Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
Geological, Geochemical, Geophysical, Drilling	$465,486

AUTHOR(S) H.C. Boyle, H. Limion SIGNATURE(S) H. Craig Boyle, H. Limion

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED Not filed YEAR OF WORK 1987

PROPERTY NAME(S) Similkameen

COMMODITIES PRESENT Cu Au

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION Similkameen NTS 92H/8W

LATITUDE 49° 20' LONGITUDE 102° 29'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

See Table I in report - too lengthy to list here.

OWNER(S)

(1) Newmont Mines Limited (2)

MAILING ADDRESS

P.O. Box 520
Princeton, B.C. V0X 1W0

OPERATOR(S) (that is, Company paying for the work)

(1) Newmont Exploration of Canada Limited (2)

MAILING ADDRESS

900 - 808 West Hastings Street
Vancouver, B.C. V6C 3A4

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The Voigt Stock, one of the Copper Mountain Intrusions of late Triassic age, hosts a Cu Au deposit 800m long, 2 to 30m wide. This vertical deposit is cut by post-mineral felsite dykes that divide it into a number of lenses. The mineralization is chalcopyrite-pyrite with appreciable specular hematite and minor magnetite. Host structure is a breccia and vein-stockwork. K-feldspar epidote calcite alteration.

REFERENCES TO PREVIOUS WORK Preto (1972): Geology of Copper Mountain, B.C. EMPR Bulletin 59.

(over)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground	1" = 100', 125 hectares	See Table I in report	84,756
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	75,040 m	" " " " "	
Electromagnetic			34,340
Induced Polarization	28,133 m	" " " " "	
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ....)			
Soil	1729 for Cu Au	" " " " "	
Silt			45,482
Rock	1157 for Cu Au	" " " " "	
Other			
DRILLING (total metres; number of holes, size)			
Core	2592m, 19 holes, NQ size	" " " " "	213,410
Non-core			
RELATED TECHNICAL			
Sampling/assaying	604 core samples for Cu Au		
Petrographic	(costs in drilling)		
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)	75,040 m	" " " " "	25,328
Road, local access (kilometres)			
Trench (metres)	3,155 m	" " " " "	62,170
Underground (metres)			
		TOTAL COST	465,486

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted ..... Date	Rept. No.			Information Class

REPORT ON THE 1987 WORK PROGRAM ON THE SIMILKAMEEN PROJECT

SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA

N.T.S. 92H/7E & 8W

LATITUDE 49° 20.4', LONGITUDE 102° 29.2'

CLAIM OWNER:	Newmont Mines Limited
OPERATOR:	Newmont Exploration of Canada Limited
WORK DONE:	May 15 to December 6, 1987
REPORT BY:	H. C. Boyle, P.Eng. H. Limion, P.Eng. Newmont Exploration of Canada Limited Vancouver, B.C.
DATE:	February 20, 1988

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INTRODUCTION

Purpose

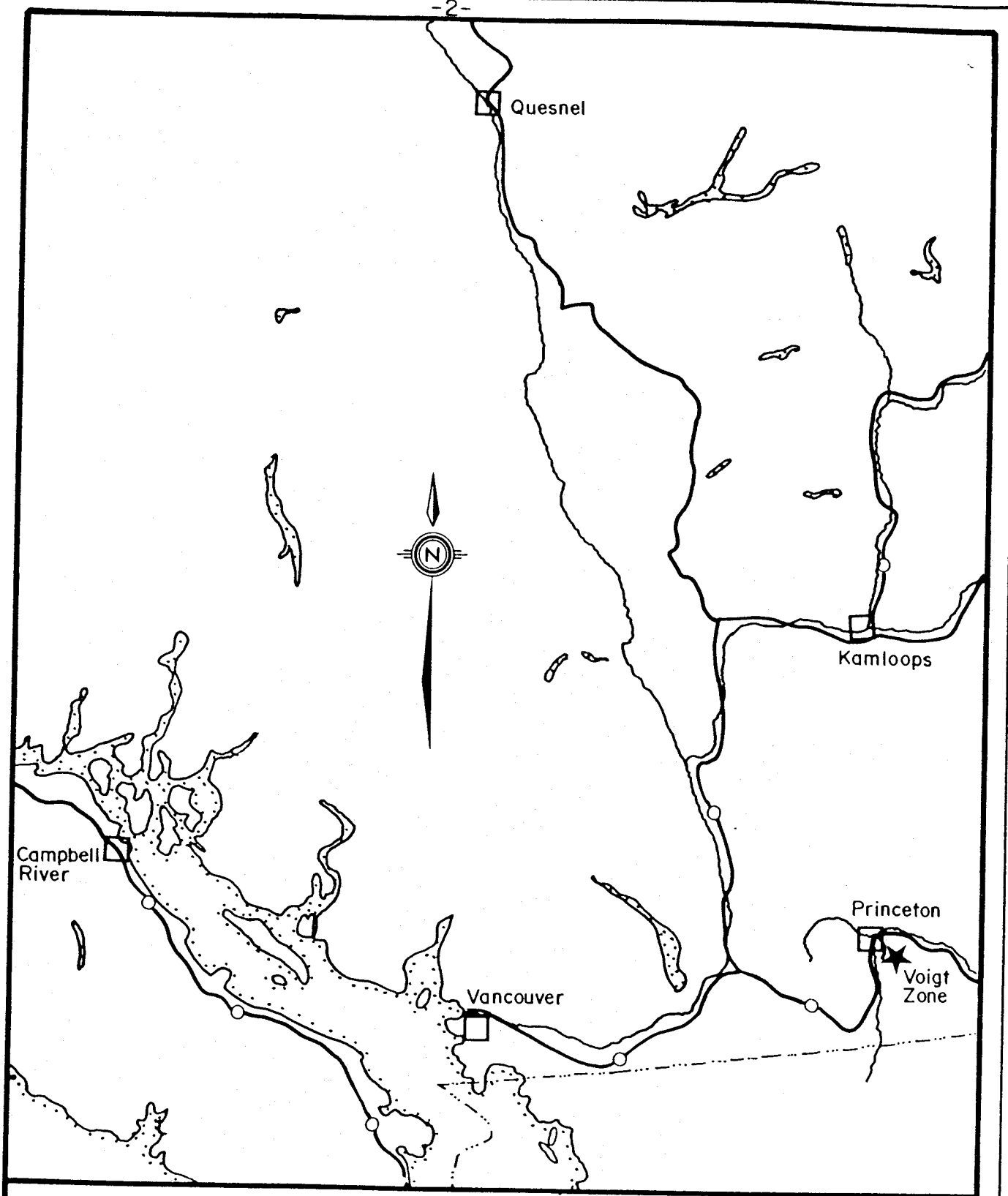
The purpose of this report is to document the results of an exploraiton program carried out during 1987 on a portion of the Similkameen mine property. Property owner is Newmont Mines Limited; operator of the exploration program is Newmont Exploration of Canada Limited.

Most of the work was concentrated on and around long-known mineralized deposits named Automatic, Frisco and No. 14, collectively referred to as the Voigt Zone. The objective of the work is to expand reserves here to the point where the Voigt Zone might be profitably mined in conjunction with the larger orebodies 2.5 km away that constitute the present mining operation. The Voigt Zone carries a significantly greater gold content than the other copper deposits in the Copper Mountain district.

Location, Access and Topography

The area covered by the exploration program is located about 15 km south of the town of Princeton. It extends eastward from the canyon of the Similkameen River through Lost Horse Gulch, across Wolf Creek and up the western slope of the ridge separating Wolf and Willis Creeks.

The property is bisected by the paved Copper Mountain road and old logging and mining exploration roads provide excellent four-wheel drive access to most of the property.



NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE

Drawn by	Date	Revised by	Date
H.L.	Dec. 87		

LOCATION MAP

Twp. of

NTS.: 92-H-7and 8

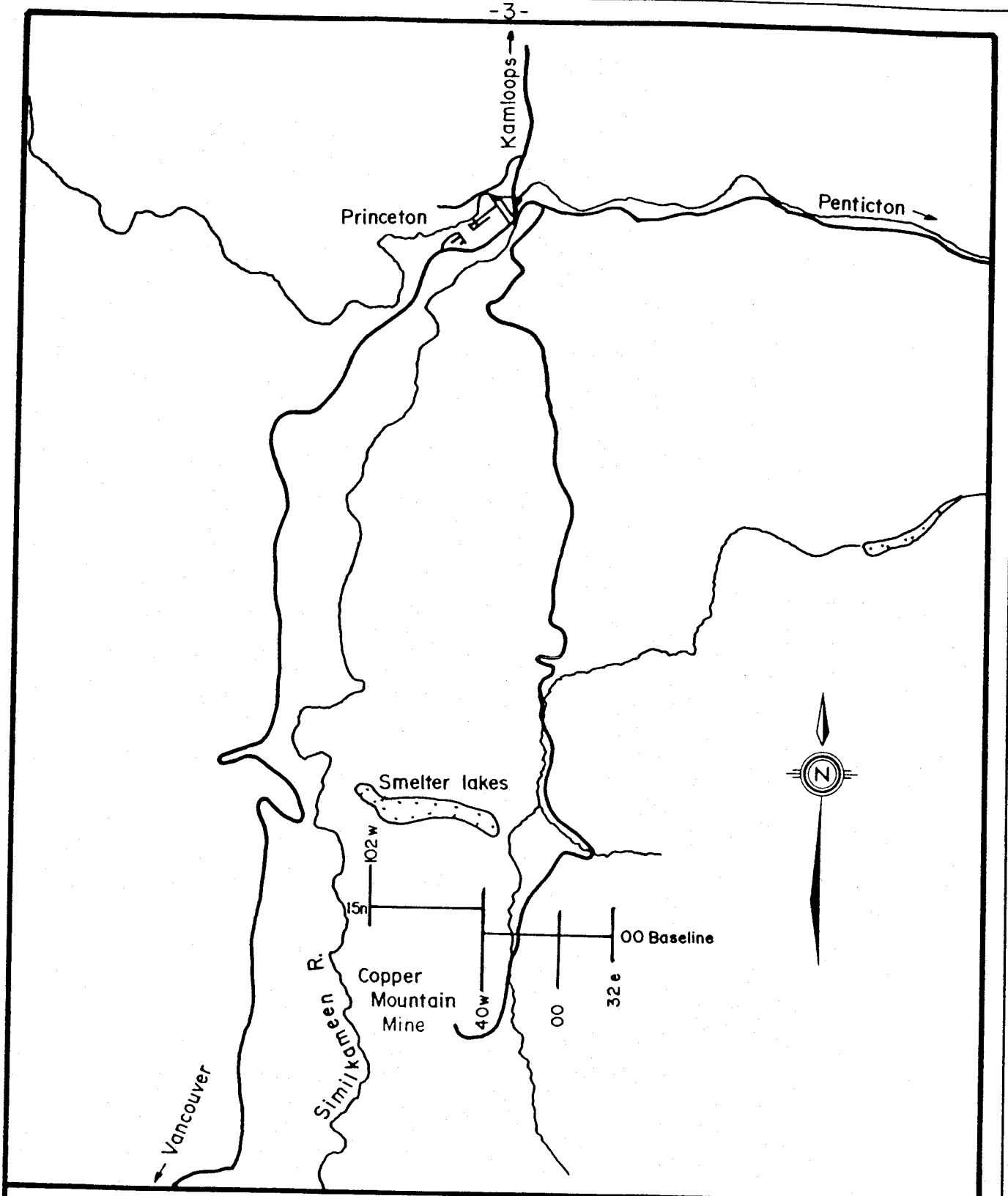
Project Chief:

Scale: 1:2,500,000

Province: B.C.

Date: Dec. 87

Plate: Fig. 1



NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE

Drawn by	Date	Revised by	Date
H.L.	Dec. 87		

GRID LOCATION

Twp. of

NTS.: 92 · H · 7 & 8

Project Chief:

Scale: 1: 100,000

Province: B.C.

Date: Dec. 87

Plate: Fig. 2

Elevations vary from 2500' at the bottom of the Similkameen Canyon to about 4200' in the area of Copper Mountain and eastern limit of the property. The terrain is characterized by subdued rolling mountain tops and generally gentle slopes interrupted by the steep walled, north-south Similkameen Canyon and the east-west Lost Horse Gulch and Smelter Lake valleys.

Most of the area is forest covered with jack pine and fir on the dryer slopes and ridge crests, and poplar in the damp lowland flats.

Outcrop is moderate to poor and averages about 10% overall through the area mapped. It is concentrated in local north-south trending rises separated by grassy covered slopes and damp flats. Geologic mapping was assisted by extensive backhoe trenching.

Claims

The claims upon which work was done and the type of work are listed in the following Table I.

History

Most of these claims, and certainly the core claims, were staked around the beginning of the century and have seen periodic exploration since then. No production has taken place from this portion of the property. All the ground is presently held by Newmont Mines Limited. About half the claims in the Lost Horse Gulch area and a handful of those over the Voigt Stock were purchased from Granby Mining along with the Copper Mountain Mine in 1967. Most of the remaining claims were acquired from Nufort Resources Inc. in 1979. Some ground around the edges was staked since 1979, and a block of 41 units was staked on the eastern boundary in July of 1987.

TABLE 1

CLAIMS AND WORK SUMMARY

CLAIM	GEOLOGIC MAPPING	GEOCHEMISTRY SOIL	GEOPHYSICS I.P.	GEOPHYSICS MAG	TRENCHING	DRILLING
No.15		x		x		
Brian 'H' Fr		x		x		
Oronoco		x		x		
Sunlight		x		x		
Diamond Dot		x		x		
Dot Fr		x		x		
Queen A Fr		x		x		
Adelaid Fr		x		x		
Daisy		x		x		
St. Elmo		x		x		
Queen Bee Fr		x		x		
Alabama		x		x		
Lone Star		x		x		
June Bug		x		x		
Margaret		x		x		
Great Western		x		x		
No. 5		x		x		
No. 32		x		x		
Virginia		x	x	x		
No. 18 Fr		x	x	x		
No. 18		x	x	x		
L1776		x		x		
Frieda		x		x		
No. 31		x	x	x		
Automatic Fr	x	x	x	x		
Nelson Fr		x	x	x		
Olympia		x	x	x		
New Wolf Fr		x	x	x		
Robert Byrant	x	x	x	x		
No. 1	x	x	x	x	x	x
Frisco	x	x	x	x	x	x
RS	x	x	x	x	x	
Queen 'D' Fr	x	x	x	x	x	x
L3348	x	x	x	x		
No. 14	x	x	x	x	x	x
No. 33	x	x	x	x	x	x
Queen 'E' Fr	x	x	x	x	x	
No. 51 Fr		x		x		
No. 71 Fr		x		x		
L59		x	x	x		
L60		x	x	x		
No. 69		x	x	x		
Queen 'J' Fr	x	x	x	x		
Queen H Fr		x	x	x		
Alpine Fr	x	x	x	x		
Alpine No. 1	x	x	x	x		
L3346		x	x	x		
Queen 'G' Fr		x	x	x	x	

Principal periods of exploration activity have been:

1912-13 - excavation of the Automatic Adit and No. 14 shaft
- surface and underground diamond drilling
- trenching and surface mapping

1919 - underground sampling and surface diamond drilling by Consolidated Mining and Smelting Co.

1927 - surface diamond drilling by C.M.&S.

1952(?) - underground diamond drilling in the Automatic Adit by Granby Mining

1965-1973 - geophysical surveys, mapping, trenching and chip sampling surface diamond drilling by Granby Mining, Newmont Mining, Cumont Mines and Nufort Resources.

