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Rapport fra prospekteringsarbeider i Bidjovagge - 1996
HMC - 1996 Report - Bidjovagge Prosjekt
Part I - 1996 Exploration Summary

Forfatter: Pierce, Garth

Dato: 30.01 1997

Bedrift: BCLX Consulting Ltd
Norway Gold Exploration
Geologiske Tjenester

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
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Geologi Geofysikk Geokjemi Boring	Rapport	Bidjovagge

Råstofftype	Emneord
Malm/metall	Au Cu

Sammendrag

Table # 3 gives a list of drill results as reported by HMC in it's public releases . Detailed drill data including summary drill logs, assays, sections and field logs are included as Appendixes # 2 a,b,c and d. The 1996 drill program failed to delineate any significant new zones of near surface mineralization. Copper and gold values were however widespread and the alteration system is extensive. Drill holes such as 96-13 show the tenor of the mineralization that still remains to be tested near surface. Deeper intercepts such as those in 96-1, 96-5 and 96-11 indicate the potential for deeper zones of mineralization at Bidjovagge. For the most part the Bidjovagge ore zones are poorly tested below 150 meters.

The style of mineralization at Bidjovagge is fairly unique and can best be described as fracture controlled sulfide ores which most commonly take on a stockwork appearance. The mineralization is best developed as replacement zones superimposed on a highly altered calcareous sedimentary succession.Within this stratigraphy copper -gold ores are spatially related to graphitic horizons and in some instances the best ores appear to be zones of intense alteration where these graphite beds have been completely replaced to sodium rich felsites . The mineralizing processes may in part be related to the mafic dike suite, principally alkaline gabbro and diabase sills, which intude the host rocks. The ores do however show some features which are more characteristic of skarn or contact replacement copper - gold mineralization related to diorite or syenodiorite intrusions . At Bidjovagge such intrusives would have to be at depth and future exploration should at least consider this potential. The ores exposed at surface,could simply cap a more extensive hydrothermal cell at depth . The ore forming processes at Bidjovagge are extensive and appear to go to depth; further drilling is therefore strongly recommended. **Se også BV 4566, BV 4567 og BV 4568**

HMC -1996 Report -Bidjovagge Project

Part I- 1996 Exploration Summary

Bclx Consulting Limited

Garth Pierce ,President
Dated--January 30, ~~1996~~ 1997-Wolfville,Nova Scotia

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1. INTRODUCTION :

The Bidjovagge Cu-Au project is located in an early Proterozoic greenstone belt in Finnmark , Norway ***(Figure 1***). The Bidjovagge ores comprise a complex set of vein and stockwork copper - gold deposits which are hosted by a succession of highly altered calcareous and graphitic sediments; the sediments have been intruded by a diverse suite of mafic intrusives ***(Figure 2).*** The ores of the district were first discovered in the 1950's and two mining operations have been undertaken . The most recent mining program was carried out by Outokumpu in the period 1985 to 1991.

This report describes ***Hendricks Minerals of Canada's*** (HMC) 1996 exploration program on the Bidjovagge project during the period of February through December of 1996 . HMC acquired the option to earn a 100% interest in this past producing mine by agreement with the Norway Mineral Venture , a private group which has controlled the mineral rights since January 1995. To earn its interest HMC must make annual option payments of $C25,000 and complete exploration expenditures of $C2.5 million dollars on or before February 1, 2001. HMC has met its first year obligations and this agreement is in good standing .

During 1996 HMC carried out exploration programs totaling in excess of $C800,000 . Initial programs included extensive compilation work and an independent review of the projects mineral inventory .This work was completed by late May and the 1996 field program began with a regional soil geochemistry survey which focused on the main mine workings, an area northwest of the mine known as the west anticline and the extension of the mine stratigraphy to the north . Numerous untested soil anomalies were detected and follow-up prospecting and diamond drill programs were initiated in July . During the field season a sampling program was also carried out to assess low grade ore stockpiled on site .

