MAP NO.: 105 K 3	**ASSESSMENT REPORT** X **PROSPECTUS** **CONFIDENTIAL** X **OPEN FILE**	**DOCUMENT NO:** 092598 **MINING DISTRICT:** Whitehorse **TYPE OF WORK:** Geochemistry, Geophysics	

REPORT FILED UNDER: Noranda Exploration

DATE PERFORMED:	3 July 1988 - 29 Sept 1988	**DATE FILED:**	15 December 1988
LOCATION: **LAT.:**	62 10'N	**AREA:**	Faro
LONG.:	133 15'W	**VALUE $:**	59 925.00

CLAIM NAME & NO.: RAN 1-90 (YB08978-YB089067)
RAN 159-197 (YB09130-YB09168)
RAN 709-720 (YB09371-YB09382)

WORK DONE BY: Noranda Exploration Co. Ltd.

WORK DONE FOR: Akito-Lori Resources Inc.

DATE TO GOOD STANDING:	

REMARKS: #97 RAN (HEMLO GROUP) In 1988, systematic till sampling was undertaken, and a ground magnetometer survey was done. A pair of linear geochemical anomalies returned values up to 260 ppb Hg and 0.7 ppm Ag but the source is believed to lie off the claims to the southeast.

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WORK DONE BY: Noranda Exploration Co. Ltd
WORK DONE FOR: Akiko-Lobi Resources Inc.

DATE TO GOOD STANDING

REMARKS: # 97 RAN (HEMLO GROUP)

The RAN claims lie within the Tintina Trench and are covered with an extensive blanket of glacial till, gravel and lake bed clays. Chert, phyllite, siliceous tuff and minor crystal tuff are exposed on the south parts of the claims.

In 1988, systematic till sampling was undertaken, and a ground magnetometer survey was done. A pair of linear geochemical anomalies returned values up to 260 ppb Hg and 0.7 ppm Ag but the source is believed to lie off the claims to the southeast.

HEMLO

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

092598

M.R. file no.	
R.M.M.R. file no.	
Date forwarded	15 DEC 88

TRANSMITTAL FORM

From ▶ Mining Recorder at: Whitehorse

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

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 — Claim sheet no.
- ☑ QUARTZ ASSESSMENT REPORT — Claims: RAN 1-90, 709-720, 159-197 — Claim sheet no.: 105-K-3
  - Type of report: G, GC, GP
  - Submitted by: Noranda Expl. / Prime Capital Corp
  - Cls. work performed on: RAN 1-90, 159-197, 709-720
  - $ req. for ren. application: 59,925.00

OFFICE OF THE REGIONAL MANAGER MINERAL RIGHTS DEC 15 1988 WHITEHORSE YUKON TERRITORY

Signature

Date returned: 3 Jan. 88

REPLY ACTION

Approved for amt required

Signature

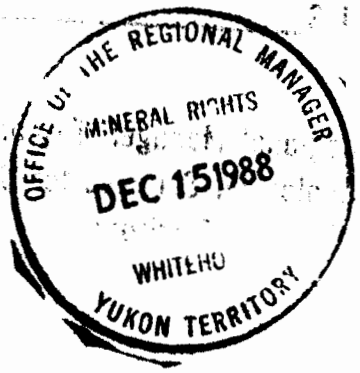
802-6027-26 (6-86)

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL

REPORT 1988

on the

Ran 1-90, Ran 159-197 & Ran 709-720 CLAIMS



Whitehorse Mining District

Yukon Territory

N.T.S.: 105 K/3

Latitude: 62 10'N

Longitude: 133 15'W

Owner: Prime Capital Corp.

Operators: Noranda Exploration Co. Ltd.

(no personal liability)

Author: K.D. Galambos, P. Eng.

December, 1988

092598

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 $ 59,925.00 .

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

SUMMARY

The Hemlo Exploration (recently change to AKIKO-LORI Resources Inc.) group of Ran claims consists of 141 mineral claims in the Tintina Trench centered approximately 13.5km southeast of Faro, Yukon and straddling the Robert Campbell Highway. Epithermal mineralization similar to that found at Grew Creek is the target.

Work completed includes the mapping of bedrock and surficial sediments at 1:10,000 scale, the collecting of 231 till and 54 humus samples from a reconnaissance grid on lines spaced 200m-1000m apart. Forty-five rock samples were collected from various parts of the grid. In addition, 45.85 line-km of a magnetometer were completed on the the Hemlo east and west grids.

No bedrock anomalies were discovered but till sampling revealed two weak ribbon type anomalies flanking a topographic high. The source is believed to be off of the claim group to the southeast. Mapping shows the majority of the claim group to be underlain by Pennsylvanian and Permian metasediments of the Anvil Allochthonous assemblage. These rocks are generally massive and relatively impermeable and would not act as good host rocks for epithermal mineralization. Much of the property is covered by glacial overburden further hampering exploration activities.

Any further exploration activity should focus on the more favorable lithologies such as the Tertiary sediments and volcanics found at Grew Creek.

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CHAPTER ONE: INTRODUCTION

1-1: Introductory Statement

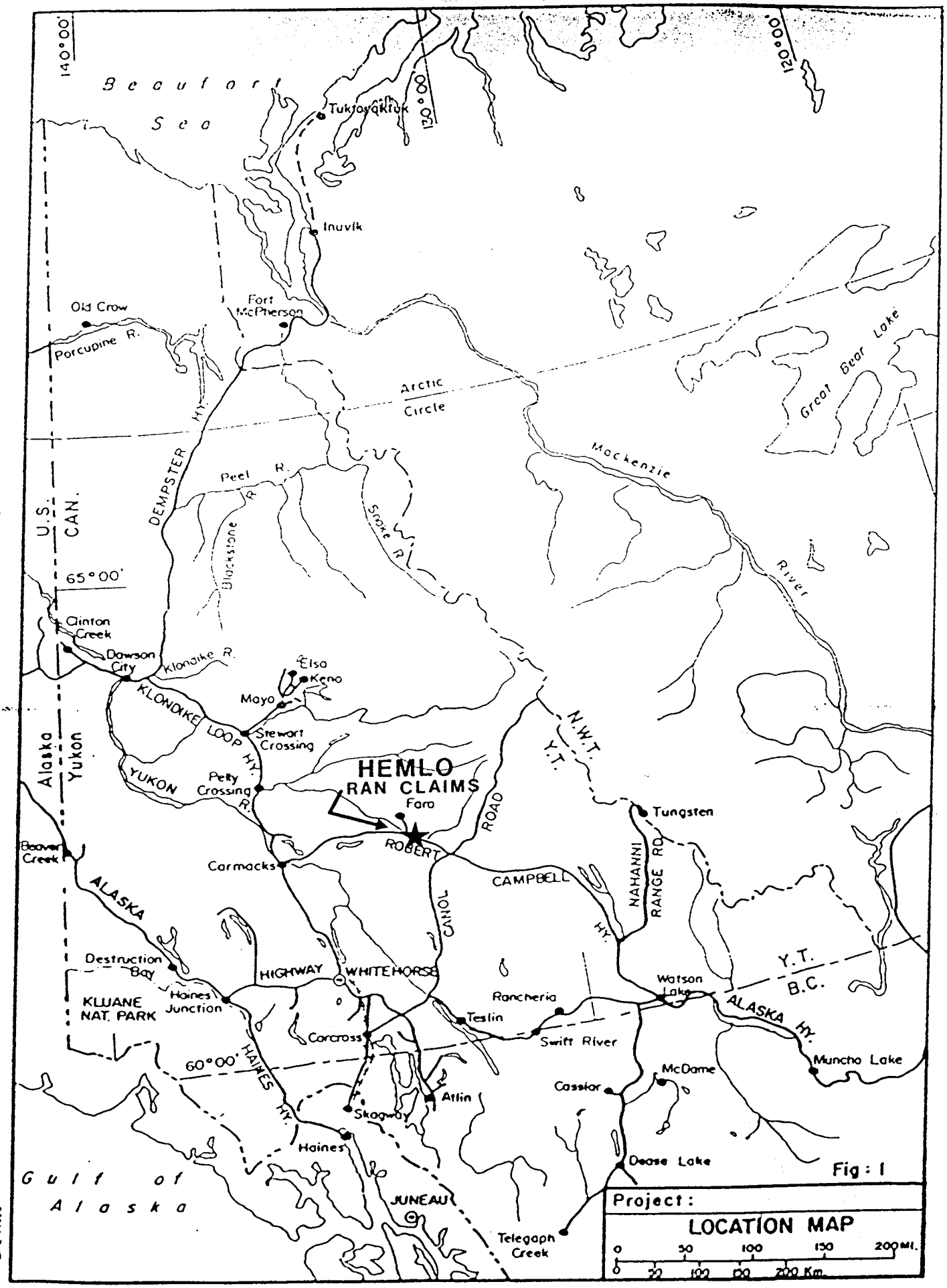
The Ran 1-90 (YB08978-9067), Ran 159-197 (YB9130-9168), Ran 709-720 (YB09371-9382) lie within the Tintina Trench and straddle the Robert Campbell Highway approximately 13.5km southeast of Faro, Yukon. The property, known as the Hemlo option was staked November 23-25, 1987 to cover areas of possible mineralization similar to that found at Grew Creek. At present, the property is 100% owned by Prime Capital Corporation while Noranda Exploration has an option to earn up to 50% of the property. All work completed on the property (till sampling, surficial and bedrock mapping and a ground magnetometer survey) was conducted by Norex personnel.

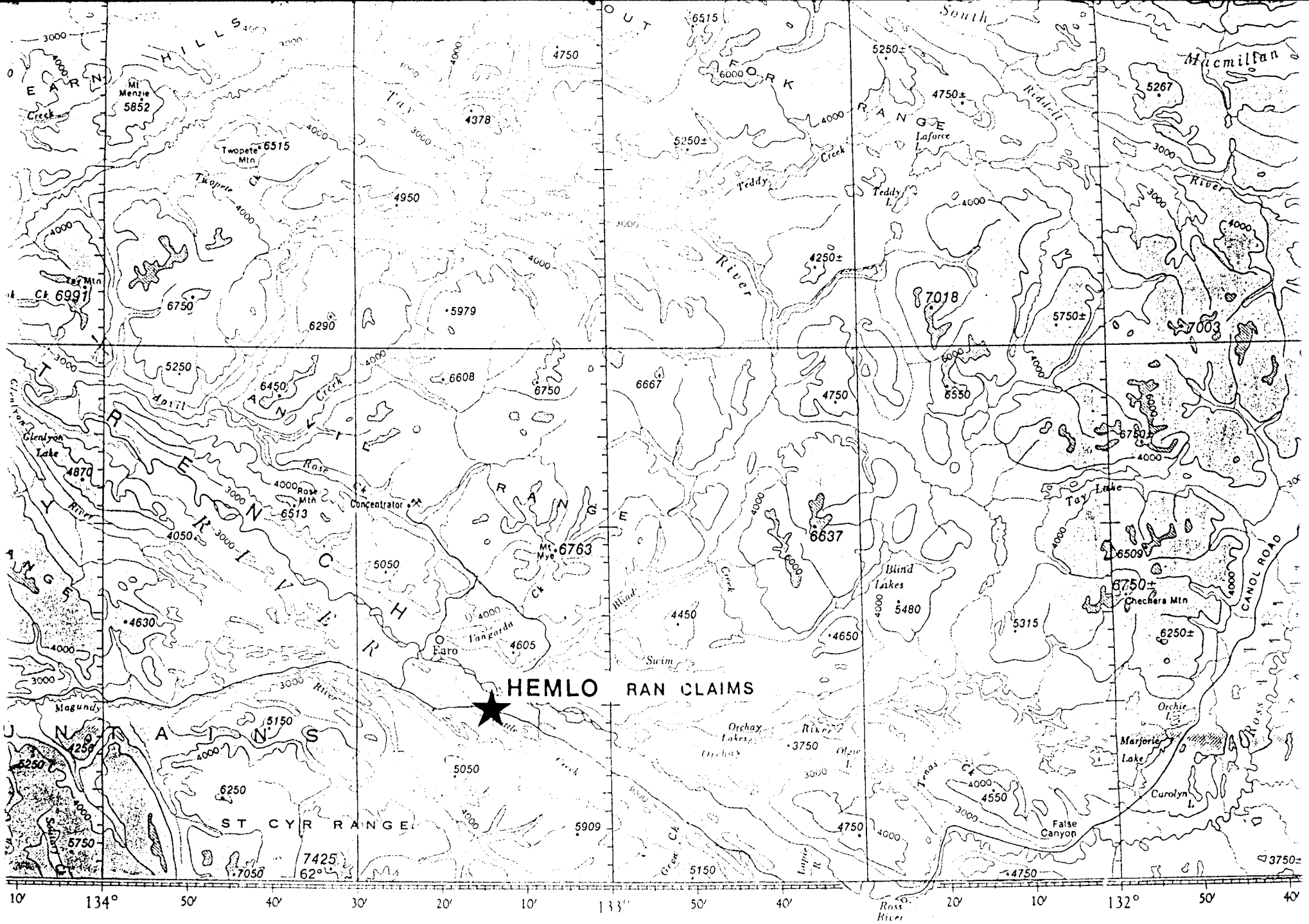
1-2: Location & Access

The property, centered approximately Lat. 61 10'N, Long. 133 15'W on the NTS 105 K/3 mapsheet, lies on both sides of the Robert Campbell Highway approximately 10.5km east of the Mitchell Road (Faro access) junction. The western and northern portions of the property are easily accessible as they are virtually bisected by the Robert Campbell Highway and Blind Creek roads respectively. The southeast part of the Hemlo property lies between 1 and 2km south of and parallel to the highway. A cat trail following Buttle Creek could provide 4WD access with minor upgrading. A powerline connecting Ross River with the main grid from Whitehorse parallels the highway the length of the claim group.

1-3: Topography & Vegetation

The claims lie along the southwestern edge of the Tintina Trench in the Pelly Mountains. Within the Trench, topography is characterized by rolling glacial features (drumlins, morains, etc.) of low relief and a series of steep east-west trending ridges of moderate relief. Elevation on the


Beaufort Sea
Tuktoyaktuk
Inuvik
Old Crow
Porcupine R.
Fort McPherson
Arctic Circle
DEMPSTER HY.
Peel R.
Blackstone R.
Snake R.
Mackenzie River
Great Bear Lake
U.S.
CAN.
65°00'
Clinton Creek
Dawson City
Klondike R.
Elsa
Keno
Mayo
KLONDIKE LOOP HY.
Stewart Crossing
Alaska
Yukon
YUKON
Petty Crossing
HEMLO
RAN CLAIMS
Faro
ROBERT
ROAD
N.W.T.
Y.T.
Tungsten
Beaver Creek
Carmacks
ALASKA
HIGHWAY
CANOL
CAMPBELL
HY.
NAHANNI RANGE RD.
Destruction Bay
KLUANE NAT. PARK
Haines Junction
WHITEHORSE
Watson Lake
Y.T.
B.C.
ALASKA HY.
Rancheria
Teslin
Swift River
Muncho Lake
Carcross
60°00'
HAINES HY.
Skagway
Atlin
McDame
Cassiar
Haines
Dease Lake
Gulf of Alaska
JUNEAU
Telegaph Creek
Fig : 1
Project :
LOCATION MAP
0 50 100 150 200 MI.
0 50 100 150 200 Km.



SCALE 1:500,000

FIG: 2

property lies between 650 and 1000m and slopes generally downward to the north. Numerous small pothole lakes cover the property and drainage is either northward into the Pelly River or west and northwest into Buttle Creek.

A fire during the late 1960's destroyed most of the first growth on the claims leaving only small pockets of mature spruce and pine. The area has since been revegetated with aspen, birch, pine and often thick tangles of alder and willow.

1-4: History of the Claims

The Hemlo group of claims were staked in November of 1987 by Gordon Clark and Associates. Claim ownership was subsequently transferred to Prime Capital Corporation who remains the sole owner of the property.

The group of claims covered in this report are as follows:

CLAIMS	RECORD NO.	RECORD DATE
Ran 1-90	YB08978-9067	Nov. 23, 1987
Ran 159-197	YB09130-9168	Nov. 24, 1987
Ran 709-720	YB09371-9382	Nov. 25, 1987

Upon acceptance of this report the claims shall remain in good standing until February 23, 1993.

1-5: Previous Exploration

The first recorded presence of white travelers in the area was that of Robert Campbell who negotiated the Pelly River to its junction with the Yukon River in 1843 and was responsible for the naming of many of the rivers and topographic features along his route. He returned five years later to establish a Hudson Bay Trading Post at Fort Selkirk. It was not until 1887 that George Dawson surveyed and carried out geological examinations of the areas surrounding the Pelly River between Pelly Banks and its junctions with

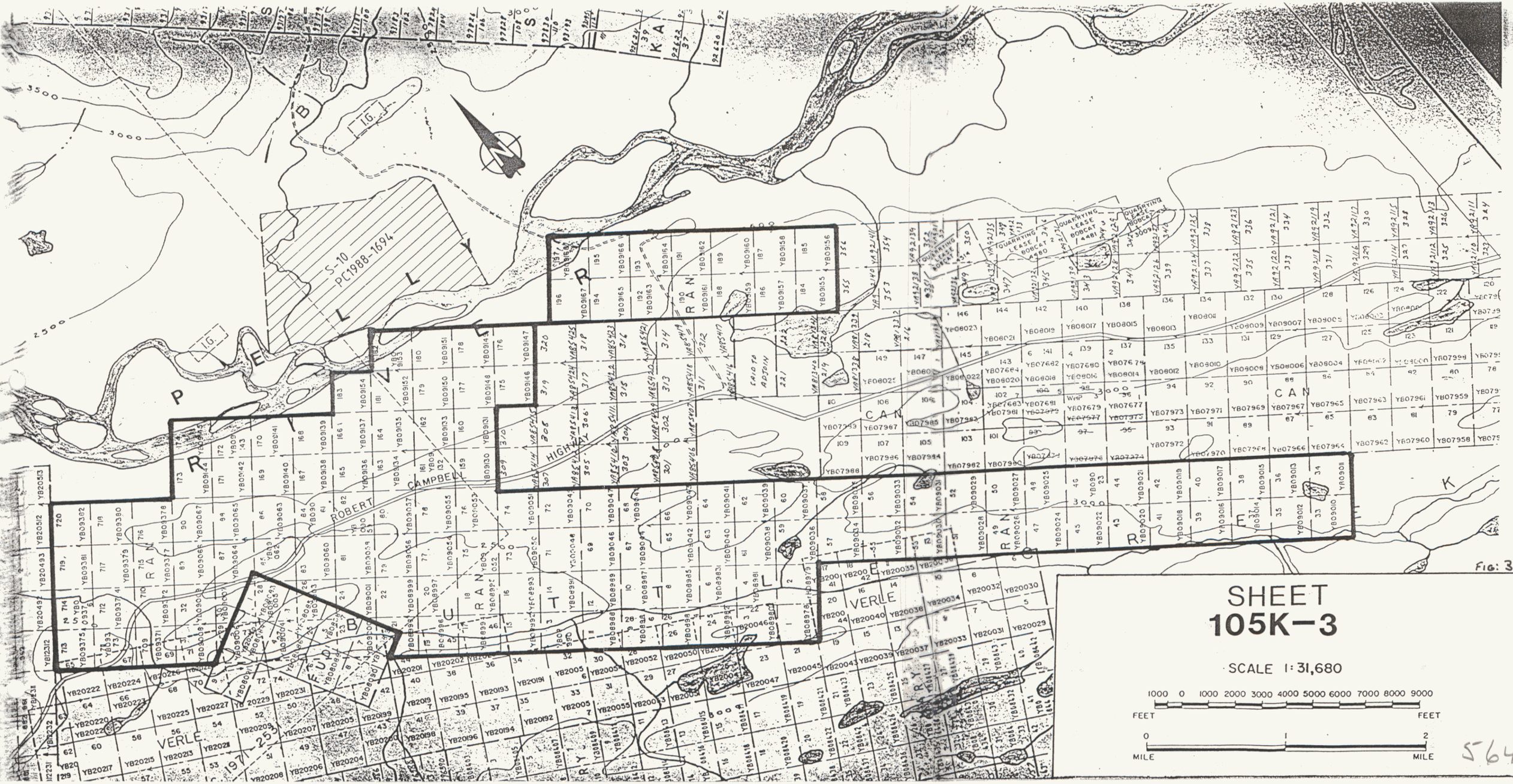


FIG: 3

SHEET 105K-3

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the Yukon River. Little is known from that time until the mid 1960's when there was an exploration rush in search of Anvil type stratiform lead-zinc-silver deposits similar to that found at Faro, Yukon.

