nil	nil	nil	nil	nil	nil
20050.0E	140	0.8	12	nil	nil	nil	nil	nil	nil
20075.0E	9	0.6	28	nil	nil	nil	nil	nil	nil
20100.0E	11	0.6	24	nil	nil	nil	nil	nil	nil
20125.0E	675	3.4	28	nil	nil	nil	nil	nil	nil
20150.0E	225	4.2	52	nil	nil	nil	nil	nil	nil
20175.0E	445	1.2	20	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9300.0N Azimuth: 90 Deg. Number of Stations: 14

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19900.0E	26	1.2	8	nil	nil	nil	nil	nil	nil
19925.0E	12	0.6	12	nil	nil	nil	nil	nil	nil
19950.0E	1	0.4	20	nil	nil	nil	nil	nil	nil
19975.0E	1	0.2	20	nil	nil	nil	nil	nil	nil
20000.0E	5	0.4	16	nil	nil	nil	nil	nil	nil
20025.0E	34	0.6	16	nil	nil	nil	nil	nil	nil
20050.0E	1	0.6	24	nil	nil	nil	nil	nil	nil
20075.0E	46	1.2	8	nil	nil	nil	nil	nil	nil
20100.0E	44	1.0	4	nil	nil	nil	nil	nil	nil
20125.0E	102	1.0	64	nil	nil	nil	nil	nil	nil
20150.0E	84	2.0	16	nil	nil	nil	nil	nil	nil
20175.0E	122	1.2	8	nil	nil	nil	nil	nil	nil
20200.0E	195	1.2	24	nil	nil	nil	nil	nil	nil
20225.0E	31	2.4	32	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9400.0N Azimuth: 90 Deg. Number of Stations: 13

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19925.0E	72	1.4	28	nil	nil	nil	nil	nil	nil
19950.0E	32	1.6	36	nil	nil	nil	nil	nil	nil
19975.0E	21	3.0	28	nil	nil	nil	nil	nil	nil
20000.0E	34	3.4	40	nil	nil	nil	nil	nil	nil
20025.0E	27	1.6	48	nil	nil	nil	nil	nil	nil
20050.0E	6	1.6	68	nil	nil	nil	nil	nil	nil
20075.0E	16	1.6	60	nil	nil	nil	nil	nil	nil
20100.0E	30	1.4	60	nil	nil	nil	nil	nil	nil
20125.0E	31	1.6	44	nil	nil	nil	nil	nil	nil
20150.0E	27	1.4	48	nil	nil	nil	nil	nil	nil
20175.0E	13	1.4	48	nil	nil	nil	nil	nil	nil
20200.0E	12	1.2	88	nil	nil	nil	nil	nil	nil
20225.0E	17	0.8	68	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9500.0N Azimuth: 90 Deg. Number of Stations: 15

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19910.0E	19	1.2	100	nil	nil	nil	nil	nil	nil
19925.0E	10	0.4	150	nil	nil	nil	nil	nil	nil
19950.0E	6	1.2	100	nil	nil	nil	nil	nil	nil
19975.0E	3	0.8	56	nil	nil	nil	nil	nil	nil
20000.0E	2	1.4	80	nil	nil	nil	nil	nil	nil
20025.0E	7	1.4	72	nil	nil	nil	nil	nil	nil
20050.0E	20	6.0	76	nil	nil	nil	nil	nil	nil
20075.0E	14	1.2	44	nil	nil	nil	nil	nil	nil
20100.0E	45	1.4	60	nil	nil	nil	nil	nil	nil
20125.0E	107	1.4	56	nil	nil	nil	nil	nil	nil
20150.0E	37	1.4	68	nil	nil	nil	nil	nil	nil
20175.0E	215	1.6	40	nil	nil	nil	nil	nil	nil
20200.0E	35	1.4	56	nil	nil	nil	nil	nil	nil
20225.0E	51	2.2	76	nil	nil	nil	nil	nil	nil
20250.0E	32	2.2	160	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9600.0N Azimuth: 90 Deg. Number of Stations: 21

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19775.0E	4	0.8	28	nil	nil	nil	nil	nil	nil
19800.0E	5	0.4	56	nil	nil	nil	nil	nil	nil
19825.0E	4	1.2	44	nil	nil	nil	nil	nil	nil
19850.0E	16	2.2	40	nil	nil	nil	nil	nil	nil
19875.0E	5	0.6	44	nil	nil	nil	nil	nil	nil
19900.0E	71	2.0	24	nil	nil	nil	nil	nil	nil
19925.0E	14	1.2	28	nil	nil	nil	nil	nil	nil
19950.0E	10	2.0	40	nil	nil	nil	nil	nil	nil
19975.0E	36	3.4	60	nil	nil	nil	nil	nil	nil
20000.0E	25	3.2	68	nil	nil	nil	nil	nil	nil
20025.0E	4	1.2	64	nil	nil	nil	nil	nil	nil
20050.0E	36	1.4	24	nil	nil	nil	nil	nil	nil
20075.0E	14	4.4	36	nil	nil	nil	nil	nil	nil
20100.0E	21	2.4	40	nil	nil	nil	nil	nil	nil
20125.0E	27	1.2	150	nil	nil	nil	nil	nil	nil
20150.0E	16	1.2	96	nil	nil	nil	nil	nil	nil
20175.0E	17	4.6	180	nil	nil	nil	nil	nil	nil
20200.0E	38	3.4	280	nil	nil	nil	nil	nil	nil
20225.0E	74	4.0	270	nil	nil	nil	nil	nil	nil
20250.0E	33	4.0	210	nil	nil	nil	nil	nil	nil
20275.0E	82	7.6	170	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9700.0N Azimuth: 90 Deg. Number of Stations: 19

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19775.0E	5	1.2	36	nil	nil	nil	nil	nil	nil
19800.0E	10	0.4	36	nil	nil	nil	nil	nil	nil
19825.0E	6	1.0	24	nil	nil	nil	nil	nil	nil
19850.0E	14	2.2	72	nil	nil	nil	nil	nil	nil
19875.0E	13	1.0	100	nil	nil	nil	nil	nil	nil
19900.0E	21	6.2	260	nil	nil	nil	nil	nil	nil
19925.0E	8	2.6	100	nil	nil	nil	nil	nil	nil
19950.0E	48	4.0	100	nil	nil	nil	nil	nil	nil
19962.5E	27	1.6	96	nil	nil	nil	nil	nil	nil
19975.0E	9	3.6	80	nil	nil	nil	nil	nil	nil
19987.5E	57	13.0	260	nil	nil	nil	nil	nil	nil
20000.0E	31	6.8	190	nil	nil	nil	nil	nil	nil
20025.0E	50	8.8	200	nil	nil	nil	nil	nil	nil
20050.0E	72	8.4	130	nil	nil	nil	nil	nil	nil
20125.0E	1	6.4	100	nil	nil	nil	nil	nil	nil
20225.0E	80	7.2	280	nil	nil	nil	nil	nil	nil
20250.0E	42	4.6	220	nil	nil	nil	nil	nil	nil
20275.0E	18	5.0	120	nil	nil	nil	nil	nil	nil
20300.0E	36	7.0	170	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9775.0N Azimuth: 90 Deg. Number of Stations: 1

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20000.0E	38	5.2	120	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9800.0N Azimuth: 90 Deg. Number of Stations: 22

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19800.0E	1	1.4	40	nil	nil	nil	nil	nil	nil
19825.0E	1	0.8	20	nil	nil	nil	nil	nil	nil
19850.0E	79	12.0	320	nil	nil	nil	nil	nil	nil
19875.0E	5	5.6	120	nil	nil	nil	nil	nil	nil
19900.0E	21	3.8	88	nil	nil	nil	nil	nil	nil
19925.0E	38	7.0	220	nil	nil	nil	nil	nil	nil
19950.0E	1	1.0	120	nil	nil	nil	nil	nil	nil
19975.0E	30	2.0	80	nil	nil	nil	nil	nil	nil
20000.0E	104	6.6	140	nil	nil	nil	nil	nil	nil
20025.0E	148	18.0	190	nil	nil	nil	nil	nil	nil
20050.0E	112	10.0	110	nil	nil	nil	nil	nil	nil
20075.0E	82	10.0	120	nil	nil	nil	nil	nil	nil
20100.0E	63	6.2	68	nil	nil	nil	nil	nil	nil
20125.0E	73	6.8	84	nil	nil	nil	nil	nil	nil
20150.0E	36	4.8	120	nil	nil	nil	nil	nil	nil
20175.0E	20	5.6	140	nil	nil	nil	nil	nil	nil
20200.0E	28	4.2	120	nil	nil	nil	nil	nil	nil
20225.0E	48	5.4	110	nil	nil	nil	nil	nil	nil
20250.0E	37	6.0	120	nil	nil	nil	nil	nil	nil
20275.0E	46	4.8	140	nil	nil	nil	nil	nil	nil
20300.0E	1	5.6	120	nil	nil	nil	nil	nil	nil
20325.0E	42	4.6	180	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9825.0N Azimuth: 90 Deg. Number of Stations: 1

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20000.0E	1	5.6	76	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 9900.0N Azimuth: 90 Deg. Number of Stations: 21

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
19800.0E	40	3.8	120	nil	nil	nil	nil	nil	nil
19825.0E	13	2.6	48	nil	nil	nil	nil	nil	nil
19850.0E	65	4.4	530	nil	nil	nil	nil	nil	nil
19875.0E	162	1.6	36	nil	nil	nil	nil	nil	nil
19900.0E	30	1.0	48	nil	nil	nil	nil	nil	nil
19925.0E	74	2.4	28	nil	nil	nil	nil	nil	nil
19950.0E	25	1.6	4	nil	nil	nil	nil	nil	nil
19975.0E	1	4.2	44	nil	nil	nil	nil	nil	nil
20000.0E	1	0.8	120	nil	nil	nil	nil	nil	nil
20025.0E	69	3.4	110	nil	nil	nil	nil	nil	nil
20050.0E	1	5.0	84	nil	nil	nil	nil	nil	nil
20075.0E	22	2.0	160	nil	nil	nil	nil	nil	nil
20100.0E	103	9.8	200	nil	nil	nil	nil	nil	nil
20125.0E	124	12.0	290	nil	nil	nil	nil	nil	nil
20150.0E	91	7.2	160	nil	nil	nil	nil	nil	nil
20175.0E	17	1.4	300	nil	nil	nil	nil	nil	nil
20200.0E	172	5.0	360	nil	nil	nil	nil	nil	nil
20225.0E	148	7.8	310	nil	nil	nil	nil	nil	nil
20250.0E	64	4.0	160	nil	nil	nil	nil	nil	nil
20275.0E	83	4.6	200	nil	nil	nil	nil	nil	nil
20300.0E	42	3.6	130	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 10000.0N Azimuth: 90 Deg. Number of Stations: 14

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20000.0E	88	1.0	24	nil	nil	nil	nil	nil	nil
20025.0E	3	1.0	16	nil	nil	nil	nil	nil	nil
20050.0E	1	3.2	40	nil	nil	nil	nil	nil	nil
20075.0E	2	1.0	40	nil	nil	nil	nil	nil	nil
20100.0E	88	3.0	260	nil	nil	nil	nil	nil	nil
20125.0E	12	0.8	110	nil	nil	nil	nil	nil	nil
20150.0E	54	4.0	180	nil	nil	nil	nil	nil	nil
20175.0E	26	1.0	180	nil	nil	nil	nil	nil	nil
20200.0E	815	0.8	110	nil	nil	nil	nil	nil	nil
20225.0E	51	3.6	110	nil	nil	nil	nil	nil	nil
20250.0E	16	1.4	100	nil	nil	nil	nil	nil	nil
20300.0E	27	0.8	88	nil	nil	nil	nil	nil	nil
20325.0E	15	0.8	84	nil	nil	nil	nil	nil	nil
20350.0E	24	3.0	96	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 10100.0N Azimuth: 90 Deg. Number of Stations: 12

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20000.0E	5	0.6	40	nil	nil	nil	nil	nil	nil
20025.0E	31	1.4	68	nil	nil	nil	nil	nil	nil
20050.0E	1	0.6	64	nil	nil	nil	nil	nil	nil
20075.0E	2	0.6	44	nil	nil	nil	nil	nil	nil
20100.0E	1	0.8	40	nil	nil	nil	nil	nil	nil
20125.0E	1	0.8	44	nil	nil	nil	nil	nil	nil
20150.0E	1	1.6	16	nil	nil	nil	nil	nil	nil
20175.0E	1	5.8	60	nil	nil	nil	nil	nil	nil
20200.0E	1	0.8	64	nil	nil	nil	nil	nil	nil
20225.0E	1	2.6	80	nil	nil	nil	nil	nil	nil
20275.0E	1	0.6	32	nil	nil	nil	nil	nil	nil
20300.0E	2	0.8	88	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 10200.0N Azimuth: 90 Deg. Number of Stations: 9