HMC elected to use most of the 1996 drill budget to target near surface anomalies to search for ores amenable to open pit mining . Areas adjacent to existing workings were targeted . The extensions of known mineralization to depth below the shallow open pits was left for future drill programs ; the decision being that with the existing mineral mineral inventory a near surface discovery could lead more quickly to a production decision.

This report has been prepared on behalf of HMC by ***BCLX Consulting Ltd.*** , a private Canadian consulting firm which HMC retained to supervise the 1996 exploration program . BCLX worked closely with an Oslo based geological consulting firm, ***Geologiske Tjenester A/S***, and developed an experienced team of Canadian and Norwegian personnel for the property.

2. PROJECT LOCATION / INFRASTRUCTURE

The Bidjovagge project is located on an all weather road forty kilometers northwest of Kautokeino in Finnmark County, Norway. Kautokeino is a modern town with a population of 3000 and has all the necessary facilities to support the exploration program . The town is located on one of the main highways from the Norwegian coast into Finland and is situated 50 kilometers from the Finnish border and 130 kilometers from the Norwegian port city of Alta. (***Fig.#1***). Alta. is a regional center for many services and air travel in Finnmark . Kautokeino was used as a base for the exploration program and the daily commute to the site negated the need for a camp at Bidjovagge and proved a cost effective way to complete the program.

Bidjovagge lies above tree-line in a mature alpine terrain at elevations of 650 to 800 meters . The rolling hill country is comparable to many parts of the tundra in Canada's Northwest Territories . Snow cover varies from one to three meters from late November through May . At approximately 70 degrees north latitude , Bidjovagge is north of the Arctic circle and is therefore subject to marked seasonal changes in daylight hours .

The Bidjovagge site is still serviced by a power line and water pipeline. Both services are now disconnected but are in generally good repair and would appear to be suitable for use in the future if exploration proves successful.

3. HMC LAND POSITION

HMC controls 56 claim units ,covering 14.3 square kilometers of the Proterozoic sedimentary stratigraphy that hosts the main copper-gold showings in the district (***Figure # 3***) .The HMC claim blocks enclose all of the past producing deposits at Bidjovagge . Copper-gold production has come from a sedimentary package and the ore zones are spatially related to a graphitic horizon .The graphite gives the ore stratigraphy a clear airborne EM response ; HMC controls a seven kilometer strike length of the main EM anomaly in the district .

4. PREVIOUS WORK-BIDJOVAGGE HISTORY--*Figure 4a,4b*

The Boliden Mining Company staked the first claims at Bidjovagge in 1952 ,after a local Lapland reindeer herder discovered copper rich samples in the Caskias mountains . Exploration was subsequently taken over by a Norwegian government committee and by 1966 four copper deposits had been defined containing 3 million tonnes grading 1.8% Cu and 0.5 gpt Au . The Bleikvassli Mining Company leased the deposit and ran a 100,000 TPY copper mining operation from 1970 to 1975 .The operation closed due to low copper prices and metallurgical problems encountered in treating sections of the copper ore which were graphitic.

A reevaluation of the gold content of the copper ores led Outokumpu Oy to reopen the mine in 1985 ; reserves at that time were recorded as 1 million tonnes at 1.2% CU and 2 gpt AU .Outokumpu operated the mine at a rate of 1000 tonnes per day , mining ores both by decline and from four shallow open pit deposits . The gold grades of the operation continued to improve as new discoveries such as the K zone (11.3 g/t) were made. Metallurgical problems were resolved by simply avoiding the graphitic portions of the ore deposit . In six years of production Outokumpu mined a total of 1.9 million tonnes grading 1.2% Cu and 4.1gpt Au . Mining operations closed in 1992 , after the shallow open pits had been exhausted.

Reserves at closure were stated as 776,000 tonnes grading 1.3 % Cu and 4.0 gpt. Au . During 1993 and 1994, Outokumpu continued exploration at the site before releasing the mineral rights back to the state on January 1,1995.