This exploration has been confined primarily to an area approximately 20km to the southeast in the vicinity of Grew Creek where General Enterprises staked ground over what is now known as the "Tarn Zone". They conducted EM and IP surveys and drilled three diamond drill holes. Small placer operations have been attempted at Grew Creek since the early 1980's. The Grew Creek deposit was located and staked by Al Carlos in 1983 and subsequently optioned to Hudson Bay Exploration and Development Co. Ltd.. H.B.E.D. conducted geological, geophysical and geochemical surveys, drilled 13 diamond drill holes (1732m), 19 rotary holes (1660m) and conducted an extensive trenching program over a period of three years before finally dropping the option on the property. Noranda Exploration picked up the option in 1987 and has been exploring the property since that time.

1-6: Work Program

A total of 179 person days were spent on various surveys over the Hemlo group of Ran claims from July 3 to Sept. 29, 1988. During that time 10.6km of base line was cut and a total of 57.175km of flag line was run with 200m line spacing and 25m stations. A total of 285 till and humus samples and 45 rock samples were collected over the entire property. In addition, a magnetometer survey covered 45.85 line km on the two grids. Bedrock and surficial mapping of the property was completed at 1:10,000 scale.

Contractors involved include; Gordon Clark and Associates who cut the baseline and aided in flagging cross lines and Trans North Helicopter who provided air transport to the more remote parts of the grid.

Norex personnel involved in the project include:

Janine Copland	Cook	Whitehorse
Rob Copland	Field Assistant	"
Lynn Hoover	"	Calgary
Kim Rogers	"	Peterborough
John Jensen	"	Atlin
Greg Morton	"	Faro
Jason Mitchel	"	"
Mike Zachariau	"	"
John Weir	Field Geophysicist	Vancouver
Steve Keiser	"	"
Louise Gagnon	Field Geologist	Ottawa
Isabelle Poliquin	"	"
Alain Plouffe	"	"
Sheila Reid	"	Red Lake
Heather Brown	"	Thunder Bay
Ken Galambos	Project Geologist	Whitehorse

CHAPTER TWO: GEOLOGY

2-1: Regional Geology

The Hemlo group of Ran claims lie within the Tintina Trench, a large northwest trending transcurrent fault which separates the Pelly-Cassiar Platform (to the southwest) from the Anvil Allochthon (to the northeast). The terrane to the southwest of the Tintina fault includes: Cambro-Ordovician buff, orange and orange brown weathering, calcareous shale and silty limestone intruded by Cretaceous biotite ± hornblende diorite granodiorite and granite, and Ordovician-Devonian graphitic, black siliceous and pyritic slate. The rocks to the northeast are generally part of the Anvil Allochthonous Assemblage and include Pennsylvanian and Permian dark grey-green basalt, tuff and breccia; grey green, jasper red and apple green chert and siliceous tuff; massive, fine crystalline dark grey limestone and recessive green weathering serpentinite.

The Tintina Trench in the project area is actually a sub-parallel fault system containing (from south to north) the Buttle Creek, Grew Creek, Danger Creek and Lapie River Faults. This fault system forms a graben structure containing Tertiary aged felsic to intermediate ash flow tuffs and flows; stocks and necks of, often flow banded, quartz-feldspar porphyry; minor dark grey-green basaltic necks and flows and well sorted and graded boulder chert-quartz conglomerate through to brown siltstone and shale.

2-2: Property Geology

2-2-1: Surficial Geology (see fig. 7,8,9) (from Plouffe 1988)

Quarternary sediments and stratigraphy

-TILL-

Till is really the most extensive surficial sediment on the Hemlo

MAP 19-1987

SHEET 2 OF 3

GEOLOGY

TAY RIVER MAP AREA

YUKON TERRITORY

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection

© Crown Copyrights reserved

Projection transverse universelle de Mercator

© Droits de la Couronne réservés

FIG : 4

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Recommended citation:

Gordey, S.P., Irwin, S.E.B.

1987: Geology, Sheldon Lake and Tay River map areas, Yukon Territory; Geological Survey of Canada, Map 19-1987 (3 sheets), scale 1:250 000

Exploration claim block. Unleached till in this area is grey, calcareous, silty, and compact. In some profiles where oxidation is predominant, till is reddish to yellowish, non-calcareous, sandy to silty, and less compact. In several localities, especially close to abrupt slopes, till was reworked by processes such as solifluction and slumping. The surficial till throughout the area was deposited during McConnell glaciation.

-GRAVEL-

Major gravel deposits cover parts of the property. These deposits can be subdivided in four categories: (1) modern alluvium, (2) terrace gravel, (3) ice contact stratified drift, and (4) supra-glacial gravel. The texture of these deposits varies tremendously throughout the area.

-GLACIOLACUSTRINE SEDIMENTS-

Surficial sediments of the northwestern sector of Hemlo Exploration property consist of an extensive cover of glaciolacustrine silt and clay. These sediments seems to be confined below 730 m a.s.l.. Based on observations made on river bank sections along the Pelly River, they can easily reach a thickness of 10 m. They were deposited in a glacial lake, formed by isostatic downwarping, in front of the retreating McConnell ice (Jackson, 1986). In other areas, isolated pockets of laminated silt and clay are probably related to supraglacial sedimentation.

-STRATIGRAPHY-

The most complete stratigraphic record of Quaternary sediments is present in sections off the property to the southeast along the Lapie and Pelly Rivers respectively.

-Lapie River section: The lowest unit exposed at this section is a clast supported bouldery gravel. It is overlain by a thick till unit defined as pre-McConnell by Jackson (in press). A thick unit of outwash gravels overlies the lower till. An erosional contact separates the outwash gravels from the overlying till which is thought to be of McConnell age (Jackson, in press). This upper till is overlain by a thin cover (1-3 m) of outwash gravel.

-Pelly River section: The lowest unit at this section is the pre-McConnell till observed at Lapie River. A sharp contact separates this till unit from the overlying glaciolacustrine silt and clay. Based on field observations only, there seems to be a fining upward cycle in this unit from silt rich to clay rich laminations. Outwash gravels overlie the outwash gravels from which it is separated by an erosional contact. This upper till is essentially overlain by the same sequence of sediments as the pre-McConnell till i.e. glaciolacustrine silt and clay, and outwash gravels. The section is capped by eolian deposits.

QUARTERNARY HISTORY

Most of the following is presented Jackson (in press). The lowest gravel unit exposed along the Lapie River are representative of a period of fluvial aggradation prior to the pre-McConnell glaciation. Recession of the pre-McConnell glacier was characterized by the formation of a glacial lake in the Pelly River valley. In other areas, such as the Lapie River valley, the ice front was marked by an open drainage system and the deposition of outwash gravel. Following the isostiatic rebound, the drainage was reopened in the Pelly River valley prior to the McConnell glaciation. As indicated from the stratigraphic record, the McConnell glaciation was essentially

followed by the same events. Holocene time was marked by the build up of alluvial fans at the foothills of the Pelly Mountains.

-ICE FLOW PATTERNS-

Ice flow pattern indicators for the pre-McConnell glaciation are limited to till fabrics and pebble counts. Both of these indicators reveal that pre-McConnell ice was flowing west to northwest over the area (Plouffe, in progress).

At the onset of McConnell glaciation, valley glaciers were emanating from major valleys of the Pelly Mountains. This earlier stage of valley glaciation is clearly indicated by till fabrics and pebble counts. (Plouffe, in progress).

At the maximum of McConnell glaciation the Selwyn Lobe of the Cordilleran ice sheet flowed west to northwest over the area (Hughes et al. 1969). Ice flow direction is clearly indicated from striations, drumlinoid ridges, till fabrics, and pebble counts. As presented by Jackson (in press), flow patterns of the McConnell glacier was totally controlled by topography.

At the terminal of McConnell glaciation, a glacial lake was dammed at 1040 m a.s.l. up into the Lapie River valley (Jackson, in press). Also, clasts such as the Tertiary rhyolite (Tempelman-Kluit, 1977; Jackson et al., 1986) and the South Fork Volcanics (Gordey, 1988; Gordey and Irwin, 1987) were found in till at about 940 m a.s.l.. These clasts are coming from bedrock units to the northeast of the Tintina Fault, and therefore had to be transported by ice into the Lapie River valley. From these observations, it is clear that ice flowed up gradient in the Lapie Valley for an unknown period of time during the downwasting of the Selwyn Lobe.

2-2-2: Bedrock Geology

Bedrock underlying the Hemlo property consists of slices of the Anvil Allochthon northeast of the Danger Creek fault and bounded by the Grew Creek and Buttle Creek faults to the south. Exposure is good on the southern grid while no outcroppings were noted on the northern grid.

The rocks exposed include resistant green chert, siliceous phylites, grey siliceous tuff and minor crystal tuff and thin bedded to massive grey to black hornfels? or silicified siltstone.

The exact location of the Danger, Grew Creek faults was not determined geologically but rather through EM surveys conducted by Hudson Bay Exploration in 1986. The trace of the Buttle Creek fault is approximate only.

TABLE OF FORMATIONS

Regional Geology

TERTIARY

Tv: Tv, undivided; Tv1, small stocks & necks of white weathering, flow-banded, rhyolitic, quartz-sanidine porphyryi Tv2, laminated rhyolitic ash-flow tuffs and flows; Tv3, dark grey weathering, locally amygdaloidal dark grey-green basalt neck & flows.

Ts: recessive, thick bedded to massive, pebble to boulder chert-quartz conglomerate, chert sandstone and thin bedded, dark brown siltstone and shale

MID-CRETACEOUS

Kg: resistant, grey weeathering, locally foliated, biotite ± hornblende diorite, granodiorite, and granite

PENNSYLVANIAN AND PERMIAN

CPa: Anvil Allochthonous Assemblage: CPa, undivided; CPav, resistant, dark weathering dark grey-green basalt, tuff, and breccia; CPat, thin bedded, grey-green, jasper-red and apple-green chert & siliceous tuff CPal, light grey weathering, massive, fine crystalline, dark grey limestone; CPaub, recessive, green weathering serpentinite

ORDOVICIAN TO DEVONIAN

ODsl: moderately resistant, black weathering, siliceous, graphitic, black siliceous and pyritic slate

CAMBRO-ORDOVICIAN

uCOc: buff, ornage and orange-brown weathering, thinly interlaminated calcareous shale and silty limestone

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Property Geology

PENNSYLVANIAN AND PERMIAN

1 Anvil Allochthanous Assemblage

1a -thin bedded grey-green jasper, red & apple green chert

1b -thin bedded foliated grey siliceous tuff (cyrstal tuff)

1c -massive siliceous tuff

1d -thin bedded to massive grey to black hornfels (siltstone)

Surficial Geology

1 Proglacial Lake Sediment laminated silt and clay, comprises sandy and gravelly layers several metres thick (approximately 3 to 25m).

2 Sand and Gravel includes modern alluvium, fluvial terrace, alluvial fan and proglacial outwash, crudely to well stratified sand & gravels with laminated sandy layers; variable thickness (3-12m)

3 McConnell Till compact to loose, grey locally calcareous, pebbly to cobbly till; silty & locally sandy where reworked; variable thickness (1-15m)

4 Bedrock closely spaced outcrops & bedrock covered by less than .5m of unconsolidated sediments (usually till); includes colluvium and crushed bedrock.

CHAPTER THREE: GEOCHEMISTRY

3-1: Till Geochemistry (from Plouffe 1988)

PROCEDURES

During the 1988 field season, a systematic till sampling program was implemented over the Hemlo property. In previous studies, till sampling has been found useful in prospecting for gold in glaciated terrain (e.g. Closs and Sado, 1978; Dilabio, 1982a; Kaszycki and Dilabio, 1986). This technic is based on the fact that till is composed of comminuted substratum debris which were transported by the glacier in the down ice direction. Thus, till reflects the nature and geochemistry of the substratum. Further, any geochemical anomaly defined in till can be traced back to its source in the up ice direction. Gravel deposits were not sampled in this program primarily because they do not represent the composition of the local bedrock, and secondly they are often slightly enriched in gold which was concentrated by physical effects during the deposition of the gravel. Glaciolacustrine sediments are not useful in geochemical exploration because they generally have a low gold content. Also, it is practically impossible to define a source area for an anomalous sample of such sediment. Alluvial fans identified on ortho map were not sampled because they are composed of a mixture of debris emanating from outside the claim blocks area and therefore do not reflect the local bedrock.

Samples of unleached and oxidized till were collected in hand dug pits to depth varying between 30 to 70 cm i.e. below the B-horizon. Till exposed in road cuts and river bank sections was sampled at different depths. All samples were collected at 50 m intervals along transect lines (perpendicular to baseline) which are trending 040-220, i.e. perpendicular to the major ice flow direction. The spacing between each transect line varies between 300 and 1000 m.

Based on previous work by Dilabio (1982b; 1985), gold in till seems to be concentrated in the silt fraction. Therefore, the <63 um fraction was recommended for geochemical analysis. Analysis of bulk samples would be useless in this case since the coarser fraction would have a diluting effect on gold content. At Acme Laboratory in Vancouver <63 um separation are costly and time consuming, however the <75 um separation are performed on a regular basis and therefore are cheaper and faster. For this reason all analysis were done on the <75 um fraction. Based on results obtained so far this fraction seems to be satisfactory for gold analysis. In 1988, a total of 231 till samples were collected.

Humus samples were collected in areas lacking adequate till material for sampling such as over outcroppings. A total of 54 humus samples were collected.

All samples were dried in the field and shipped to either Acme Analytical Laboratories or Bondar-Clegg for preparation and analysis. Humus was treated using standard (-80 mesh) geochemical procedures. Till were sieved to -200 mesh (75 um) as gold is believed to be concentrated in the silt fraction in tills. Samples were analyzed for Ag, As, Au and Hg or using an ICP 30 element analysis which includes the above four elements.

Results were generally disappointing though they do hint at a pair of fairly linear, subparallel ribbon anomalies which flank a topographic high at 14000E, 49900N.

The northern anomaly in this pair consists of a 25 - 100m wide (1-3 sample) concentration of Hg between 100 and 210 ppb, weak and spotty Ag up to .5 ppm and a one sample wide Au anomaly up to 9 ppb. The southern anomaly consists of a 500 - 600m wide concentration of Hg up to 260ppb, with a narrower 100 - 200m wide Ag anomaly up to .7 ppm and spotty though fairly linear Au concentrations up to 16 ppb. Arsenic does not correlate well with

either anomaly and is generally very weak. The trends of the two anomalies are ~135 degrees Az and 150 degrees Az respectively. The source is believed to be off the claim block to the southeast.

The following suggestions concerning further sampling are from Plouffe 1988.

Suggestions for mineral exploration

Due to the nature of gold, false anomalies are common in drift prospecting for the element. Most of these false values can be produced at two levels: (1) in soil profiles as secondary enrichment due to gold mobility, and (2) during analytic procedures where gold particles can get preconcentrated in a subsample because of their high density. Therefore anomalies obtain at the reconnaissance level should be resampled to verify if they are reproducible. As an example, five samples could be collected at and around an anomalous site. Typically the angle of spread in the vertical plane of an anomaly is low (5 degrees) and as such would not reach surface for a distance of several 100 metres. Drilling would be necessary to trace the anomaly to its source. In the case of closely spaced anomalies, drilling can be done using either a portable drill or a reverse circulation drill to get deeper unoxidized till samples. Drilling sites should be selected carefully with respect to the ice flow direction and slope orientation. In other words, anomalies defined in till are not likely to be directly over the bedrock source unless the overburden is very thin. It is more likely to find them down-ice with respect to the source. Also, it should be kept in mind that in steep terrain, till maybe reworked by gravity process such as solifluction and slumping.

SUMMARY STATISTICAL ANALYSIS

TILL

	Ag	As	Au	Hg
# samples	202	202	202	202
High	0.7	47	28	260
Low	0.1	2	1	10
Stnd. Dev.	0.1	5.1	3.0	55.4
Distribution (# of values, n=Avg.)				
n + 0-0.5 S.D.	40	97	69	62
n + 0.5-1 S.D.	134	59	113	65
n + 1-2 S.D.	14	41	14	68
n + 2-3 S.D.	11	3	3	6
n +)3 S.D.	3	2	3	1
Simple Avg.	0.2	11.5	2.6	91.3
Reduced Avg.	0.2	11.2	2.3	90.5

(NOTE: Reduced avg. excludes all values)3 S.D.)

Complete results are included in appendix 1.

3-2: Rock Geochemistry

A total of 45 rock samples were collected on the property with the best results being 32 ppb Au and 1.7 ppm Ag.

Complete results are included in appendix 2.

CHAPTER FOUR: GEOPHYSICS

4-1: Ground Magnetometer Survey

A ground magnetometer survey was carried out over approximately 45.85 line km on the Hemlo-Ran claims. An EDA OMNI 4 instrument and base stations were used. The survey was completed on grids with 200m line spacing and 12.5m stations. Data was filtered and plotted by Noranda's Vancouver office.

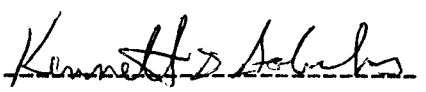
Contoured magnetometer data is plotted on figs. 20 and 21. Magnetometer data was found to be most useful in determining gross lithologies under till covered regions. As seen on the maps, northwest trends are most evident. On the Hemlo east grid (fig. 18) there is a mag high in the southeast corner of the grid and what appears to be a minor offset shown by lower magnetics between 11800E and 12000E and at 9950N. This possible offset is believed to trend at approximately 070 degrees Az. On the Hemlo west grid (fig. 19) the magnetic units tend to be quite linear and fairly continuous. On both grids it is the metasediments of the of the Anvil Allochthonous package which seems to reflect the areas of lower magnetics. The area of higher magnetics are not exposed and no explanation can be given for their cause.

CHAPTER FIVE: CONCLUSIONS & RECOMMENDATIONS

Geochemical sampling, geophysics and geological mapping was undertaken over the Hemlo group of the Ran claims in an attempt to discover mineralization similar to that at Grew Creek. Geological mapping shows that the majority of the claim group lies outside of the Tertiary graben which hosts that mineralization. Exploration was hampered in some areas by a thick blanket of overburden. Magnetometer surveys were useful in mapping some of the lithologies present in areas of deep overburden. Geochem anomalies were generally weak but indicated a possible source off of the claim group to the southeast. No indication of mineralization was noted on the claim group. The metasediments of the Anvil allochthonous package are generally massive and would not act as a good host rock for mineralizing fluids.