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20100.0E	10	0.2	10	nil	nil	nil	nil	nil	nil
20125.0E	10	0.4	12	nil	nil	nil	nil	nil	nil
20150.0E	30	0.4	10	nil	nil	nil	nil	nil	nil
20175.0E	10	0.4	6	nil	nil	nil	nil	nil	nil
20200.0E	10	1.0	8	nil	nil	nil	nil	nil	nil
20225.0E	10	0.4	48	nil	nil	nil	nil	nil	nil
20250.0E	10	0.2	26	nil	nil	nil	nil	nil	nil
20275.0E	20	0.2	28	nil	nil	nil	nil	nil	nil
20300.0E	10	0.2	30	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 10300.0N Azimuth: 90 Deg. Number of Stations: 9

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20200.0E	10	0.2	42	nil	nil	nil	nil	nil	nil
20225.0E	10	0.2	32	nil	nil	nil	nil	nil	nil
20250.0E	10	0.2	56	nil	nil	nil	nil	nil	nil
20275.0E	10	0.2	34	nil	nil	nil	nil	nil	nil
20300.0E	10	0.2	36	nil	nil	nil	nil	nil	nil
20325.0E	10	0.2	38	nil	nil	nil	nil	nil	nil
20350.0E	10	0.2	62	nil	nil	nil	nil	nil	nil
20375.0E	10	0.2	40	nil	nil	nil	nil	nil	nil
20400.0E	10	0.4	54	nil	nil	nil	nil	nil	nil

GEOCHEMICAL SURVEY

Project Name : TORO Project Number: 320
Grid Name : TORO

Date: 5/30/87 Operator: CH NTS: 115I12
Baseline: 20000.0E Baseline Azimuth: 0 Degrees
Number of Lines: 20 Data File: C320TOR.ZAT

Line: 10400.0N Azimuth: 90 Deg. Number of Stations: 9

STATION	Au PPB	Ag PPM	As PPM	undef undef	undef undef	undef undef	undef undef	undef undef	undef undef
20100.0E	10	0.2	40	nil	nil	nil	nil	nil	nil
20125.0E	10	0.2	18	nil	nil	nil	nil	nil	nil
20150.0E	10	0.2	48	nil	nil	nil	nil	nil	nil
20175.0E	10	0.2	36	nil	nil	nil	nil	nil	nil
20200.0E	10	0.2	54	nil	nil	nil	nil	nil	nil
20225.0E	10	0.2	26	nil	nil	nil	nil	nil	nil
20250.0E	10	0.2	44	nil	nil	nil	nil	nil	nil
20275.0E	10	0.2	70	nil	nil	nil	nil	nil	nil
20300.0E	10	0.4	20	nil	nil	nil	nil	nil	nil

APPENDIX TWO

OVERBURDEN TRENCHING RESULTS

APPENDIX TWO

OVERBURDEN TRENCHING RESULTS

Sample No.	Type	Au ppb	Ag ppm	As ppm	
TRENCH A					
91583	OB	50	6.0	94	
91584	OB	100	11.0	500	
TRENCH B					
91576	OB	30	4.4	74	
91577	OB	80	7.2	150	
91578	OB	100	14.0	660	
91579	OB	330	18.0	2700	
91580	OB	140	16.0	1800	
					Cu/Pb /Zn
91581	RX	10	3.4	320	240/160/950
91582	RX	10	3.6	160	60/320/1700
TRENCH C					
91585	OB	110	8.0	82	
91586	OB	80	4.8	130	
91587	OB	70	6.8	150	
91588	OB	430	5.0	1400	
91589	OB	60	4.0	80	
91590	OB	220	17.0	610	
91591	RX	10	2.4	60	20/250/1400
TRENCH E					
91592	OB	110	1.6	40	
91593	OB	70	3.4	60	
91594	OB	50	3.2	70	
91595	OB	50	1.2	46	
91596	OB	70	1.2	30	
91597	RX	10	1.4	60	40/40/72

Sample No.	Type	Au ppb	Ag ppm	As ppm
TRENCH F				
20175E-9405N	OB	30	1.2	56
9410	OB	10	1.2	24
9415	OB	20	1.0	40
9420	OB	20	0.8	40
9425	OB	10	0.8	52
9430	OB	60	1.2	68
9435	OB	60	1.2	44
9440	OB	90	1.2	52
9445	OB	70	1.0	100
9450	OB	40	1.2	52
9455	OB	30	1.0	60
9460	OB	50	1.2	80
9465	OB	50	1.2	64
9470	OB	30	1.0	68
9475	OB	230	1.2	44
9480	OB	80	1.2	44
9485	OB	50	2.4	52
9490	OB	150	1.8	52
9495	OB	20	2.8	36
20175E-9500N	OB	40	2.6	48
TRENCH 87-1				
20000E-9700N	OB	90	8.4	170
9705	OB	110	15.0	230
9710	OB	90	13.0	320
9715	OB	170	17.0	150
9720	OB	120	14.0	140
9725	OB	120	14.0	120
9730	OB	110	12.0	200
TRENCH 87-2				
20200E-9320N	OB	100	2.0	44
9325	OB	60	2.6	56
9330	OB	150	2.8	52
9335	OB	80	3.0	88
9340	OB	60	1.6	72
9345	OB	70	1.8	80

Sample No.	Type	Au ppb	Ag ppm	As ppm
TRENCH 87-3				
20020E-9900N	OB	70	9.8	740
20030	OB	100	6.8	450
20040	OB	70	5.8	340
20050	OB	80	6.8	320
20060	OB	90	5.0	170
20070	OB	90	4.6	780
20080	OB	70	4.8	960
TRENCH 87-4				
20185E-9200N	OB	100	4.4	36
20190	OB	390	3.8	70
20195	OB	200	5.2	100
TRENCH 87-5				
20260-9200N	OB	20	2.2	30
20265	OB	20	1.0	38
20270	OB	10	0.6	120

APPENDIX THREE

DIAMOND DRILL CORE LOGS

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2, 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
GRID	FIELD CO-ORDINATES							SURVEYED CO-ORDINATES			Sheet 1 of 8
Lat. 9 + 200 N	Elev. ~790 m	Dip -45°						Lat.	Elev.	Dip	HOLE No.
Dep. 20 + 260 E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	T-87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS ppb Au	ASSAYS ppm Ag		
0	12.2		OVERBURDEN									
12.2	14.6		QUARTZ MONZONITE PORPHYRY 10-15% rounded quartz phenocrysts, 30% feldspar phenocrysts, 50-60% quartz-feldspar matrix, 5—10% mafics which are partially to completely altered & replaced.				29051		55	0.7		
14.6	16.5	57%	light grey to white, dark streaks of fine grained sulphides, feldspar phenocrysts very altered, matrix feldspar less altered. In places clayey, intense alteration is present, no mafics remaining.	1-2mm Quartz veins, 45° to core	1% py		29052		30	0.8		
16.5	18.0	55%	QUARTZ MONZONITE PORPHYRY Some carbonate alteration in feldspar, alteration less intense	fractures 55° pyrite lined	1-3% py		29053		120	1.6		
18.0	19.5	86%	QUARTZ MONZONITE PORPHYRY 18.8, 19.1 - Quartz flooding, grey, pyrite, remnant mafics. (2—5cm, 35° to core)	fractures 30-35° - py 80°-py	3% py		29054		45	1.4		
19.5	21.0	60%	QUARTZ MONZONITE PORPHYRY Fracture coatings of soft white waxy mineral, quartz veins - <1mm to 3mm, pyrite in fractures, carbonate in fractures, some silicification along fractures	fr-025-035°, 010°: intersect at 60°, Fractures 30,40,50°	3% py		29055		15	1.2		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2, 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115 I/12
GRID	FIELD CO-ORDINATES							SURVEYED CO-ORDINATES			Sheet 2 of 8
Lat. 9 + 200N	Elev.	Dip -45°						Lat.	Elev.	Dip	HOLE No.
Dep. 20 + 260 E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	T-87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
21.0	22.5	68%	QUARTZ MONZONITE PORPHYRY Greyer, remnant mafics altered to chlorite-sericite. Some quartz flooded fractures.	Quartz-carbonate fr. 90°,60°,35°	1-3% py		29056		15	1.7		
22.5	24.0	74%	QUARTZ MONZONITE PORPHYRY Alteration less, more competent, micas chloritized pyrite on fractures & disseminated.				29057		<5	1.5		
24.0	25.5	69%	QUARTZ MONZONITE PORPHYRY Slight alteration of feldspar, mafic minerals altered to chlorite,pyritic,rusty fractures-20-30cm spacing some carbonate alteration on fractures	Fractures 045° 030°,070°,010°	1-2% py		29058		<5	1.8		
25.5	27.0	95%	QUARTZ MONZONITE PORPHYRY 26.5, 26.7 - Quartz-carbonate veining, MoS_2,pyrite, ?Sphalerite 1-2mm	Fractures 010°,060° Quartz vein-050°	1-2%py tr Mo ?sphal		29059		5	2.2		
27.0	28.5	82%	QUARTZ MONZONITE PORPHYRY late fractures with carbonate 1mm quartz veinlet - 045° MoS_2 - 27.7m	045°-Quartz veinlet fr-75°,60°,45°, 15°.	1% py Mo		29060		5	7.3		
28.5	30.0	75%	QUARTZ MONZONITE PORPHYRY More bleaching, feldspar phenocrysts softer, fractured	fr-035°,080°,010° 070°.	1-2% py		29061		10	2.8		
30.0	31.5	89%	QUARTZ MONZONITE PORPHYRY Feldspar very soft, clayey alteration, 30.5-soft grey crush zone, very clayey, more competent gradually to 31.5	fr-035°,080°, 045°. shears 020°.	1-3% py		29062		30	2.9		
31.5	33.0	74%	QUARTZ MONZONITE PORPHYRY Pyritic fractures, rusty, coarse, euhedral pyrite, feldspar soft, altered., 53.0 clayey sheared fracture zone.	fr-055°,060°, 030°,080°, 015°	1-3% py		29063		25	3.6		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2, 87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
GRID	FIELD CO-ORDINATES							SURVEYED CO-ORDINATES			Sheet 3 of 8
Lat. 9 + 200N	Elev.	Dip -45°						Lat.	Elev.	Dip	HOLE No.
Dep. 20 + 260E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	T-87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
33.0	34.5	60%	QUARTZ MONZONITE PORPHYRY Very bleached, broken - last 10cm darker 33.5 - Quartz vein - 1.5mm - molybdenite,pyrite - 040°	Fr- 060°,025°, 035°,015°,045° Vein - 040°.	~1% py tr Mo, MoS_2		29064		20	3.0		
34.5	36.0	89%	QUARTZ MONZONITE PORPHYRY Darker, lighter greenish grey, harder, more competent 35.7 carbonate filled extension fractures - 1-3mm with slight bleaching	Fr. 075°,035°, 015° Pyrite coated	1-3% py		29065		10	1.0		
36.0	37.5	94%	QUARTZ MONZONITE PORPHYRY Mafics→chlorite.Pyrite,chlorite on fractures -045° carbonate filled extension fractures <1-2mm -055° 37.4 - Quartz veinlet - MoS_2,Pyrite.	Fr - 40°-55°	1-2% py. Mo		29066		40	0.9		
37.5	39.0	98%	QUARTZ MONZONITE PORPHYRY 38.3 - Mo? 2-8mm Quartz vein. Silicification present, mica-chlorite/sericite. pyrite on fractures more porphyritic appearance	Fr 15°,20°,35°, 30°,80°.	1% py tr Mo		29067		10	1.2		
39.0	40.5	100%	QUARTZ MONZONITE PORPHYRY Carbonate on later veins & fractures. to 1.5cm, silicified, mafics→chlorite	Fr - 35°,60° 025° - tr Mo	<1%-5% py Tr. Mo		29068		15	1.4		
40.5	42.0	100%	QUARTZ MONZONITE PORPHYRY Darker, more silicified, grey, mottled mafics altered, late carbonate veins, 2cm zone quartz (py to 2mm) 080° at 40.9. 41.5 mafics fairly fresh	Fr 050°,035°, 020°	1-3% py		29069		20	1.1		
42.0	43.5	92%	QUARTZ MONZONITE PORPHYRY Lighter, 40.5 -- 40.6 shearing, alteration	~040°--sheared, 070°--fractured 060-015°	1-2% py		29070		45	0.6		
43.5	45.0	94%	QUARTZ MONZONITE PORPHYRY Several zones of alteration, shearing, crush zone, pyrite streaks, calcite & silica along these	020° veining 015--020°-- shearing	1-2% py		29071		40	5.0		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2,87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
GRID FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 4 of 8
Lat. 9 + 200 N	Elev.	Dip -45°						Lat.	Elev.	Dip	HOLE No.
Dep. 10 + 260E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	T-87--1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
45.0	46.5	90%	QUARTZ MONZONITE PORPHYRY Slightly more competent -- carbonate veining and feldspar altered	015-020° fractures & shearing	<1% py		29072		25	1.9		
46.5	48.0	88%	QUARTZ MONZONITE PORPHYRY 46.9 Thin quartz vein, Tr. MoS_2 47.6 Crushed zone	090° Quartz vein	<1%py Mo		29073		15	3.2		
48.0	49.5	90%	QUARTZ MONZONITE PORPHYRY 48.4 bleached zone <1/2 m, mafics mostly gone. Mo in quartz veins - 48.5, 48.6	080°,045°-qtz veins 000-010°,060°-fr with pyrite	py<1% Mo		29074		45	2.2		
49.5	51.0	93%	QUARTZ MONZONITE PORPHYRY 49.5 - 50 Sheared, bleached 50-51 - harder, greyer, more siliceous	0°--fr with pyrite 060°-fractured 010°-30° shearing	<1%py		29075		50	1.6		
51.0	52.5	96%	QUARTZ MONZONITE PORPHYRY 52.1 Sheared area, thin carbonate coating on fractures. py on hairline fractures.	Fr --050°,020°, 005°	1% py		29076		40	2.3		
52.5	54.0	100%	QUARTZ MONZONITE PORPHYRY Fine grained sulphide veinlets at steep angle to core, lighter, altered - mafics mostly replaced	Fr - 020°,060°	1- 3% py		29077		30	2.6		
54.0	55.5	100%	QUARTZ MONZONITE PORPHYRY Silicified patches, streaks & patches of fine grained pyrite. 54.7 -- 54.9 - sheared. Chlorite/ pyrite on fractures, some carbonate.	Fr-020°,060°, 085°	1- 3% py		29078		<5	8.3		
55.5	57.0	99%	QUARTZ MONZONITE PORPHYRY 070° thin quartz vein, specks of molybdenite, off-set by later fractures - 55.9,56.5	Fr 0°-020°, 50-060°	1-2%py Tr. Mo		29079		10	3.2		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2, 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
GRID	FIELD CO-ORDINATES							SURVEYED CO-ORDINATES			Sheet 5 of 8
Lat. 9 + 200N	Elev.	Dip -45°						Lat.	Elev.	Dip	HOLE No.
Dep. 20 + 260E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	T--87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
57.0	58.5	96%	QUARTZ MONZONITE PORPHYRY Thin quartz veining parallel to core. Calcite extension fractures. 57.5 -- 58.2 Sheared/crushed zone	Fr. 0 - 020° 40--60°	1% py		29080		20	11.0		
58.5	60.0	85%	QUARTZ MONZONITE PORPHYRY Becoming more broken, chlorite/pyrite on some fractures	Fr 040°, 030°, 0°	1% py		29081		5	2.6		
60.0	62.0	95%	QUARTZ MONZONITE PORPHYRY More broken, some clayey, crushed zones, pyrite crystals to 2mm along fractures. White waxy mineral fills some fractures.	Fr.-020°, 040°.	1%py		29082		10	8.2		
62.0	63.1	100%	QUARTZ MONZONITE PORPHYRY Very clayey soft muck, some quartz/feldspar fragments. Colour is light brownish, totally altered	------	----		29083		35	3.3		
63.1	64.5	100%	QUARTZ MONZONITE PORPHYRY Grey, mafics sericitized and chloritized, pyrite on fractures. Thin quartz veins, matrix silicified	Fr.-010° strong, 060°, 030°	<1%py		29084		10	2.5		
64.5	66.0	98%	QUARTZ MONZONITE PORPHYRY Matrix silicified, large quartz/feldspar phenos minor pyrite, mostly on fractures.	-------	<1%py		29085		50	1.6		
66.0	67.5	99%	QUARTZ MONZONITE PORPHYRY Darker, greenish colour, quartz veining (1-2mm) early. Minor Mo in quartz at 67.2, 67.4. Chloritic	040°-Strong Fr. 060°-Quartz vein with Mo. 0-010°-Quartz	tr Mo <1%py		29086		35	1.7		
67.5	69.0	100%	QUARTZ MONZONITE PORPHYRY Chloritized, carbonate & pyrite on fractures. Pyrite in 1-3mm streaks, Mo in discontinuous quartz veins, Sphalerite on fractures-025° at 68.7, 68.9	025° Fracture -070°	≤1%py tr Mo sphal		29087		25	2.6		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
May 31, 1987	June 2, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 6 of 8