Work Summary

The exploration program extended from late May to early December under the field supervision of project geologist C. Boyle. Geophysical surveys were directed by H. Limion, who is also the author of the chapter on geophysics. Management supervision was provided by G. Delane and T. Macauley. The field crew fluctuated over the season from 5 to 11 employees, plus another 2 to 6 contractor's employees. Survey control for the work was provided by a chain and compass grid with east-west base lines and north-south cross lines from an origin point at the shaft on the No. 14 Zone at the east end of the Voigt deposits. A transit survey was used to locate the collars of diamond drill holes (but not bearings) and the trenches. Note that all measurements on this project are in Imperial units (feet) rather

than metric because the voluminous amount of older work (all done in Imperial units) has required all work done on this property retain the same system. Particulars of work done are summarized below:

Linecutting - 246,200' (75,040m) of grid line; some cut out for IP, the remainder just chained and flagged for soil sampling. Some done by Newmont employees, some contracted to Amex Exploraiton.

Geologic Mapping - of outcrops and trenches was done in detail to trace out the Voigt Zone, to investigate geochemical and geophysical anomalies, and to generally prospect the whole area of interest. Mapping was at a scale of 1" = 40', which was reduced to 1" = 100' for report purposes. An area of 4200' by 3200' was covered, comprising 308 acres (125 hectares).

Geochemistry - A total of 472 B horizon soil samples were analyzed for Cu and Au, a further 1146 samples were analyzed for Au only, and 111 mull (Ao horizon) were analyzed for Au, for a total of 1729 soil samples. Most of the bedrock in trenches was rock chip sampled in 5 to 10 foot lengths for Cu and Au, a total of 1157 samples being analyzed.

Geophysics - The entire 246,200' (75,040m) of grid was covered by magnetometer producing 7913 readings. The IP survey covered 92,300' (28,133m) producing 3380 readings.

Trenching - The program from August to November was carried out under contract by Bud Blows of Princeton, using a Case 450B tractor and backhoe excavator. Trenches were 2' to 5' wide, up to 12' deep, and an aggregate of 10,350' (3155m) in length. Most were successful in reaching bedrock. Trenches floors were cleaned out by shovel and broom to prepare for mapping and sampling.

Drilling - Nineteen NQ diamond drill holes totalling 8505' (2592m) were drilled under contract by R. Beaupre of Princeton. Of this footage, 4837' were split and 604 samples sent for Cu Au assay. Core is stored on the property at the old Ingerbelle office.

GEOLOGY

General Geology

The geology of the area can be summarized from the B.C. Dept. of Mines and Petroleum Resources Bulletin 59, Geology of Copper Mountain by V.A. Preto, 1972. The work completed this year encompasses an east-west belt from the western end of Lost Horse Gulch to the eastern side of the Voigt Stock. The area is underlain on its southern margin by andesite flows and breccias of the Upper Triassic Wolf Creek Formation. To the northeast , these volcanics are intruded by the Upper Triassic Voigt Stock, of dioritic composition. To the northwest the volcanics are intruded by the highly altered and compositionally variable Lost Horse Intrusive Complex. It is considered to be mostly monzonitic with syenitic and dioritic phases, due in part to hydrothermal metasomatism.

Cutting through all these units are post-mineral north-south felsite Mine dykes (a locally applied term) and less numerous grey andesitic dykes. Unconformably overlying these units to the north of Lost Horse Gulch and northwest of the Voigt Stock are vary-coloured andesite and basalt flows, breccias and tuffs of the lower volcanic formation of the middle Eocene Princeton Group.

Mapping was restricted to the Voigt Stock in the east, about 1-1/2 miles to the northeast of the Copper Mountain Mine. Only limited prospecting and rock chip sampling in old trenches was carried out in Lost Horse Gulch.

Property Geology

The geologic mapping was restricted to a portion of the grid over the Voigt Stock and is summarized in Map 1. The area is largely underlain by the Voigt Stock with Wolf Creek volcanics occurring only in the southern limit of the area. Cutting the stock are north-south trending felsite Mine dykes and to a lesser extent, later andesite dykes.

Rock Types

Wolf Creek Volcanics
Triassic
Unit 2 - dark to medium green, fine to medium grained, massive to agglomerated pyroxene-hornblende porphyry andesite. It is generally fractured, and altered, with varying degrees of albitization and saussuritization.

Voigt Stock
Triassic
Unit 2 - grey green to dark grey, fine to medium grained diorite with an interlocking texture of plagioclase pyroxene and biotite. Alteration to epidote and K-spar is associated with fractures over wide areas.

Mine Dykes
U Cretaceous-L Tertiary
Unit 3 - variable from fine grained and aphanitic tan massive or banded felsites to quartz, feldspar and quartz-feldspar porphyries with phenocrysts up to 5mm long in a light to dark grey aphanitic groundmass.

Andesite Dykes
Tertiary
Unit 4 - very fine grained to aphanitic, dark grey or black, massive andesite that frequently appears like a very well indurated siltstone.

Previous work has clearly established that the Wolf Creek volcanics have been intruded by the Voigt diorite stock, and both have been cut by the felsite mine dykes. This is also clear from field relationships established in the mapping. The relative age of the andesite dykes with respect to the mine dykes is less clear from current work, but certainly a post mine dyke age does not conflict with any observations made in the field.

Structures

The structure of the mapped area is dominated by the east-west orientation of the Voigt Zone mineralization and the north-south orientation of the Mine dykes. The Voigt Zone occupies an east-westerly zone along the base line, and is traceable for 2600', from L4E to L22W. It appears to be near vertical with a slightly sinuous aspect. Surface mapping and drill intercepts indicate significant changes, from a lenticular

breccia zone to anastomosing vein network with pinch and swell characteristics. Little muddy gouge was noted but the zone occurs within a broader zone of altered, punky diorite.

Minor veining and shearing was noted throughout the map area with a variety of orientations. Several areas were located where east-west trends were clear, and occasionally well developed, as at 600' N on L4W, but none of these approached the main zone for persistency or strength.

The other prominent feature is the north-south felsite Mine dykes. They are steeply easterly dipping to vertical, and like at Copper Mountain, split and coalesce, enclosing lenses of diorite. They are clearly post mineralization, cutting through the Voigt Zone, creating serious dilution problems, with thickness varying from a few feet to several 10's of feet. Surface mapping indicates they occupy an aggregate of at least 420' across the zone or about 20% of its length. This does not include those areas obscured by overburden.

Minor narrow andesite dykes also show a tendency towards a north-south orientation and occasionally a close association with the Mine dykes. This suggests that these reflect an underlying pattern of structural weakness in the north-south direction. This impression is reinforced by an examination of the surface drainage pattern in the immediate area, i.e. Wolf Creek, Verde Creek, and the creek draining Victor Lake.

Later east-west faults appear to have offset the felsite and andesite dykes. These may be a minor reactivation of fault zones associated with the Voigt Zone.

Alteration

Alteration is marked by the development of light yellowish-green epidote and salmon-pink K-feldspar. The epidote occurs as pervasive alteration over areas up to 100' in diameter or more, and associated with veining, fracturing and faulting.

K-feldspar alteration is clearly associated with veining fracturing and faulting as it is most frequently seen as alteration envelopes around these features. These envelopes are generally an inch or less thick but occasionally broader. When numerous parallel fractures or a network of fractures occur, the K-feldspar alteration coalesce so that it becomes pervasive. Diorite clasts within breccia bodies are also seen to have K-feldspar alteration rims.

Veining is almost exclusively light grey to pinkish grey spary calcite. No quartz was noted during this season's work though other mappers report its presence. The above mentioned epidote and K-feldspar almost invariably accompany these calcite veins, and pervasive calcite is also a feature associated with the epidote and K-feldspar.

Bleaching, an indication of albitization, was also seen but not routinely noted in mapping.

MINERALIZATION

Voigt Zone

Mineralization in the Voigt Zone consists of specular hematite, magnetite, pyrite, pyrrhotite and chalcopyrite, with a calcite gangue and epidote K-feldspar calcite alteration halo.

It occurs in a well defined strongly expressed shear zone alone an east-west trend through the dioritic Voigt Stock. The zone is traceable for at least 2600', from L4E to L22W on the grid and varies from a few feet to approximately 100' in width.

Gold is carried with this mineralization but its mode of occurrence is unknown. It shows a general pattern of association with the Voigt Zone, but varies widely within it as compared to copper. Exceptionally high values in one is usually reflected in higher than average values in the other, and background in one generally means background in the other, though exceptions for both metals can be found.

The style of mineralization in the Voigt Zone also shows variation along its strike length and with depth. Between L4E and L8W the Zone contains a lens of brecciated mineralization consisting of rounded to angular clasts of K-feldspar altered diorite in a black massive matrix of specularite with varying amounts of euhedral and massive pyrite, pyrrhotite, chalcopyrite and calcite. The style of the brecciation is progressive from a crackle, with little or no clast rotation to a breccia with clasts rounded, clearly rotated and floating in the matrix. The clasts are frequently veined with mineralization and carry disseminated sulphides.

The breccia mineralization is enclosed by and transitional to an anastomosing vein network system along the strike of the zone and apparently to depth as well, The mineralogy of the vein system is similar to the breccia and the intervening wall rock is heavily altered. The alteration leaves the diorite quite dark colored and soft suggesting chloritization and comminution associated with shearing. At surface this gives a weathered punky appearance to the diorite.

Numerous cross trenches through the zone as well as several diamond drill intersections have returned grades ranging between 0.2% and 1% Cu, and 0.01 and 0.1 oz/ton Au. Overall, it would appear that the zone is averaging something less than 0.5% Cu and 0.05 oz/ton Au. As might be expected, better grade pockets occur through the zone and are associated with the narrow hematite breccia while the broad network of anastomosing veins tends to produce lower Cu/Au grades.

Other Mineralization

Other areas of mineralization are known either from historical records or as a consequence of prospecting and trenching. All of these zones have proved to be small and discontinuous though very similar in style and mineralization to the Voigt Zone. The one exposed in the backhoe trench at 600N on L4W shows the most similarity to the hematite veins in altered diorite and it did produce some relative anomalous values. But it could not be extended laterally and when undercut with a diamond drill hole, it only returned 0.10% Cu and 0.029 oz/ton Au over 10'.

Most other areas of mineralization are discrete calcite veins with hematite and sulphides that are generally a foot or much less in width. They occasionally gave a good assay but are too small to indicate an exploration target.

The southern contact of the stock with the volcanics does hold some possibilities however. Where it has been exposed in trenching and in some outcrops, the andesites can carry abundant sulphides, principally pyrite and pyrrhotite with very minor chalcopyrite. Chip samples in this area have yielded

anomalous values in gold and copper, though they are far below economic ranges. The area was to be tested with a drill hole, but unfortunately the hole was drilled entirely in barren felite dyke.

Some old showings were examined and sampled in Lost Horse Gulch, on the Virginia Claim and the Diamond Dot Claim. Values close to economic were obtained in copper with interesting values in gold (see Fig. 20). However, additional work in both areas as well as throughout the Lost Horse Gulch is required before their significance can be established.

GEOCHEMISTRY

Soil Geochemistry - General

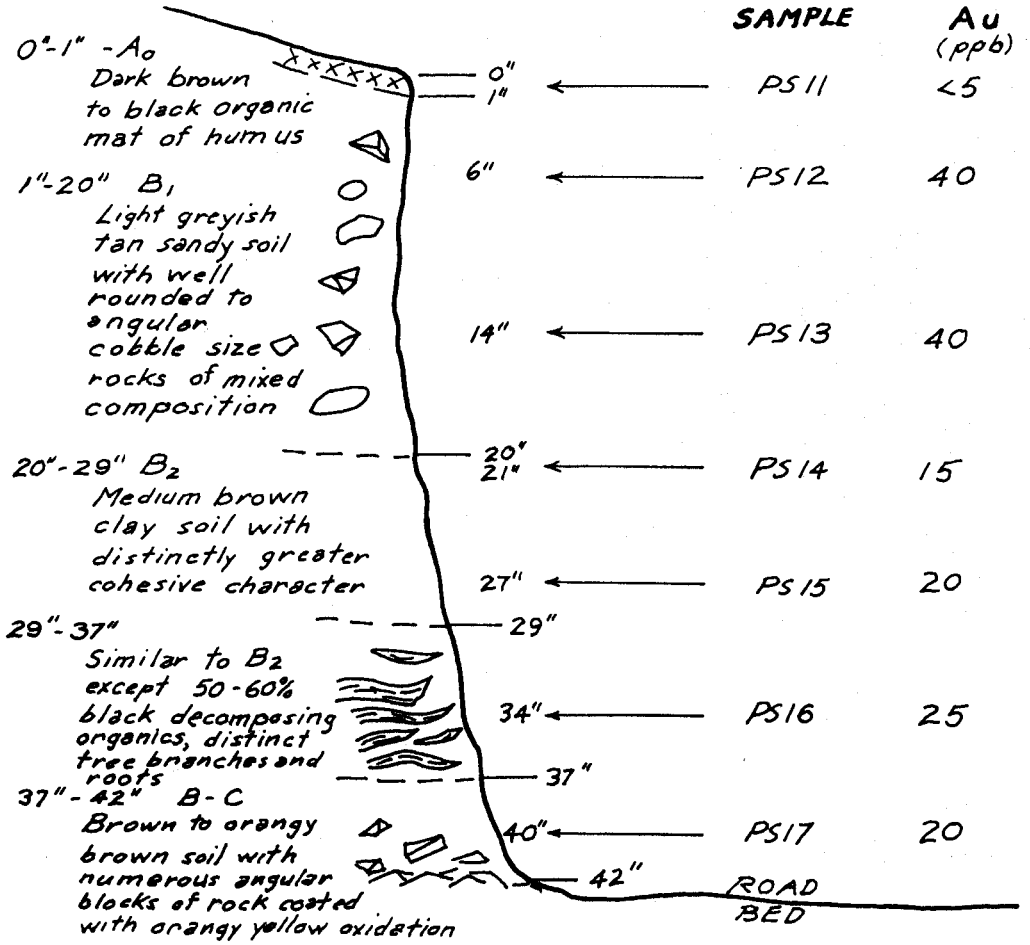
A soil survey was conducted over the entire survey grid. It was intended to delineate the known mineralization along the Voigt Zone, locate possible new zones of mineralization within the Voigt Stock, and establish a basis for evaluating the potential of the Lost Horse Gulch area for gold. Samples were taken during July and August using a mattock and stainless steel trowel. They were taken between a depth of 4 to 16 inches to sample the light brown sandy "B" horizon soils. In many cases, however, surface weathering was deep and the only sample obtained was from the leached grey to grey-brown "dusty" "A" horizon soils. The samples were placed in a clearly identified Kraft paper envelope and sent to Chemex Labs Ltd. in North Vancouver for analysis. At Chemex the samples were dried and sieved to a -80 mesh fraction. For copper a one gram portion of this fraction is digested for two hours using hot 70% perchloric acid and concentrated nitric acid. The sample volume is adjusted to 25 mm and analyzed using an atomic absorption spectrometer. For

gold, a ten gram sample is fused and analyzed using fire assay procedures with an atomic absorption finish. The results of the soil geochemical survey are plotted on Maps 3 (Voigt Zone) and Map 4 (Lost Horse Gulch).