If any further work is contemplated for the property, it is recommended that it be confined to areas with Tertiary volcanics and sediments similar to those hosting gold mineralization at Grew Creek. Detailed prospecting and geochem are probably the most useful tools in such areas.

Respectfully submitted by;



K.D. Galambos, P. Eng.

STATEMENT OF COSTS

LABOUR:		
	179 person days at $145/day	$25,955.
SUPPLIES & LODGING:		
	179 person days at $50/day	8,950.
GROUND TRANSPORT:		
	Gas & Oil	586.
	Vehicle Rental	2,250.
CONTRACTORS:		
	Helicopter 12.3 hrs X $650./hr.	7,995.
	Linecutting	8,240.
	Magnetometer Surveys	6,903.
	Equipment Rental	550.
GEOCHEMICAL ANALYSIS:		
	285 till & humus samples @$12.50/sample	4,462.50
	45 rock samples @20.00/sample	900.
Report Writing, Drafting etc.		1,500.
	TOTAL	$68,291.50

REFERENCES

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1887: Report on an Exploration in the Yukon District, N.W.T. and Adjacent Northern Portion of British Columbia.

Gordey, S.P., Irwin, S.E.B.

1987: Geology, Sheldon Lake & Tay River map areas, Yukon Territory; Geological Survey of Canada, Map 19-1987 (3 sheets), scale 1:250,000

Miller, J.K.

Model for clastic indicator trains in till.

STATEMENT OF QUALIFICATIONS

I, Ken Galambos, of the City of Whitehorse, Yukon, do hereby certify that:

1. I have been a employee of Noranda Exploration Company, Limited (NPL) in Whitehorse since March, 1988.

2. I am a graduate of the University of Saskatchewan with a B.E. in Geological Engineering.

3. I have practised my profession for the past eight years primarily in the Northern Cordillera.

4. I supervised and participated in field work done on the claims in 1988.

5. I am a member of the Association of Professional Engineers of the Yukon Territory.

Kenneth D. Galambos, P. Eng.

APPENDIX 1

Till Geochemical Results

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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

-200 mesh

DATE RECEIVED: JUL 18 1988 DATE REPORT MAILED: July 26/88 ASSAYER. C. Leong ..D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 88-07-068-334 File # 88-2836

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
7075 48625-1	2	43	24	120	.4	41	8	500	2.89	21	5	ND	4	83	1	2	2	33	2.45	.074	17	29	.97	462	.01	6	1.18	.01	.16	1	5	130
7075 48625-2	1	41	23	122	.3	48	11	585	2.79	17	5	ND	5	83	1	2	3	34	2.52	.075	18	31	1.02	482	.01	5	1.22	.01	.18	1	3	110
7075 48625-3	1	40	21	122	.2	40	8	488	2.82	14	5	ND	5	84	1	2	2	35	2.52	.075	18	31	.99	515	.01	11	1.26	.01	.17	1	1	130
7075 48625-4	1	59	21	120	.6	49	11	621	2.72	20	7	ND	4	85	1	2	2	33	2.41	.074	17	29	.93	499	.01	8	1.19	.01	.17	1	2	170
7075 48625-5	2	39	18	125	.2	44	9	572	2.75	14	5	ND	4	87	1	2	2	35	2.61	.079	20	30	.98	509	.01	4	1.27	.01	.17	1	2	120
7075 48625-6	1	43	17	125	.2	49	11	555	2.77	14	5	ND	4	95	1	2	2	35	2.82	.077	19	30	1.03	496	.01	7	1.28	.02	.16	1	2	130
7075 48625-7	2	42	22	121	.6	51	12	631	2.75	14	5	ND	4	94	1	2	2	35	2.62	.074	18	32	1.12	491	.01	3	1.28	.02	.17	1	1	200
7100 49050	1	28	19	93	.1	30	8	542	2.17	12	5	ND	4	79	1	2	2	29	2.38	.067	15	20	.35	414	.02	2	.94	.01	.13	1	1	70
7900 49150-1	1	24	13	81	.1	26	5	365	1.89	12	5	ND	3	70	1	2	2	23	2.54	.072	15	21	.72	377	.02	10	.68	.01	.08	1	1	90
7900 49150-2	1	31	14	88	.3	32	7	464	2.18	13	5	ND	3	73	1	2	2	26	2.43	.073	16	23	.73	367	.02	9	.83	.01	.10	1	1	80
7900 49150-3	1	36	19	90	.1	33	9	507	2.35	15	5	ND	3	74	1	2	3	29	2.56	.071	16	24	.85	341	.02	5	.99	.01	.11	1	2	100
8100 48825	1	19	16	57	.1	23	7	262	2.25	9	5	ND	4	15	1	2	2	29	.22	.020	17	27	.49	269	.02	4	1.12	.01	.10	1	1	40
8100 48900	1	23	6	51	.1	21	4	222	1.55	11	5	ND	1	33	1	2	2	20	1.03	.038	11	17	.41	210	.01	3	.73	.02	.10	2	1	70
8100 48950	2	40	21	113	.5	47	10	421	2.95	14	5	ND	6	37	1	2	2	40	.83	.074	21	35	.86	387	.02	5	1.39	.01	.18	1	1	110
8100 49000	1	37	15	96	.3	39	9	560	2.52	12	5	ND	5	70	1	2	4	34	2.92	.074	18	30	.82	509	.02	7	1.18	.01	.14	1	2	120
8100 49250	1	37	16	68	.4	43	10	401	3.19	15	8	ND	8	19	1	3	2	47	.46	.020	32	44	.77	430	.04	9	1.99	.01	.16	1	1	90
8100 49300	1	50	18	78	.2	49	9	483	3.24	19	5	ND	6	22	1	2	2	44	.40	.019	24	36	.64	584	.02	5	1.79	.01	.12	1	1	110
8100 49350	2	38	21	126	.1	47	9	313	3.89	17	6	ND	9	19	1	2	2	52	.30	.015	30	39	.88	617	.02	4	2.09	.01	.14	1	1	60
8100 49400	2	21	13	65	.2	34	8	215	2.38	13	5	ND	2	37	1	2	3	29	.55	.025	18	28	.54	305	.01	4	1.01	.01	.07	1	2	90
8100 49950	1	21	16	62	.1	27	5	127	2.19	11	5	ND	5	8	1	3	5	32	.11	.013	17	25	.40	177	.02	2	1.16	.01	.03	1	1	20
8100 50000	2	44	13	66	.3	45	7	358	2.30	13	5	ND	4	26	1	2	2	27	.50	.050	19	28	.51	466	.02	2	1.09	.01	.06	1	3	70
8100 50150	2	42	13	135	.4	42	8	581	2.71	13	5	ND	8	85	1	3	4	36	4.31	.089	23	27	.78	732	.03	4	1.02	.01	.12	1	2	130
8850 49300-1	1	40	16	114	.2	45	11	621	2.60	17	5	ND	4	80	1	2	2	32	2.57	.072	17	28	.89	401	.02	3	1.03	.01	.15	1	2	110
8850 49300-2	2	40	18	121	.2	48	12	617	2.77	15	5	ND	5	84	1	2	2	35	2.76	.076	20	31	.98	456	.02	6	1.24	.01	.18	1	3	120
8850 49300-3	1	31	15	101	.2	33	8	468	2.30	11	5	ND	3	74	1	2	2	28	2.66	.071	18	25	.81	340	.02	2	.90	.01	.13	1	2	80
8850 49300-4	1	40	16	108	.2	37	9	536	2.57	18	5	ND	4	78	1	3	2	31	2.63	.071	17	28	.88	358	.03	2	1.03	.01	.15	1	1	100
8850 49300-5	1	36	14	104	.2	35	9	567	2.58	17	5	ND	3	79	1	2	2	32	2.73	.069	18	29	.95	347	.03	2	1.09	.01	.15	1	2	120
STD C/AU-S	18	57	38	132	7.2	68	27	1075	3.97	40	20	7	36	45	17	16	21	56	.45	.083	39	55	.91	175	.06	34	1.94	.06	.17	12	51	1400

Hemlo Expl.

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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

DATE RECEIVED: AUG 4 1988 DATE REPORT MAILED: Aug 11/88 ASSAYER. C. Leong .D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8808-029 334 File # 88-3264 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
5600 48650	2	35	16	87	.1	35	9	347	2.84	12	5	ND	7	20	1	2	2	39	.29	.052	28	33	.57	271	.03	2	1.42	.01	.18	1	3	70
6100 48600	1	45	15	91	.3	44	11	476	3.02	15	6	ND	5	47	1	2	2	43	1.53	.066	24	35	.81	464	.03	4	1.69	.02	.18	1	2	150
6100 48650	1	25	15	74	.1	34	10	376	2.93	21	5	ND	5	23	1	2	2	42	.39	.029	24	35	.60	335	.03	5	1.57	.01	.17	1	1	50
6100 48700	1	27	13	59	.1	30	9	470	2.62	13	5	ND	4	23	1	2	3	38	.42	.024	22	31	.56	419	.03	2	1.49	.02	.14	1	1	50
6100 48900	3	35	19	163	.2	41	11	463	3.35	17	5	ND	7	41	1	2	2	49	.86	.036	28	32	.91	564	.03	5	1.48	.01	.17	1	7	80
7350 45850	2	51	20	97	.1	101	14	669	4.25	10	5	ND	14	19	1	2	2	63	.57	.028	37	106	1.50	258	.09	6	2.51	.02	.23	1	9	40
7350 45925	2	21	13	57	.1	32	7	164	2.67	11	5	ND	6	16	1	2	3	42	.28	.019	20	39	.58	331	.03	3	1.73	.01	.07	1	1	20
7800 45850	2	17	15	91	.4	28	10	395	2.79	12	6	ND	6	26	1	2	2	39	.55	.042	22	33	.61	355	.03	2	1.35	.01	.13	1	1	30
7800 45900	2	30	11	74	.1	35	5	243	2.77	16	5	ND	5	76	1	2	2	34	6.83	.029	22	23	.60	417	.03	5	1.16	.02	.10	1	1	60
8900 49325-1	2	42	19	110	.2	44	13	732	2.97	15	5	ND	4	55	1	2	2	36	1.96	.070	19	30	.81	352	.02	3	1.31	.02	.16	1	4	110
8900 49325-2	2	40	20	123	.1	54	17	681	2.94	16	5	ND	4	67	1	2	2	38	2.39	.076	21	31	.96	501	.02	4	1.40	.01	.13	1	5	120
8900 49325-3	2	38	14	110	.1	39	12	532	2.60	16	5	ND	5	76	1	2	2	32	2.97	.074	20	27	.85	396	.02	3	1.21	.01	.16	1	6	100
9100 48675	1	29	14	83	.1	30	9	349	2.87	12	5	ND	7	19	1	2	2	38	.34	.027	32	31	.58	317	.03	6	1.50	.02	.12	1	1	50
9100 48725	1	35	14	84	.2	29	9	417	2.34	11	5	ND	3	64	1	2	3	29	2.89	.060	17	25	.75	350	.02	4	1.07	.02	.12	1	28	170
9100 48775	2	27	17	108	.2	34	11	671	3.02	15	5	ND	5	35	1	2	2	38	.79	.071	23	32	.74	348	.03	4	1.35	.02	.14	1	1	130
9100 48825	2	41	18	104	.7	42	11	613	3.20	15	8	ND	7	44	1	2	3	41	1.27	.060	25	35	.92	340	.02	5	1.58	.02	.13	1	6	160
9100 49150	2	52	19	143	.4	45	9	479	2.97	14	5	ND	6	121	1	2	2	49	5.82	.092	21	30	1.39	689	.03	3	1.38	.02	.17	1	1	100
9100 49200	1	31	18	118	.3	29	6	384	2.55	14	5	ND	4	206	1	2	2	38	10.15	.076	17	25	1.22	508	.03	3	1.16	.02	.14	1	1	90
9100 49725	1	38	17	99	.2	37	10	560	2.88	16	5	ND	4	135	1	2	2	36	5.66	.071	18	34	1.15	371	.03	2	1.32	.05	.16	1	4	110
9100 49800	1	40	15	108	.5	39	10	538	3.01	24	5	ND	6	119	1	2	2	43	5.20	.075	20	35	1.09	575	.03	4	1.52	.01	.19	1	6	100
9100 50050	1	23	13	84	.3	35	10	535	2.53	11	5	ND	3	26	1	2	2	34	.51	.036	22	31	.56	485	.02	3	1.50	.02	.14	1	1	50
9100 50100	1	16	16	96	.2	28	9	388	2.60	10	5	ND	2	29	1	2	2	35	.59	.041	25	32	.63	424	.02	2	1.48	.01	.12	1	3	70
9100 50150	1	32	12	69	.4	38	7	337	2.71	14	5	ND	7	23	1	3	2	39	.47	.038	26	31	.63	439	.02	2	1.42	.01	.11	1	4	110
9600 49900-1	2	31	17	119	.5	34	9	486	2.76	18	5	ND	6	123	1	3	2	33	4.49	.094	20	26	1.57	683	.03	5	.98	.02	.14	1	1	60
9600 49900-2	2	42	19	129	.6	50	11	616	3.11	14	5	ND	6	90	1	2	2	45	2.79	.079	19	36	1.23	497	.02	9	1.59	.03	.23	1	1	150
9600 49900-3	2	38	16	116	.4	46	12	578	2.93	18	5	ND	5	83	1	2	2	38	2.47	.077	20	33	1.07	507	.02	7	1.36	.02	.18	1	1	130
9600 49900-4	2	34	13	99	.5	39	10	479	2.43	15	5	ND	4	79	1	2	2	38	2.52	.067	16	32	1.02	428	.02	5	1.25	.02	.16	1	35	210
9600 49900-5	3	39	12	126	.5	47	11	589	2.91	15	5	ND	6	92	1	2	3	44	2.90	.078	21	34	1.21	550	.02	4	1.55	.02	.22	1	3	140
10100 49125	1	45	15	86	.1	49	12	608	3.73	16	5	ND	9	70	1	2	2	51	1.41	.017	34	44	1.00	372	.04	3	2.11	.04	.17	1	2	110
10100 49225	1	47	20	94	.4	38	9	591	3.23	16	5	ND	5	66	1	3	2	38	3.55	.055	25	32	.86	349	.03	2	1.46	.02	.14	1	5	170
10100 49525	1	31	21	74	.1	31	10	517	3.13	11	5	ND	8	19	1	2	2	37	.33	.023	30	35	.65	286	.03	4	1.65	.01	.16	1	1	90
10100 49600	1	38	12	74	.1	29	10	505	3.33	9	5	ND	7	24	1	2	2	42	.45	.024	34	41	.82	353	.04	3	1.74	.02	.13	1	1	130
10100 49775	1	26	14	64	.3	28	7	345	2.66	11	5	ND	4	21	1	2	3	30	.50	.026	23	30	.60	261	.02	2	1.26	.01	.14	1	1	90
10100 49825	1	54	14	79	.2	38	11	554	3.21	11	5	ND	5	37	1	2	2	46	.38	.025	22	40	.92	293	.06	6	1.78	.02	.29	1	1	110
10100 49925	1	32	14	97	.2	33	10	490	2.59	14	5	ND	3	69	1	2	2	29	3.01	.065	15	26	.71	358	.02	5	1.23	.01	.12	1	1	120
10100 49975	2	27	17	93	.1	37	11	464	3.28	17	5	ND	5	24	1	2	2	31	.35	.038	24	29	.63	227	.01	7	1.38	.01	.12	1	1	100
STD C/AU-S	17	60	35	122	6.6	68	27	1077	4.20	38	17	8	36	47	18	16	18	58	.48	.085	39	56	.94	176	.07	32	2.03	.06	.14	13	53	1300

5 Any whose

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
10100 50025	2	35	19	84	.4	39	11	798	3.71	25	5	ND	7	24	1	2	3	31	.39	.017	28	23	.62	311	.01	2	1.38	.02	.09	1	1	150
10100 50075-1	2	34	16	110	.5	42	11	574	2.51	22	5	ND	6	83	1	2	3	29	2.32	.073	16	25	.84	418	.01	5	1.00	.01	.13	1	4	100
10100 50075-2	1	39	12	91	.7	26	10	502	2.32	19	7	ND	5	102	1	2	2	26	3.33	.069	15	26	.85	402	.01	2	.95	.01	.10	1	8	120
10100 50125	1	26	14	58	.1	31	7	338	2.60	13	5	ND	6	18	1	3	2	25	.26	.023	25	24	.41	338	.01	2	1.19	.01	.09	1	5	70
10100 50175	1	53	22	90	.6	54	11	563	3.34	19	5	ND	5	46	1	2	2	35	.86	.053	22	32	.63	486	.01	2	1.60	.02	.13	1	4	140
10100 50225	1	37	13	63	.6	37	8	463	2.71	19	5	ND	5	25	1	2	2	23	.39	.025	22	25	.47	353	.01	4	1.21	.01	.10	1	2	120
10100 50300	1	37	14	92	.3	41	8	383	2.57	15	5	ND	4	29	1	2	3	29	.48	.063	22	28	.55	418	.01	2	1.35	.01	.09	1	8	70
10100 50350	1	33	14	93	.1	38	7	426	2.56	13	5	ND	3	21	1	2	2	31	.33	.029	20	27	.53	413	.01	2	1.24	.01	.09	1	15	60
10100 50400	1	21	14	52	.1	30	6	309	2.16	11	5	ND	5	17	1	2	2	26	.20	.014	20	26	.48	300	.01	2	1.22	.01	.07	2	2	40
10100 50450	1	41	14	104	.4	44	10	525	2.49	14	5	ND	5	71	1	3	2	35	2.57	.062	19	30	.87	522	.02	2	1.24	.01	.13	1	5	100
10100 50500	1	28	15	72	.4	42	10	440	2.41	12	5	ND	5	31	1	3	4	32	.51	.049	21	30	.63	356	.01	4	1.27	.01	.10	1	2	60
10600 50300-1	1	27	10	81	.4	25	7	376	1.90	11	5	ND	4	71	1	2	3	13	2.09	.071	14	17	.70	326	.01	2	.54	.01	.07	1	2	70
10600 50300-2	2	33	16	104	.2	40	12	533	2.36	15	5	ND	3	85	1	2	3	25	2.42	.071	16	22	.83	330	.01	3	.85	.01	.10	1	5	110
11100 49575	1	38	15	77	.1	33	9	591	2.57	5	5	ND	5	124	1	2	2	35	7.02	.055	18	36	1.05	303	.02	3	1.43	.01	.13	1	3	90
11100 49625	1	50	21	81	.2	42	13	761	3.30	11	5	ND	9	26	1	2	2	46	.65	.024	30	49	1.03	285	.03	4	1.97	.01	.14	1	11	120
11100 49675	1	39	13	92	.2	35	11	811	3.63	10	5	ND	8	76	1	2	2	45	3.21	.055	24	50	1.25	229	.03	3	1.97	.01	.15	1	5	80
11100 49750	1	51	5	51	.4	29	5	230	1.65	6	5	ND	2	119	1	2	2	19	8.43	.063	10	22	.76	503	.01	5	.58	.01	.07	2	4	260
11100 49800	1	32	7	52	.3	23	4	220	1.31	11	5	ND	1	258	1	2	2	14	13.24	.063	3	14	.39	627	.01	2	.40	.01	.06	2	3	110
11100 49850	1	45	12	56	.7	38	9	335	2.15	13	5	ND	4	75	1	3	2	21	5.05	.073	14	25	.67	356	.01	5	.70	.01	.07	1	6	160
11100 49900	1	46	18	67	.2	36	10	567	3.10	12	5	ND	5	18	1	2	2	30	.54	.018	33	33	.53	271	.02	2	1.33	.01	.11	1	7	120
11100 50050	1	42	13	64	.3	34	9	388	2.23	9	5	ND	3	77	1	2	2	23	6.89	.053	13	30	.66	300	.01	2	1.01	.01	.09	1	21	150
11100 50100	1	43	12	61	.5	43	9	356	2.22	12	5	ND	2	56	1	3	3	25	2.89	.054	16	33	.72	206	.02	3	.89	.01	.07	1	9	210
11100 50150	1	31	21	89	.2	24	8	420	2.43	20	5	ND	1	49	1	2	2	14	1.92	.066	13	13	.33	177	.01	4	.51	.01	.04	1	10	140
11100 50200	1	35	13	69	.2	27	7	423	1.92	13	5	ND	3	82	1	2	2	18	5.61	.068	12	17	.56	421	.01	3	.70	.01	.05	1	8	120
11100 50325	5	40	11	56	.5	41	8	329	2.25	9	6	ND	3	33	1	3	2	23	1.61	.041	18	33	.55	220	.01	4	.84	.01	.07	1	24	220
11100 50375	1	23	12	58	.1	29	5	304	2.02	12	5	ND	1	21	1	2	3	19	.68	.046	15	20	.42	203	.01	2	.69	.01	.05	1	4	160
11100 50425	1	30	16	67	.1	42	8	303	2.89	11	5	ND	6	20	1	3	2	31	.38	.016	26	32	.56	449	.01	3	1.48	.01	.07	1	5	60
11100 50475	1	32	13	65	.3	34	9	420	2.36	11	5	ND	3	41	1	2	2	29	1.01	.035	17	27	.72	336	.01	3	1.24	.01	.08	1	2	130
12100 49175	2	23	17	66	.1	26	9	308	2.83	17	5	ND	9	30	1	2	2	36	.35	.033	20	30	.72	209	.05	3	1.49	.03	.20	1	1	30
12100 49225	1	22	11	62	.1	22	7	293	2.40	8	5	ND	9	12	1	2	2	30	.14	.018	23	24	.48	158	.04	3	.97	.03	.09	1	1	40
12100 49275	1	29	13	81	.2	26	8	494	2.56	9	5	ND	9	86	1	2	2	34	4.52	.067	21	26	.85	323	.04	3	1.09	.01	.15	1	2	100
12100 49325	1	22	12	63	.2	19	9	449	3.17	7	5	ND	11	31	1	2	2	39	.33	.019	23	26	.78	232	.04	2	1.53	.01	.18	1	1	20
12100 49375	1	47	16	58	.5	39	10	517	2.60	10	5	ND	6	22	1	2	2	32	.67	.031	27	31	.61	236	.03	2	1.08	.01	.14	1	5	220
12100 49350	1	49	15	71	.4	35	8	432	2.33	7	5	ND	3	59	1	2	2	31	3.27	.068	17	31	.71	267	.02	2	1.06	.01	.10	1	2	130
12100 49500	1	38	15	81	.1	39	10	595	2.85	7	5	ND	7	70	1	2	2	38	3.65	.063	22	41	.89	310	.03	4	1.37	.01	.13	1	7	130
STD C/AU-S	17	56	38	132	7.1	68	27	1065	3.92	39	21	8	37	47	17	15	19	56	.45	.085	39	55	.38	172	.06	33	1.85	.06	.14	13	49	1300