HOLE No. T-87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
69.0	70.5	98%	QUARTZ MONZONITE PORPHYRY Quartz vein 015°, pyrite on fracture 040°, carbonate on extension fracture. 70.4 - streaks of sphalerite	015° Quartz vein 040° pyrite 010° shear	1%py sphal		29088		< 5	2.6		
70.5	72.0	93%	QUARTZ MONZONITE PORPHYRY 70.7-sphalerite, pyrite on fractures, quartz to 1.5cm wide vein. pyrite,chlorite on later fractures rusty fractures	010°-030°-crush zone w. quartz fractures-040°, 080°,005° with carbonate	1%py sphal		29089		5	4.4		
72.0	73.5	92%	QUARTZ MONZONITE PORPHYRY Lighter colour, more fractured, more thin carbonate veins, less quartz, rusty fractures	Fractures-015° 060°,080° 020°-quartz veinlets	1%py sphal?		29090		40	1.6		
73.5	75.0	89%	QUARTZ MONZONITE PORPHYRY Carbonate & quartz veining, 74.0 - broken zone - probably lost some core.	Parallel to core is some shearing. 035° fractures with pyrite.	1-2%py sphal		29091		10	2.1		
75.0	76.5	88%	QUARTZ MONZONITE PORPHYRY Some sheared fragmental texture-possibly xenoliths or cataclastic texture. Carbonate veinlets & alteration, Pyrite & Chlorite on fractures	020°-quartz veins. 030°,080°,060° shearing, Pyritic fractures random	1-2%py sphal?		29092		30	2.0		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
May 31, 1987	June 2, 87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 7 of 8
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T-87-1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
76.5	78.0	85%	QUARTZ MONZONITE PORPHYRY Similar - less quartz, chlorite replaces hbde, biotite. matrix silicified. Clayey gouge zone 77.5-025°	Fr. 015°,020°, 030°.	<1% py		29093		10	1.4		
78.0	79.5	85%	QUARTZ MONZONITE PORPHYRY Minor quartz veining patches of pyrite, sphalerite - between grain boundaries, Pyrite on fractures.	Fr. 065°	<1% py sphal		29094		20	2.2		
79.5	81.0	n/a	QUARTZ MONZONITE PORPHYRY Greener colour, white feldspar phenos, quartz flooding, chloritization, possible potassic alteration 80.8 - fine grained sheared zone or recrystallized zone, green, remnant porphyrytic texture.	020,040° shearing.	<1% py Mo?		29095		40	1.0		
81.0	82.5	n/a	QUARTZ MONZONITE PORPHYRY Several green, fine grained sheared zones, hard, 81.5, 81.7, chloritized. Silicification & some pinkish patches-potassic alteration	050°-shear zones quartz veins parallel to core	Tr py		29096		20	1.1		
82.5	84.0	n/a	QUARTZ MONZONITE PORPHYRY Same - irregular quartz patches & veins. 83.0-shear zone, epidote? little pyrite except on fractures	------	Tr py		29097		55	1.6		
84.0	85.5	n/a	QUARTZ MONZONITE PORPHYRY same - biotite looks fresher, feldspar altered Quite broken up	-------	Tr py		29098		60	3.2		
85.5	87.0	n/a	QUARTZ MONZONITE PORPHYRY Same - some mottled texture - grain size varies - fine quartz veining	-------	Tr py		29099		30	1.4		

DRILL LOG - 81

Date June 2, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
May 31, 1987	June 2, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES			Sheet 8 of 8
Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing	T--87--1

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
87.0	88.5	n/a	QUARTZ MONZONITE PORPHYRY Irregular silicified shear zones to ~88.0, becomes dark green with white phenos. irregular veins & patches of quartz, carbonate	-----	Tr py		29100		35	1.3		
88.5	90.0	n/a	QUARTZ MONZONITE PORPHYRY Dark green to greyish & less silicified, carbonate veinlets, possible sphalerite	------	py on fractures sphal?		29101		15	1.1		
90.0	91.4	n/a	QUARTZ MONZONITE PORPHYRY Grey with white phenos, carbonate veinlets, sulphides on fractures and irregularly throughout.	Fr- 045°,060°, 025°	1-2% py sphal?		29102		75	3.3		
End of Hole.												

DRILL LOG - #1

Date June 3, 1987 Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared June 3/87	Date Completed June 6/87	Core Size NQ	DIP TESTS					PROPERTY TORO		PROJECT No. 320	N.T.S. No. 115I/12
FIELD CO-ORDINATES			DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	SURVEYED CO-ORDINATES			Sheet 1 of 8
Lat. L9 + 200N	Elev. ~805m	Dip -45°						Lat.	Elev.	Dip	HOLE No. T-87--2
Dep. 20 + 205E	Length 91.4m	Bearing 270°						Dep.	Length	Bearing	

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS ppb Au	ASSAYS ppm Ag		
0	6		OVERBURDEN									
6	11	14%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE Very broken - small fragments - greenish to rusty with heavy limonite & pyrolusite on fracture surfaces & patches throughout, feldspar phenos altered, rusty to hematitic, mafics → chlorite		tr py		29103		< 5	0.7		
11	14	33%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE Pale grey to greenish matrix, limonitic stain of feldspar phenos, Fe Mn stain throughout		tr py		29104		15	1.2		
14	17	33%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE More unweathered pyrite		1% py		29105		20	0.7		
17	18.5	53%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE Fresh, coarse pyrite on fracture surfaces, dendritic pyrolusite		py		29106		15	0.6		
18.5	20.0	60%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE Larger, broken pieces, pyrolusite, limonite on fractures and within 1.5cm margins of fractures.		py		29107		10	2.0		
20.0	21.5	100%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE SAME - soft clayey altered zone from 20.2 - 20.9 consists of quartz, feldspar in slippery, soft clayey matrix with carbonate & some pyryte. Rest has Fe stain Pyrite, carbonate veins	sheared/fractured at 040°	py		29108		65	4.8		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 3/87	June 6/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES			
Lat.	Elev.	Dip	Sheet 2 of 8
Dep.	Length	Bearing	HOLE No. T-87-2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
21.5	23.0	87%	FELDSPAR QUARTZ PORPHYRY - QUARTZ MONZONITE Feldspar stained dark brown, pyrite along fractures.		py		29109		30	1.3		
23.0	24.5	93%	QUARTZ MONZONITE PORPHYRY SAME - Discolouration of feldspar more patchy, related to fractures. Py, Mn on fractures ~24.0-End of intense ly oxidized zone.	fractures 045°, 010°	~1%py		29110		70	1.4		
24.5	26.0	90%	QUARTZ MONZONITE PORPHYRY Pale grey green, limonitic staining either side of fractures. Feldspar phenos buff to white, pyrite on fractures & disseminated 25.3--clayey, sheared zone,	040° strong fracture.	Up to 1%py		29111		15	0.4		
			10cm, carbonate on fractures.									
26.0	27.5	74%	QUARTZ MONZONITE PORPHYRY Rusty staining close to fracture, large quartz phenos, small feldspar phenos, ground mass fine grained, greenish, texture variable, looks ^ brecciated in	Fracture 040°	tr py		29112		10	0.3		
			places - as if before or during xllization. Carbonate veining, alteration	(Start of possible brecciation)								
27.5	29.0	86%	QUARTZ MONZONITE PORPHYRY SAME - patches are fine grained, green with little or no phenocrysts, soft, quite broken, some feldspar has pinkish colour	Foliation developing ~040° - 030°	~1%py		29113		45	0.3		
29.0	30.5	100%	QUARTZ MONZONITE PORPHYRY "Brecciation" more evident. Patches of hematitic stain, some Mn stain on fracture. Core soft- can easily gouge with knife.		≤1%py		29114		60	0.2		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY		PROJECT No.	N.T.S. No.
June 3/87	June 6/87	NQ					TORO		320	115I/12
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES		Sheet 3 of 8
				RECORDED	CORRECTED	RECORDED	CORRECTED			
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T-87-2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
30.5	32.0	91%	QUARTZ MONZONITE PORPHYRY More mottled, irregular textures, patches of red & black - probably hematite, some carbonate veining	30-50° shearing	py		29115		20	0.2		
32.0	33.5	98%	QUARTZ MONZONITE PORPHYRY Mottled texture, feldspar hematite stained, pretty broken up. Chloritized mafics.	050°- foliation & fractures	? py		29116		20	0.3		
33.5	35.0	97%	QUARTZ MONZONITE PORPHYRY SAME - Chloritization of mafics more evident - pinkish zone of possible potassic alteration of feldspar	050° -- Same	1-2% py		29117		30	0.5		
35.0	36.5	87%	QUARTZ MONZONITE PORPHYRY Feldspar greenish white, carbonate coarser grained-intrusive texture is more evident, with some patches or zones of fine grained texture, contact sharp or gradual		1-2% py		29118		20	0.4		
36.5	38.0	89%	QUARTZ MONZONITE PORPHYRY Greenish, chloritized biotite (& maybe hbde) 37.5 - 37.8 very broken up	030°-040° foliation	<1% py		29119		10	0.3		
38.0	39.5	100%	QUARTZ MONZONITE PORPHYRY Mostly altered & broken up, feldspar phenos don't show up well, Pyrite on fractures, few small red patches of hematite	Irregular fractures occasionally quite broken up	<1% py		29120		25	0.5		
39.5	41.0	76%	QUARTZ MONZONITE PORPHYRY Some coarser textured sections, very broken up @ 40.8		<1% py		29121		40	0.8		
41.0	42.5	82%	QUARTZ MONZONITE PORPHYRY More hematite patches (<1%) up to 15% mafic with white feldspar phenos, pyrite on fractures 42.1 - very broken up, some rubbly pieces, 10-20cm		<1% py		29122		15	0.7		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY	PROJECT No.	N.T.S. No.
June 3/87	June 6/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I/12
FIELD CO-ORDINATES							SURVEYED CO-ORDINATES		Sheet 4 of 8
Lat.	Elev.	Dip					Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing					Dep.	Length	Bearing	T-87--2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
42.5	44.0	100%	QUARTZ MONZONITE PORPHYRY Broken up -- same as previous sections, sericitic, chloritic (potassic alteration?) carbonate on fractures; and in feldspar phenos	040°-030°-fr and weak foliation.	<1% py		29123		25	<0.1		
44.0	45.5	94%	QUARTZ MONZONITE PORPHYRY Pale to darker greenish - dark areas have pinker feldspar , mottled texture, fine grained patches and streaks.	Sheared streaks	<1% py		29124		15	0.1		
45.5	47.0	74%	QUARTZ MONZONITE PORPHYRY Same, 46.9 - very broken up	025°-045° shearing/foliation	<1% py		29125		30	0.5		
47.0	48.5	63%	QUARTZ MONZONITE PORPHYRY Same - mottled patches of variable crystal size pyrite-fine grained, disseminated, some on fractures.	fr. 035°-060°	<1% py		29126		35	0.7		
48.5	50.0	65%	QUARTZ MONZONITE PORPHYRY Lots of xenoliths or fragments, ~1-5cm, coarse pyrite on fractures.	fr. 020°,040° irregular	1% py		29127		85	0.9		
50.0	51.5	71%	QUARTZ MONZONITE PORPHYRY Same, carbonate on fractures, 52.4-sheared zone, 50.4-sphalerite	060° sheared zone	1% py tr sphal		29128		80	0.9		
51.5	53.0	77%	QUARTZ MONZONITE PORPHYRY Sheared/broken zone ~52.5 to 52.8 -- 030° pyrite veinlets 010° 52.9 sphalerite - in carbonate veinlet.	030° sheared	1%py tr sphal		29129		65	0.6		
53.0	54.5	79%	QUARTZ MONZONITE PORPHYRY Pyrite along fractures, small veinlets.	045°,025° fractures	+1% py		29130		40	0.6		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 3, 1987	June 6, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 5 of 8