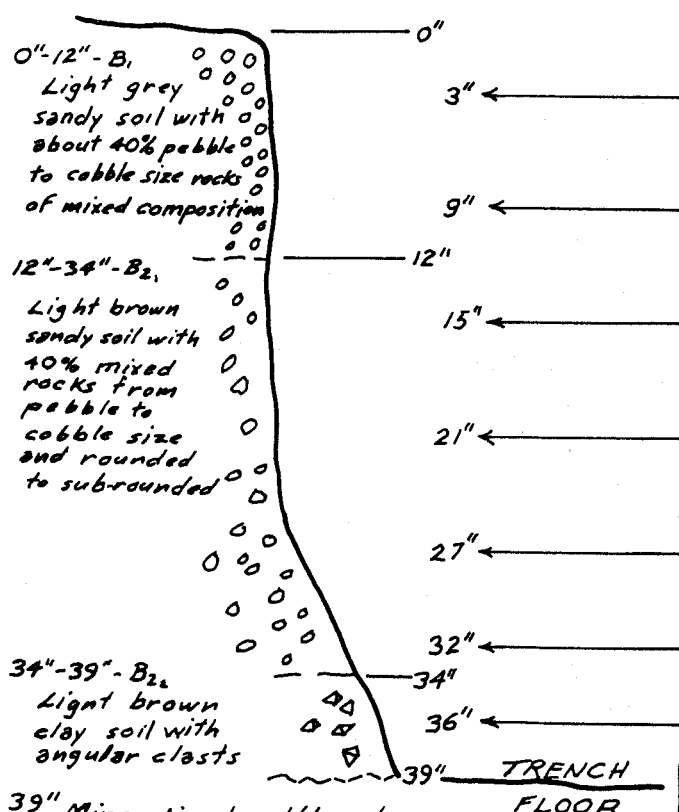
Voigt Zone

On Map 3, the area is almost entirely underlain by the Voigt Stock diorite with only a small portion of the grid crossing the southern contact into Wolf Creek Volcanics at approximately 2500S. Samples were collected every 100' on lines spaced 400' apart. On this plan, gold is plotted to the right of the sample point and copper to the left. (The values in brackets refer to mull samples - see below). Two sites were profile-sampled as well, one within the mineralized zone and one outside it to the south. The results of these are presented in Fig. .

The soil sample results for gold show only a partial response to the Voigt Zone mineralization. At the western end of the zone, on L16W and L20W, a handful of values between 30 and 300 ppb Au reflect the presence of the vein network style of mineralization. Deep overburden below L12W appears to have effectively masked any possible anomaly. The 280 ppb Au on L8W at 200' N and the 75 ppb Au on L00 at 200' N probably reflects some down slope dispersion of the mineralization, either by mechanical or hydromorphic means, as they are both well to the north of the actual zone. In fact, except for these two values, the better breccia style mineralization hardly shows up at all. The profile samples presented in Fig. 3, illustrate that gold up to 40 ppb can be present in soils over essentially barren ground. Thus the 35 and 20 ppb Au on L4W at the base line and 100'N respectively are not especially significant values, and the Voigt Zone is not well reflected in gold in soils east of L16W.



SAMPLE	Au (ppb)	Ag (ppm)	Cu (ppm)
PS11	<5	<0.2	69
PS12	40	<0.2	85
PS13	40	<0.2	190
PS14	15	<0.2	831
PS15	20	<0.2	1295
PS16	25	<0.2	2780
PS17	20	<0.2	1370



SAMPLE	Au (ppb)	Ag (ppm)	Cu (ppm)
PS21	<5	<0.2	64
PS22	30	<0.2	102
PS23	260	<0.2	233
PS24	85	<0.2	261
PS25	135	<0.2	313
PS26	470	<0.2	887
PS27	560	<0.2	1555

NEWMONT EXPLORATION OF CANADA LTD.

VOIGT ZONE - GEOCHEMISTRY
PROFILE SAMPLES PS1 + PS2

SCALE AS SHOWN	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 3

The long string of anomalous gold between 700S and 1700S on L00 remains unexplained. Nothing to suggest a source for these numbers was observed in the mapping or sampling work. The fact that they all occur more or less in sequence on a single line suggests either a sampling or analytical problem. However, this string of values cannot be entirely dismissed and will have to be further investigated.

Other isolated anomalies, such as the 150 ppb Au at 600N on L00 appear to be associated with minor mineralized veins or weakly developed vein systems. Trenching and drilling in this area did reveal such a zone (see below). The exception to this is the 2900 ppb Au at 700N or L24W. This was taken in a dark organic soil in a damp swampy area which indicates hydromorphic enhancement.

Overall, the response of the soils over the Voigt stock seems unusually weak. Of the 691 soil samples taken, only 69 (10%) returned values greater than 5 ppb Au. The obvious conclusion of course is that there is no mineralization to produce such numbers. However, the poor results over the brecciated mineralization of the Voigt Zone itself suggests that other reasons should be considered. This is reinforced by the results of the profile sampling when a sample taken directly over the zone in grey leached soil returned a value of less than 5 ppb Au. This soil horizon was the sampled medium at many sites over the grid where it is present to considerable depth. Such a potential sampling problem should be further investigated, perhaps by resampling a portion of the grid using an auger.

Of the soil samples taken on the grid over the Voigt Zone, 207 were analyzed for copper as well as gold. Most of these were collected over the known mineralization, between about

500' north and south of the baseline on L8E to L24W. The copper analyses also include samples from three lines extending to 1500' N and from three lines extending 3000' S.

The copper in soils again reflects the western end of the Voigt Zone with the highest single value of 1095 ppm Cu occurring on the base line at L20W. Again, however, the zone is not well reflected going eastward and the area around the No. 14 shaft shows up as only a secondary feature, with the highest copper value only 227 ppm Cu. A value of 945 ppm Cu occurs with the 150 ppb Au at 600N on L00 and correlates with a 508 ppm Cu at 600N on L4W. As mentioned above a weakly developed zone in this area was discovered by trenching and drilling.

The other high copper values on the grid seem erratic and, where they have been investigated, have not lead to the discovery of mineralization.

Lost Horse Gulch

The soil geochemical survey results for the Lost Horse Gulch Area are presented in Map 4. The underlying geology consists mostly of the Lost Horse Intrusive Complex of mostly monzonitic composition but with dioritic and syenitic phases. Rafts of Wolf Creek volcanics occur within the complex and an enbayment of these volcanics is present in the southeast corner of the grid. The grid also just crosses the northern contact of the complex with the overlying Tertiary volcanics. Except for the eastern end of the grid, where the terrain is more rugged, line spacing is every 200'. Samples were collected every 100' along the lines, but initially only alternate samples were submitted for analysis. Subsequently, the intervening samples for the eastern part of the grid were sent for analysis to better define the gold anomaly in that area. Copper analyses were also completed for these samples and plotted to the left of the sample point with gold to the right.

Much stronger soil geochemical anomalies are apparent in the Lost Horse Gulch Area. The strongest anomaly, on L42W and L44W between 200S and 700N is associated with the old Virginia showing. This has seen extensive exploration in the past with chalcopyrite occurring in volcanics near their contact with the Lost Horse Intrusive Complex. Minor gold is known to occur with this mineralization but it has not been systematically tested for its gold potential.

The broad northwesterly trending anomaly on the southern portion of the grid between L50W and L70W has not been investigated. Old showings and workings are scattered throughout the area and undoubtably these have contributed to this anomaly. Prospecting and sampling as a follow-up is required.

Another interesting feature is the strong northeasterly trending extending zones, both as strong peaks within anomalous values and as a series of scattered smaller peaks. This suggests the possibility of a structure similar to the northeast trending "breaks" known in the Copper Mountain Mine.

Finally the several modest values and few strongly anomalous values obtained at the western end are difficult to interpret and the intervening samples should be analyzed. Some old showings are also known in this area and the additional data would help in directing future prospecting and sampling efforts.

Of the samples for which copper analyses have been obtained, a general correlation between copper and gold is apparent. This indicates that the copper and gold are occurring together in this area, as might be expected. The pattern can be confirmed by running additional samples for copper.

Mull Sampling - Voigt Zone

The collection of mull samples was proposed as a method to overcome the glacial overburden problem in delineating the Voigt Zone and prospecting for new ones. Therefore, an orientation survey was conducted over the Voigt Zone. Samples were collected approximately every 100' from 500 or 600N to 500 or 600S on lines spaced 400' apart from L8E to L24W. Some additional samples were taken on L4W from 800N to 1500N. All samples were collected over an area between 1 and 2 metres with stainless steel trowel. The material collected generally consisted of partially decomposed pine and fir needles, dried grasses and occasionally poplar and ground willow leaves. The sample was stuffed into a kraft paper envelope and sent to Chemex Labs Ltd. in North Vancouver. Chemex dry milled the sample, blended and sub-sampled it to obtain a 10 gram sample that was pelletized and shrink-wrapped. The pelletized samples were then sent to Xray Labs in Hamilton, Ontario for gold analysis by neutron activation. The results are presented on Map 3 in brackets beside the gold in soil results for the same site.

The mull sample results shows a similar pattern as the soil with a strong response over the mineralized zone at L16W and L00. This similarity in pattern between soil and mull samples suggests that the mull sampling is only slightly more effective than soil geochemistry. The added difficulty of collection, expense of analysis and delay in receiving results was not justified.

Rock Geochemistry - Trenching

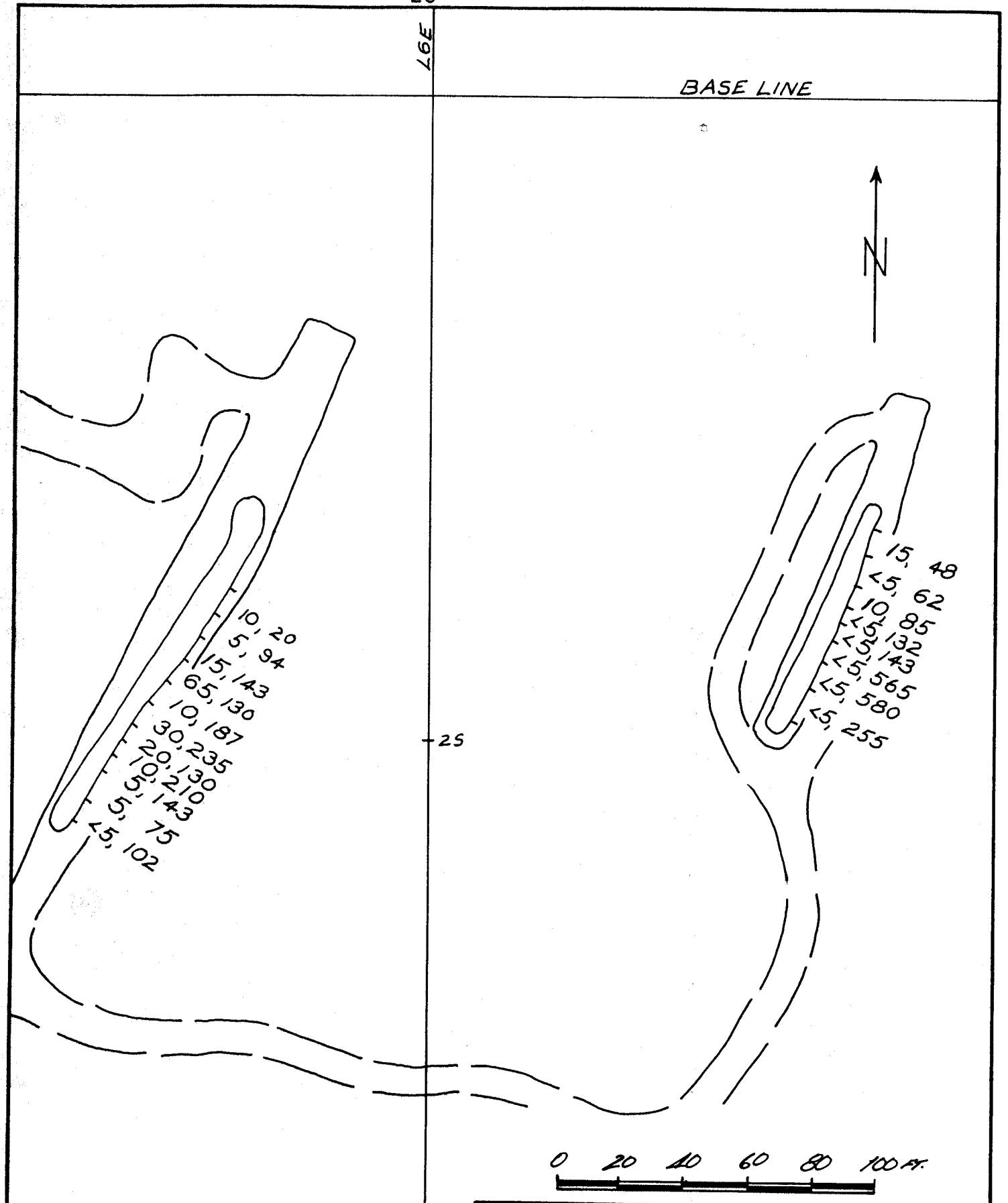
The Voigt Zone and other areas (principally those suggested by the IP survey) were extensively trenched with a backhoe excavator. The purpose of this was to assist in mapping

and to provide fresh rock for rock chip sampling. The mapping forms part of the overall mapping program and is summarized in Map 1. The results of the rock chip sampling are summarized in Fig. 4 to 19. The relationship of the trenches and the area covered by each of the figures is shown on Map 2.

The samples were taken using an ordinary geologist's pick over a specific interval in the trench wall or floor. Core was taken to get as uniform amount of material over the sample width as was reasonably possible. Between 2 lb and 5 lb of material was generally obtained. The samples were placed in plastic bags, identified with a tag and shipped to Chemex Labs Ltd.

Initially, rock chip samples taken trenches in the No. 14 shaft area were analyzed for the gold and copper of the obvious mineralization. Later, as the trench sampling expanded into areas with less obvious potential, geochemical analyses were required. Consequently, in the accompanying figures the results shown are for both assayed and geochemically analyzed samples. For the sake of consistency, all the assay values have been converted to parts per billion (1 oz/ton = 34,286 ppb).

Chemex dry crushes the rock in two stages, sub-samples and ring pulverizes the sub-samples to -140 mesh. The sample is screened and the screen examined for metallics, which are analyzed separately if present. Any +140 mesh material is hand pulverized and homogenized with the original sub-sample. From the pulverized sub-sample, 10 grams are analyzed for gold by fire assay method using an atomic absorption finish. Copper is analyzed using a 2 gram sub-sample digested in hot perchloric-nitric acid mixture for two hours. The solution is cooled and transferred to a 250 ml volumetric flask and aluminum chloride added as an ionization suppressant for Mo. The solution is then analyzed on an atomic absorption instrument.