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
12100 49550	1	35	13	69	.2	29	9	378	2.58	9	5	ND	3	68	1	2	3	38	2.93	.046	21	35	.77	349	.03	4	1.41	.01	.12	1	2	150
12100 49600	1	23	6	55	.1	29	6	243	2.30	11	5	ND	3	23	1	2	2	29	.55	.042	19	29	.50	265	.03	2	.95	.01	.05	1	5	180
12100 49675	1	42	12	86	.2	47	11	527	2.54	12	5	ND	3	96	1	2	4	36	4.86	.082	20	37	1.00	536	.03	2	1.21	.01	.12	1	3	170
12100 49725	1	40	11	70	.3	32	8	340	2.24	11	5	ND	2	105	1	2	3	31	7.69	.062	17	26	.84	533	.02	3	1.07	.01	.11	1	8	220
12100 49800	1	32	14	62	.1	34	11	396	3.29	10	5	ND	8	24	1	2	2	46	.48	.011	32	45	.78	296	.06	2	1.73	.02	.13	1	3	60
12100 49850	1	40	15	63	.3	40	10	425	2.96	14	5	ND	6	20	1	2	2	34	.37	.020	32	33	.48	279	.02	2	1.25	.01	.09	1	1	170
12100 49900	1	24	8	41	.2	18	6	245	2.09	6	5	ND	4	19	1	2	2	28	.40	.013	17	22	.44	208	.02	2	1.02	.02	.09	2	1	40
12100 49950	1	26	15	73	.2	29	10	420	2.79	14	5	ND	3	32	1	2	2	35	.79	.074	29	31	.73	256	.03	5	1.15	.02	.11	1	1	50
12100 50000	1	32	11	50	.2	17	4	145	2.19	8	5	ND	5	29	1	2	2	30	.48	.077	25	23	.47	201	.03	3	.95	.01	.07	2	4	50
12100 50075	1	8	6	75	.1	14	4	187	1.84	2	5	ND	3	12	1	2	2	23	.18	.040	13	26	.55	115	.03	2	1.10	.01	.09	1	2	20
12100 50350	1	56	22	89	.1	27	11	502	3.21	15	5	ND	8	23	1	2	2	33	.39	.023	41	33	.57	239	.01	2	1.37	.01	.08	1	3	100
12100 50425	1	24	8	62	.1	22	5	281	2.57	15	5	ND	5	17	1	2	3	23	.26	.017	26	21	.33	233	.01	2	1.17	.01	.06	1	2	70
12100 50500	1	31	13	74	.3	28	8	524	3.09	12	6	ND	9	20	1	2	3	31	.32	.023	36	26	.47	310	.01	2	1.39	.01	.11	1	7	90
13100 49250	1	31	11	104	.5	41	11	681	3.17	12	5	ND	5	41	1	3	3	40	.53	.052	23	38	.63	355	.02	4	1.50	.01	.14	1	6	180
13100 49325	1	39	13	67	.1	33	10	397	3.31	19	5	ND	7	28	1	2	3	44	.50	.045	35	39	.62	310	.02	4	1.66	.01	.10	1	3	120
13100 49525	1	21	17	93	.1	21	11	423	3.28	9	5	ND	10	20	1	2	3	54	.42	.023	21	56	.99	229	.08	2	1.98	.02	.23	1	1	25
13100 49575	1	26	7	48	.2	20	5	195	1.56	8	5	ND	1	81	1	2	2	21	7.02	.063	12	17	.58	272	.02	3	.73	.02	.07	2	1	70
13100 49650	1	20	6	33	.1	14	5	231	2.08	4	5	ND	6	14	1	2	2	31	.32	.016	20	23	.53	107	.04	2	1.30	.02	.07	1	2	25
13100 49750	1	25	11	56	.1	30	10	414	2.80	9	5	ND	7	22	1	2	3	40	.58	.013	25	34	.60	442	.03	3	1.58	.01	.08	1	2	90
13100 49775	2	21	16	65	.3	30	10	223	2.98	17	8	ND	10	21	1	3	2	41	.34	.038	27	31	.59	389	.03	2	1.53	.01	.08	1	2	30
13100 50000	1	23	9	37	.1	24	6	169	2.35	7	5	ND	5	11	1	2	2	36	.12	.008	20	31	.41	161	.02	2	1.38	.01	.04	1	2	30
13100 50200	1	54	31	78	.1	46	11	601	3.97	14	5	ND	9	26	1	2	2	53	.43	.023	35	49	.82	386	.04	2	1.94	.02	.11	1	5	200
13100 50250	1	17	13	70	.1	28	10	250	2.52	8	5	ND	7	22	1	2	3	49	.32	.010	27	39	.65	330	.03	2	2.12	.01	.08	1	1	30
13100 50350	1	45	17	68	.1	42	11	493	3.34	12	5	ND	11	17	1	2	2	42	.30	.025	30	43	.67	268	.02	3	1.71	.01	.11	1	1	190
13100 50450	1	36	17	94	.2	46	13	663	3.86	7	5	ND	7	25	1	2	2	52	1.05	.074	23	74	1.39	300	.07	7	2.08	.02	.31	1	1	110
13100 50550	2	15	16	66	.2	25	10	447	2.30	9	5	ND	6	25	1	2	3	37	.53	.043	25	34	.64	237	.03	3	1.30	.01	.11	1	2	40
13100 50600	1	12	9	37	.1	14	5	419	1.47	5	5	ND	3	28	1	2	2	19	.64	.028	15	17	.34	150	.02	2	.73	.03	.08	2	1	30
14000 49200	2	33	12	69	.1	44	10	302	2.70	21	5	ND	5	42	1	2	2	34	.51	.048	25	29	.60	216	.05	6	1.55	.05	.07	1	1	30
14000 49250	2	25	15	91	.3	20	8	474	2.88	15	5	ND	8	24	1	2	3	27	.29	.032	20	22	.45	191	.03	2	1.06	.02	.12	1	1	30
14000 49400	1	36	9	60	.2	30	5	197	2.75	13	5	ND	3	48	1	2	2	34	1.07	.079	24	33	.64	396	.02	4	1.25	.02	.12	1	6	120
14000 49475	1	35	10	69	.1	40	8	335	3.03	14	5	ND	5	29	1	2	2	40	.44	.044	36	33	.51	424	.02	2	1.37	.01	.08	1	1	180
14000 49700	2	26	10	95	.1	27	8	395	2.60	13	5	ND	6	22	1	2	2	34	.34	.024	21	28	.42	240	.03	3	1.30	.02	.10	1	1	20
14000 50075	1	38	7	44	.5	30	7	302	1.97	8	5	ND	1	92	1	2	2	30	4.25	.045	11	36	.80	313	.08	4	.93	.02	.11	2	1	150
14000 50125	1	38	12	78	.4	34	9	574	2.68	11	5	ND	3	39	1	2	2	36	.84	.096	24	28	.68	523	.03	5	1.29	.01	.07	1	2	100
14000 50175	1	31	8	53	.1	31	8	334	2.58	10	5	ND	2	62	1	2	2	36	2.78	.068	20	31	.80	436	.03	2	1.38	.02	.09	1	2	140
14000 50275	1	26	10	62	.2	33	11	465	2.85	8	5	ND	3	33	1	2	4	37	.69	.046	20	36	.62	351	.02	3	1.38	.01	.12	1	4	90
STD C/AU-S	18	57	37	127	7.1	66	27	1084	4.00	38	17	7	36	47	17	18	21	56	.46	.086	38	55	.39	172	.06	33	1.94	.06	.14	13	50	1300

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
14000 50275	1	40	17	146	.2	41	11	414	2.83	9	5	ND	7	29	1	2	3	43	.46	.039	23	38	.55	742	.02	2	1.87	.02	.07	1	1	20
14000 50425	1	38	12	80	.1	43	12	573	3.11	3	5	ND	5	54	1	2	4	38	2.23	.068	25	39	.74	404	.02	4	1.39	.01	.06	1	1	170
14000 50475	1	13	8	55	.1	23	5	287	2.01	4	5	ND	2	27	1	2	2	29	.45	.029	14	30	.45	237	.02	4	1.02	.01	.04	1	2	40
14000 50525	1	33	11	76	.1	42	10	459	2.56	10	5	ND	3	46	1	2	2	34	1.67	.074	21	36	.71	360	.02	5	1.16	.01	.08	1	1	100
14000 50575	1	23	10	48	.1	22	6	229	2.42	8	5	ND	7	16	1	2	3	25	.28	.016	17	26	.35	226	.01	5	.86	.01	.07	3	1	30
15000 49600	1	19	13	71	.1	24	11	561	2.79	3	5	ND	6	25	1	2	2	39	.61	.033	28	35	.77	258	.04	3	1.52	.01	.19	1	1	40
15000 49775	1	41	17	90	.1	37	11	589	3.46	6	5	ND	9	56	1	2	2	41	2.48	.068	26	48	.95	156	.04	2	1.44	.01	.22	1	2	110
15000 49950	2	8	11	73	.1	16	5	266	2.34	7	5	ND	4	16	1	2	2	31	.22	.031	21	26	.53	232	.03	2	1.09	.01	.06	1	1	20
15000 49900	1	39	10	53	.4	27	6	340	1.99	6	5	ND	1	138	1	2	2	25	3.52	.055	13	22	.59	287	.02	2	.80	.02	.09	1	1	210
15000 49975	1	37	14	66	.2	42	11	553	3.19	12	5	ND	6	29	1	2	2	37	.56	.019	29	34	.61	250	.03	3	1.25	.02	.14	1	1	150
15000 50025	1	26	9	64	.2	26	7	500	2.52	7	5	ND	5	125	1	2	2	32	7.70	.062	16	29	1.18	371	.04	4	1.14	.01	.13	1	8	100
15000 50125	1	36	13	70	.2	37	11	684	3.29	5	5	ND	6	76	1	2	2	48	3.67	.068	15	42	1.32	323	.03	6	1.63	.01	.20	1	2	110
15000 50275	2	35	13	94	.1	37	10	426	2.36	12	5	ND	4	63	1	2	3	36	2.54	.084	21	30	.86	572	.03	3	1.17	.01	.09	1	5	50
15000 50325	1	46	13	72	.2	43	10	498	2.71	12	5	ND	1	94	1	2	2	30	6.28	.077	15	34	.77	451	.01	4	.87	.01	.06	1	1	250
15000 49825	2	45	19	78	.1	34	16	1176	4.73	5	5	ND	22	30	1	2	3	45	.45	.025	41	41	.93	275	.02	3	2.05	.01	.14	2	1	50
16000 49875	1	42	12	76	.3	41	10	393	3.30	12	5	ND	7	23	1	2	2	44	.49	.055	25	44	.79	448	.03	2	1.61	.01	.12	1	5	130
16000 49925	1	31	14	66	.1	31	8	358	2.54	11	5	ND	5	20	1	2	2	32	.38	.032	24	27	.51	266	.02	3	1.10	.01	.05	2	1	50
16000 49975	1	26	14	73	.1	26	14	841	4.37	5	5	ND	21	22	1	2	2	66	.65	.027	52	55	1.24	182	.13	5	2.32	.01	.74	1	1	30
16000 50200	1	36	20	70	.1	40	16	445	3.87	8	5	ND	11	23	1	2	2	57	.29	.009	38	53	1.01	308	.06	3	2.58	.01	.11	1	1	40
16000 50400	1	23	13	60	.1	26	7	215	2.66	8	5	ND	9	17	1	2	4	39	.23	.024	22	32	.57	234	.02	2	1.56	.01	.06	1	2	20
17000 49750	1	37	11	61	.2	32	11	370	3.55	7	7	ND	9	30	1	4	2	43	.48	.040	33	39	.63	191	.02	3	1.67	.02	.19	1	9	50
17000 49800	2	28	10	93	.1	29	10	467	3.70	6	5	ND	9	32	1	2	2	51	.55	.036	24	45	.87	357	.04	2	2.19	.02	.13	2	1	20
17000 49850	1	39	17	88	.1	36	9	464	2.99	7	5	ND	1	82	1	2	2	36	3.56	.074	20	38	.94	328	.03	3	1.23	.02	.09	1	1	150
17000 50025	1	69	9	64	.2	42	9	400	2.65	7	5	ND	1	97	1	2	2	37	5.30	.053	19	41	.87	358	.04	4	1.39	.03	.10	1	11	180
17000 50075	1	57	14	91	.3	52	10	554	3.43	8	5	ND	5	77	1	2	2	46	2.89	.065	25	54	.98	546	.04	5	1.57	.02	.12	1	1	130
17000 50175	1	19	12	47	.1	18	6	272	2.13	4	5	ND	6	14	1	2	2	31	.20	.022	20	26	.49	204	.03	4	1.21	.01	.06	2	4	20
17000 50225	1	36	19	71	.1	34	11	706	3.33	11	5	ND	8	25	1	3	2	42	.43	.025	34	35	.65	300	.04	3	1.52	.01	.10	1	1	50
17000 50275	3	40	66	74	.5	39	14	621	3.71	6	5	ND	7	20	1	2	2	55	.48	.025	29	80	1.03	213	.07	2	2.04	.01	.26	1	2	30
17000 50375	3	23	15	59	.2	26	10	310	3.03	47	5	ND	9	21	1	2	2	42	.37	.025	27	37	.70	288	.04	2	1.78	.01	.10	1	1	40
18000 49850	1	42	12	67	.3	32	8	435	3.45	6	5	ND	2	98	1	2	2	48	4.01	.087	22	38	1.17	241	.04	5	1.73	.02	.22	2	2	100
18000 49950	9	47	13	144	.3	27	8	561	2.26	4	5	ND	1	139	1	2	2	30	5.36	.086	15	25	.60	439	.02	6	1.19	.02	.09	2	1	20
18000 50075	2	41	13	80	.1	47	14	643	4.12	8	5	ND	8	27	1	2	2	56	.43	.030	43	47	.78	344	.03	6	2.05	.02	.15	1	2	50
18000 50125	1	30	10	58	.3	23	9	458	2.84	4	8	ND	5	26	1	2	2	43	.43	.047	23	32	.63	328	.04	2	1.48	.03	.07	1	1	60
18000 50175	1	40	16	80	.1	49	13	599	4.11	8	5	ND	9	30	1	2	2	54	.41	.020	37	48	.71	410	.02	3	2.02	.02	.08	1	1	70
18000 50225	2	32	18	87	.1	37	13	243	4.25	5	5	ND	9	16	1	2	2	54	.15	.016	22	44	.72	197	.01	2	3.00	.01	.08	1	1	10
18000 50275	1	26	14	92	.3	28	9	330	3.01	8	8	ND	7	22	1	2	2	40	.33	.042	21	34	.53	325	.03	6	1.55	.02	.11	2	2	20
STD C/AU-S	17	59	36	131	6.5	67	27	1149	4.06	37	19	7	37	47	18	17	17	58	.46	.088	40	57	.91	176	.06	33	1.97	.06	.13	12	50	1300

NORANDA EXPLORATION PROJECT 8808-029 334 FILE # 88-3264

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
18000 50325	1	40	12	76	.4	45	14	759	4.43	9	5	ND	6	43	1	2	2	51	.81	.035	34	44	.85	343	.01	2	1.67	.04	.08	1	2	90
19000 49850	1	40	13	80	.1	47	11	466	4.06	9	5	ND	7	33	1	2	2	55	.46	.026	31	46	1.02	450	.05	3	2.10	.02	.09	1	1	80
19000 49975	2	33	17	85	.1	36	12	468	4.57	11	5	ND	13	25	1	2	4	49	.36	.038	63	38	.68	224	.02	2	1.92	.02	.21	1	1	30
19000 50025	2	33	13	70	.1	31	11	459	4.16	9	5	ND	11	30	1	2	2	54	.50	.017	39	48	1.00	169	.06	2	2.15	.02	.37	1	1	30
19000 50525	2	37	17	69	.1	35	14	509	4.52	10	5	ND	14	24	1	2	3	55	.35	.020	31	43	.90	138	.04	2	2.58	.01	.44	1	1	50
19550 49850	1	36	13	113	.2	44	13	814	3.92	6	5	ND	4	99	1	2	2	49	3.20	.071	25	43	1.21	246	.03	2	1.73	.03	.16	1	2	110
19550 49900	2	41	21	98	.1	35	13	583	4.79	16	5	ND	17	30	1	2	2	53	.50	.057	30	40	.87	282	.03	2	2.14	.02	.32	1	1	100
19550 50300	2	24	12	122	.2	21	9	462	3.17	7	5	ND	9	22	1	2	3	37	.43	.023	31	27	.58	232	.04	2	1.61	.03	.18	1	2	20
19550 50550	1	47	17	88	.1	41	13	686	4.92	8	5	ND	14	32	1	2	2	66	.51	.021	61	52	1.15	225	.06	2	2.69	.02	.31	1	2	60
19550 50600	2	31	20	76	.1	30	10	276	4.11	6	5	ND	7	18	1	2	2	59	.25	.018	18	39	.71	232	.01	2	2.98	.01	.09	1	16	10
MT59000 9575	2	25	18	99	.1	28	9	283	3.23	9	5	ND	8	11	1	2	2	50	.10	.020	35	39	.60	209	.03	3	2.25	.01	.06	1	1	20
STD C/AU-S	17	58	37	132	6.7	68	25	1095	4.07	39	21	8	36	47	17	16	17	57	.46	.084	39	56	.91	171	.06	33	1.92	.06	.16	12	48	1400