HOLE No. T-87-2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
54.5	56.0	87%	QUARTZ MONZONITE PORPHYRY 54.9 - 55.3 broken up, clayey patches, variable mottled texture. darker green after 55.5	060°-shearing 0-020° fracture with pyrite, calcite.	~1%py		29131		30	0.8		
56.0	57.5	100%	QUARTZ MONZONITE PORPHYRY 57.0 Sphalerite in irregular streaks - 10cm zone 57.3 very broken up, clayey zone, white feldspar phenos, 1-3mm		py, sphal.		29132		35	1.3		
57.5	59.0	60%	QUARTZ MONZONITE PORPHYRY 57.5 , 58.0 very broken up 59.0 broken up -- very fractured appearance		py		29133		50	0.5		
59.0	60.5	81%	QUARTZ MONZONITE PORPHYRY Darker green, more uniform, some silicification, very chloritic with irregular veinlets of pyrite.	shearing/foliation & fractures ~035°	1-2% pyrite		29134		75	0.6		
60.5	62.0	70%	QUARTZ MONZONITE PORPHYRY SAME - occasional <1mm quartz veinlets	quartz -050°	1-2% py		29135		30	0.7		
62.0	63.5	69%	QUARTZ MONZONITE PORPHYRY SAME - faint foliation ~040°	Fractures with pyrite 010°, 030°, 040°.	1-2% py		29136		10	0.8		
63.5	65.0	100%	QUARTZ MONZONITE PORPHYRY Texture becomes more variable, possible xenoliths, crush or shear zone	sheared/crushed zone 045°	1-2% py sphal.		29137		45	1.6		
65.0	66.5	90%	QUARTZ MONZONITE PORPHYRY 65--65.1 clayey crush or shear zone, lots of pyrite, streaks of fine grained sphalerite, especially after 65.5, some carbonate alteration	035° Fr	1-2% py sphal.		29138		150	3.2		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY	PROJECT No.	N.T.S. No.
June 3/1987	June 6/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I/12

FIELD CO-ORDINATES			SURVEYED CO-ORDINATES			Sheet 6 of 8
Lat.	Elev.	Dip	Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing	Dep.	Length	Bearing	T--87-2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
66.5	68.0	90%	QUARTZ MONZONITE PORPHYRY Matrix darker, fine grained pyrite in patches, veinlets and disseminated, after 67.2 becomes lighter mottled texture, streaks of sphalerite	lots of fractures	1-5% py sphal.		29139		10	1.2		
68.0	69.5	100%	QUARTZ MONZONITE PORPHYRY Lighter, mottled, few thin quartz veins noted. 69.0 - 69.5 very broken up, clayey, calcite veining.	irregular fractures	~1% py tr sphal.		29140		25	2.0		
69.5	71.0	100%	QUARTZ MONZONITE PORPHYRY Shear zone from 70.3 to 70.6 - 030°, lots of pyrite Otherwise greenish, mottled & variable texture	shear zone 030°	+1% py sphal.		29141		25	9.8		
71.0	72.5	73%	QUARTZ MONZONITE PORPHYRY 71-71.2-clayey gouge zone, rest same-mottled with xenoliths or breccia fragments. ~71.7 streaky areas with sphalerite, very fine quartz vein with trace grey sulphide (Moly), pyrite on fractures.		py sphal. Mo?		29142		200	1.6		
72.5	74.0	100%	QUARTZ MONZONITE PORPHYRY 72.5 to 72.65 fractured area, also 73.8, mottled texture, pyrite on fractures	Weak foliation at 050° to core	tr py		29143		45	0.9		
74.0	75.5	98%	QUARTZ MONZONITE PORPHYRY Mottled xenolithic texture, calcite veining 75.0 - 75.1-gouge, pyrite on same fractures	055-060° fractures very weak foliation	tr py		29144		30	1.1		
75.5	77.0	94%	QUARTZ MONZONITE PORPHYRY Distinct foliation of chloritized mafic minerals mottled chloritic alteration (Generally chloritized throughout core) 76.5-77.0 broken up	Fol. 030°	tr py		29145		20	0.6		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 3, 1987	June 6, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	TORO	PROJECT No.	320	N.T.S. No.	115I/12
SURVEYED CO-ORDINATES				Sheet	7 of 8
Lat.	Elev.	Dip		HOLE No.	
Dep.	Length	Bearing		T-87--2	

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
77.0	78.5	98%	QUARTZ MONZONITE PORPHYRY 77-78 Quite broken up same	Fr. 050°	tr py		29146		< 5	0.3		
78.5	80.0	100%	QUARTZ MONZONITE PORPHYRY More uniform texture, feldspar phenos stained buff, 78.6 -- 78.7, 79.4 - 79.6 broken up		tr py		29147		10	1.2		
80.0	81.5	100%	QUARTZ MONZONITE PORPHYRY SAME- 80-- 81.1 quite broken	Many fractures at 10-20° to core.	tr py		29148		20	1.8		
81.5	83.0	100%	QUARTZ MONZONITE PORPHYRY Badly broken up. Several sheared intervals, clayey, broken (090-060°) some carbonate veining, traces of Moly along fractures, very fine grained-82.2	Shears 090°-060° to core. Fractures 035°,020°,075°	Mo? py		29149		780	4.3		
83.0	84.5	97%	QUARTZ MONZONITE PORPHYRY Yellow tinge to feldspar phenos, some carbonate alteration, greenish mottled colour due to chlorite, some minor shearing and fractures, pyrite on fractures & disseminated.	Fractures 40°, 35°,70°	py		29150		35	1.2		
84.5	86.0	85%	QUARTZ MONZONITE PORPHYRY SAME - 85.5 - 85.8 shattered	Shear 010° with slickensides at 090° to core	py		29151		15	0.8		
86.0	87.5	85%	QUARTZ MONZONITE PORPHYRY Very broken up, thin clayey shear zones with some pyrite and carbonate.	shears 025°	py		29152		15	1.2		

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 3/87	June 6/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 8 of 8

HOLE No. T-87-2

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	ASSAYS Ag		
87.5	89.0	73%	QUARTZ MONZONITE PORPHYRY Very broken up - as previous, dark mineral, possibly sphalerite, on fracture surface	shears at ~025°	sphal? py		29153		15	3.4		
89.0	90.5	87%	QUARTZ MONZONITE PORPHYRY More competent, a few thin shear zones.	shear 040°	sphal? py		29154		5	1.2		
90.5	91.4	97%	QUARTZ MONZONITE PORPHYRY Several clayey gouge or shear zones	shears variable 040°	minor py		29155		5	0.6		
91.4			END OF HOLE									

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 8, 1987	June 10/87	NQ

FIELD CO-ORDINATES		
Lat. L 9+950	Elev. ~805m	Dip -45°
Dep. 20 +280	Length 77.7m	Bearing 270°

DIP TESTS	BEARING		ANGLE	
DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES			
Lat.	Elev.	Dip	Sheet 1 of 7
Dep.	Length	Bearing	HOLE No. T-87--3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au ppb	Ag ppm	As ppm
0	9.4		OVERBURDEN								
9.4	17.1	14%	QUARTZ MONZONITE PORPHYRY poor recovery- fragments may not be bedrock, limonitic stain of feldspar phenos and matrix, sericitic & chloritic alteration of mafics, red and yellow ochrous mud on fragments. Alteration variable.		Minor py		29156		<5	2.5	600
17.1	20.9	35%	QUARTZ MONZONITE PORPHYRY Sandy to clayey with quartz and feldspar grains, occasional solid pieces, pale grey to yellow (Limonitic) with small quartz veinlets crosscutting, sericitic, clays grey, yellow & red -Mn stain.		Py		29157		85	5.4	24
20.9	23.2	28%	QUARTZ MONZONITE PORPHYRY Grey, white and yellow clayey with quartz eyes, one 15cm section is more solid -- very altered Q.F.P. with sericite, pyrite, Fe stained - all very soft.		Tr py		29158		130	4.0	500
23.2	25.0	56%	QUARTZ MONZONITE PORPHYRY White, very altered, staining is limonitic or greenish yellow, thing quartz veinlets present, very soft, clayey, bleached quartz, feldspar, sericite, Tr Py		Tr py		29158				
25.0	26.5	67%	QUARTZ MONZONITE PORPHYRY Yellowish grey with pyritic fractures, still soft but more competent, intensely fractured. Feldspar yellow to brown stained, mafics sericitized		1-2% py		29159		10	0.7	140