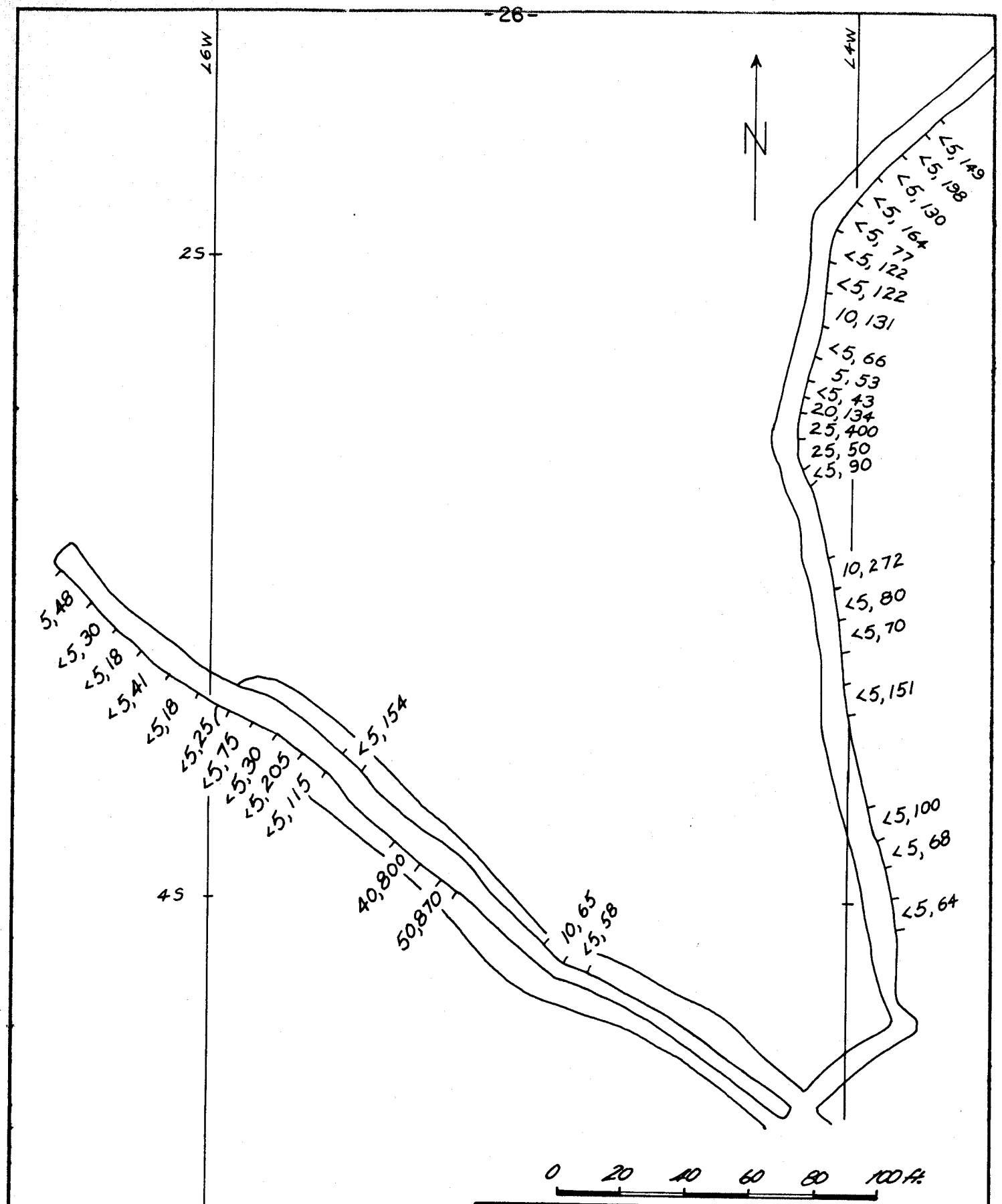


Au (ppb), Cu (ppm)

NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE
TRENCH SAMPLES - Au (PPB) Cu (PPM)

SCALE 1" = 40'	LOCATION 92H/8W	DATE FEB 20, 88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 4



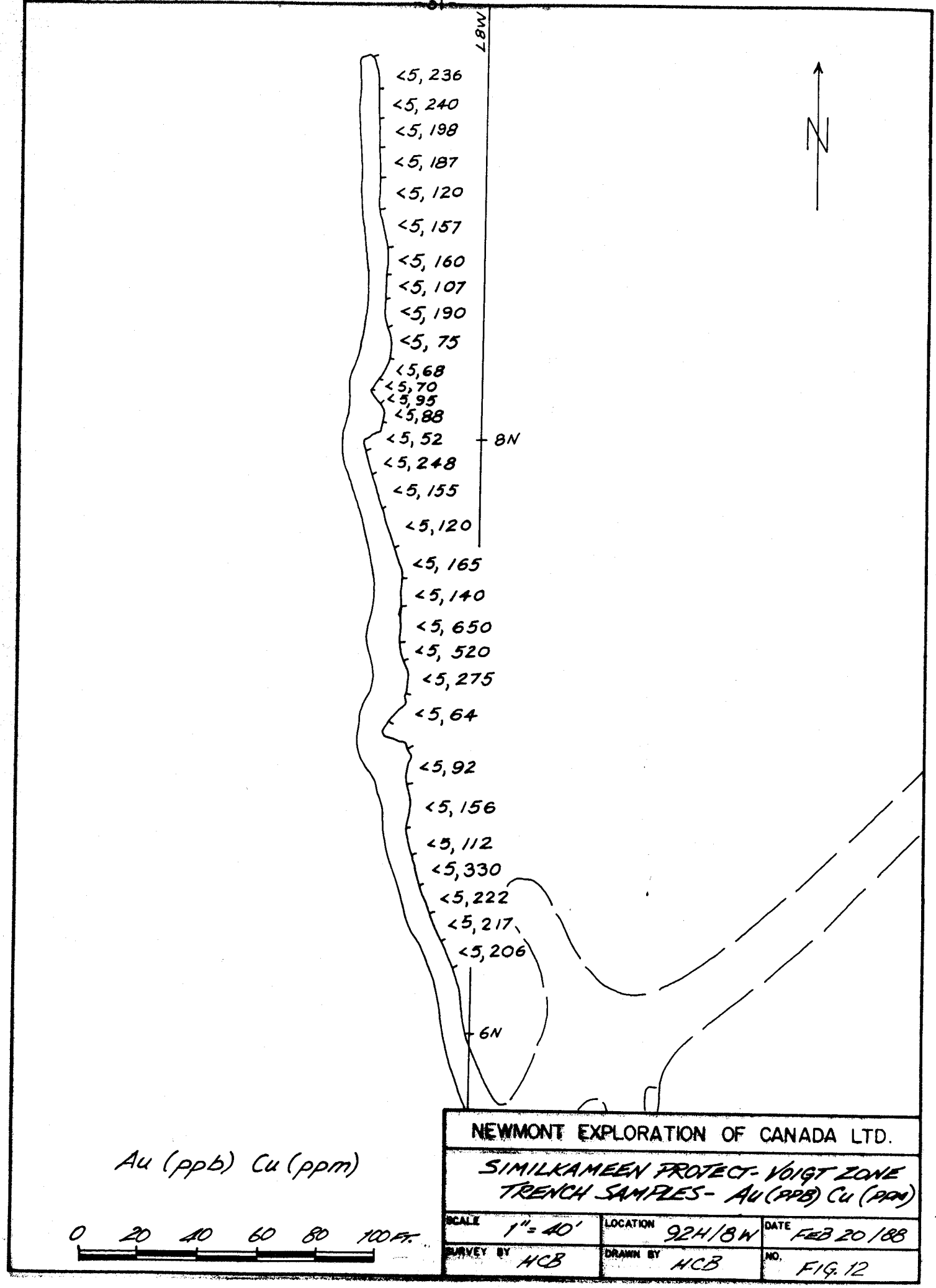
Au (ppb) Cu (ppm)

NEWMONT EXPLORATION OF CANADA LTD.

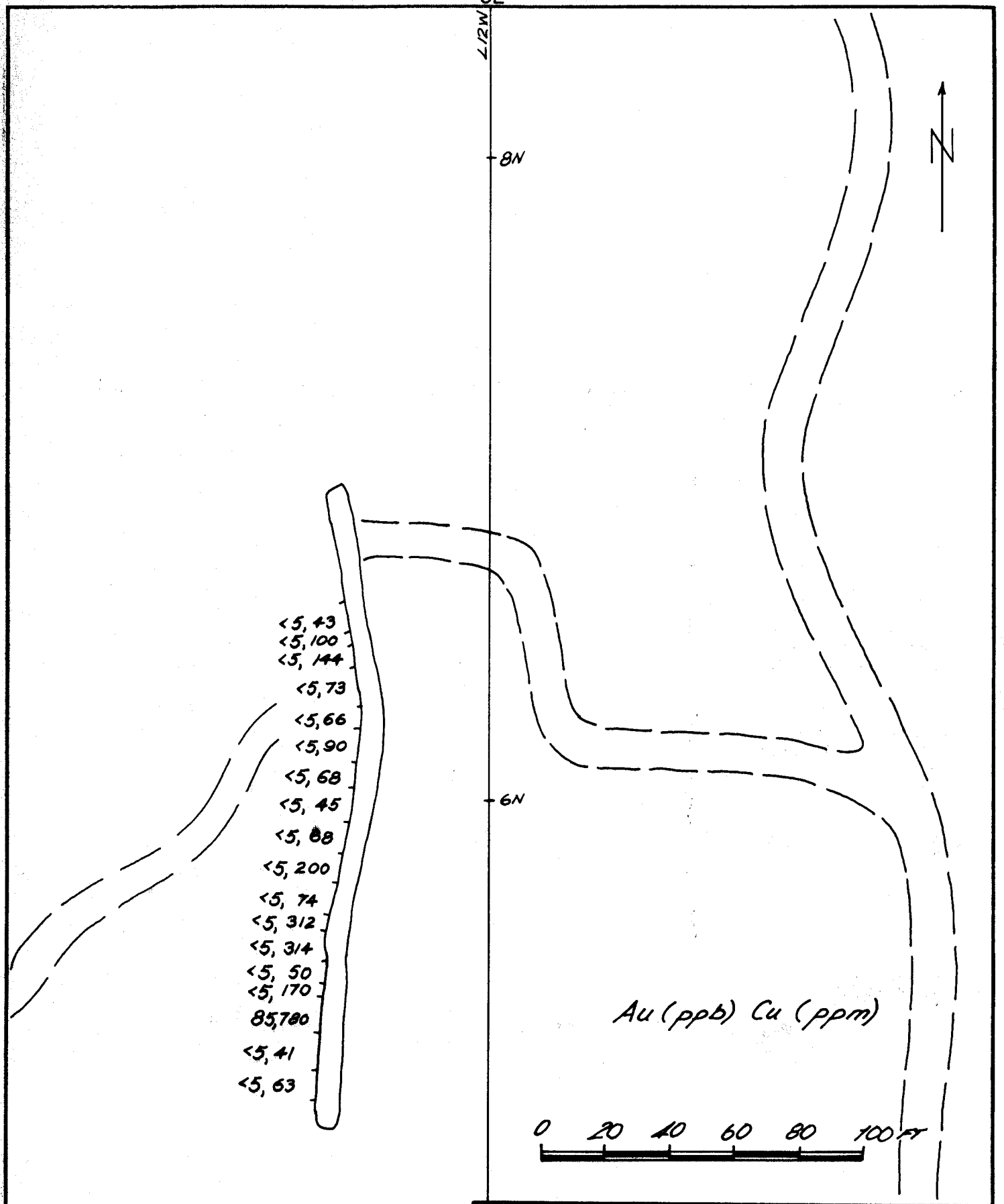
SIMILKAMEEN PROJECT - VOIGT ZONE

TRENCH SAMPLES Au (PPB) Cu (PPM)

SCALE	LOCATION	DATE
1"=40'	92H/8W	FEB 20 88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 7



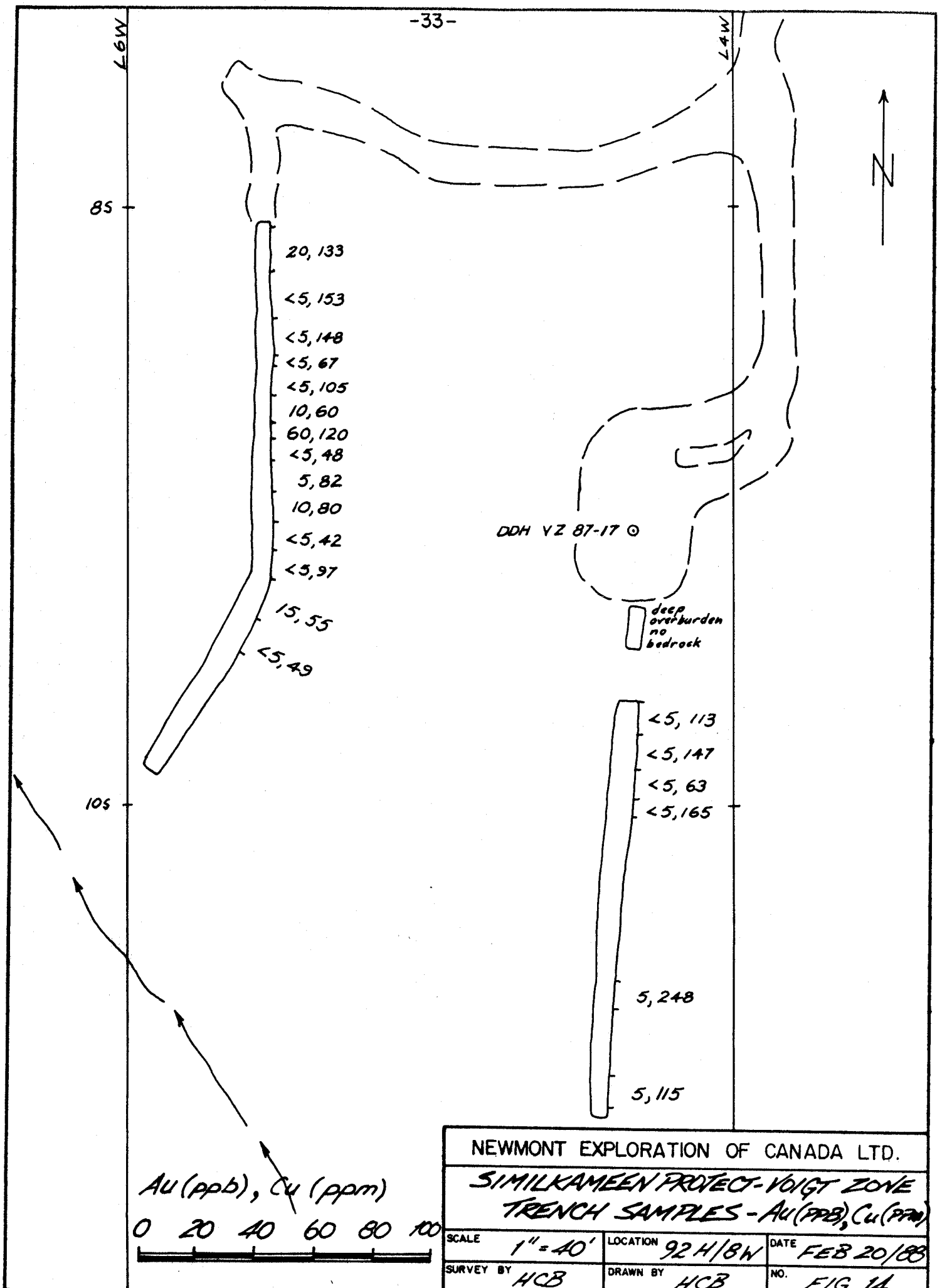
NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT- VOIGT ZONE TRENCH SAMPLES- Au (PPB) Cu (PPM)		
SCALE 1"= 40'	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 12