Hand Expl. (LP)

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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

DATE RECEIVED: SEP 23 1988 DATE REPORT MAILED: Sept 29/88 ASSAYER. C. Leong ..D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

-200 MESH

NORANDA EXPLORATION PROJECT 8809-079 334 File # 88-4749 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
9100 48700	1	30	11	77	.2	23	8	391	2.24	7	5	ND	3	54	1	2	2	31	2.26	.049	16	24	.61	315	.02	2	1.11	.01	.11	1	1	80
9100 48725	1	33	12	90	.2	28	9	335	2.30	11	5	ND	5	53	1	2	4	39	2.60	.062	15	25	.73	345	.02	2	.95	.01	.11	1	25	100
9100 48750	1	36	11	85	.1	35	11	543	2.81	15	5	ND	3	33	1	2	2	35	.85	.046	23	31	.70	365	.02	2	1.35	.01	.13	1	4	90
9075 48725	1	34	15	96	.1	33	11	457	2.69	13	5	ND	5	37	1	2	2	34	1.15	.056	20	27	.63	310	.02	2	1.17	.01	.11	1	5	110
9125 48725	2	40	18	96	.1	42	13	552	3.18	20	5	ND	5	29	1	2	2	41	.66	.034	27	36	.63	406	.02	3	1.47	.01	.13	1	1	120
10075 50350	1	27	12	74	.1	31	7	312	2.20	12	5	ND	4	38	1	2	4	28	.96	.073	18	24	.72	348	.02	7	.90	.02	.07	1	1	150
10100 50325	1	19	12	67	.1	30	7	301	2.27	11	5	ND	4	27	1	2	3	29	.42	.059	16	28	.49	258	.01	2	1.10	.01	.09	1	1	20
10100 50350	1	18	14	79	.1	29	7	272	2.31	11	5	NE	4	30	1	2	2	30	.24	.032	20	24	.46	218	.02	4	.99	.02	.07	1	1	30
10100 50375	1	17	12	128	.5	22	5	258	1.84	7	5	ND	3	25	1	2	2	27	.49	.044	15	24	.47	207	.02	3	1.03	.02	.06	1	1	40
10125 50350	1	18	9	74	.1	29	7	606	2.18	11	5	ND	3	23	1	2	2	30	.27	.038	20	24	.45	431	.01	2	1.22	.01	.08	1	1	40
10175 50350	2	16	14	71	.1	26	8	344	2.72	15	5	ND	6	21	1	2	2	31	.23	.029	24	25	.50	348	.02	2	1.32	.01	.09	1	1	30
10225 50350	2	27	20	80	.1	39	12	516	2.95	16	5	ND	6	23	1	2	2	37	.35	.017	25	33	.60	439	.01	2	1.60	.01	.12	1	2	70
10275 50350	1	22	10	70	.1	37	8	301	2.40	10	5	ND	5	22	1	2	2	32	.32	.023	22	32	.53	416	.01	3	1.40	.01	.09	1	1	50
10325 50350	1	34	18	59	.1	44	10	332	2.47	11	5	ND	5	25	1	2	2	34	.41	.033	25	32	.59	401	.01	4	1.35	.01	.11	1	1	120
10375 50350	1	11	8	56	.1	21	6	204	2.11	7	5	ND	4	17	1	2	3	27	.25	.020	18	23	.43	312	.01	2	1.16	.01	.07	1	1	20
10425 50350	1	20	13	84	.1	34	9	374	2.62	10	5	ND	5	20	1	2	2	33	.32	.027	22	29	.50	396	.01	2	1.44	.01	.10	1	2	40
10475 50350	1	20	9	57	.1	26	6	188	2.22	11	5	ND	5	18	1	2	2	25	.34	.033	18	21	.37	297	.01	2	1.02	.01	.06	1	1	70
10525 50350	1	22	11	100	.1	33	9	379	2.42	11	5	ND	4	21	1	2	2	34	.31	.031	21	28	.49	419	.01	4	1.45	.01	.09	1	1	60
10575 50350	2	30	17	83	.1	32	8	293	2.91	16	5	NE	5	20	1	2	3	32	.35	.023	25	27	.43	395	.01	3	1.37	.01	.07	1	1	90
11075 49625	1	24	8	57	.1	28	10	390	3.06	9	5	ND	3	16	1	2	2	39	.32	.013	27	39	.73	246	.01	2	1.66	.01	.08	1	2	40
11075 50050	1	43	11	50	.2	42	7	314	1.70	8	5	ND	1	90	1	2	2	22	6.17	.086	14	28	.77	530	.02	2	.63	.01	.04	1	1	170
11075 50150	1	35	6	51	.1	32	7	233	1.66	9	5	ND	1	113	1	2	2	22	12.72	.076	11	23	.71	741	.02	3	.71	.01	.05	1	1	140
11100 49900	1	19	6	55	.1	22	7	248	2.36	6	5	ND	6	16	1	2	2	31	.36	.018	15	30	.57	214	.02	2	1.32	.01	.07	1	2	30
11100 49625	1	50	14	68	.3	33	10	513	3.07	9	5	ND	5	70	1	2	2	40	4.27	.057	20	43	.53	265	.03	2	1.73	.02	.13	1	1	160
11100 49650	1	36	12	57	.1	44	10	372	2.91	7	5	ND	3	29	1	2	3	35	1.02	.032	23	54	.80	226	.04	2	1.42	.02	.08	1	16	130
11100 50025	1	36	9	71	.1	42	9	334	2.22	4	5	ND	2	46	1	2	2	32	1.35	.030	19	38	.77	336	.03	5	1.05	.02	.08	1	1	120
11100 50050	1	34	14	66	.1	50	12	632	2.68	10	5	ND	3	33	1	4	2	41	10.02	.057	13	189	1.36	279	.03	7	1.65	.02	.17	2	3	140
11100 50075	1	16	8	66	.1	38	9	409	2.47	9	5	ND	3	29	1	2	2	36	.59	.029	21	42	.63	385	.04	2	1.27	.01	.05	1	1	50
11100 50100	1	26	15	65	.1	40	10	396	2.89	15	5	ND	5	19	1	2	2	35	.42	.027	25	36	.53	236	.02	2	1.22	.01	.07	1	2	120
11100 50125	1	45	13	78	.1	61	15	447	3.41	32	5	ND	4	28	1	2	2	44	1.03	.045	27	57	.76	305	.05	2	1.39	.01	.08	1	1	180
11100 50150	1	23	12	74	.1	20	6	321	2.15	16	5	ND	1	41	1	2	2	16	1.52	.054	13	13	.30	168	.01	2	.54	.01	.04	1	1	100
11100 50175	1	54	9	51	.2	50	8	266	2.14	9	5	ND	1	69	1	2	3	27	6.31	.032	19	40	.69	457	.02	2	.86	.01	.05	1	1	220
11100 50200	1	31	10	55	.1	26	6	330	1.82	11	5	ND	2	70	1	2	2	19	4.59	.060	12	17	.54	373	.01	2	.70	.01	.05	1	1	100
11100 50325	1	44	7	61	.1	41	7	313	2.27	8	5	ND	2	73	1	2	2	25	5.25	.078	15	36	.82	253	.02	4	.86	.01	.06	1	2	210
11100 50350	1	19	6	55	.1	27	6	220	2.04	11	5	NE	4	14	1	2	3	27	.42	.017	20	26	.40	325	.01	2	1.09	.01	.05	1	1	70
11125 49625	1	28	10	57	.1	33	8	330	2.81	5	5	ND	5	21	1	2	2	33	.63	.022	29	44	.79	248	.04	2	1.53	.01	.08	1	1	130
11125 50050	1	39	14	78	.1	40	13	566	4.10	12	5	ND	8	18	1	2	2	54	.42	.015	28	69	1.15	205	.07	2	2.35	.02	.15	1	1	110
STD C/AU-S	18	59	38	132	6.8	67	31	1024	4.04	39	19	8	38	46	18	16	21	60	.49	.085	40	57	.93	179	.07	33	2.05	.06	.13	12	48	1300

Col blue

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	Hg PPB
11125 S0150	1	40	16	77	.1	38	10	355	2.72	13	5	ND	4	23	1	2	2	36	.72	.028	26	38	.59	394	.03	4	1.19	.01	.06	1	2	130
11175 S0050	1	38	11	45	.2	31	7	254	2.00	11	5	ND	2	58	1	2	2	23	6.93	.042	12	25	.50	263	.01	4	.96	.02	.07	1	1	150
11200 S0325	1	33	12	61	.2	47	9	457	2.22	11	5	ND	3	94	1	2	2	31	5.24	.085	17	34	.97	590	.03	3	1.08	.01	.07	1	1	140
11225 S0050	1	41	15	65	.1	42	9	337	2.65	16	5	ND	5	23	1	3	2	34	.44	.021	24	32	.56	245	.03	4	1.14	.01	.06	1	1	120
11300 S0325	1	27	8	55	.1	40	8	271	2.15	12	5	ND	2	51	1	2	2	28	2.06	.052	16	41	.74	339	.04	4	.98	.02	.05	1	2	90
11325 S0050	1	20	12	71	.1	21	7	210	2.61	15	5	ND	5	12	1	2	2	25	.20	.018	19	21	.30	258	.01	4	1.01	.01	.05	1	1	40
11350 S0325	1	45	18	90	.1	39	7	351	2.85	25	5	ND	3	22	1	2	2	22	.41	.039	24	22	.42	306	.01	2	.86	.01	.04	1	3	130
11375 S0050	2	14	15	70	.1	18	9	278	2.64	12	5	ND	5	11	1	2	2	29	.17	.014	17	24	.39	226	.02	5	1.14	.01	.06	1	1	20
11425 S0050	2	17	13	60	.1	19	8	346	2.35	8	5	ND	5	12	1	2	2	32	.21	.018	19	26	.45	288	.01	2	1.44	.01	.05	1	3	20
11450 S0325	1	15	11	55	.1	15	5	181	2.01	10	5	ND	3	12	1	2	2	20	.17	.020	11	16	.23	207	.01	3	.81	.01	.04	1	1	30
11475 S0050	1	24	15	67	.1	28	8	340	2.63	11	5	ND	5	19	1	2	2	31	.35	.022	17	27	.34	421	.01	2	1.16	.01	.07	1	3	50
11525 S0050	2	24	10	72	.1	30	11	343	3.49	15	5	ND	7	19	1	2	3	48	.29	.021	19	35	.54	349	.07	3	1.45	.01	.08	1	2	30
11575 S0050	2	19	15	94	.1	24	8	356	2.79	13	5	ND	5	16	1	2	2	32	.29	.024	15	25	.36	325	.01	2	1.41	.01	.06	1	2	30
STD C/AU-S	18	57	35	132	6.6	64	30	1043	4.08	37	18	8	26	47	17	18	22	57	.47	.088	38	55	.91	172	.06	33	1.96	.06	.13	11	51	1400

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

BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-05899.0 (COMPLETE) Hemlo Exploration (IP) REFERENCE INFO: LAB CODE 8808-021

CLIENT: NORANDA EXPLORATION CO. LTD.
PROJECT: 334

SUBMITTED BY: UNKNOWN
DATE PRINTED: 22-SEP-88

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	54	1 PPB		INST. NEUTRON ACTIV.
2	Ag	Silver	54	2 PPM		INST. NEUTRON ACTIV.
3	As	Arsenic	54	0.5 PPM		INST. NEUTRON ACTIV.
4	Ba	Barium	54	100 PPM		INST. NEUTRON ACTIV.
5	Br	Bromine	54	1 PPM		INST. NEUTRON ACTIV.
6	Cd	Cadmium	54	2 PPM		INST. NEUTRON ACTIV.
7	Co	Cobalt	54	2 PPM		INST. NEUTRON ACTIV.
8	Cr	Chromium	54	10 PPM		INST. NEUTRON ACTIV.
9	Ir	Iridium	54	20 PPB		INST. NEUTRON ACTIV.
10	Mo	Molybdenum	54	0.5 PPM		INST. NEUTRON ACTIV.
11	Ni	Nickel	54	10 PPM		INST. NEUTRON ACTIV.
12	Sb	Antimony	54	0.1 PPM		INST. NEUTRON ACTIV.
13	Se	Selenium	54	5 PPM		INST. NEUTRON ACTIV.
14	Ta	Tantalum	54	0.5 PPM		INST. NEUTRON ACTIV.
15	Th	Thorium	54	0.5 PPM		INST. NEUTRON ACTIV.
16	U	Uranium	54	0.1 PPM		INST. NEUTRON ACTIV.
17	W	Tungsten	54	1 PPM		INST. NEUTRON ACTIV.
18	Zn	Zinc	54	20 PPM		INST. NEUTRON ACTIV.

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
0 ORGANIC OR HUMUS	54	1 -80	54	DRY, SIEVE -80	54

REPORT COPIES TO: NORANDA EXPLORATION
NORANDA EXPLORATION

INVOICE TO: NORANDA EXPLORATION

Mac ✓

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

BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-05899.0 | PROJECT: 334 | PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Co PPM	Cr PPM	Ir PPB	Mo PPM	Ni PPM
01 HEX 14000 49075		<1	<2	4.0	730	5	<2	7	12	<20	0.7	<10
01 HEX 14000 49100		1	<2	1.8	630	4	<2	5	<10	<20	<0.5	11
01 HEX 14000 49150		12	<2	43.0	780	4	<2	16	60	<20	1.2	38
01 HEX 14000 49350		<1	<2	4.0	850	4	<2	10	18	<20	<0.5	<10
01 HEX 14000 49525		<1	<2	2.2	550	7	3	3	<10	<20	0.7	<10
01 HEX 14000 49575		1	<2	2.5	430	4	<2	2	<10	<20	0.6	<10
01 HEX 14000 49600		<1	<2	0.6	140	3	<2	<2	<10	<20	4.1	<10
01 HEX 14000 49650		1	<2	1.1	370	4	<2	2	<10	<20	0.9	<10
01 HEX 14000 49725		<1	<2	<0.5	200	4	<2	<2	<10	<20	2.5	<10
01 HEX 14000 49800		<1	<2	3.3	730	11	<2	10	15	<20	1.5	<10
01 HEX 14000 49850		2	<2	2.0	740	6	<2	12	<10	<20	0.5	12
01 HEX 14000 49900		<1	<2	2.2	600	5	<2	8	11	<20	0.5	<10
01 HEX 14000 49950		2	<2	1.8	240	4	<2	5	13	<20	3.9	<10
01 HEX 14000 50025		<1	<2	0.5	230	3	<2	<2	<10	<20	2.0	<10
01 HEX 14000 50075		2	<2	5.0	800	12	<2	9	29	<20	<0.5	21
01 HEX 14000 50225		<1	<2	6.8	740	4	<2	9	41	<20	0.7	20
01 HEX 14000 50325		3	<2	2.2	790	4	<2	6	17	<20	<0.5	11
01 HEX 15000 49725		<1	<2	2.5	530	4	<2	6	17	<20	0.6	11
01 HEX 15000 50225		<1	<2	0.5	370	3	<2	<2	<10	<20	1.6	<10
01 HEX 16000 49700		<1	<2	1.4	410	4	<2	3	<10	<20	2.7	<10
01 HEX 16000 49775		<1	<2	6.1	880	5	<2	10	23	<20	0.7	<10
01 HEX 16000 50025		<1	<2	0.7	150	5	<2	<2	<10	<20	0.9	<10
01 HEX 16000 50075		1	<2	2.7	520	3	<2	4	15	<20	2.2	<10
01 HEX 16000 50125		<1	<2	2.9	470	5	<2	7	20	<20	0.6	<10
01 HEX 17000 49700		3	<2	6.8	660	7	<2	11	41	<20	0.6	21
01 HEX 17000 49900		<1	<2	1.1	320	4	<2	3	<10	<20	2.0	<10
01 HEX 17000 49975		2	<2	1.6	450	3	<2	3	<10	<20	0.9	<10
01 HEX 17000 50100		2	<2	3.0	540	5	<2	3	22	<20	1.0	<10
01 HEX 17000 50325		<1	<2	3.1	710	5	<2	9	27	<20	1.1	13
01 HEX 18000 49875		<1	<2	1.8	620	6	<2	5	<10	<20	1.8	<10
01 HEX 18000 50000		<2	<2	12.0	750	9	<2	18	29	<20	<0.5	<10
01 HEX 18000 50375		<1	<2	2.7	490	7	<2	4	15	<20	0.6	<10
01 HEX 19000 49900		<1	<2	5.6	700	4	<2	10	25	<20	<0.5	15
01 HEX 19000 50075		2	<2	0.7	230	3	<2	<2	<10	<20	1.7	<10
01 HEX 19000 50125		2	<2	1.1	370	5	<2	<2	<10	<20	1.3	<10
HEX 19000 50200		1	<2	0.9	160	4	<2	<2	<10	<20	2.3	<10
01 HEX 19000 50250		1	<2	0.9	430	5	<2	6	<10	<20	0.5	<10
01 HEX 19000 50300		<1	<2	3.5	620	6	<2	8	19	<20	<0.5	<10
01 HEX 19000 50350		<1	<2	2.8	600	2	<2	8	11	<20	0.6	17
01 HEX 19000 50400		<1	<2	1.8	470	5	3	7	21	<20	<0.5	14

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North Vancouver, B.C.
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(604) 985-0681 Telex 04-352667

BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-05899.0 | PROJECT: 334 | PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Se PPM	Ta PPM	Th PPM	U PPM	W PPM	Zn PPM
01 HEX 14000 49075		0.5	<5	<0.5	3.9	1.5	<1	<50
01 HEX 14000 49100		0.3	<5	<0.5	2.7	1.0	<1	61
01 HEX 14000 49150		2.4	<5	<0.5	5.0	1.7	1	70
01 HEX 14000 49350		0.7	<5	0.6	8.6	3.0	<1	120
01 HEX 14000 49525		0.4	<5	<0.5	3.1	1.4	<1	67
01 HEX 14000 49575		0.2	<5	<0.5	1.0	0.4	<1	55
01 HEX 14000 49600		<0.1	<5	<0.5	<0.5	0.2	<1	<50
01 HEX 14000 49650		0.1	<5	<0.5	0.9	0.3	<1	140
01 HEX 14000 49725		<0.1	<5	<0.5	<0.5	0.1	<1	100
01 HEX 14000 49800		0.5	<5	<0.5	5.3	4.3	<1	100
01 HEX 14000 49850		0.5	<5	<0.5	4.9	4.9	<1	<50
01 HEX 14000 49900		0.4	<5	<0.5	4.8	2.1	<1	52
01 HEX 14000 49950		0.3	<5	<0.5	3.4	1.0	<1	<50
01 HEX 14000 50025		<0.1	<5	<0.5	<0.5	0.2	<1	<50
01 HEX 14000 50075		1.0	<5	<0.5	3.6	5.9	<1	<50
01 HEX 14000 50225		0.9	<5	0.7	6.2	2.2	2	<50
01 HEX 14000 50325		0.5	<5	<0.5	7.2	2.0	1	54
01 HEX 15000 49725		0.5	<5	<0.5	4.7	1.6	1	70
01 HEX 15000 50225		<0.1	<5	<0.5	<0.5	0.2	<1	58
01 HEX 16000 49700		0.2	<5	<0.5	1.3	0.5	<1	74
01 HEX 16000 49775		0.5	<5	<0.5	5.1	1.8	1	81
01 HEX 16000 50025		0.2	<5	<0.5	1.2	0.4	<1	<50
01 HEX 16000 50075		0.4	<5	<0.5	2.6	0.8	<1	60
01 HEX 16000 50125		0.3	<5	<0.5	5.1	1.5	<1	82
01 HEX 17000 49700		0.7	<5	0.6	13.0	2.5	<1	110
01 HEX 17000 49900		0.2	<5	<0.5	1.5	0.6	<1	<50
01 HEX 17000 49975		0.3	<5	<0.5	2.5	0.8	<1	69
01 HEX 17000 50100		0.4	<5	<0.5	3.3	1.2	1	60
01 HEX 17000 50325		0.5	<5	<0.5	4.3	1.6	<1	64
01 HEX 18000 49875		0.4	<5	<0.5	3.7	1.4	<1	<50
01 HEX 18000 50000		1.0	<5	<0.5	15.0	4.2	1	84
01 HEX 18000 50375		0.4	<5	<0.5	3.6	1.2	<1	<50
01 HEX 19000 49900		0.5	<5	0.6	10.0	2.1	<1	54
01 HEX 19000 50075		0.1	<5	<0.5	0.6	0.2	<1	66
01 HEX 19000 50125		0.2	<5	<0.5	1.5	0.8	<1	62
HEX 19000 50200		0.1	<5	<0.5	0.7	0.5	<1	<50
01 HEX 19000 50250		0.2	<5	<0.5	1.1	0.4	<1	<50
01 HEX 19000 50300		0.5	<5	<0.5	4.7	1.9	<1	<50
01 HEX 19000 50350		0.5	<5	0.6	6.4	1.9	<1	<50
01 HEX 19000 50400		0.4	<5	<0.5	2.9	1.2	<1	<50

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
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BONDAR-CLEGG

Geochemical Lab Report

REPORT: V88-05899.0 | PROJECT: 334 | PAGE 2A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Co PPM	Cr PPM	Ir PPB	Mo PPM	Ni PPM
01 HEX 19000 50450		<2	<2	5.4	640	5	<2	14	50	<20	<0.5	18
01 HEX 19550 49950		4	<2	4.3	720	8	<2	7	38	<20	<0.5	19
01 HEX 19550 50000		3	<2	10.0	580	7	<2	10	29	<20	<0.5	<10
01 HEX 19550 50050		<1	<2	9.0	610	10	<2	15	55	<20	0.7	15
01 HEX 19550 50100		<1	<2	1.4	420	5	<2	3	12	<20	0.9	<10
01 HEX 19550 50150		<1	<2	0.6	270	4	<2	<2	<10	<20	1.2	<10
01 HEX 19550 50200		<1	<2	1.8	520	4	<2	6	<10	<20	<0.5	<10
01 HEX 19550 50350		<1	<2	4.4	720	4	<2	7	31	<20	1.0	19
01 HEX 19550 50400		<1	<2	1.3	800	5	<2	5	<10	<20	0.9	<10
01 HEX 19550 50450		<1	<2	2.6	600	4	<2	6	21	<20	0.7	<10
01 MTB 90000 94000		<1	<2	0.6	240	4	<2	<2	<10	<20	3.8	<10
01 MTB 90000 9525		<1	<2	1.1	490	4	3	4	11	<20	<0.5	<10
01 MTB 90000 9625		<1	<2	0.9	490	6	<2	3	<10	<20	0.6	<10
01 MTB 90000 9675		2	<2	1.3	320	5	<2	4	<10	<20	1.2	<10

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Geochemical Lab Report

REPORT: V88-05899.0 | PROJECT: 334 | PAGE 20

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Se PPM	Ta PPM	Th PPM	U PPM	W PPM	Zn PPM
01 HEX 19000 50450		0.8	<5	1.3	8.1	3.9	<1	<50
01 HEX 19550 49950		0.5	<5	0.6	7.5	1.8	1	53
01 HEX 19550 50000		0.4	<5	0.6	9.2	1.9	1	<50
01 HEX 19550 50050		0.5	<5	0.6	11.0	2.8	1	70
01 HEX 19550 50100		0.2	<5	<0.5	1.8	0.7	<1	<50
01 HEX 19550 50150		0.1	<5	<0.5	0.9	0.3	<1	<50
01 HEX 19550 50200		0.4	<5	<0.5	3.8	1.3	<1	<50
01 HEX 19550 50350		0.6	<5	0.6	7.0	1.7	1	<50
01 HEX 19550 50400		0.4	<5	<0.5	4.3	1.8	<1	<50
01 HEX 19550 50450		0.4	<5	<0.5	3.4	1.3	<1	51
01 MTB 9000 9400		0.1	<5	<0.5	0.8	0.6	<1	<50
01 MTB 9000 9525		0.2	<5	<0.5	1.9	0.8	<1	80
01 MTB 9000 9625		0.2	<5	<0.5	1.0	0.3	<1	<50
01 MTB 9000 9675		0.7	<5	<0.5	2.1	2.8	<1	<50

APPENDIX 2

Rock Sample Descriptions & Geochemical Results

NORANDA EXPLORATION MPANY, LIMITED

PROPERTY HEMLO EXPLORATION

N.T.S. _____

DATE JULY 88

PROJECT 334

ROCK SAMPLE REPORT

MPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
												K.C.
9925	L 8400E 49875 N											
	SILICIFIED BASIC VOLC.?											
	DISSEMINATED PYRITE	2%										
	NON-CALC.											
	RUSTY WEATHERING.											
	O/C, GRAB SAMPLE											

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 6 188

ROCK SAMPLE REPORT

PROJECT 334

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39726	L 19550 E Δ 49850 N Rusty narrow quartz vein in well-jointed slightly schistose hornfels	1-2%	Grab									H.G.B.
39727	L 18350 E Δ 49950 N Minor disseminated pyrite hornfels, mylonitic?	3%	Grab									H.G.B.
39728	L 18200 E Δ 49850 N Very minor pyrite in silicified dark chert and hornfels.	2%	Grab									H.G.B.
39729	L 18000 E Δ 49900 N Rusty quartz veins in buff coloured chert		Grab									H.G.B.
39730	L 17700 E Δ 49925 N Minor pyrite in medium to dark grey chert.	2%	Grab									H.G.B.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 6 188

ROCK SAMPLE REPORT

PROJECT 334

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39731	L 17700E ∆ 4980ON Approximately 1% pyrite in mafic volcanics at cliff edge.	1%	Grab.									H·G·B.
39732	L 17550E ∆ 49650N Minor pyrite in fractured, rusted mafic volcanics.	1%	Grab									H·G·B.
39733	L 17450E ∆ 4985ON Approximately 1% pyrite in rusty, pale green + cream intermediate volcanics	1%	Grab									H·G·B
39734	L 17450E ∆ 4985ON Approximately 1% pyrite in rusty + siliceous intermediate to felsic volcanics	1%	Grab									H·G·B.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION MPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 6 88

ROCK SAMPLE REPORT

PROJECT 334

MPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39661	L 10100E Δ9700N (Mintel B) Rusty, grey to black chert with bands of jasper. Minor pyrite	1%	Grab									S.E.R.
39662	L 10100E Δ 9750N (Mintel B) Rusty, light colored silicified chert. Up to 2% pyrite.	2%	Grab									S.E.R.
39663	NO Sample.											
39664	No Sample.											
39665	L 19200E Δ 50825N Light grey, rusty on Ws. Light grey to white on Fs. Hornfelsic massive chert. Up to 4% pyrite	4%	Grab									S.E.R.
39666	L 19200E Δ 50625N Light green, rusty, silicified Chert. Minor pyrite.	<1%	Grab									S.E.R.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 6 188

ROCK SAMPLE REPORT

PROJECT 334

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39667	L 19200E Δ 50500N Dark green silicified chert. mm size quartz bands with minor disseminated pyrite.	1%	Grab									S.E.R
39668	L 8200N Δ 49625N Buff coloured on WS, white to green on FS. cm wide white chert interlayered in crystal tuff. Trace pyrite.	1%	Grab									S.E.R.
39669	L 8200N Δ 49825N Crystal Tuff - grey to black matrix supported tuff. Up to 3% disseminated and stringers of pyrite.	3%	Grab									S.E.R

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 6/88

ROCK SAMPLE REPORT

PROJECT 334

MPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39670	L 18000E Δ 50325N Black massive chert up to 4% disseminated sulfides	4%	Grab									S.E.R.
39671	L 18000E Δ 50030N White, rusty massive chert interbedded by fine laminated chert.	<1%	Grab									S.E.R.
39672	L 50000N Δ 17225E Siltstone with chert nodules. Minor sulfides (pyrite)	2%	Grab									S.E.R.
39673	L 17000E Δ 49710N Dark grey, argillaceous chert. Minor sulfides.	1-2%	Grab									S.E.R.
39674	L 7000E Δ 49800N Silicified crystal tuff, carbonate on partings Less than 1% sulfides	<1%	Grab									S.E.R.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

PROPERTY HEMLO EXPLORATION

N.T.S. _____

DATE AUGUST 6 188

PROJECT 334

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39675	L 7000 E ∆ 49810N Silicified crystal tuff? Effervesces strongly, Carb veins.	<1%	Grab									S.E.R.
39735	L 7400E ∆ 49820 N Rusty silicified crystal tuff strongly foliated.	<1%	Grab									S.E.R.
39736	L 7400 E ∆ 49775 N Highly deformed crystal tuff. Compositional banding of light and dark layers.	<1%	Grab									S.E.R.
39737	L 17000E ∆ 50400N Chert interbedded with silicic sediments. Rusty weathering, approximately 2% sulphides (pyrite)	2%	Grab									S.E.R

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION MPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 12/8

ROCK SAMPLE REPORT

PROJECT 334

MPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
39738	L 17000E Δ 5032.5N Purplish - brown hornfelsic chert. Approximately 5% pyrite in the hornfelsic areas.	5%	Grab									S.E.R
	L16900E Δ 49900N											
39739	Siltstone with rusty chert bands. Quartz vein in siltstone.	<1%	Grab									S.E.R.
39740	L16700E Δ 49850N Tan colour. rusty chert	<1%	Grab									S.E.R.
39741	L16680E Δ 49830N Light coloured, rusty chert with highly weathered pyrite cubes.	2%	Grab									S.E.R.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

PROPERTY HEMLO EXPLORATION

N.T.S. _____

DATE AUGUST 12/88

PROJECT 334

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
9742	L 16100E Δ 4975ON Hemplic crystal tuff with 2cm wide quartz vein.	<1%	Grab									S.E.R.
9743	L 14000E Δ 5014SN Metavolcanic with thin chert bands with jasper or iron staining.	<1%	Grab									S.E.R.
10106	L 8600E Δ 4985ON Medium grey crystal tuff with 2% visible sulphides	2%	Grab									L.H
0107	L 8800E Δ 4995SN Medium grey well foliated crystal tuff. Approximately 3%	3%	Grab									L.H.

G = GEOCHEM A = ASSAY

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. _____

PROPERTY HEMLO EXPLORATION

DATE AUGUST 12/88

ROCK SAMPLE REPORT

PROJECT 334

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	G☐ A☐	SAMPLED BY
40108	Rusty, well foliated crystal tuff. Up to 4% visible sulphides (pyrite)	4%	Grab									L.H.
-39744	L 13200E Δ 50035 slightly foliated intermediate volcanic with quartz bands. Weakly silicified. Less than 1% sulphides	<1%	Grab									S.E.R.
39745	L 12000E Δ 50035N Dark green massive cherty volcanic. Very Carbonate rich. Approximately 2% sulphides.	2%	Grab									S.E.R.

G = GEOCHEM A = ASSAY

Hemlo Option (HC) 8808-067

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

DATE RECEIVED: AUG 3 1988
DATE REPORT MAILED: Aug. 12./88.

GEOCHEMICAL ANALYSIS CERTIFICATE

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

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

NORANDA EXPLORATION PROJECT HEMLO OPTION 334 FILE # 88-3228

SAMPLE#	Ag PPM	As PPM	Au* PPB	Hg PPB
R 39925	2.2	5	26	30

Hemlo Exp. (SK)

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

DATE RECEIVED: AUG 22 1988
DATE REPORT MAILED: Aug. 27/88

GEOCHEMICAL ANALYSIS CERTIFICATE

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

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

NORANDA EXPLORATION PROJECT 8808-084 334 FILE # 88-3798

SAMPLE#	Ag PPM	As PPM	Au* PPB	Hg PPB
R 39661	.2	2	2	5
R 39662	.2	2	1	5
R 39665	.1	6	1	20
R 39666	.1	2	3	10
R 39667	.1	2	2	10
R 39668	.5	2	1	5
R 39669	.1	3	2	10
R 39670	.1	2	2	5
R 39671	.1	4	1	5
R 39672	.1	2	1	5
R 39673	.1	5	6	5
R 39674	.1	2	2	5
R 39675	.1	2	1	5
R 39726	.4	2	1	10
R 39727	.1	2	1	5
R 39728	.1	2	1	10
R 39729	.1	2	2	10
R 39730	.1	2	4	5
R 39731	.1	21	1	5
R 39732	.3	13	6	10
R 39733	.1	12	12	5
R 39734	.1	4	1	10
R 39735	.1	2	1	10
R 39736	.1	2	1	10
R 39737	.4	6	1	5
R 39738	.1	2	1	10
R 39739	.5	3	1	5
R 39740	.1	10	2	20
R 39741	.4	5	1	5
R 39742	.4	2	1	10
R 39743	.2	2	1	5
R 39744	.1	4	1	10
R 39745	.1	2	1	5
R 40106	.1	2	1	5
R 40107	.2	2	2	5
R 40108	.1	2	1	5
STD C/AU-R	7.1	41	520	1300

Hemlo Expl. (SR)

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

DATE RECEIVED: SEP 6 1988
DATE REPORT MAILED: Sept 15/88

GEOCHEMICAL ANALYSIS CERTIFICATE

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

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

NORANDA EXPLORATION PROJECT 334/8809-025 FILE # 88-4256

SAMPLE#	Ag PPM	As PPM	Au* PPB	Hg PPB
R 40152	.7	11	10	5
R 40153	1.7	8	32	10
R 40154	.1	2	2	10
R 40155	.2	6	4	5
R 40156	.1	8	1	5
R 40157	.2	7	2	5
R 40158	.2	2	6	5
R 40159	.1	7	1	5
STD C/AU-R	6.7	44	520	1300

DANGER CREEK FAULT

GREW CREEK FAULT

BUTTLE CREEK FAULT

HEMLO EXPL. GEOLOGY (MAP 1)

LEGEND

1 ANVIL ALLOCHTONOUS ASSEMBLAGE
(Pennsylvanian and Permian)

1a - thin bedded grey-green jasper, red and apple green chert;

1b - thin bedded foliated grey siliceous tuff (Crystal tuff)

1c - massive siliceous tuff

1d - thin bedded to massive grey to black hornfels (siltstone)

bedding joints foliation × R-39665 rock sample

fault (probable, inferred)

Reference: Geology, S.P. and Irwin, S.E.B. 1987
Geology, Sheldon Lake and Tay River map areas, Yukon Territory;
Geol Surv of Canada Map 19-1987 3 sheets, scale 1:250,000.

Fig. 5

SHEET INDEX

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

McElhanney

REF. NO. 11530-

THE MCELHANNEY GROUP LTD.
200-1166 ALBERNI STREET, VANCOUVER, B.C. (604) 683-8521
COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1967 AT AN APPROXIMATE SCALE OF 1:15000
MAP SCALE 1:10,000 | CONTOUR INTERVAL 10 METRE
DATE COMPILED 10-MARCH-1988 | SHEET NUMBER 6 OF 8

NORANDA EXPLORATION
PROPERTY GEOLOGY
566
HEMLO EXPLORATION - RAN CLAIMS

092SW8

HEMLO EXPL. GEOLOGY (MAP 2)

LEGEND

1 ANVIL ALLOCHTONOUS ASSEMBLAGE
(Pennsylvanian and Permian)

1b - thin bedded foliated grey siliceous tuff (crystal tuff)

bedding Joints foliation R-39665 rock sample

fault (probable, inferred)

Reference

Geology, S.P. and Irwin, S.E.B., 1987
Geology, Sheldon Lake and Toy River map areas, Yukon Territory;
Geol. Survey of Canada, Map 19-1987 3 sheets scale 1:250,000.