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 8. 1987	June 10, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	TORO	PROJECT No.	320	N.T.S. No.	115I/12
SURVEYED CO-ORDINATES				Sheet	2 of 7
Lat.	Elev.	Dip		HOLE No.	
Dep.	Length	Bearing			T--87--3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au (ppb)	Ag (ppm)	As (ppm)
26.5	28.0	69%	QUARTZ MONZONITE PORPHYRY All fractures limonitic, matrix pinkish, minor disseminated pyrite, mostly very rubbly		Tr py		29160		<5	0.4	51
28.0	29.5	55%	QUARTZ MONZONITE PORPHYRY Matrix pinkish, feldspar phenos greenish white or Fe stained, very broken up		<1% py		29161		<5	0.1	29
29.5	31.0	79%	QUARTZ MONZONITE PORPHYRY More limonitic, feldspar phenos and matrix stained very broken to 30.2, larger pieces after that.		<1% py		29162		5	0.1	10
31.0	32.5	90%	QUARTZ MONZONITE PORPHYRY Reddish hematite patches, lots of limonite staining, overall pinkish colour, (potassic?) chlorite replacing mafics		Tr Py		29163		<5	0.8	10
32.5	34.0	97%	QUARTZ MONZONITE PORPHYRY Silicified, pinkish coarse F.Q.P., varies to greenish with coarse pinkish clasts (Xenoliths?), to all greenish F.Q.P. limonite & Mn on fractures,	Sheared texture 060°. at "contact" 32.8-33.2	~1% py		29164		<5	0.1	6
			disseminated pyrite. Greenish section-fine texture, chlorite, hematite in matrix & patchy epidote alteration of feldspar phenos.								
34.0	35.5	95%	QUARTZ MONZONITE PORPHYRY Silicified some epidote to 34.7, greenish, texture becoming coarser, Fe, Mn, carbonate on fractures	Fractures 030°, 010°	Tr py		29165		<5	0.1	4
35.5	36.6	93%	QUARTZ MONZONITE PORPHYRY Silicified, dark greenish epidote on fractures and alteration around feldspars, hematite, chlorite present, Fe,Mn on fractures, carbonate. last 15cm colour becomes much lighter	030° fractures with limonite, & Carbonate or epidote.	Tr py		29166		<5	0.3	4

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY	PROJECT No.	N.T.S. No.
June 8, 1987	June 10. 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I /12
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES		Sheet 3 of 7
Lat.	Elev.	Dip						Lat.	Elev. / Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length / Bearing	T-87--3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
36.6	38.0	77%	QUARTZ MONZONITE PORPHYRY Very altered, light rusty colour, soft, friable, FQP texture is occasionally still evident, clayey alteration	- - -	<1% Tr py		29167		<5	1.6	11	
38.0	39.5	99%	QUARTZ MONZONITE PORPHYRY Limonitic stained to pale greenish FQP, Chloritic, some purplish hematitic patches, hematite & limonite also on fractures, biotite sericitized or chloritized	common fr.- 045°--050°	rare Tr py		29168		<5	0.2	7	
39.5	41.0	94%	QUARTZ MONZONITE PORPHYRY Same, minor epidote present	Fr. 050°,015°	<1% Tr py		29169		<5	0.1	10	
41.0	42.5	80%	QUARTZ MONZONITE PORPHYRY SAME - More hematitic, chloritic, very broken up, (largest piece ~ 8cm)	Fr.-070°,025°	<1%py		29170		<5	0.3	10	
42.5	44.0	84%	QUARTZ MONZONITE PORPHYRY Same - greenish, becoming paler, very small pieces, limonitic and hematitic stain on fractures, patchy epidote alteration 43.5-44.0 very broken, sheared.		Tr py		29171		<5	0.1	8	
44.0	45.5	51%	QUARTZ MONZONITE PORPHYRY Change in colour & alteration--less limonite, pale grey, small fragments, some clayey, altered sections, kaolinite, limonitic/hematitic stain on fractures but not as strong. No chlorite, mafics replaced by hematite, pyrite, sericite		py-tr to 1%		29172		<5	0.2	11	
45.5	47.0	59%	QUARTZ MONZONITE PORPHYRY Clayey shear zone to 46.0, some textures retained Rest is light buff to light maroon (hematite) with green patches & flecks. pyrite & a micaceous mineral (sericite?) on fractures	- -- -	Py hem.		29173		<5	0.1	7	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 8, 1987	June 10, 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 4 of 7
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No. T--87--3
Dep.	Length	Bearing						Dep.	Length	Bearing	

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
47.0	48.5	83%	QUARTZ MONZONITE PORYPHRY Buff with occasional hematitic patches, patchy limonitic stain on fractures. pyrite on fractures and occasional very fine grained patches along grain boundaries, sericitic, very broken up.		py		29174		<5	0.1	4	
48.5	50.0	80%	QUARTZ MONZONITE PORPHYRY Occasionally very broken, less limonitic stain on fractures, pale buff to grey-from fine grained sulphides (pyrite?) close to carbonate filled, partially healed fractures parallel to core, green mica (sericite), pink carbonate.		<1% to 3% py		29175		10	0.1	23	
50.0	51.5	65%	QUARTZ MONZONITE PORPHYRY Change-almost no Fe stain (limonite) past this point, pale buff to pinkish with occasional hematite stain on fractures, no limonite, occasional hematite patches, greenish mica, 50.8 - pinkish (potassic alteration?) silicified 50.0 - 50.8 - very broken	some shearing 040°	1-3% py		29176		<5	0.2	7	
51.5	53.0	68%	QUARTZ MONZONITE PORPHYRY Salmon pinkish to grey, potassic alteration (?) some silicification, thin quartz veins, numerous healed fractures, pyrite on fractures & dissemated, sphalerite on fractures. 52.3 - more broken, 52.6 - greyer		1-2% py, sphal.		29177		5	1.0	9	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 8, 1987	June 10, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 5 of 7

HOLE No. T-87-3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
53.0	54.5	64%	QUARTZ MONZONITE PORPHYRY Pale grey, grey, clayey & very altered (kaolinite) from 53.5 - 54.8. Poor recovery. Biotite replaced by sericite, pyrite on fractures & shear zones, rest slightly less altered, more competent.	crushed & sheared	1-5% py		29178		10	0.8	53	
54.5	56.0	88%	QUARTZ MONZONITE PORPHYRY Same - pale grey, very clayey & altered in sections, badly sheared and crushed, held together by clayey matrix. Pyrite on fractures and streaks in clayey parts.	crushed & sheared	1-5% py		29179		75	7.4	20	
56.0	57.5	72%	QUARTZ MONZONITE PORPHYRY Same - mostly very crushed, pale greyish	Crush zone	1-2% py		29180		10	13.0	18	
57.5	59.0	76%	QUARTZ MONZONITE PORPHYRY Same - mostly crushed & very soft, black pyritic streaks and fine grained disseminated pyrite, occasional greenish mica in more competent sections.	Crush zone	1-5% py		29181		5	4.0	18	
59.0	60.5	81%	QUARTZ MONZONITE PORPHYRY SAME.	Crush zone	1-3% py		29182		5	1.2	20	
60.5	62.0	60%	QUARTZ MONZONITE PORPHYRY Same - buff to pale grey or whitish, sulphides in streaks and fractures, sphalerite associated with some pyrite, especially at 61.5m.	Crush zone, Foliation -045° Slightly more competent.	~1% py sphal.		29183		25	5.7	52	
62.0	63.5	75%	QUARTZ MONZONITE PORPHYRY Very badly crushed, white, pyrite & possible sphalerite present	Crush zone	1-2% py sphal?		29184		<5	6.0	21	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 8, 1987	June 10, 1987	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 6 of 7
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T-87-3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
63.5	65.0	93%	QUARTZ MONZONITE PORPHYRY Pale, buff coloured, mafics sericitized	Crush zone	~1%py tr sphal.		29185		15	2.8	28	
65.0	66.5	88%	QUARTZ MONZONITE PORPHYRY Broken but not badly crushed rock. Green sericitic patches probably replace mafics, feldspar phenos very soft, matrix hard, slightly silicified		~1% py sphal		29186		5	2.3	20	
66.5	68.0	85%	QUARTZ MONZONITE PORPHYRY SAME - pyrite on fractures & in small patches throughout with sphalerite.	occasional small crushed zones	py sphal		29187		<5	1.0	23	
68.0	69.5	78%	QUARTZ MONZONITE PORPHYRY SAME - Hard, silicified matrix		~1% py ~1% sphal		29188		10	2.5	23	
69.5	71.0	88%	QUARTZ MONZONITE PORPHYRY SAME - minor epidote alteration, pyrite, sphalerite some crushing	small crushed zones	~1%py sphal		29189		10	6.5	19	
71.0	72.5	85%	QUARTZ MONZONITE PORPHYRY SAME - very badly crushed and sheared in places, some calcite, lots of pyrite in crush zones.	crush zone 030°	~1% py sphal		29190		<5	2.8	18	
72.5	74.0	87%	QUARTZ MONZONITE PORPHYRY Varies from fairly competent to very badly crushed zone, lots of pyrite, pinkish carbonate, traces of pyrite, sphalerite in crushed rock.	crush zone 010°	~1-10% py tr sphal		29191		<5	1.3	16	
74.0	75.5	95%	QUARTZ MONZONITE PORPHYRY Fairly competent but mostly crushed and sheared, pale greenish mineral (Sericite?), very soft, replaces most feldspar. lots of carbonate, pyrite, clayey minerals in crushed areas.	crush zone 010-030°	1-10% py		29192		<5	0.8	13	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 8, 1987	June 10, 1987	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 7 of 7

HOLE No. T-87-3

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
75.5	77.7	71%	QUARTZ MONZONITE PORPHYRY Very friable, crushed grey to brownish matrix with soft, altered, white to greenish feldspar phenos. Limonitic stain 77.4 - 77.7, possible hematite.	very broken up	<1%py		29193		<5	0.7	5	
77.7			END OF HOLE									

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY	PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I/12

FIELD CO-ORDINATES			SURVEYED CO-ORDINATES			Sheet 1 of 11
Lat. L56+20m W	Elev. ~930 m	Dip -45°	Lat.	Elev.	Dip	HOLE No. T-87-4
Dep. 112+50N	Length 111.6m	Bearing 135°	Dep.	Length	Bearing	

approx -9650N 0+080E ew GRID

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au ppb	Ag ppm	As ppm
0	12.5	0.5m	OVERBURDEN Some core recovered, probably not bedrock				29194		<5	<0.1	13
12.5	14.0	100%	QUARTZ MONZONITE PORPHYRY Grey to rusty brown limonitic stained selvage from 1-5cm out from fractures, also Mn stain in this zone. Several sets of cross cutting fractures. Quartz phenos 10%, feldspar phenos 30%, quartz/feldspar matrix 50%, 5-10% mafics, 1-2% spec. hematite, matrix light grey, some pink colour to feldspar phenos, biot→bluish chlorite, weak carbonate is pervasive on fractures & in altered feldspar.	fractures - 060°,030°,050°	1%py +hematite +pyrolusite +limonite		29195		<5	<0.1	5
14.0	15.5	93%	QUARTZ MONZONITE PORPHYRY Colour change to mainly pink (some greenish) feldspar phenos, darker grey matrix, variable alteration of biotite to chlorite. Wide fracture selvage of Fe stain, Mn stain Feldspar phenos bright rusty to pinkish brick colour, Mostly Fe stained, end very broken up	Fr. 045°,025°	Fe Mn		29196		<5	0.2	5
15.5	17.0	27%	QUARTZ MONZONITE PORPHYRY Very little core - rusty stained, fairly solid, Mn stain on fractures		Fe Mn		29197		<5	<0.1	3
17.0	18.5	63%	QUARTZ MONZONITE PORPHYRY Feldspar phenos white or pinkish, matrix pinkish brown, biotite→chlorite, carbonate veining 2-3mm. Quite broken up.	Fr 005° to core 030°	Fe Mn		29198		<5	<0.1	4

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 12/87	June 14/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY		PROJECT No.	N.T.S. No.
TORO		320	115I/12
SURVEYED CO-ORDINATES			Sheet 2 of 11
Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing	T--87--4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
18.5	20.0	90%	QUARTZ MONZONITE PORPHYRY Fractures with carbonate, limonite, Mn. 005-010° to core. Matrix dark pinky brown, feldspar white to rusty. 19.0 - 19.4 - very dark brown, softer, very rusty also broken.	Fractures 005° - carbonate veining. 040°-060° fractures	Fe Mn		29199		<5	<0.1	7	
20.0	21.5	90%	QUARTZ MONZONITE PORPHYRY Less fracturing, overall dark colour, feldspar phenos light greyish or greenish to darker, rusty to pinkish, matrix dark, biotite→chlorite 10% mafics, Mn+Fe on fractures	random fractures	Fe Mn		29200		<5	<0.1	4	
21.5	23.0	90%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Bright pink feldspar in a dark browny/greyey/ pinky matrix, chlorite(up to 15%)& Mn present.		tr py Mn Fe		29201		<5	<0.1	6	
23.0	24.5	100%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Pink feldspar in dark matrix, Fe, Mn stain on fracture & rusty zones, < 1cm., 24.3 to end - some very rusty narrow crush zones, feldspar rusty or pink and very soft. Up to 15% chlorite	065°, 010° fractures.	Mn Fe		29202		<5	<0.1	4	
24.5	26.0	100%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) SAME - last 40cm very broken up (25.6 - 26.0)		Fe Mn		29203		<5	<0.1	5	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY	PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I/12