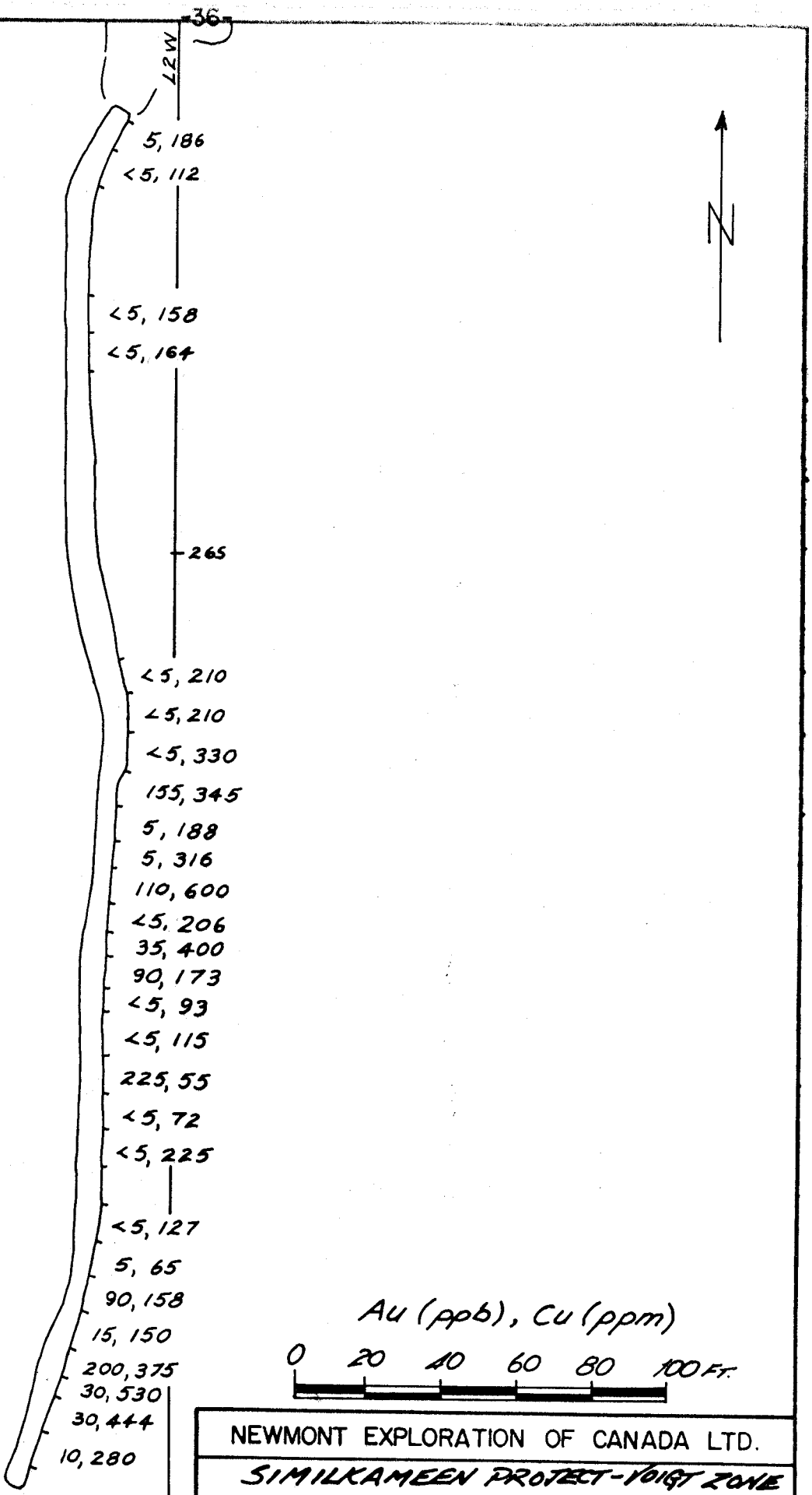
NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - HOGT ZONE
TRENCH SAMPLES Au (PPB) Cu (PPM)

SCALE 1" = 40'	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 13



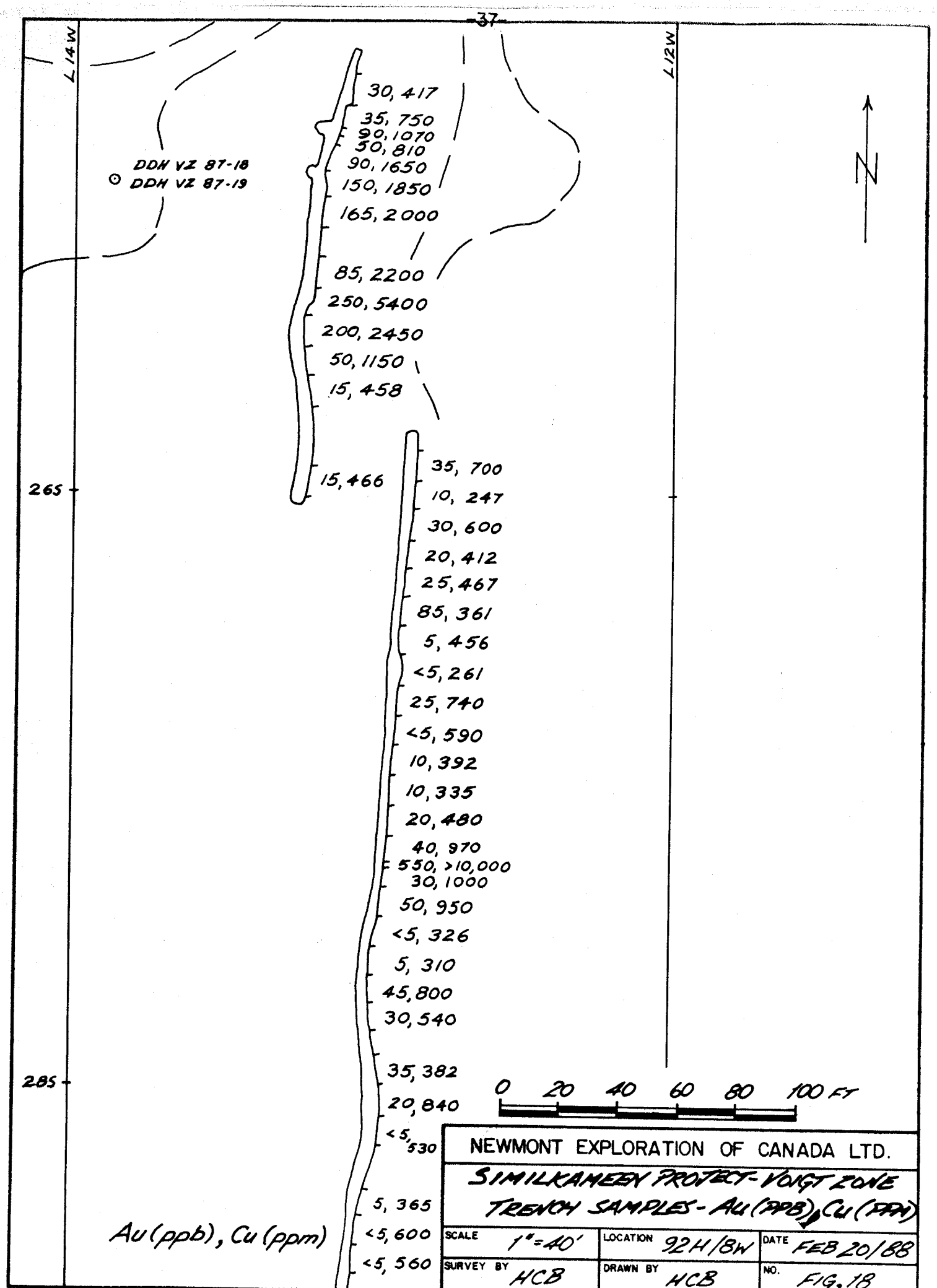
NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT - VOIGT ZONE TRENCH SAMPLES - Au (PPB), Cu (PPM)		
SCALE 1" = 40'	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 14



NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE
TRENCH SAMPLES Au (PPB), Cu (PPM)

SCALE 1" = 40'	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 17

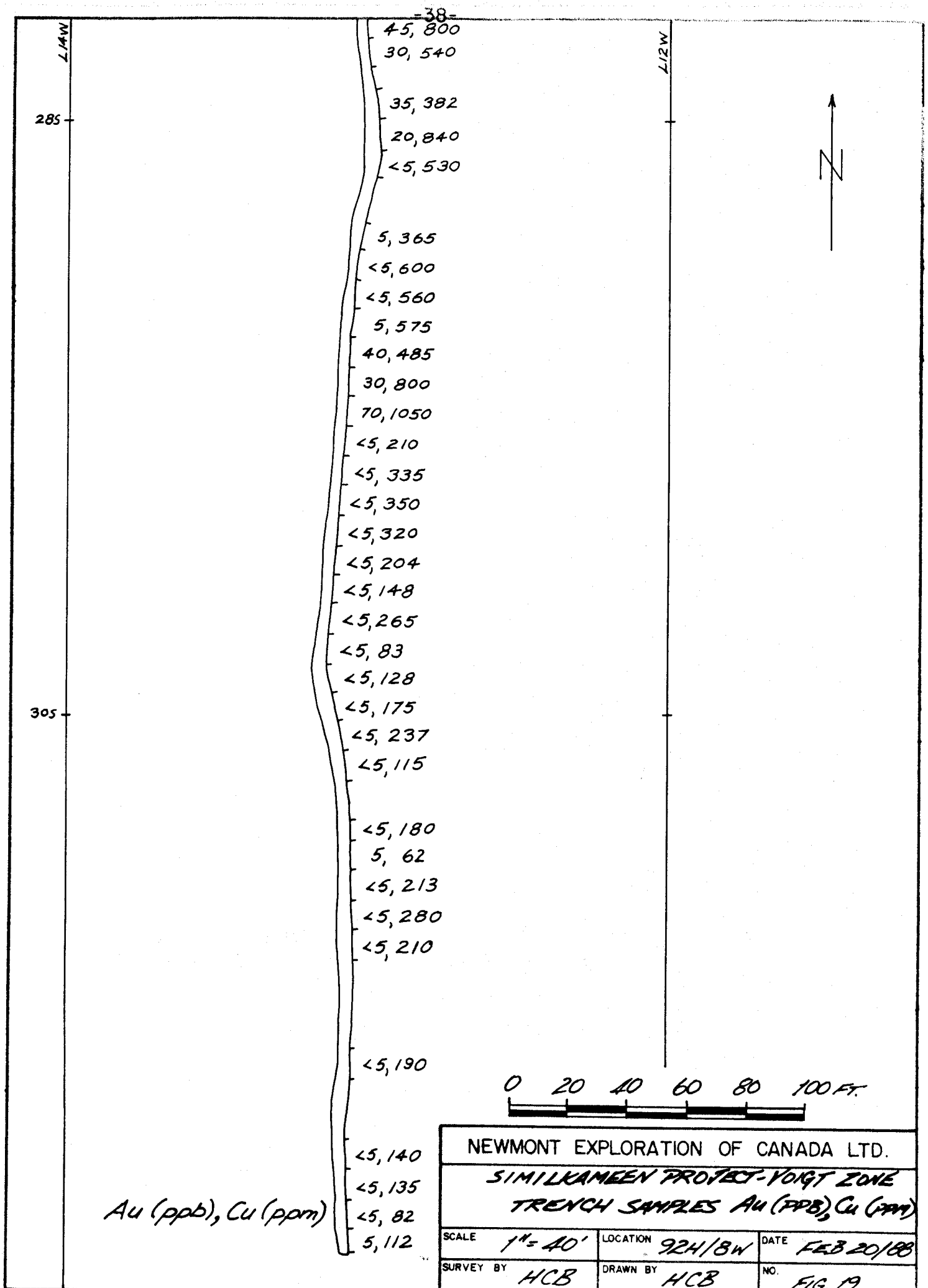


NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE

TRENCH SAMPLES - Au (PPB), Cu (PPM)

SCALE	LOCATION	DATE
1" = 40'	92H/8W	FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 18



NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE
TRENCH SAMPLES Au (PPB), Cu (PPM)

SCALE	LOCATION	DATE
1" = 40'	92H/8W	FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 19

When treating samples geochemically for gold, Chemex again uses a 10 gram sub-sample. This is fused in litharge, carbonate and siliceous flux, with the addition of 10 mg of Au-free Ag metal and cupelled. The silver bead is parted with dilute HNO_3 and then treated with aqua regia. The salts are dissolved in dilute HCl and analyzed for Au on an atomic absorption spectrophotometer to a detection limit of 5 ppb. Geochemical analyses for copper involves dissolving a 1 gm sub-sample in hot 70° $HClO_4$ and concentrated HNO_3 for two hours. The sample volume is adjusted to 25 mls using demineralized water, homogenized and allowed to settle before being analyzed by atomic absorption procedures to a 1 ppm detection limit.

Over 1000 rock chip samples were taken. The results shown on the accompanying figures clearly demonstrate the presence of the Voigt Zone at surface along a length of some 2600'. A noteworthy feature is that while gold and copper have an overall corelation, it is not one-to-one. The best gold values are not associated with the best copper values and visa versa.

Gold content in rock chip samples outside the Voigt Zone was disappointing. Except for a handful of scattered isolated values between 10 and 100 ppb Au most of the samples ran less than 5 ppb Au.

There are some minor exceptions to this. One is the short string of values in the trench of 600N at 3W (see Fig. 11) where one sample ran 355 ppb Au over 10'. This was confirmed in drill hole below (see section on diamond drilling), but the source is a narrow weakly mineralized zone with little apparent potential. Another is a similar zone in the trench between L8W and L10W at about 1850S. Here again a modest string of gold values is associated with weakly veined and altered diorite. The

area has not yet been tested further. The final area that returned interesting values is the southern contact of the Voigt Stock with the volcanics. Two trenches excavated across this contact between 2500S and 3000S on L2W and between L12W and L14W, returned relatively consistent and elevated values in gold. Sampling over a couple of hundred feet shows gold in the 10 to 200 ppb range with one narrow sample on a hematite vein running 550 ppb Au. An unsuccessful attempt was made to drill this area late in the season. The area should be further investigated with additional prospecting, trenching and drilling.

Copper values in the rock geochemistry from the trench sampling off the Voigt Zone show a similar pattern as sampling within the zone. The three areas discussed above for gold also show elevated copper values. Over 1% Cu was reported in the sample that ran 550 ppb Au, for example. As is the case for the Voigt Zone, there is considerable variation within this broad correlation.

There is an additional point of interest in the copper geochemistry over the area as a whole. A quick inspection of all the sampling results for copper, reveals that most are over 100 ppm Cu and perhaps as many as half are between 200 and 400 ppm Cu. Several samples are in the 1000's ppm Cu, with the 10,000 ppm cited above the highest obtained outside the Voigt Zone itself. While this is not economic grade copper, it is clearly anomalous and suggest that the Voigt Stock is a copper rich intrusive. The possibility that an economic concentration of copper with significant gold credits exists should not be ignored.

Little rock chip sampling has been done in the Lost Horse Gulch area, but the strong gold anomaly in soils around the old Virginia showing required further investigation. The showing occurs along a contact of the Lost Horse Intrusive Complex with fractured and altered Wolf Creek volcanics, and is known to contain close to economic grades in copper (approximately 0.3% Cu) over a significant area. However, the gold content of the mineralization was unknown. Consequently a resampling of the old trenches was carried out, the results of which are presented in Fig. 20. Copper grades are close to what has been reported in the past, averaging about 3000 ppm Cu (or 0.3%). The gold in 58 rock samples ranges from 5 to 865 ppb, averaging 143 ppb (0.004 oz/ton). Although not outstanding, it does indicate gold in the system, and a large area of the soil anomaly has yet to be examined. Further prospecting and chip sampling should be conducted to try to locate a richer source area.

GEOPHYSICS

Magnetic and induced polarization surveys were conducted on the property. The magnetic survey was designed to help in the geological mapping and the grid area. The induced polarization survey was to trace the sulphides associated with the Voigt Zone, to find new locations of disseminated sulphide mineralization, and to also aid the geological mapping.