PELLY RIVER

PELLY

GREW CREEK FAULT

BUTTLE CREEK FAULT

Buttle Creek

LAKE

CUT LINE

L 5000E L 5200E L 6000E L 6200E L 6400E L 6600E L 6800E L 7000E L 7200E L 7400E L 7600E L 7800E L 8000E L 8200E L 8400E L 8600E

SHEET INDEX

8 7 6 5 4 3 2 1

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

Fig: 6

THE MCELHANNEY GROUP LTD.
2200-1166 ALBERNI STREET, VANCOUVER, B.C. (604) 683-8521
COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1967 AT AN APPROXIMATE SCALE OF 1:15000

MAP SCALE 1:10,000	CONTOUR INTERVAL 10 METRE
DATE COMPILED 10-MARCH 1988	SHEET NUMBER 7 OF 9

REF. NO. 11530-

NORANDA EXPLORATION

PROPERTY GEOLOGY — 567

HEMLO EXPLORATION RAN CLAIMS

092598

HEMLO EXPL. (map 3)

LEGEND - see map 2

SHEET INDEX

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY

McElhanney

THE MCELHANNEY GROUP LTD.
200-1166 ALBERNI STREET, VANCOUVER, B.C. V6E 3Z4 (604) 683-8521
COMPILED FROM AERIAL PHOTOGRAPHS (SCALE 1: 36 000) AT AN APPROXIMATE SCALE OF 1:5000

MAP SCALE 1:10,000 — CONTOUR INTERVAL 2 METRES

DATE COMPILED 18-MARCH 1988 — SHEET NUMBER 5 OF 8

REF. NO. 01530

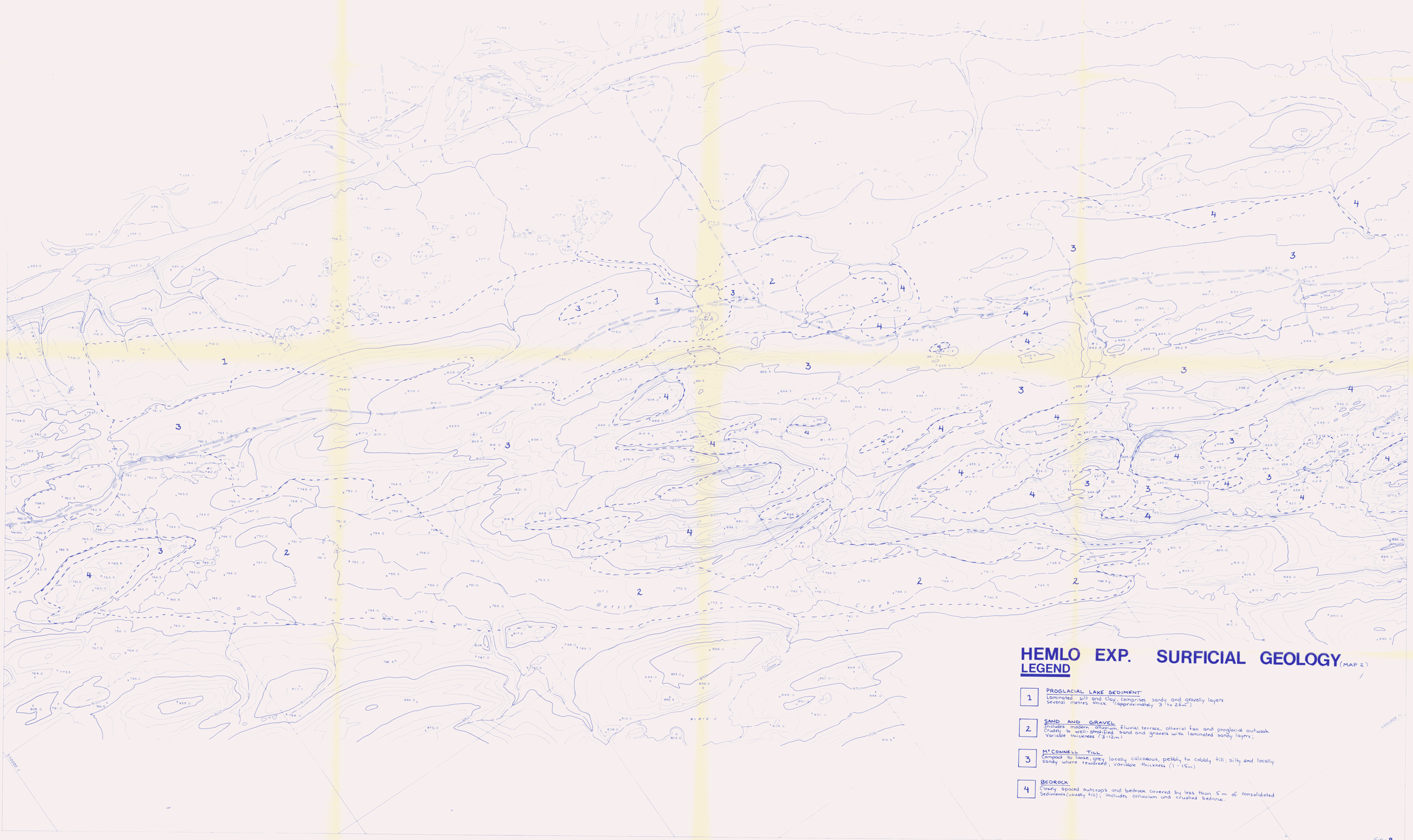
NORANDA EXPLORATION

— SURFICIAL GEOLOGY —

HEMLO EXPLORATION - RAN CLAIMS

568

092598



HEMLO EXP. SURFICIAL GEOLOGY (MAP 2)

LEGEND

1 **PROGLACIAL LAKE SEDIMENT**
Laminated silt and clay, comprises sandy and gravelly layers several metres thick (approximately 3 to 25m)

2 **SAND AND GRAVEL**
Includes modern alluvium, fluvial terrace, alluvial fan and proglacial outwash. Crudely to well-stratified sand and gravels with laminated sandy layers; Variable thickness (3-12m)

3 **McCONNELL TILL**
Compact to loose, grey locally calcareous, pebbly to cobbly till; silty and locally sandy where reworked; Variable thickness (1 - 15m)

4 **BEDROCK**
Closely spaced outcrops and bedrock covered by less than 5m of consolidated sediments (usually till); Includes colluvium and crushed bedrock.

FIG. 8

SHEET INDEX

PRELIMINARY RECONNAISSANCE TYPE MAPPING. SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

McElhanney

REF. NO. 11538

THE McELHANNEY GROUP LTD.
2nd-1166 ALBERNI STREET, VANCOUVER, B.C. (604) 681-9521

COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1967 AT AN APPROXIMATE SCALE OF 1:55000

MAP SCALE 1:10,000	CONTOUR INTERVAL 10 METRE
DATE COMPILED 10-MARCH 1988	SHEET NUMBER 6 OF 8

NORANDA EXPLORATION

— SURFICIAL GEOLOGY — 569

HEMLO EXPLORATION — RAN CLAIMS

D92598

HEMLO EXPL.
SURFICIAL GEOLOGY (map 1)

LEGEND - See map 2

PELLY RIVER

PELLY RIVER

LAKE

Buffie Creek

CUT LINE

Fig 9

SHEET INDEX

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

McElhanney

REF. NO. 11530-

THE MCELHANNEY GROUP LTD.
200-1166 ALBERNI STREET, VANCOUVER, B.C. (604) 683-8521
COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1967
AT AN APPROXIMATE SCALE OF 1:55000

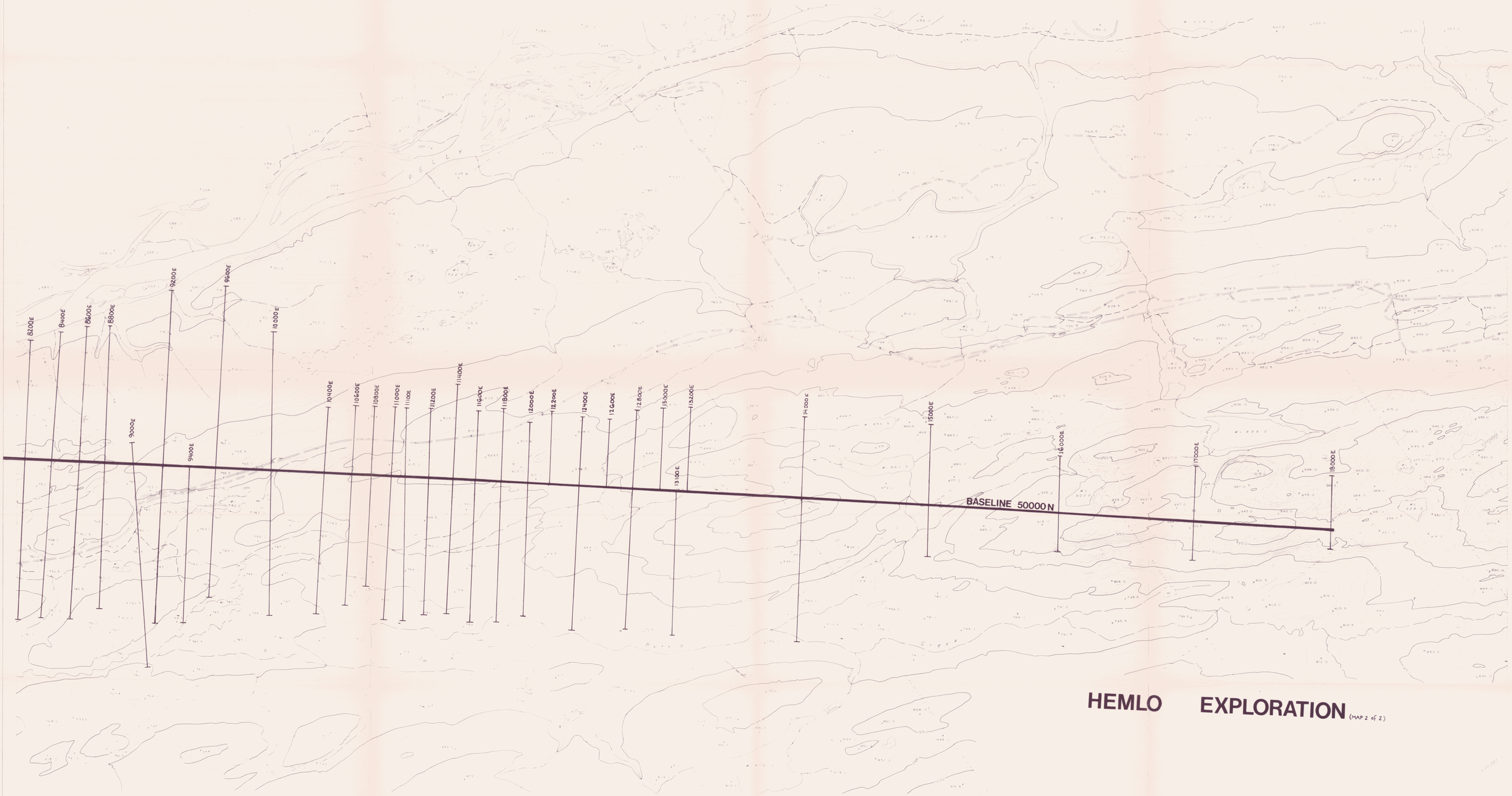
MAP SCALE 1:10,000	CONTOUR INTERVAL 10 METRE
DATE COMPILED 10-MARCH 1988	SHEET NUMBER 7 OF 8

NORANDA EXPLORATION

— SURFICIAL GEOLOGY — 570

HEMLO EXPLORATION - RAN CLAIMS

092598



HEMLO EXPLORATION (MAP 2 of 2)

Fig: 10

SHEET INDEX

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

McElhanney

THE McELHANNEY GROUP LTD.
2nd FLOOR, 4 BENTALL STREET, VANCOUVER, B.C. V6B 2K7 604 682 8521

COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1987
TO AN APPROXIMATE SCALE OF 1:15000

MAP SCALE 1:2,500 CONTOUR INTERVAL 10 METRE

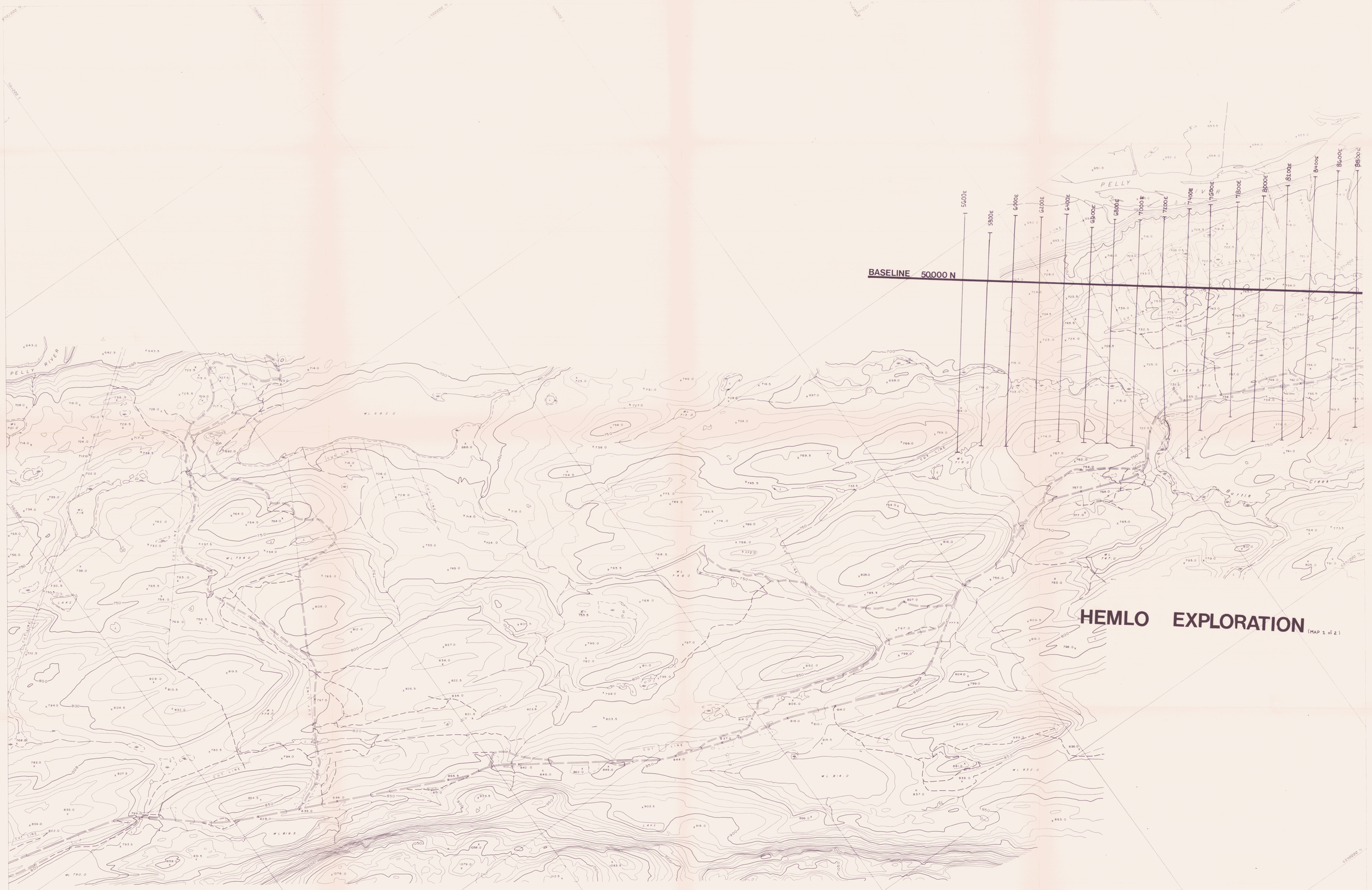
DATE COMPLETED 12 MARCH 1988 SHEET NUMBER 6 OF 8

NORANDA EXPLORATION

BASE MAP – EAST 571

HEMLO RAN CLAIMS

092598



HEMLO EXPLORATION (MAP 1 of 2)

Fig: 11

SHEET INDEX

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

PRELIMINARY RECONNAISSANCE TYPE MAPPING
SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE BUT UNCERTAIN MAP ACCURACY.

McElhanney

REF. NO. 11538-

THE MCELHANNEY GROUP LTD.
200-1166 ALBERNI STREET, VANCOUVER, B.C. (604) 683-8521

COMPILED FROM AERIAL PHOTOGRAPHY TAKEN IN 1967
AT AN APPROXIMATE SCALE OF 1:55000

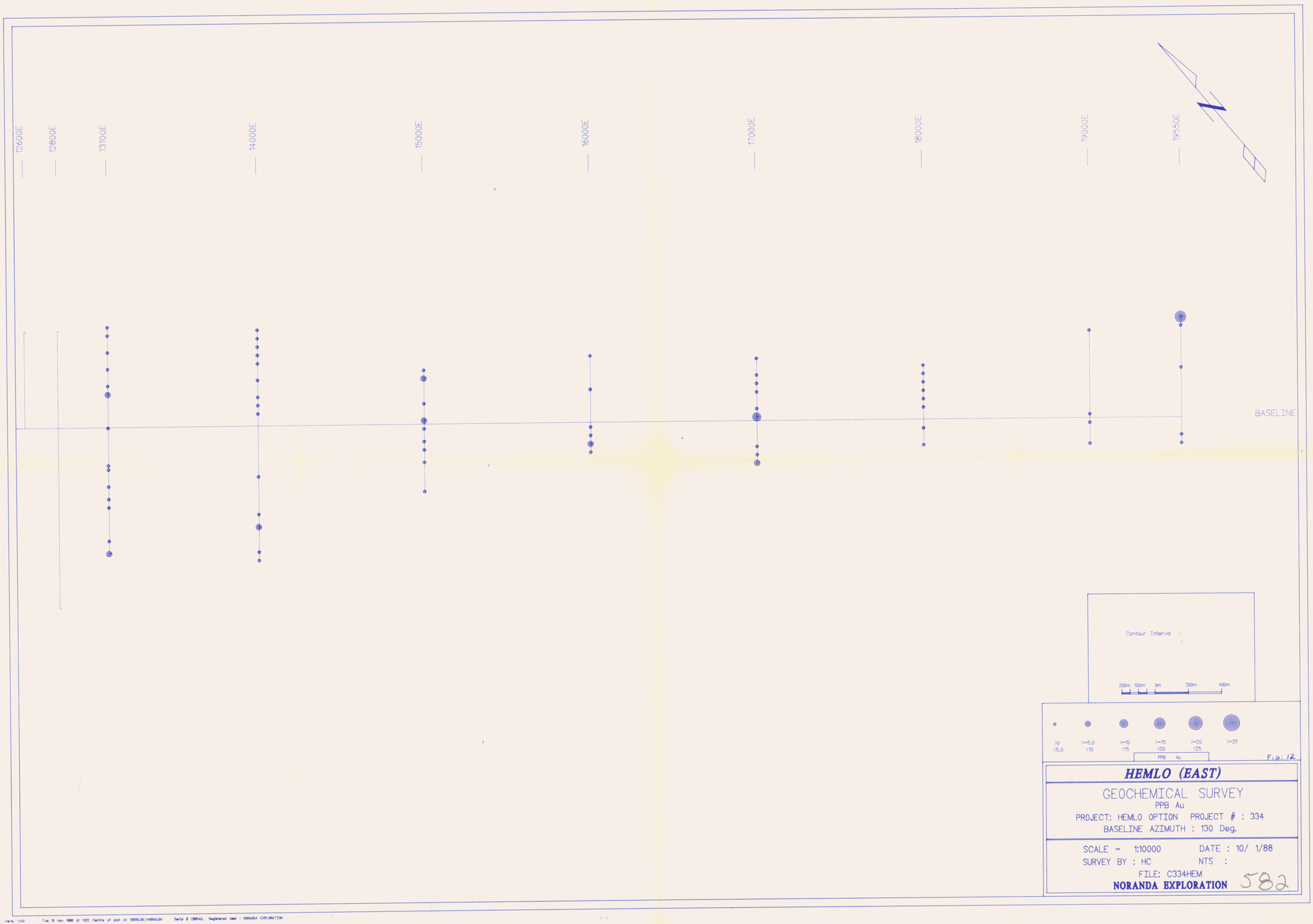
MAP SCALE 1:10,000
CONTOUR INTERVAL 10 METRE
DATE COMPILED 10-MARCH 1988
SHEET NUMBER 7 OF 8

NORANDA EXPLORATION

BASE MAP – WEST 572

HEMLO RAN CLAIMS

092598



092598

Contour Interval :
:

200m 100m 0m 200m 400m

>0 <5.0
>=5.0 <10
>=10 <15
>=15 <20
>=20 <25
>=25

PPB Au

FIG: 12

HEMLO (EAST)

GEOCHEMICAL SURVEY

PPB Au

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION

582

Vers. 1.40 Tue 15 Nov 1988 at 1122 Centre of plot at 16550.0E/49900.0N Serial # 088140, Registered User : NORANDA EXPLORATION

092598

12600E
12800E
13100E
14000E
15000E
16000E
17000E
18000E
19000E
19550E

BASELINE

Contour Interval :

200m 100m 0m 200m 400m

>0 <0.30
>=0.30 <0.40
>=0.40 <0.50
>=0.50 <0.60
>=0.60 <0.70
>=0.70

PPM Ag

FIG 13

HEMLO (EAST)