FIELD CO-ORDINATES			SURVEYED CO-ORDINATES			Sheet	HOLE No.
Lat.	Elev.	Dip	Lat.	Elev.	Dip	3 of 11	T-87--4
Dep.	Length	Bearing	Dep.	Length	Bearing		

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
26.0	27.5	97%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Pink to brick red feldspar, minor epidote, biotite replaced by chlorite, very fine grained hematite & pyrite in matrix, which is light greyish to fairly dark		tr py		29204		<5	<0.1	5	
27.5	29.0	97%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Large patches of pyrolusite surround grains - away from fractures, feldspar mostly pink-occasional greenish some biotite fairly fresh		tr py		29205		<5	<0.1	5	
29.0	30.5	94%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Abrupt colour change, light grey greenish to limonitic & clayey. trace pyrite, feldspar white to greenish, quartz clear, grey. Rusty, selvage 1-2cm	py, Fe, Mn on fractures	tr py + py on fractures		29206		<5	<0.1	34	
			from fracture 29.3-29.5 clayey, limonitic mud. 29.9 back to pink feldspar/dark matrix									
30.5	32.0	90%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) 31.2 - 31.3 clayey zone. Feldspar phenos, greyish to pink, dark fine grained matrix, biotite partially altered to chlorite		tr py Mn		29207		<5	<0.1	11	
32.5	33.5	93%	FELDSPAR QUARTZ PORPHYRY (QUARTZ MONZONITE) Colour varies - dark pinkish grey to light greeny grey - 32.5. Fe Mn on fractures chlorite, sericite in light grey, altered section. pyrite (Very fine grained) disseminated & on fractures	Alteration zone 010° to core	py tr to 1%		29208		<5	<0.1	7	
33.5	35.0	85%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) Pale grey-altered, with pyrite, 33.8 - 34.1 -- rusty crush or shear zone, after this back to darker grey with pink and green	Shear - 045°	tr py		29209		<5	<0.1	5	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ		BEARING		ANGLE		Toro		320	115I/12
FIELD CO-ORDINATES			DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED	SURVEYED CO-ORDINATES			Sheet 4 of 11
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T-87-4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As
35.0	36.5	83%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) Pale to dark greeny grey, fine grained disseminated pyrite throughout, pyrite on fractures, feldspar phenos altered to greenish sericite, carbonate filled fractures, 35.3 crush zone	Limonitic fractures Mn	Fe Mn 1% py		29210		5	0.4	8
36.5	38.0	79%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) SAME -- feldspar phenos white to light greenish, bluish chlorite, pyrite, Mn, carbonate on fracture	Py, Mn	1% py		29211		<5	0.1	5
38.0	39.5	81%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) Quite broken up-especially from 38.2-38.6, light greenish matrix, green feldspar phenos, dark green chlorite, limonite, Mn on fractures	Fe, Mn on fractures	tr py		29212		<5	<0.1	12
39.5	41.0	91%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) Feldspars pinkish, matrix darker after 40.0 with dark pink feldspar - more uniform grey near fractures	060° colour change assoc. with fractures			29213		5	0.1	5
41.0	42.5	97%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) More uniform greyish pink with green to black chlorite, biotite, epidote. Fe, Mn on Fracture, traces of epidote, occasional clots of chlorite.	Fe, Mn			29214		<5	<0.1	3
42.5	44.0	100%	QUARTZ MONZONITE PORPHYRY (FELDSPAR-QUARTZ PORPHYRY) "granitic" appearance -- salmon pink overall colour with grey quartz phenos, chlorite/epidote replace mafics, few fractures with minor Fe stains- more solid				29215		<5	<0.1	4

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 12/87	June 14/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	PROJECT No.	N.T.S. No.
TORO	320	115I/12

SURVEYED CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

Sheet 5 of 11

HOLE No. T-87--4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
44.0	45.5	100%	QUARTZ MONZONITE PORPHYRY (FELDSPAR- QUARTZ PORPHYRY) SAME - mottled various shades of pink, more epidote.	Mn,Fe on fractures			29216		<5	<0.1	3	
45.5	47.0	100%	QUARTZ MONZONITE PORPHYRY SAME-"granitic" appearance, fracture zone: 46.3-46.7				29217		<5	<0.1	5	
47.0	48.5	70%	QUARTZ MONZONITE PORPHYRY SAME -- Colour darkens towards end		tr py		29218		<5	<0.1	3	
48.5	50.0	55%	QUARTZ MONZONITE PORPHYRY Becomes greenish in places - alternates with pink to green feldspar. 49.0-49.5 - several fracture and shear zones with carbonate, limonite, 49.1-wider zone with pyrite, grey gouge		py trace to 5%		29219		<5	<0.1	5	
50.0	51.5	74%	QUARTZ MONZONITE PORPHYRY Back to pinkish "granitic" rock - very broken from 51.0 - 51.5 - Mn on fractures, minor limonite, chlorite epidote, hematite				29220		5	<0.1	5	
51.5	53.0	87%	QUARTZ MONZONITE PORPHYRY SAME - a bit more broken up--Fe,Mn stain near fractures, colour varies a bit.	considerable fracturing along core	py		29221		5	<0.1	9	
53.0	54.5	90%	QUARTZ MONZONITE PORPHYRY SAME -- occasional soft pinkish to white mineral (Not calcite) along fractures.				29222		<5	<0.1	5	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS				PROPERTY	PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO	320	115I/12

FIELD CO-ORDINATES			SURVEYED CO-ORDINATES			Sheet 6 of 11
Lat.	Elev.	Dip	Lat.	Elev.	Dip	HOLE No. T-87--4
Dep.	Length	Bearing	Dep.	Length	Bearing	

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
54.5	56.0	92%	QUARTZ MONZONITE PORPHYRY SAME -- slightly greyer				29223		10	<0.1	3	
56.0	57.5	99%	QUARTZ MONZONITE PORPHYRY Mostly greyish colour, some Fe stain to 1.5cm out from fractures, 56.1-56.2 very broken, 56.2-56.3 very bright pink to orangey feldspar, chloritic patches with hematite, pyrite, chalcopyrite + possible galena	050° to core--chloritized/pink/mineralized zone	py chalco galena?		29224		5	<0.1	5	
57.5	59.0	90%	QUARTZ MONZONITE PORPHYRY Mostly pinkish, some very pink zones associated with fractures. thin carbonate veinlets, Fe,Mn on Fractures at a steep angle to core.	Fractures 010°	FeMn		29225		10	<0.1	3	
59.0	60.5	91%	QUARTZ MONZONITE PORPHYRY SAME - light grey to pinkish - matrix pinker. Chlorite/epidote replace mafics, Mn on fractures as well as bright orange red ochre.		FeMn		29226		5	<0.1	4	
60.5	62.0	92%	QUARTZ MONZONITE PORPHYRY SAME - pinker, some rusty colour associated with fractures. Fe,Mn on fractures		FeMn		29227		<5	<0.1	4	
62.0	63.5	100%	QUARTZ MONZONITE PORPHYRY SAME -- becoming greyer in last 75cm with 10--15% mafics.				29228		<5	<0.1	6	
63.5	65.0	100%	QUARTZ MONZONITE PORPHYRY A bit more broken up -- carbonate on fractures limonite stain in zone around fractures		Fe		29229		<5	<0.1	5	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ						TORO		320	115I/12
FIELD CO-ORDINATES			DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	SURVEYED CO-ORDINATES			Sheet 7 of 11
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T--87-4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
65.0	66.5	97%	QUARTZ MONZONITE PORPHYRY Very solid, some red and limonite stain on fractures, pinker.		Fe		29230		<5	<0.1	4	
66.5	68.0	97%	QUARTZ MONZONITE PORPHYRY SAME - getting streaks and patches of chlorite and hematite with some pyrite, streaks of pink & green, Fe stain near fractures, some Mn		<1% py Fe,Mn		29231		<5	<0.1	4	
68.0	69.5	100%	QUARTZ MONZONITE PORPHYRY Very mottled in colour, feldspar phenos grey to white to dark pink, matrix light buff to grey to dark pinkish grey, biotite fresh to totally chloritized, occasionally quite broken.		tr py		29232		<5	<0.1	6	
69.5	71.0	100%	QUARTZ MONZONITE PORPHYRY SAME - larger patches of mottled colour 1 to 20 cm streaks of chlorite with pyrite, epidote, hematite.		<1% py		29233		<5	<0.1	4	
71.0	72.5	97%	QUARTZ MONZONITE PORPHYRY Feldspar pink to white to blue green, very variable but mostly lighter & greener 71.4--71.6 - very altered light green with carbonate, very fine grained grey quartz veining with very fine -grained pyrite.		~1% py		29234		<5	<0.1	**THIN QUARTZ VEINING 28	
72.5	73.2	97%	QUARTZ MONZONITE PORPHYRY Light greenish, altered, very soft altered feldspar, matrix harder - slightly silicified, chlorite, pyrite dissem. and on fractures. 73.0:very fine grained grey quartz vein with very fine grained dissem. pyrite 5-10%	Qtz. vein - 045° 1cm	1-5% py		29235		35	<0.1 x	230 thin Quartz veining	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ						TORO		320	115I/12
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 8 of 11
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T-87-4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
73.2	74.0	97%	QUARTZ MONZONITE PORPHYRY Back to mottled dark pink and greenish, carbonate on fractures.		tr py		29235		35	<0.1	230	
74.0	75.5	97%	QUARTZ MONZONITE PORPHYRY SAME - pink to green, mostly green pyrite & chlorite in streaks parallel to core, carbonate veining		~1%py		29236		<5	0.1	12	
75.5	77.0	97%	QUARTZ MONZONITE PORPHYRY Mostly greenish, slightly bleached, 75.5-dark grey, very fine grained quartz vein, with 20% very fine grained pyrite, chlorite, epidote, sericite present	040° quartz vein	py		29237		30	0.2	90	*QUARTZ VEIN
77.0	78.5	100%	QUARTZ MONZONITE PORPHYRY Pinkish to dark reddish, feldspar white to reddish to grey - alteration variable, some carbonate veining.				29238		<5	<0.1	3	
78.5	80.0	100%	QUARTZ MONZONITE PORPHYRY Matrix reddish to pinkish, feldspar pink to white to greenish. 1-5mm carbonate filling of fractures, sheared zone with pyrite, carbonate.	040° sheared zone-variable	tr py.		29239		<5	1.2	8	
80.0	81.5	95%	QUARTZ MONZONITE PORPHYRY Very light green, bleached to 80.8', then pinker to dark reddish, thin pyrite veinlets, carbonate veinlets, sheared.	045°-pyrite veinlets.	pyrite		29240		15	0.4	5	
81.5	83.0	95%	QUARTZ MONZONITE PORPHYRY Greyish to light pink and green bleached, sheared 82.3-82.7-quartz veining--very fine grained, sulphides, also carbonate veining.	Quartz vein--2-10mm, 050° irregular, Carbonate-1cm--050°	<1%py		29241		<5	0.2	22 *QUARTZ VEINING	
83.0	84.5	97%	QUARTZ MONZONITE PORPHYRY Alteration includes epidote, sericite, ?chlorite, light greeny grey, soft, altered & sheared with thin quartz veining - grey, clear to very fine grained with pyrite in quartz veins, shears, disseminated, some carbonate veining	045°-shearing	<1% py		29242		<5	0.4	15	

DRILL LOG - 81

Date _____ Logged By _____

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 12/87	June 14/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY	TORO	PROJECT No.	320	N.T.S. No.	115I/12
SURVEYED CO-ORDINATES				Sheet	9 of 11
Lat.	Elev.	Dip		HOLE No.	
Dep.	Length	Bearing			T-87-4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
84.5	86.0	97%	QUARTZ MONZONITE PORPHYRY 84.5 - 84.6 pyritic crush zone, 84.6-84.95 - quartz veining 1mm - 1cm, grey, very fine grained, pyrite, then core soft, broken up	Quartz veining 040° & irregular	<1%py		29243		45	0.6	*QUARTZ VEINING 140	
86.0	87.5	93%	QUARTZ MONZONITE PORPHYRY Light grey, soft, broken up, carbonate veining and alteration, chlorite, biotite.		py		29244		<5	0.7	100	
87.5	89.0	91%	QUARTZ MONZONITE PORPHYRY Soft, sheared and broken up, last 30cm-harder, pinky-grey matrix with grey green phenocrysts				29245		<5	0.2	30	
89.0	90.5	96%	QUARTZ MONZONITE PORPHYRY Pink alteration of feldspar & matrix, chlorite, epidote, + hematite patches. Carbonate on fractures Colour and degree of alteration vary		py		29246		<5	1.0	6	
90.5	92.0	100%	QUARTZ MONZONITE PORPHYRY Pinkish from 90.5 - 91.5, becomes light greenish & altered with occasional thin grey quartz veins with pyrite.		py		29247		30	1.5	*QUARTZ VEINS 40	
92.0	93.5	97%	QUARTZ MONZONITE PORPHYRY Mostly fairly soft, light grey green altered with grey quartz veins up to 1cm (92.2) with pyrite.	Quartz veins 040°	py		29248		65	1.2	160 * QUARTZ VEINS	
93.5	95.0	97%	QUARTZ MONZONITE PORPHYRY Very variable -- light greenish to pinkish, pyrite in grey quartz & silicified zone, multistage carbonate veining. 94.8 - lots of pyrite, silicified. 94.1 - 5cm carbonate veining		~1%py		29249		35	0.5	86 * Quartz veins	
95.0	96.5	100%	QUARTZ MONZONITE PORPHYRY Mostly dark pink, mottled and variable colour epidote/chlorite patches, white altered feldspar near fractures.		tr py		29250		<5	0.4	7	

DRILL LOG - 81

Date _____ Logged By A.S.