The magnetic survey shows a varied distribution of near surface magnetic material. The variation in readings between successive stations is so great, that it is not possible to identify or trace many unique geological features. One particular feature, a magnetic low, is the only item that is readily identifiable.

The induced polarization survey does not suffer from the same lack of line to line coherence as the magnetic survey. An IP chargeability anomaly is traceable for the extent of the Voigt zone, and other IP anomalies line up parallel to that zone.

Geophysical Coverage

Magnetics - Mag Survey Readings, Maps 5 & 6
Mag Survey Contours, Maps 7 & 8
Mag Survey Profiles, Map 9

Mag data were collected in June, July and August with the EDA OMNI IV proton precession magnetometer. Coverage extended from 3200E to 2400W, with readings at 25' spacings. All data were corrected for diurnal variation with a second OMNI IV magnetometer, acting as a base station, and monitoring the magnetic field every 30 seconds.

Later, in August and September, readings were extended west to line 102W. These readings were made with the Scintrex MP-2 proton precession magnetometer, and corrected to baseline readings established along line 1500N. These readings were mainly at 50' station spacings.

In all, 7913 magnetic readings are recorded, covering 246,200 feet of grid line.

Induced Polarization - IP Sections; Appendix I
IP Chargeability Contours; Map 11
IP Resistivity Contours; Map 12

Induced Polarization (IP) surveys were conducted in June, and in July-August. The surveys were done in dipole-dipole array, with an electrode spacing of 100' and an n spacing of n=1 to 4. On a few lines, n spacings of 1 to 3 have been used.

IP coverage extends over 92,300' of grid line, with 3380 individual readings of resistivity and chargeability. Coverage is listed in Appendix I.

IP work was done with a Crone battery powered IP transmitter, and a Crone IP receiver. Chargeability readings are shown in milliseconds, to the Newmont IP standard.

IP "anomalies" are picked on the profiles, and plotted on the "Geophysics Compilation" maps.

Geophysical Results - Geophysics Compilation Map 13 & 14

Magnetics

The plotted magnetic data do not show any traceable patterns or signatures. Perhaps the near surface distribution of magnetic material (magnetite mainly) is so varied, that data are not sampled adequately even at 25' readings. Or, perhaps, the N20E felsite dykes are so numerous, that they disrupt any E-W geologic continuity.

The "upward continued mag" map shows a few highs and lows that do extend over a longer distance. A mag high extends NNW through 6900W/1000N. A magnetic high covers the region around 4100W/400N. Mag highs are found near 2000W/1200S and 600W/1800S.

A definite mag low exists at 1300E/900S.

Induced Polarization

The plotted IP anomalies indicate an E-W trend that plots close to the Voigt zone, from 00/00 to 2000W/100S. IP anomalies are found to continue 400' east and west of the zone.

Drilling along the Voigt zone with holes 87-1, 2, 3, 4, 5, 7, 8, 9, 13, 14, 15 and 16 shows generally less than 1% pyrite, with smaller (5-10') regions of higher concentrations of chargeable minerals, such as pyrite, chalcopyrite, and magnetite.

North of the Voigt zone, a long IP trend goes from 1400W/600N to 1400E/600N. It was intersected by holes 87-12 and 87-11. Mineralization was less than 1% pyrite, so a satisfactory explanation for the anomaly is not yet evident.

South of the baseline, IP anomalies or anomaly trends are again evident. One trend from 2400W/1000S to 1200W/700S is drilled by hole 87-10. Again, mineralization is less than 1% py except for small veinlets of higher concentration, and a satisfactory explanation for the anomaly is lacking. Another IP trend, from 1800W/1500S to 400W/1000S is intersected by hole 87-17, with similar results. The anomaly trend from 2000W/2300S to 800E/2800S is drilled by holes 87-18 and 87-19, but the hole stayed in a dyke.

Undrilled IP anomalies extend from 1200W/1900S to 3200E/1100S, from 400W/2800S to 00/2600S, from 400E/1000S to 3200E/200S and from 200E/500S to 2000E/200N. Shorter strike IP anomalies are also found throughout the survey area.

The resistivity patterns sometimes reflect geology. In this case, the resistivity appears to vary with topography: -the higher, drier areas are more resistive than lower, damper regions.

Magnetic data do not indicate any congruous trends or patterns. Upward continuation of mag data to decrease near-surface effects helps to establish a few higher and lower zones. A method to remove the disruptive effects of the felsite dykes is being sought.

A general IP chargeability high follows the Voigt zone, and is traceable 400' east and west. Other chargeability highs are evident, and do line up from line to line. Drilling to date does not distinguish chargeable from non-chargeable regions, but work to achieve a discrimination between the two is continuing.

IP chargeability highs are recommended for drilling, since these should indicate areas of higher metallic mineralization.

DIAMOND DRILLING

Diamond drilling began on the property on September 11, 1987 and concluded on December 1, 1987 with a 27 day hiatus between October 22 and November 19. A total of 8505' of NQ core was drilled in 19 holes. Of these, 14 holes were drilled on the Voigt Zone, one of which was abandoned short of its target. The remaining 5 holes were drilled on geophysical targets. The drill hole collars with the horizontal projection of the drill hole are located and identified on Map 1. Of the footage drilled, 4837' (57%) was split and sent to Chemex Labs Ltd. for assaying for copper and gold, totalling 604 samples. The results of the diamond drilling program are presented in the drill logs in Appendix II, and summarized in Table II.

Overall, the drilling reflects at depth what is observed at surface. On the Voigt Zone the eastern portion around the No. 14 Shaft is characterized by a hematitic breccia within a veined and altered zone. Except for the rare isolated vein, the best copper-gold occurs within the breccia. The breccia zone also shows a variable thickness, both at surface and depth, typical of the pinch and swell character of a shear vein. Through this portion of the zone, from L4E to L7W,

TABLE II

DRILLING SUMMARY

(all distances in feet)

AREA	HOLE NO.	COORDINATES NORTH	COORDINATES EAST	AZIMUTH & DIP		TOTAL DEPTH	INTERSECTIONS FROM	INTERSECTIONS TO	INTERSECTIONS LENGTH	GRADE %Cu	GRADE ozAu	REMARKS
Voigt Zone	VZ 87-1	75	350W	195°	-45°	618	29	30	1	9.62	3.266	Cal, py, cp vein outside Voigt Zone
							137	190	53	.80	.176	Voigt Zone Breccia
"	VZ 87-2	100	50E	180°	-45°	301	105	175	70	.11	.013	Voigt Zone under
							175	195	20	1.22	.091	No. 14 Shaft
"	VZ 87-3	110	1190W	180°	-45°	304	210	220	10	.57	.010	weakly mineralized Voigt Zone undetected
"	VZ 87-4	100	760W	180°	-45°	305	95	142	47	.24	.011	Wk Voigt Zone
"	VZ 87-5	300	75E	180°	-50°	7 05	520	600	80	.16	.007	Wk Voigt Zone
"	VZ 87-6	425	375W	180°	-50°	765	650	670	20	.12	.031	brecciated zone
							670	690	20	2.68	.130	
							690	700	10	.16	.039	
"	VZ 87-7	320	740W	180°	-50°	819	490	505	15	.25	.046	veined + brecciated
							525	528	3	.52	.018	zone
"	VZ 87-8	420	1790W	180°	-50°	276				-		hit barren dyke
"	VZ 87-9	420N	1800W	200°	-50°	723	485	540	55	.41	.016	veined & alt'd dio
							585	630.3	45.3	.27	.004	"
IP anomaly	VZ 87-10	500S	1530W	180°	-39°	404	87.9	91.1	3.2	.68	.008	vein
							170.5	171.0	0.5	.82	.010	vein
"	VZ 87-11	750N	420W	164°	-39°	328	300	310	10	.10	.029	veined & alt'd dio
Voigt Zone	VZ 87-12	750N	420W	180°	-50°	1176	385.2	391.0	5.8	.17	<.002	sheared & alt'd dio
							1036.5	1081.5	45	.30	.005	veined & alt'd dio
"	VZ 87-13	100N	500W	180°	-45°	225	153.7	175.0	21.3	.54	.040	Bxx, vein & alt'd dio
"	VZ 87-14	125N	1375W	180°	-45°	274	140.0	195.0	55	.18	.011	veined & alt'd dio
"	VZ 87-15	125N	1550W	180°	-45°	249	121.8	147.6	25.8	.30	.021	veined & alt'd dio
"	VZ 87-16	100S	600W	0°	-45°	229	117.0	163.7	46.7	.75	.059	breccia
IP anomaly	VZ 87-17	900S	450W	180°	-45°	323	67.8	98.0	30.2	.07	<.002	wk vein & alt'd dio
South Contact	VZ 87-18	2500S	1390W	180°	-48°	129	-	-	-			In't barren dyke
"	VZ 87-19	2500S	1390W	154°	-46°	352	-	-	-			In't barren dyke

drilling has established the continuity of the breccia style mineralization and extended its depth to at least 600' below surface. A deep hole, VZ 87-12, intersected the zone about 900' below surface, but gold was very weak and copper only modest. It is, however, the only hole drilled to this depth and, in the light of the experience of most shear vein systems, cannot be said to have delimited the depth possibilities.

Similarly, drilling at the eastern end of the zone suggests a weakening of the system in this direction. Little breccia mineralization was encountered and the overall grades were lower. But, the zone was intersected and some potential for extending it eastward both near surface and at depth still exists.

On the west, drilling encountered a very similar situation as that observed at surface. From about L8W to L20W drilling intersected a less clearly defined zone characterized by an anastomosing, steeply dipping to vertical network vein system. Through this area, the system seems to be relatively narrow and weakly mineralized between L8W and L14W. From there the vein system widens, seems to split (see VZ 87-9) and has a moderate increase in grade. All of the drilling through this area has been near surface (approximately 200' depth or less) and the possibilities at greater depths have yet to be tested.

The five other holes drilled on the property were designed to explore apparent IP anomalies that ran subparallel to the Voigt Zone. Hole VZ 87-11 tested an east-west trending anomaly approximately 500' north of the zone. The area was trenched and a modest zone exposed. The drill results confirmed the presence of the zone at around 300' in the hole or 200' below surface. It was weakly developed and gave only modest gold-copper values. (This zone was also cut, at a slightly deeper depth, by hole VZ 87-12, which confirmed the weak poorly mineralized character).

Two holes, VZ 87-10 and VZ 87-17, were drilled to test the IP anomaly at approximately 1000' south of the Voigt Zone. Neither hole encountered economically significant mineralization, nor was an explanation for the IP anomaly apparent.

The last two drill holes of the program, VZ 87-18 and VZ 87-19 were intended to check the south contact area of the Voigt Stock. Sulphide mineralization was exposed in a long trench between 2500S and 3200S between L12W and L14W, and this is reflected in an IP anomaly. Interesting gold and copper values were produced from the rock chip geochemical sampling of this trench. Unfortunately, both holes were collared in a barren felsite Mine dyke and never broke out of it before they were stopped.

The diamond drilling program has successfully traced the Voigt Zone along its presumed 2600' length, filling in some blank spots left from previous work. The program also extended the depth of known mineralization to at least 600' depth over part of its strike length. Continued drilling to test for lateral extension and continuity and for persistency at depth is warranted.

Drilling outside the Voigt Zone was less successful. Except for another effort to test the south contact area, further drilling on other parts of the property requires careful reevaluation of the present body of data and/or encouragement from new exploration information.

CONCLUSIONS

The exploration work in the Voigt Zone and Lost Horse Gulch area has resulted in a better understanding of the extent of mineralization on the Voigt Zone and established potential for gold-copper mineralization in the Lost Horse Gulch. The Voigt Zone, as has been established by surface mapping and diamond drilling, extends for approximately 2600' east-west and to a depth of at least 600' over at least a portion of its length. Additional work, both surface and drilling is required to trace the zone to the east and to depth and to define more closely the effects of the through cutting dykes.

Soil and biogeochemistry do not appear to have helped much in the exploration of the Voigt Zone. The zone itself does not stand out clearly in either survey type. No clear anomalous zones showed up in the soil survey away from the Voigt Zone except for the suspicious and as yet unexplained string of anomalous values on the southern portion of L00.

Soil sampling in the Lost Horse Gulch is more encouraging, particularly in the areas of old showings such as the Virginia and Diamond Pot. Distinct anomalies occur and other areas could be refined by additional sample analysis. Further work on these anomalous areas is warranted, as is a modest expansion of the survey area.

The geophysical surveys have produced enigmatic results. The magnetometer results are so variable that little can be made from the patterns that result. Further refinement of the data may help to resolve this, but at the moment the magnetometer work has not assisted exploration.

The IP survey did produce what seemed to be clear anomalies, with one apparently associated with the Voigt Zone. However, mapping and trenching across these anomalous zones did not produce a plausible explanation for their existence. Only the southern most anomaly, presumably associated with the relatively sulphide rich south contact of the Voigt Stock, has a probable explanation.

RECOMMENDATIONS

The following work is recommended for the upcoming exploration season:

On the Voigt Zone

1) continued drilling to delimit and define known areas of mineralization,

2) continue mapping and prospecting to the east of the area completed to date in an effort to find extensions or offsets of the Voigt Zone,

3) continue backhoe trenching on areas of potential interest,

4) review geochemical surveys to determine if another approach or technique might produce more meaningful results and carry out an orientation survey based on the results of the review,

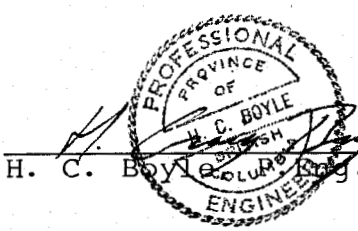
5) mineralogic study and metallurgical testing on Voigt Zone material.

On the Lost Horse Gulch Area

1) submit remaining intervening soil samples for analysis for gold and copper,

2) map, prospect the areas in which the soil geochemistry produced clearly anomalous gold results,

3) trench or drill areas that appear to justify it on the basis of the above work.



H. C. Boyle, Eng.

H. Limion, P.Eng.

Vancouver, B.C.
February 20, 1988

Distribution:
FAME
W.J. Mullin

REFERENCES

Dolmage, V., 1934: Geology and Ore Deposits of Copper Mountain, British Columbia, G.S.C. Memoir 171.

Fahrni, K.C., Macauley, T.N., Preto, V.A., 1976: Copper Mountain and Ingerbelle, CIM Special Volume No. 15, Porphyry Deposits of the Canadian Cordillera.

Preto, V.A., 1972: Geology of Copper Mountain, British Columbia Department of Mines and Petroleum Resources Bulletin 59.