GEOCHEMICAL SURVEY

PPM Ag

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

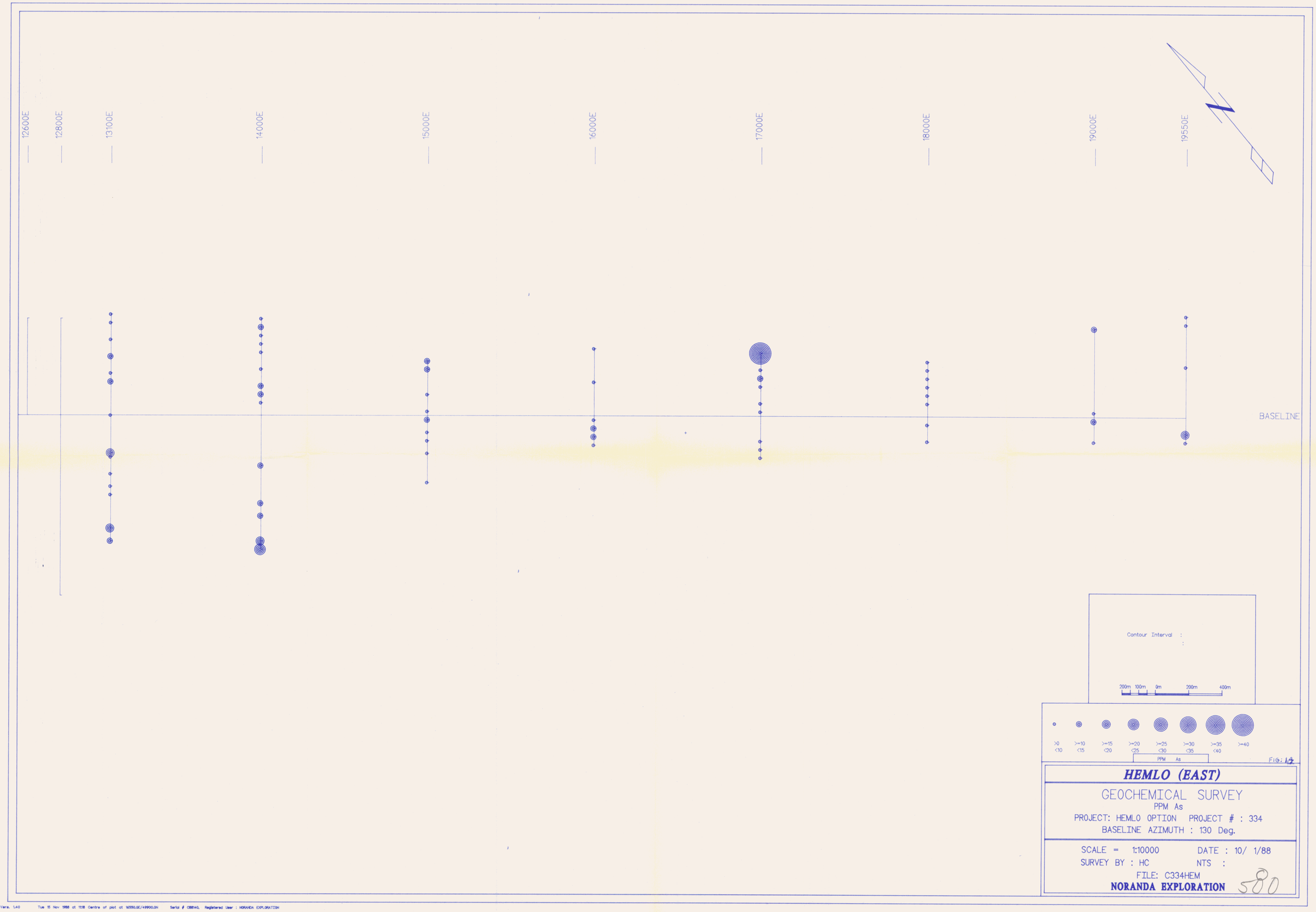
SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION

581

Vers. 1.40 Tue 15 Nov 1988 at 11:13 Centre of plot at 16550.0E/49900.0N Serial # C88140, Registered User : NORANDA EXPLORATION



092518

Contour Interval :

200m 100m 0m 200m 400m

>0 <10 | >=10 <15 | >=15 <20 | >=20 <25 | >=25 <30 | >=30 <35 | >=35 <40 | >=40

PPM As

FIG: 14

HEMLO (EAST)

GEOCHEMICAL SURVEY

PPM As

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION

580

Vers. 1.40 Tue 15 Nov 1988 at 1118 Centre of plot at 16550.0E/49900.0N Serial # 088140, Registered User : NORANDA EXPLORATION

092598

12600E
12800E
13100E
14000E
15000E
16000E
17000E
18000E
19000E
19550E

BASELINE

Contour Interval :
:

200m 100m 0m 200m 400m

>0 <50	>=50 <100	>=100 <150	>=150 <200	>=200 <250	>=250

PPB Hg

FIG: 15

HEMLO (EAST)

GEOCHEMICAL SURVEY

PPB Hg

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION 579

Vers. 1.40 Tue 15 Nov 1988 at 11:24 Centre of plot at 16550.0E/49900.0N Serial # C88140, Registered User : NORANDA EXPLORATION

092598

5600E 5800E 6000E 6100E 6200E 6400E 6600E 6800E 7000E 7100E 7200E 7400E 7600E 7800E 7900E 8000E 8100E 8200E 8400E 8600E 8800E 8900E 9100E 9600E 10100E 10600E 11000E 11100E 11200E 11300E 11400E 11600E 11800E 12000E 12100E 12200E 12400E 12600E

51100N
50700N
50300N
49900N
49500N
49100N
48700N

Contour Interval :

200m 100m 0m 200m 400m

>0 <5.0 | >=5.0 <10 | >=10 <15 | >=15 <20 | >=20 <25 | >=25

PPB Au

Fig. 16

HEMLO (WEST)

GEOCHEMICAL SURVEY

PPB Au

PROJECT: HEMLO OPTION PROJECT # : 334
BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88
SURVEY BY : HC NTS :
FILE: C334HEM

NORANDA EXPLORATION

577

Vers. 1.40 Tue 15 Nov 1988 at 1131 Centre of plot at 8950.0E/49900.0N Serial # C88140, Registered User : NORANDA EXPLORATION

092598

5600E 5800E 6000E 6100E 6200E 6400E 6600E 6800E 7000E 7100E 7200E 7400E 7600E 7800E 7900E 8000E 8100E 8200E 8400E 8600E 8800E 8900E 9100E 9600E 10100E 10600E 11000E 11100E 11200E 11300E 11400E 11600E 11800E 12000E 12100E 12200E 12400E 12600E

51100N
50700N
50300N
49900N
49500N
49100N
48700N

Contour Interval :
:

200m 100m 0m 200m 400m

>0 <0.30	>=0.30 <0.40	>=0.40 <0.50	>=0.50 <0.60	>=0.60 <0.70	>=0.70

PPM Ag

FIG: 17

HEMLO (WEST)

GEOCHEMICAL SURVEY

PPM Ag

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION 578

Vers. 1.40 Tue 15 Nov 1988 at 11:27 Centre of plot at 8950.0E/49900.0N Serial # C88140, Registered User : NORANDA EXPLORATION

092598

5600E 5800E 6000E 6100E 6200E 6400E 6600E 6800E 7000E 7100E 7200E 7400E 7600E 7800E 7900E 8000E 8100E 8200E 8400E 8600E 8800E 8900E 9100E 9600E 10100E 10600E 11000E 11100E 11200E 11300E 11400E 11600E 11800E 12000E 12100E 12200E 12400E 12600E

51100N
50700N
50300N
49900N
49500N
49100N
48700N

Contour Interval :
:

200m 100m 0m 200m 400m

>0 <10 | >=10 <15 | >=15 <20 | >=20 <25 | >=25 <30 | >=30 <35 | >=35 <40 | >=40

PPM As

FIG: 18

HEMLO (WEST)

GEOCHEMICAL SURVEY

PPM As

PROJECT: HEMLO OPTION PROJECT # : 334

BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88

SURVEY BY : HC NTS :

FILE: C334HEM

NORANDA EXPLORATION

576

Vers. 1.40 Tue 15 Nov 1988 at 1129 Centre of plot at 8950.0E/49900.0N Serial # C88140, Registered User : NORANDA EXPLORATION

092598

5600E 5800E 6000E 6100E 6200E 6400E 6600E 6800E 7000E 7100E 7200E 7400E 7600E 7800E 7900E 8000E 8100E 8200E 8400E 8600E 8800E 8900E 9100E 9600E 10100E 10600E 11000E 11100E 11200E 11300E 11400E 11600E 11800E 12000E 12100E 12200E 12400E 12600E

51100N
50700N
50300N
49900N
49500N
49100N
48700N

Contour Interval :
:

200m 100m 0m 200m 400m

>0 <50	>=50 <100	>=100 <150	>=150 <200	>=200 <250	>=250

PPB Hg

FIG: 19

HEMLO (WEST)

GEOCHEMICAL SURVEY

PPB Hg

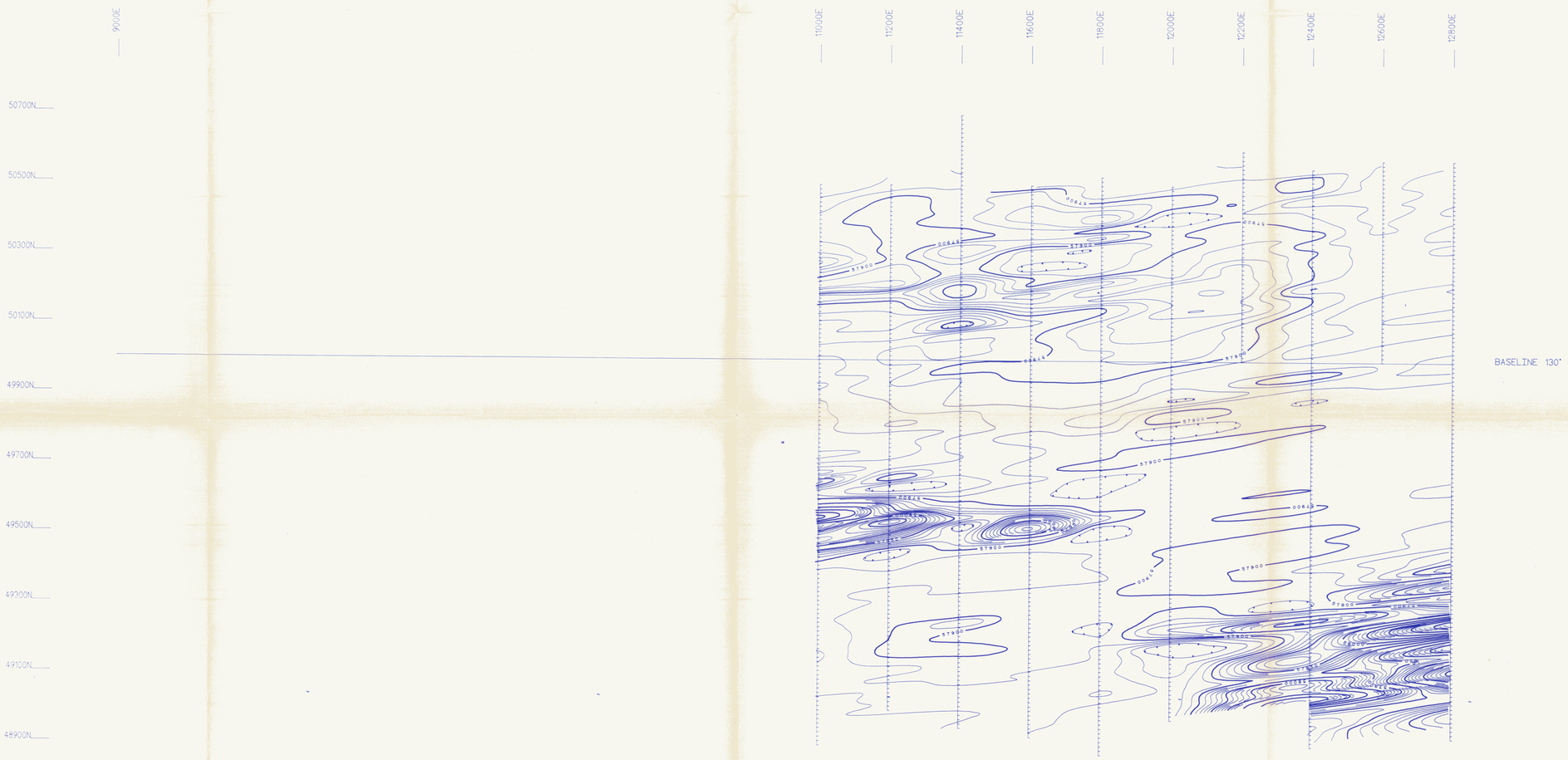
PROJECT: HEMLO OPTION PROJECT # : 334
BASELINE AZIMUTH : 130 Deg.

SCALE = 1:10000 DATE : 10/ 1/88
SURVEY BY : HC NTS :
FILE: C334HEM

NORANDA EXPLORATION

575

Vers. 1.40 Tue 15 Nov 1988 at 1132 Centre of plot at 8950.0E/49900.0N Serial # 088140, Registered User : NORANDA EXPLORATION



Instrument : OMNI IV
Field : TOTAL
Datum : 0.0 nT
Contour Interval : 10.0 nT
Conductor Axis :

100m 50m 0m 100m 200m

FIG:20

HEMLO EAST GRID

MAGNETOMETER SURVEY

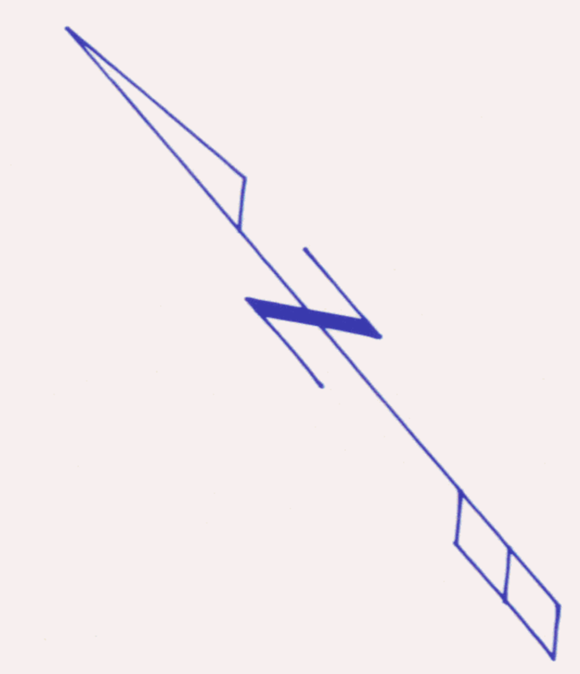
PROJECT: HEMLO PROJECT PROJECT # : 334
BASELINE AZIMUTH : 130 Deg.

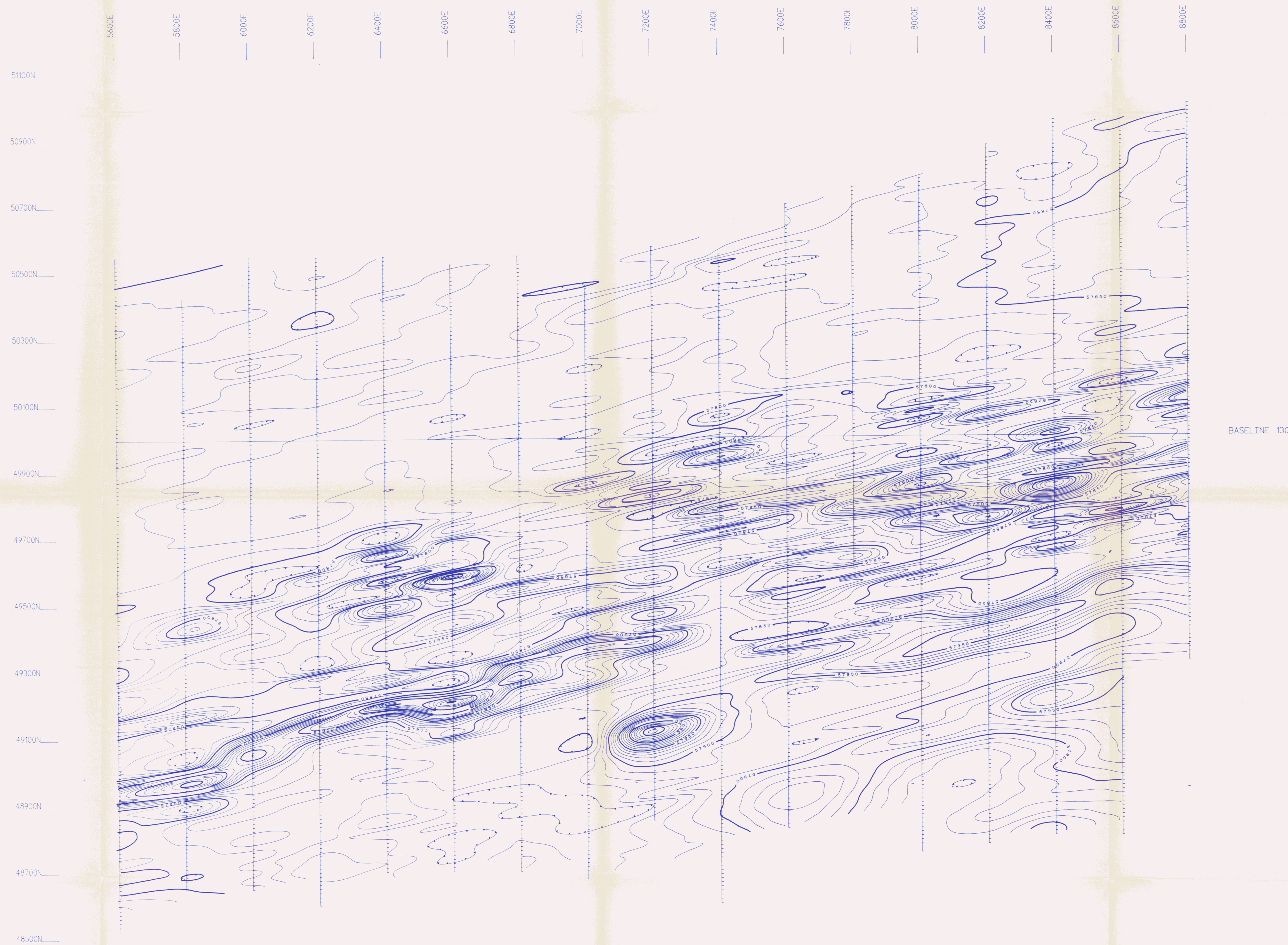
SCALE = 1: 5000 DATE : 8/ 1/88
SURVEY BY : TL/SK NTS : 105K/3
FILE: M334EAS
NORANDA EXPLORATION

573

092598

Vers. 4.11 Thu 25 Aug 1988 at 10:50 Centre of plot at 53900.0E/47750.0N
Serial # 488941 Registered User : NORANDA EXPLORATION





Instrument :OMNI IV
Field : TOTAL
Datum : 0.0 nT

Contour Interval : 10.0 nT

Conductor Axis :

100m 50m 0m 100m 200m

FIG:21

HEMLO WEST GRID

MAGNETOMETER SURVEY

PROJECT: HEMLO PROJECT PROJECT # : 334
BASELINE AZIMUTH : 130 Deg.

SCALE = 1: 5000 DATE : 8/ 1/88
SURVEY BY : TL/SK NTS : 105K/3
FILE: M334WES
NORANDA EXPLORATION 574

Vers. 4.11 Thu 25 Aug 1988 at 10:39 Centre of plot at 7200.0E/49762.5N Serial # M88140 Registered User : NORANDA EXPLORATION

092598