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
June 12/87	June 14/87	NQ

FIELD CO-ORDINATES		
Lat.	Elev.	Dip
Dep.	Length	Bearing

DIP TESTS				
DEPTH	BEARING		ANGLE	
	RECORDED	CORRECTED	RECORDED	CORRECTED

PROPERTY		PROJECT No.	N.T.S. No.
TORO		320	115I/12
SURVEYED CO-ORDINATES			Sheet 10 of 11
Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing	T--87-4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS Au	Ag	As	
96.5	98.0	100%	QUARTZ MONZONITE PORPHYRY SAME - more broken up, colour more variable, thin carbonate coatings on fractures.		tr py		27251		5	1.4	21	
98.0	99.5	100%	QUARTZ MONZONITE PORPHYRY Mostly light pink to greeny-grey, pyrite on fractures & some disseminated, chlorite streaks & patches parallel to core, carbonate on fractures		py		27252		5	0.5	33	
99.5	101.0	100%	QUARTZ MONZONITE PORPHYRY Light with dark chloritic flecks, occasional pyrite and carbonate on fractures, chlorite streaks & patches, hematite.				27253		<5	0.1	60	
101.0	102.5	100%	QUARTZ MONZONITE PORPHYRY Variable - dark pinky brown with chlorite/epidote/ hematite clots to light green & pink with thin grey pyritic quartz veinlets-.	Quartz veinlets variable orientation	<1%py		27254		<5	0.4	22 *QUARTZ VEINLETS	
102.5	104.0	100%	QUARTZ MONZONITE PORPHYRY Alteration varies - green to dark reddish grey, Chlorite, epidote. 102.6 - thin quartz vein--060°	Quartz vein 060°	py		27255		<5	0.4	*QUARTZ VEINS 21	
104.0	105.5	93%	QUARTZ MONZONITE PORPHYRY Greenish grey, quartz veins up to 1cm, are very fine grained, grey with very fine grained to 1mm pyrite. disseminated pyrite, some silicification.	Grey quartz-045° & varies	~1%py		27256		25	0.2	85 *QUARTZ VEINING	
105.5	107.0	93%	QUARTZ MONZONITE PORPHYRY Light grey green, altered, very soft, disseminated pyrite, some clayey, crumbly, altered sections, sheared and well fractured		~1%py		27257		15	0.1	33	
107.0	108.2	83%	QUARTZ MONZONITE PORPHYRY Becomes very broken up, soft and clayey in places with grey quartz veining up to 5mm wide, pyrite throughout and in quartz veins, very light grey green.	Crushed, quartz veining 050°	~1%py		27258		10	1.0	31 *QUARTZ VEINING	

DRILL LOG - 81

Date _____ Logged By A. Starr

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
June 12/87	June 14/87	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	TORO		320	115I/12
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 11 of 11
Lat.	Elev.	Dip						Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing						Dep.	Length	Bearing	T--87--4

From	To	Recovery	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width	ASSAYS			
108.2	108.6	88%	QUARTZ VEIN Some FQP, irregular dark grey quartz veining cuts very altered FQP, some open spaces, very fine grained pyrite (+arseno?) throughout	Quartz vein	1-5% py		27259		90	1.0	*QUARTZ VEIN 70	35cm
108.6	109.6	90%	QUARTZ MONZONITE PORPHYRY Very crushed & broken, thin grey quartz veins with pyrite, becomes light greenish, less broken up, pyrite occurs disseminated & on fractures	Thin quartz veining	<1%py		27260		160	5.2	60 * qtz veining	
109.6	111.6	100%	QUARTZ MONZONITE PORPHYRY Return to mottled, mostly pinkish FQPorph. lots of chlorite		py		27261		10	0.8	6	
111.6			END OF HOLE									

DRILL LOG - 81

Date _____ Logged By A. Starr

APPENDIX FOUR

DIAMOND DRILL ASSAY LOGS

ASSAY LOG
PROPERTY: TORO
HOLE No. : T-87-1

FROM	TO	WIDTH		AU PPB	AG PPM
12.20	14.60	2.40	-29051.000	55.000	0.700
14.60	16.50	1.90	-29052.000	30.000	0.800
16.50	18.00	1.50	-29053.000	120.000	1.600
18.00	19.50	1.50	-29054.000	45.000	1.400
19.50	21.00	1.50	-29055.000	15.000	1.200
21.00	22.50	1.50	-29056.000	15.000	1.700
22.50	24.00	1.50	-29057.000	5.000	1.500
24.00	25.50	1.50	-29058.000	5.000	1.800
25.50	27.00	1.50	-29059.000	5.000	2.200
27.00	28.50	1.50	-29060.000	5.000	7.300
28.50	30.00	1.50	-29061.000	10.000	2.800
30.00	31.50	1.50	-29062.000	30.000	2.900
31.50	33.00	1.50	-29063.000	25.000	3.600
33.00	34.50	1.50	-29064.000	20.000	3.000
34.50	36.00	1.50	-29065.000	10.000	1.000
36.00	37.50	1.50	-29066.000	40.000	0.900
37.50	39.00	1.50	-29067.000	10.000	1.200
39.00	40.50	1.50	-29068.000	15.000	1.400
40.50	42.00	1.50	-29069.000	20.000	1.100
42.00	43.50	1.50	-29070.000	45.000	0.600
43.50	45.00	1.50	29071.000	40.000	5.000
45.00	46.50	1.50	29072.000	25.000	1.900
46.50	48.00	1.50	29073.000	15.000	3.200
48.00	49.50	1.50	29074.000	45.000	2.200
49.50	51.00	1.50	29075.000	50.000	1.600
51.00	52.50	1.50	29076.000	40.000	2.300
52.50	54.00	1.50	29077.000	30.000	2.600
54.00	55.50	1.50	29078.000	5.000	8.300
55.50	57.00	1.50	29079.000	10.000	3.200
57.00	58.50	1.50	29080.000	20.000	11.000
58.50	60.00	1.50	29081.000	5.000	2.600
60.00	62.00	2.00	29082.000	10.000	8.200
62.00	63.10	1.10	29083.000	35.000	3.300
63.10	64.50	1.40	29084.000	10.000	2.500
64.50	66.00	1.50	29085.000	50.000	1.600
66.00	67.50	1.50	29086.000	35.000	1.700
67.50	69.00	1.50	29087.000	25.000	2.600
69.00	70.50	1.50	29088.000	5.000	2.600
70.50	72.00	1.50	29089.000	5.000	4.400
72.00	73.50	1.50	29090.000	40.000	1.600
73.50	75.00	1.50	29091.000	10.000	2.100
75.00	76.50	1.50	29092.000	30.000	2.000
76.50	78.00	1.50	29093.000	10.000	1.400
78.00	79.50	1.50	29094.000	20.000	2.200
79.50	81.00	1.50	29095.000	40.000	1.000
81.00	82.50	1.50	29096.000	20.000	1.100
82.50	84.00	1.50	29097.000	55.000	1.600
84.00	85.50	1.50	29098.000	60.000	3.200
85.50	87.00	1.50	29099.000	30.000	1.400
87.00	88.50	1.50	29100.000	35.000	1.300

ASSAY LOG
PROPERTY: TORO
HOLE No.: T-87-1

FROM	TO	WIDTH		AU PPB	AG PPM
88.50	90.00	1.50	29101.000	15.000	1.100
90.00	91.40	1.40	29102.000	75.000	3.300

** BORSURV **

ASSAY LOG
PROPERTY: TORO
HOLE No. : T-87-2

FROM	TO	WIDTH		AU PPB	AG PPM
6.00	11.00	5.00	29103.000	5.000	0.700
11.00	14.00	3.00	29104.000	15.000	1.200
14.00	17.00	3.00	29105.000	20.000	0.700
17.00	18.50	1.50	29106.000	15.000	0.600
18.50	20.00	1.50	29107.000	10.000	2.000
20.00	21.50	1.50	29108.000	65.000	4.800
21.50	23.00	1.50	29109.000	30.000	1.300
23.00	24.50	1.50	29110.000	70.000	1.400
24.50	26.00	1.50	29111.000	15.000	0.400
26.00	27.50	1.50	29112.000	10.000	0.300
27.50	29.00	1.50	29113.000	45.000	0.300
29.00	30.50	1.50	29114.000	60.000	0.200
30.50	32.00	1.50	29115.000	20.000	0.200
32.00	33.50	1.50	29116.000	20.000	0.300
33.50	35.00	1.50	29117.000	30.000	0.500
35.00	36.50	1.50	29118.000	20.000	0.400
36.50	38.00	1.50	29119.000	10.000	0.300
38.00	39.50	1.50	29120.000	25.000	0.500
39.50	41.00	1.50	29121.000	40.000	0.800
41.00	42.50	1.50	29122.000	15.000	0.700
42.50	44.00	1.50	29123.000	25.000	0.100
44.00	45.50	1.50	29124.000	15.000	0.100
45.50	47.00	1.50	29125.000	30.000	0.500
47.00	48.50	1.50	29126.000	35.000	0.700
48.50	50.00	1.50	29127.000	85.000	0.900
50.00	51.50	1.50	29128.000	80.000	0.900
51.50	53.00	1.50	29129.000	65.000	0.600
53.00	54.50	1.50	29130.000	40.000	0.600
54.50	56.00	1.50	29131.000	30.000	0.800
56.00	57.50	1.50	29132.000	35.000	1.300
57.50	59.00	1.50	29133.000	50.000	0.500
59.00	60.50	1.50	29134.000	75.000	0.600
60.50	62.00	1.50	29135.000	30.000	0.700
62.00	63.50	1.50	29136.000	10.000	0.800
63.50	65.00	1.50	29137.000	45.000	1.600
65.00	66.50	1.50	29138.000	150.000	3.200
66.50	68.00	1.50	29139.000	10.000	1.200
68.00	69.50	1.50	29140.000	25.000	2.000
69.50	71.00	1.50	29141.000	25.000	9.800
71.00	72.50	1.50	29142.000	200.000	1.600
72.50	74.00	1.50	29143.000	45.000	0.900
74.00	75.50	1.50	29144.000	30.000	1.100
75.50	77.00	1.50	29145.000	20.000	0.600
77.00	78.50	1.50	29146.000	5.000	0.300
78.50	80.00	1.50	29147.000	10.000	1.200
80.00	81.50	1.50	29148.000	20.000	1.800
81.50	83.00	1.50	29149.000	780.000	4.300
83.00	84.50	1.50	29150.000	35.000	1.200
84.50	86.00	1.50	29151.000	15.000	0.800
86.00	87.50	1.50	29152.000	15.000	1.200

ASSAY LOG
PROPERTY: TORO
HOLE No. : T-87-2

FROM	TO	WIDTH		AU PPB	AG PPM
87.50	89.00	1.50	29153.000	15.000	3.400
89.00	90.50	1.50	29154.000	5.000	1.200
90.50	91.40	0.90	29155.000	5.000	0.600