COST STATEMENT

WAGE SCHEDULE

Name	Position	Work Date From	Work Date To	Man Days	Rate per Day	Total Wages
C. Boyle	Proj Geologist	May 15/87	Dec 15/87	212	$156.56	$33,190.72
B. Malahoff	Geologist	Jan 18/88	Jan 20/88	3	135.65	409.65
K. Atkin	"	Oct 14/87	Nov 13/87	28	111.40	3,119.20
H. Klatt	"	Oct 14/87	Dec 7/87	54	107.15	5,786.10
A. Campbell	"	Sep 6/87	Dec 16/87	100	88.37	8,837.00
B. Downing	Computer Geol.	Nov 3/87	Dec 17/87	7	209.54	1,466.78
I. Casidy	Geol. Technician	Sep 29/87	Dec 2/87	43	122.85	5,282.55
D. Bottersby	Geol. Asst.	Jun 5/87	Aug 20/87	49	84.50	4,140.50
J. Brown	" "	May 25/87	Oct 30/87	108	84.50	9,126.00
C. Clarke	" "	May 22/87	Aug 26/87	62	84.50	5,239.00
P. Walker	" "	Oct 16/87	Nov 25/87	39	84.50	338.00
J. Bishop	" "	Jul 1/87	Oct 30/87	89	84.50	7,520.50
D. Clarke	" "	Jul 1/87	Aug 21/87	38	84.50	3,211.00
D. Finlay	" "	Jul 1/87	Jul 4/87	4	84.50	3,119.20
D. Bishop	" "	Sep 30/87	Oct 30/87	23	84.50	1,943.50
S. Bishop	" "	Oct 13/87	Dec 5/87	32	84.50	2,704.00
K. McCarron	" "	Oct 5/87	Oct 30/87	22	84.50	1,859.00
J. Inkster	" "	Jul 6/87	Jul 15/87	14	84.50	1,183.00
P. Bohme	" "	Aug 22/87	Sep 8/87	11	64.29	707.19
P. Dunn	Geophysicist	Jun 1/87	Jul 20/87	25	98.28	2,457.00
M. Covey	Geophys Asst.	Jun 1/87	Jun 7/87	5	81.25	406.25
R. Covey	" "	Jun 1/87	Aug 5/87	36	87.30	3,142.70
S. Gilham	" "	Jun 1/87	Aug 10/87	41	61.67	2,528.00
K. Huey	" "	May 25/87	Jun 3/87	7	84.50	591.50
D. Lindsay	" "	Jun 1/87	Aug 10/87	41	59.40	2,435.40
N. Singh	" "	Jul 5/87	Sep 7/87	62	74.60	4,625.20
Supervisory	(3) Engineers	Jun 2/87	Nov 17/87	41	234.99	9,634.56
Miscellaneous	Casual Help	May 1/87	Oct 31/87			2,891.50
						$127,895.00
	Contract Drillers (4)			250		Not Known
	Contract Trenching (2)			140		" "
			Total Man Days	1,586		

ACCOMMODATION

	Man Days	Average Rate	TOTAL COST
May 15, 1987 to Dec. 6/87	442	$28.84	$ 12,748

FOOD 14,852

EQUIPMENT RENTALS

Vehicle Rentals:

Chevrolet Blazer Toyota 4x4 Jeep Laredo Chevrolet Suburban		$22,355	

Geophysical Equipment:

Proton Magnetometer E.D.A. Mags Crone I.P. H.P. 85 Microcomputer Motorola Walkie Talkies Elliott 4.5k Transmitter	45 days	5,053	
Other Equipment		268	27,676

DIAMOND DRILLING

19 NQ Holes totalling 2,592m @ $61.43 per metre		159,237

BACKHOE TRENCHING

Case 450B - 916 hours $55 per hr	$50,380	
Mobilization & Demobolization	300	50,680

ASSAYING for Cu, Au

	No. Samples Assayed	Average Cost		
Drill Core Samples	604	$23.97	$14,478	
Trench Samples	1157	9.19	10,629	
Soil Samples	1396	7.27	10,147	35,254

LINE CUTTING

(Grid Preparation) Contract	13,841
ROADBUILDING (access roads) Contract	6,900
FIELD SUPPLIES	3,291
VEHICLE OPERATING AND MAINTENANCE	3,445
FREIGHT	2,912
AIR FARES	2,822
MISCELLANEOUS	3,933
TOTAL EXPENSE	**$465,486**

STATEMENT OF QUALIFICATIONS

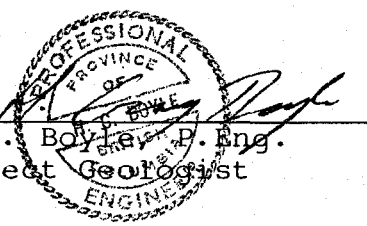
1. I am a graduate of the university of British Columbia with a B.Sc. in Geological Engineering, 1975.

2. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

3. I have been employed with Newmont Exploration of Canada Limited as an exploration geologist from February 1976 to the present.

4. I personally mapped the geology and supervised the geochemical survey, trench sampling, and drill core logging described in this report.

Vancouver, B.C.
February 20, 1988



H. C. Boyle, P. Eng.
Project Geologist

H. LIMION

STATEMENT OF QUALIFICATIONS

I, Heikki Limion, received my B.A.Sc degree in Engineering Science (Geophysics Option) from the University of Toronto in 1965.

I spent two summers in geophysical field work; one with Hudson's Bay Oil and Gas, and one with INCo exploration.

In 1965-66 I worked for one year with Hudson's Bay Oil & Gas as a Junior Geophysicist in seismic field work.

From 1967-1976 I worked with INCo Exploration, on ground and airborne geophysical surveys. I was in charge of airborne geophysical operations for four years, and worked on research and development of airborne geophysical systems. I conducted ground geophysical surveys in Canada, U.S.A., and Brazil.

In 1977 and 1978 I was the head of the geophysics sections in the Kenya Department of Mines and Geology. During this time, I was under contract to CIDA (the Canadian International Development Agency).

Since the beginning of 1979, I have held the position of Chief Geophysicist of Newmont Exploration of Canada Limited.

I am a member of the Society of Exploration Geophysicists, the Association of Professional Engineers of Ontario, and the Prospectors and Developers Association.

16,745

PART 1 OF 3

L2W

L0

L2E

L4E

DDH VZ87-2

BASE LINE

25

Au (ppb), Cu (ppm)

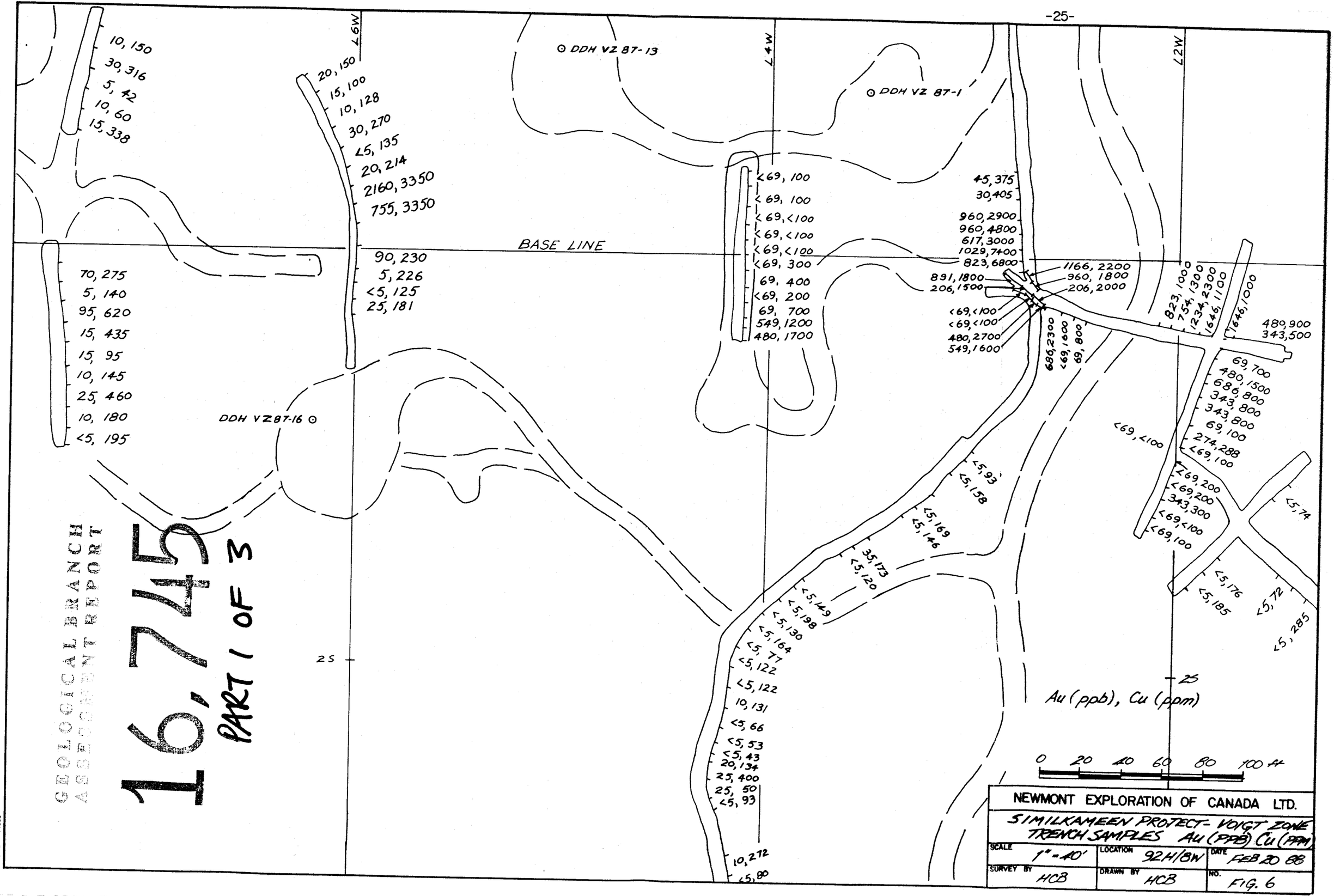
0 20 40 60 80 100 FT.

NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE
TRENCH SAMPLES Au (ppb) Cu (ppm)

SCALE	LOCATION	DATE
1" = 40'	92H/8W	FEB 20TH 88
SURVEY BY	DRAWN BY	NO.
HCB	HCB	FIG. 5

ANCAL — 14088



GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,745

PART 1 OF 3

NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT- VOIGT ZONE
TRENCH SAMPLES Au (PPB) Cu (PPM)

SCALE	LOCATION	DATE
1" = 40'	92H/8W	FEB 20 88
SURVEY BY: HCB	DRAWN BY: HCB	NO.: FIG. 6

ANCAL — 14068

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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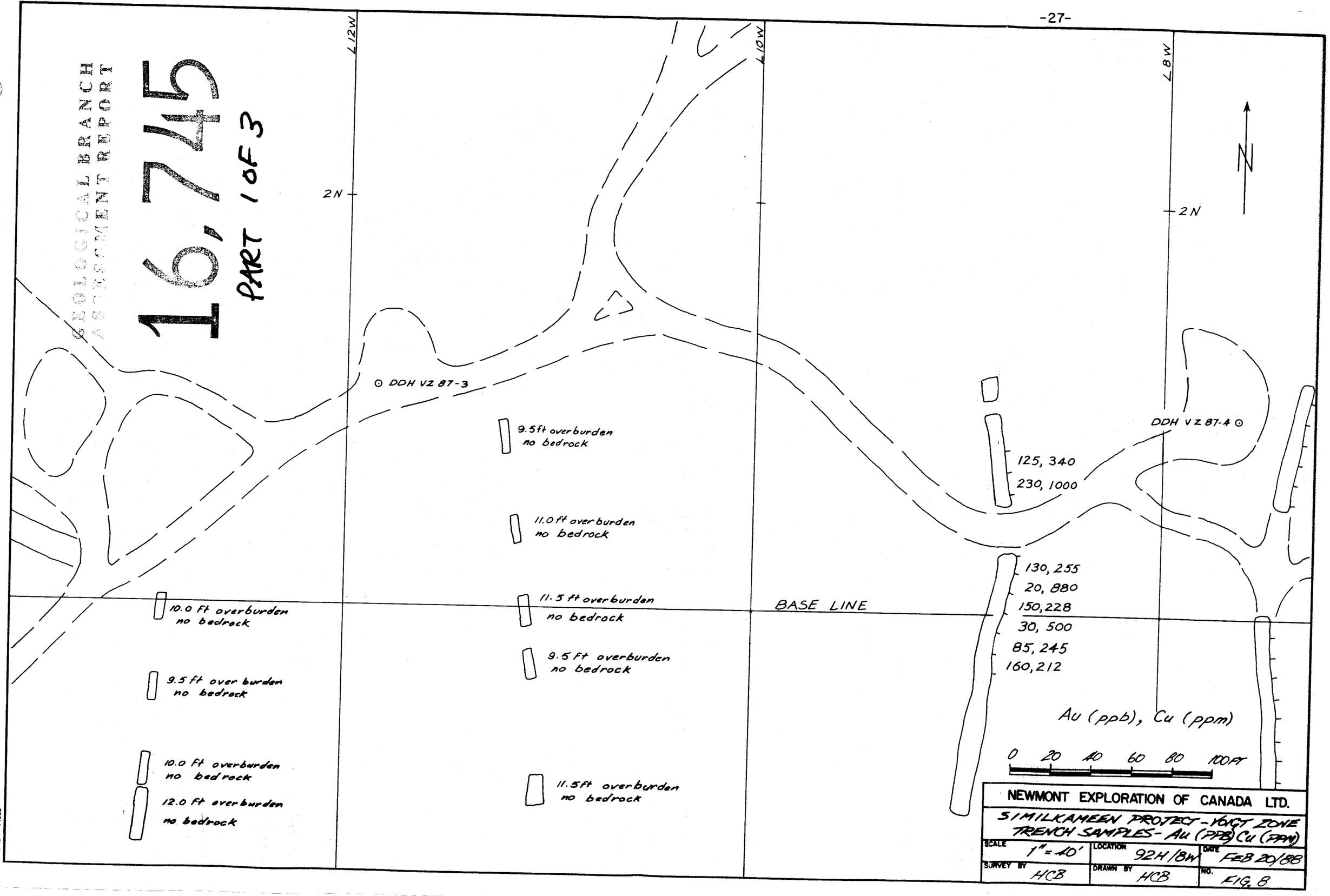

NEWMONT EXPLORATION OF CANADA LTD.

SIMILKAMEEN PROJECT - VOIGT ZONE
TRENCH SAMPLES - Au (PPB) Cu (PPM)

SCALE	LOCATION	DATE
1" = 40'	92H/8W	FEB 20/88
SURVEY BY: HCB	DRAWN BY: HCB	NO.: FIG. 8

ANCAL — 14068

18 W

16 W

14 W

2N

BASELINE

N

⊙ DDH VZ87-14

40, 125
10, 235
20, 170
<5, 500
<5, 400
10, 232
15, 530
835, >10600
20, 700
25, 1000
15, 1750
274, 630
137, 1500
<5, 5400
<5, 1300
<5, 2600
<5, 2900
<5, 2000
206, 90
15, 146
15, 520
69, 2900
137, 2000
274, 2300
69, 400
<5, 1200
<5, 2600
<5, 500

<5, 45
<5, 198
<5, 185
5, 100
<5, 300
<5, 30
<5, 110
<5, 100
<5, 100
<5, 200
686, 600
69, 600
137, 300
<5, 200
<5, 300
<5, 300
480, 1600
<5, 300
137, 100
274, 1500
100 1500
<5, 1300 2600
69 700
823 100
<5, 2600 110
3085 300
64 150 90 154
200, 300
<5, 2700
480, 2300
274, 1300
137, 5400
686, 20700
411, 10500
480, 12600
206, 2000
274, 3100
343, 8400
549, 3400
960, 5600
64, 1100
<5, 500
69, 600
69, 600
69, 600
69, 2000
<5, 700
<5, 300

25, 260
470, 122
45, 172
<5, 200
85, 155
1234, 200
206, 1100
411, 900
69, 900
549, 1300
206, 2800
90 6800
137, 2300
343, 1900
154, 3400
1028, 8400
69, 411
1097, 3300
69, 2000
411, 4800
206, 3600
69, 1800
274, 1500

Au (ppb), Cu (ppm)

0 20 40 60 80 100 ft

NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT - VOIGT ZONE TRENCH SAMPLES Au (PPB) Cu (PPM)		
SCALE 1" = 40'	LOCATION 92 H/8 W	DATE FEB 20TH 88
SURVEY BY HCB	DRAWN BY I.C.	NO. FIG. 9

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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PART 1 OF 3

ANCAL — 14068

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PART 1 OF 3

2E
4E
6E
8N
7N
6N
5N

N

<5, 195
<5, 236
<5, 94
<5, 156
<5, 173
<5, 63
<5, 96
<5, 35
<5, 50
<5, 72
<5, 81
<5, 210
<5, 95
<5, 205
<5, 152
<5, 62
<5, 72
<5, 49
<5, 94

<5, 131
<5, 75
<5, 142
<5, 200
<5, 103
<5, 48
<5, 55
<5, 51

<5, 175
<5, 102
<5, 150
<5, 150
<5, 101
<5, 148
<5, 163
<5, 112
<5, 250
<5, 135
<5, 275
<5, 260
<5, 193
<5, 172
<5, 95
<5, 158
<5, 145
<5, 156
<5, 94
<5, 100
<5, 94
<5, 195

Au (ppb), Cu (ppm)

0 20 40 60 80 100 FT

NEWMONT EXPLORATION OF CANADA LTD.