** BORSURV **

ASSAY LOG
PROPERTY: TORO
HOLE No. : T-87-3

FROM	TO	WIDTH	AU PPB	AG PPM	AS PPM
9.40	17.10	7.70-29156.000	5.000	2.500	600.000
17.10	20.90	3.80-29157.000	85.000	5.400	24.000
20.90	25.00	4.10-29158.000	130.000	4.000	500.000
25.00	26.50	1.50-29159.000	10.000	0.700	140.000
26.50	28.00	1.50-29160.000	5.000	0.400	51.000
28.00	29.50	1.50 29161.000	5.000	0.100	29.000
29.50	31.00	1.50-29162.000	5.000	0.100	10.000
31.00	32.50	1.50-29163.000	5.000	0.800	10.000
32.50	34.00	1.50-29164.000	5.000	0.100	6.000
34.00	35.50	1.50-29165.000	5.000	0.100	4.000
35.50	36.60	1.10-29166.000	5.000	0.300	4.000
36.60	38.00	1.40-29167.000	5.000	1.600	11.000
38.00	39.50	1.50-29168.000	5.000	0.200	7.000
39.50	41.00	1.50-29169.000	5.000	0.100	10.000
41.00	42.50	1.50-29170.000	5.000	0.300	10.000
42.50	44.00	1.50-29171.000	5.000	0.100	8.000
44.00	45.50	1.50-29172.000	5.000	0.200	11.000
45.50	47.00	1.50-29173.000	5.000	0.100	7.000
47.00	48.50	1.50-29174.000	5.000	0.100	4.000
48.50	50.00	1.50-29175.000	10.000	0.100	23.000
50.00	51.50	1.50-29176.000	5.000	0.200	7.000
51.50	53.00	1.50-29177.000	5.000	1.000	9.000
53.00	54.50	1.50-29178.000	10.000	0.800	53.000
54.50	56.00	1.50-29179.000	75.000	7.400	20.000
56.00	57.50	1.50-29180.000	10.000	13.000	18.000
57.50	59.00	1.50-29181.000	5.000	4.000	18.000
59.00	60.50	1.50-29182.000	5.000	1.200	20.000
60.50	62.00	1.50-29183.000	25.000	5.700	52.000
62.00	63.50	1.50-29184.000	5.000	6.000	21.000
63.50	65.00	1.50-29185.000	15.000	2.800	28.000
65.00	66.50	1.50-29186.000	5.000	2.300	20.000
66.50	68.00	1.50-29187.000	5.000	1.000	23.000
68.00	69.50	1.50-29188.000	10.000	2.500	23.000
69.50	71.00	1.50-29189.000	10.000	6.500	19.000
71.00	72.50	1.50-29190.000	5.000	2.800	18.000
72.50	74.00	1.50-29191.000	5.000	1.300	16.000
74.00	75.50	1.50-29192.000	5.000	0.800	13.000
75.50	77.70	2.20-29193.000	5.000	0.700	5.000

ASSAY LOG
PROPERTY: TORO
HOLE No.: T-87-4

FROM	TO	WIDTH	AU PPB	AG PPM	AS PPM
0.00	12.50	12.50-29194.000	5.000	0.100	13.000
12.50	14.00	1.50-29195.000	5.000	0.100	5.000
14.00	15.50	1.50-29196.000	5.000	0.200	5.000
15.50	17.00	1.50-29197.000	5.000	0.100	3.000
17.00	18.50	1.50-29198.000	5.000	0.100	4.000
18.50	20.00	1.50-29199.000	5.000	0.100	7.000
20.00	21.50	1.50-29200.000	5.000	0.100	4.000
21.50	23.00	1.50-29201.000	5.000	0.100	6.000
23.00	24.50	1.50-29202.000	5.000	0.100	4.000
24.50	26.00	1.50-29203.000	5.000	0.100	5.000
26.00	27.50	1.50-29204.000	5.000	0.100	5.000
27.50	29.00	1.50-29205.000	5.000	0.100	5.000
29.00	30.50	1.50-29206.000	5.000	0.100	34.000
30.50	32.00	1.50-29207.000	5.000	0.100	11.000
32.00	33.50	1.50-29208.000	5.000	0.100	7.000
33.50	35.00	1.50-29209.000	5.000	0.100	5.000
35.00	36.50	1.50-29210.000	5.000	0.400	8.000
36.50	38.00	1.50-29211.000	5.000	0.100	5.000
38.00	39.50	1.50-29212.000	5.000	0.100	12.000
39.50	41.00	1.50-29213.000	5.000	0.100	5.000
41.00	42.50	1.50-29214.000	5.000	0.100	3.000
42.50	44.00	1.50-29215.000	5.000	0.100	4.000
44.00	45.50	1.50-29216.000	5.000	0.100	3.000
45.50	47.00	1.50-29217.000	5.000	0.100	5.000
47.00	48.50	1.50-29218.000	5.000	0.100	3.000
48.50	50.00	1.50-29219.000	5.000	0.100	5.000
50.00	51.50	1.50-29220.000	5.000	0.100	5.000
51.50	53.00	1.50-29221.000	5.000	0.100	9.000
53.00	54.50	1.50-29222.000	5.000	0.100	5.000
54.50	56.00	1.50-29223.000	10.000	0.100	3.000
56.00	57.50	1.50-29224.000	5.000	0.100	5.000
57.50	59.00	1.50-29225.000	10.000	0.100	3.000
59.00	60.50	1.50-29226.000	5.000	0.100	4.000
60.50	62.00	1.50-29227.000	5.000	0.100	4.000
62.00	63.50	1.50-29228.000	5.000	0.100	6.000
63.50	65.00	1.50-29229.000	5.000	0.100	5.000
65.00	66.50	1.50-29230.000	5.000	0.100	4.000
66.50	68.00	1.50-29231.000	5.000	0.100	4.000
68.00	69.50	1.50-29232.000	5.000	0.100	6.000
69.50	71.00	1.50-29233.000	5.000	0.100	4.000
71.00	72.50	1.50-29234.000	5.000	0.100	28.000
72.50	74.00	1.50-29235.000	35.000	0.100	230.000
74.00	75.50	1.50-29236.000	5.000	0.100	12.000
75.50	77.00	1.50-29237.000	30.000	0.200	90.000
77.00	78.50	1.50-29238.000	5.000	0.100	3.000
78.50	80.00	1.50-29239.000	5.000	1.200	8.000
80.00	81.50	1.50-29240.000	15.000	0.400	5.000
81.50	83.00	1.50-29241.000	5.000	0.200	22.000
83.00	84.50	1.50-29242.000	5.000	0.400	15.000
84.50	86.00	1.50-29243.000	45.000	0.600	140.000

ASSAY LOG
PROPERTY: TORO
HOLE No.: T-87-4

FROM	TO	WIDTH	AU PPB	AG PPM	AS PPM
86.00	87.50	1.50-29244.000	5.000	0.700	100.000
87.50	89.00	1.50-29245.000	5.000	0.200	30.000
89.00	90.50	1.50-29246.000	5.000	1.000	6.000
90.50	92.00	1.50-29247.000	30.000	1.500	40.000
92.00	93.50	1.50-29248.000	65.000	1.200	160.000
93.50	95.00	1.50-29249.000	35.000	0.500	86.000
95.00	96.50	1.50-29250.000	5.000	0.400	7.000
96.50	98.00	1.50-27251.000	5.000	1.400	21.000
98.00	99.50	1.50-27252.000	5.000	0.500	33.000
99.50	101.00	1.50-27253.000	5.000	0.100	60.000
101.00	102.50	1.50-27254.000	5.000	0.400	22.000
102.50	104.00	1.50-27255.000	5.000	0.400	21.000
104.00	105.50	1.50-27256.000	25.000	0.200	85.000
105.50	107.00	1.50-27257.000	15.000	0.100	33.000
107.00	108.20	1.20-27258.000	10.000	1.000	31.000
108.20	108.60	0.40-27259.000	90.000	1.000	70.000
108.60	109.60	1.00-27260.000	160.000	5.200	60.000
109.60	111.60	2.00-27261.000	10.000	0.800	6.000

APPENDIX FIVE

STATEMENT OF COSTS

STATEMENT OF COSTS

PROJECT: 320 TORO CLAIMS.

Labour: 113 Mandays @ $124.32/day	$14,048.16
Helicopter: 77.4 hours @ $569.41/hour	$44,072.20
Vehicle rental, gas, diesel fuel for bulldozer & drill	$11,366.73
Camp supplies and groceries, 35 days	$ 7,885.37
Analyses costs: (See attached schedule for details)	$ 5,242.29
Sample shipment	$ 885.49

Contractors:

D.H. Waugh, Geological Consultant 30 days @ $250/day, plus expenses	$ 7,767.56
Artic Diamond Drilling Drilling costs, 4 NQ holes totalling 372 m:	$49,389.80
Bulldozer charges, 221 hours	$25,163.18
TOTAL:	$125,820.78

NORANDA EXPLORATION COMPANY, LIMITED

(WESTERN DIVISION)

DETAILS OF ANALYSES COSTS

PROJECT: 320 TORO PROJECT

ELEMENT	NO. OF DETERMINATIONS	COST PER DETERMINATION	TOTAL COSTS
SOILS:			
Au Rush	186	4.25	790.50
Au	91	3.50	318.50
Ag	277	1.60	443.20
As	277	1.50	415.50
			1,967.70
DRILL CORE:			
Prep	210	4.62	970.20
Au	210	6.28	1,318.80
Ag	210	1.86	390.60
As	106	3.49	369.94
			3,049.54
ROCK:			
Au,Ag,As, Cu,Pb,Zn	4	8.40	33.60
Au,Ag,Cu,Pb,Zn	5	16.60	83.00
Au,Ag,Zn	7	14.60	102.20
Zn-Assay	1	6.25	6.25
			225.05
		TOTAL:	5,242.29

APPENDIX SIX

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Alison M. Starr of Vancouver, B.C. do hereby certify that:

1. I am a geologist currently employed by Noranda Exploration Company Limited.

2. I am a graduate of Queen's University, Kingston, Ontario, with a BSc, Honours Geological Sciences, 1981.

3. I have practiced my profession as an exploration geologist since graduation.

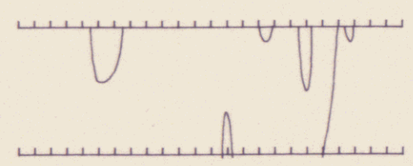
4. I was the geologist supervising the drilling on the Toro claims described in this report.

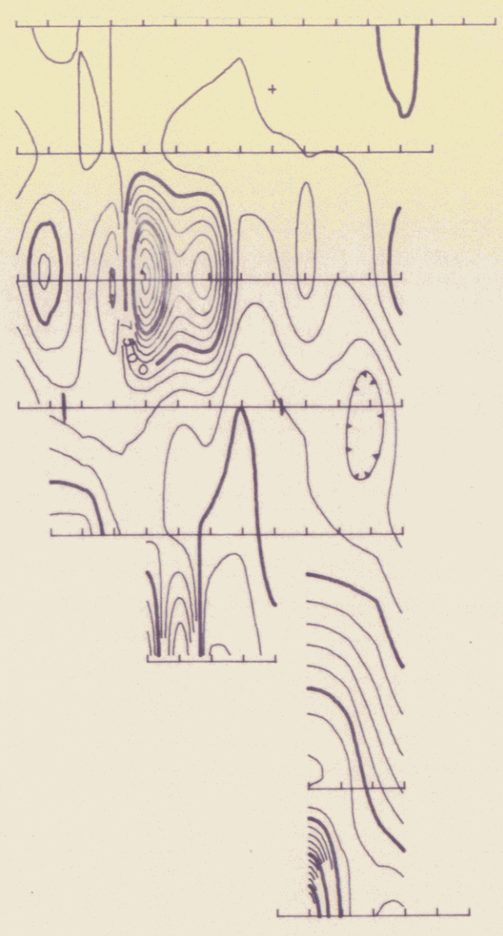
Alison M. Starr
Geologist

Vers. 3.98 Thu 25 Jun 1987 at 8:48 Centre of plot at 9450.0N/20100.0E
Serial # MB7140 Registered User : NORANDA EXPLORATION

19800E
20000E
20200E
20400E

10100N
10000N
9500N
9400N
9300N
9200N
9100N
9000N
8900N
8800N





100m 50m 0m 100m 200m

Instrument : UNIMAG
Field : TOTAL
Datum : 50000.0 nT

Contour Interval : 50 nT

Conductor Axis :

1222

TORO GRID

MAGNETOMETER SURVEY

(UNFILTERED CONTOUR PRESENTATION)

PROJECT: TORO PROJECT # : 320
BASELINE AZIMUTH : 0 Deg.

SCALE = 1: 5000 DATE : 6/24/87
SURVEY BY : R.C. NTS : 115I/12
FILE: M3TOR

NORANDA EXPLORATION

091967

Vers. 3.99 Thu 25 Jun 1987 at 8:20 Normal Profile Centre of plot at 9450.0N / 20100.0E

Serial # V87140 Registered User : NORANDA EXPLORATION

19800E 20000E 20200E 20400E

140.7 Deg. to NLK Seattle, Wash.

10400N
10300N
10200N
10100N
10000N
9900N
9800N
9700N
9600N
9500N
9400N
9300N
9200N
9100N
9000N
8900N
8800N

BASELINE

100m 50m 0m 100m 200m

Instrument : GEONICS
Vertical Scale: 1 cm = 40%

Tx Location : NLK Seattle, Wash.
Contour Interval :
In-phase : _____
Quadrature : .....

1223

TORO GRID 091967

VLF-EM SURVEY

PROJECT : TORO PROJECT # : 320
BASELINE AZIMUTH : 0 Deg.

SCALE = 1: 5000 DATE : 6/24/87
SURVEY BY : R.C. NTS : 115I/12
FILE: V3TOR FREQ.: 24.8 KHz.
NORANDA EXPLORATION