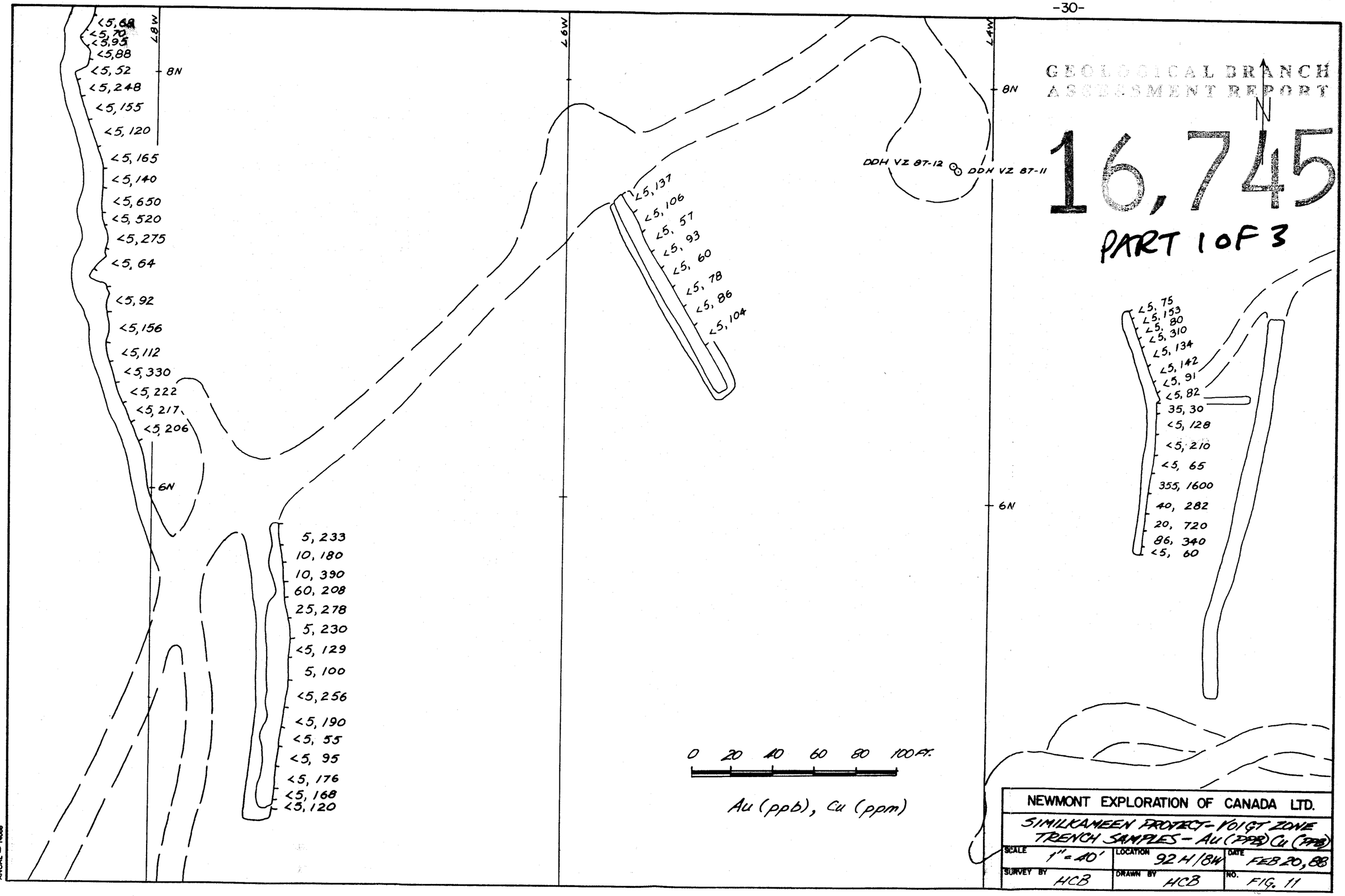
SIMILKAMEEN PROJECT- VOIGT ZONE
TRENCH SAMPLES Au (ppb), Cu (ppm)

SCALE	LOCATION	DATE
1:480	92 H/8W	FEB 20, 1988
SURVEY BY	DRAWN BY	NO.
HCB	I.C.	FIG 10

ANCAL — 14068

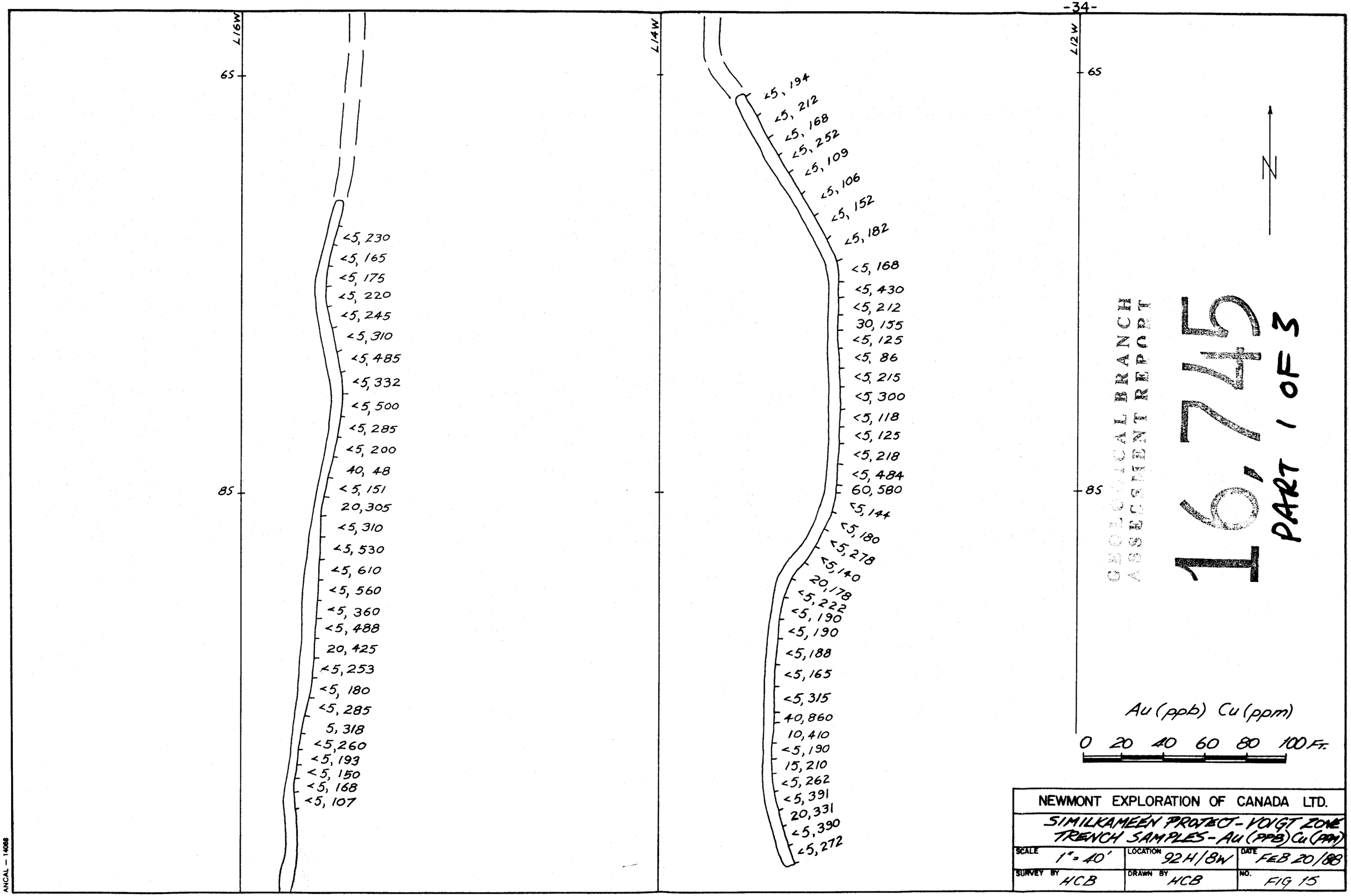
16,745

PART 1 OF 3



NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT - VOIGT ZONE TRENCH SAMPLES - Au (PPB) Cu (PPM)		
SCALE 1" = 40'	LOCATION 92 H/8W	DATE FEB 20, 88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 11

ANCAL — 14068



GEOLOGICAL BRANCH
ASSESSMENT REPORT

745

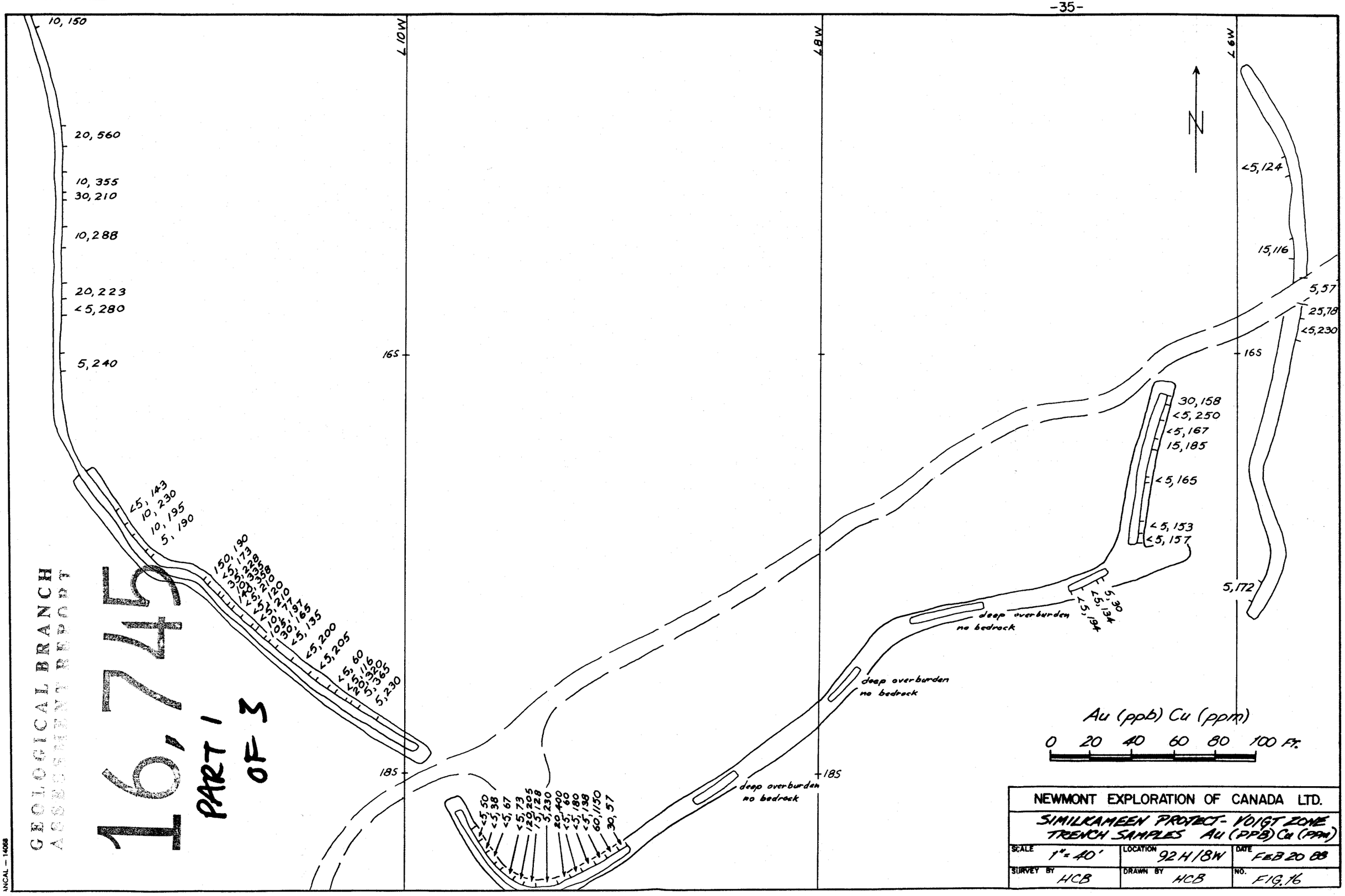
16,745

PART

1 OF 3

NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT - VOIGT ZONE TRENCH SAMPLES - Au (PPB) Cu (PPM)		
SCALE 1" = 40'	LOCATION 92H/8W	DATE FEB 20/88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG 15

ANCAL — 14068



GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,745
PART 1
OF 3

NEWMONT EXPLORATION OF CANADA LTD.		
SIMILKAMEEN PROJECT- VOIGT ZONE TRENCH SAMPLES Au (PPB) Cu (PPM)		
SCALE 1"= 40'	LOCATION 92H/8W	DATE FEB 20 88
SURVEY BY HCB	DRAWN BY HCB	NO. FIG. 16

ANCAL — 14058

L46W

L44W

L42W

L40W

2N

20, 475
<5, 446
5, 540
110, 1550
40, 2850
260, 3200
190, >10,000

150, 600

105, 5000
45, 1200
100, 3300
30, 2100
5, 550
15, 880
115, 3850
25, 1200
75, 3000
55, 2300
90, 1800
130, 3600

370, 9250
310, 6000
375, 8500
35, 1025

865, >10,000

350, 1250
850, 6000
205, 7000
75, 4750
580, 4300

110, 3250
90, 2450
200, 3500

45, 3750

385, 5500
40, 3000
25, 2750

<5, 720
35, 2600
70, 2900
60, 1550
80, 2200
85, 3100
35, 1800
360, 3700
50, 2450
90, 3000
45, 1300
135, 2600
110, 1450

50, 1700
205, 1500
240, 6700
95, 7300
15, 650
10, 330
<5, 215
65, 1600

BASE LINE

Au (ppb), Cu (ppm)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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PART 1 OF 3

0 20 40 60 80 100 ft

NEWMONT EXPLORATION OF CANADA LTD.		
VIRGINIA SHOWING LOST HORSE GULCH AREA		
SCALE: 1" = 40'	LOCATION: 92H/7E	DATE: FEB 20/88
SURVEY BY: HCB	DRAWN BY: HCB	NO.: Fig. 20

ANCAL — 14088