The Kautokeino greenstone belt was the focus of an extensive government survey program during the 1980's . As a result the Bidjovagge area has excellent airborne survey coverage . A detailed research report by ***A.Bjorlykke et al*** was also published on the deposit in Economic Geology in 1987 ; this paper is a good overview of the deposit geology and is included as ***Appendix #1a*** .

5. 1996 EXPLORATION SUMMARY

During 1996 , HMC carried out four separate exploration programs . After finalizing the option in February , HMC began to compile a detailed data base for the project . Bidjovagge had seen two periods of development and in total more then 1500 diamond drill holes had been completed prior to 1996 . As most of the records were incomplete and available only in hard copy , the first priority was to develop a comprehensive computer data base. A set of digital records was obtained from Outokumpu and this data was given to ***J.H.Reedman and Associates*** (Reedman)to compile drill plans and sections . Reedman was also asked to integrate available geophysical data into the data package .The results of this compilation work have kept up to date with current work and the final compilations are included as Maps 1-5 in ***Appendix # 1*** of this report.

After completing an assessment of the compiled data , BCLX proposed a four stage program to HMC as the initial phase of exploration at Bidjovagge .HMC accepted the proposal but emphasized that the aim of the 1996 exploration effort should be to delineate shallow near surface ores amenable to open pit mining .The resulting program included the following:

5a- Mineral Inventory -----Reedman review of Outokumpu inventory

5b- Soil Geochemistry ------Au -Cu field survey

5c- Low Grade Stockpile ; sampling program

5d- Diamond Drill Program

Each of these programs is described separately in this report . Results are illustrated by page size figures which accompany the text . Larger scale drawing have been included for each of the surveys as ***Maps 1-5 in Appendix # 1.*** Backup data for the survey work , including lab results are shown in ***Appendix #1*** while drill logs and assay results are included in ***Appendix # 2*** .

5a MINERAL INVENTORY

In 1993 at the time of the final closure at Bidjovagge , Outokumpu prepared a mineral inventory for the reserves left in place following that companies six year mining program. BCLX retained J.H.Reedman and Associates to review the Outokumpu inventory and give HMC some assessment of that resource . No attempt was made to assess any drill indicated reserves outside of the Outokumpu inventory although several areas outside of the defined zones were known to contain consistent mineralization

The Reedman report is included in full as ***section 5A1*** attached . BCLX is in complete agreement with the conclusions reached by John Reedman in his report. To date however no effort has been made to assess the entire drill data base and define a resource ; a decision was made instead to focus on outlining new zones of mineralization .

Many of the zones described in the Reedman report are open to depth and , in many cases at depths of less than 150 to 200 meters, so that the potential of expanding this resource should not be overlooked .

J.H.REEDMAN—REVIEW OF BIDJOVAGGE MINERAL INVENTORY

section 5a1-BCLX Report 25/1/96

AN ESTIMATE OF THE RESOURCE AT THE BIDJOVAGGE COPPER-GOLD DEPOSIT, FINNMARK, NORWAY: AN INTERIM REPORT

on behalf of

Hendricks Mineral Canada Limited

J. H. REEDMAN & ASSOCIATES LTD
89 Dickens Drive,
Winnipeg, Manitoba,
R3K 0M1

July 1996

INTRODUCTION

Copper mineralization was first discovered at Bidjovagge in 1950 and the deposit was mined for copper, both underground and in open pits, by the Bleikvassli Mining Company from 1970 to 1975. Various problems in mining and in recovery of copper from some of the ore hosted by graphitic schists led to premature closure of the operation. Following an appraisal of the deposit and the recognition of the gold potential of the copper ores, the mine was reopened by Outokumpu in 1985. A total of 1.7 million tonnes of ore grading 1.2% Cu and 4.1 g/t Au was mined by Outokumpu both from open pits and ramp access underground until final cessation of operations in 1991. At the closure of the mining operations Outokumpu quoted remaining *in situ* reserves at 776,000 tonnes grading 1.5% Cu and 4.0 g/t Au.

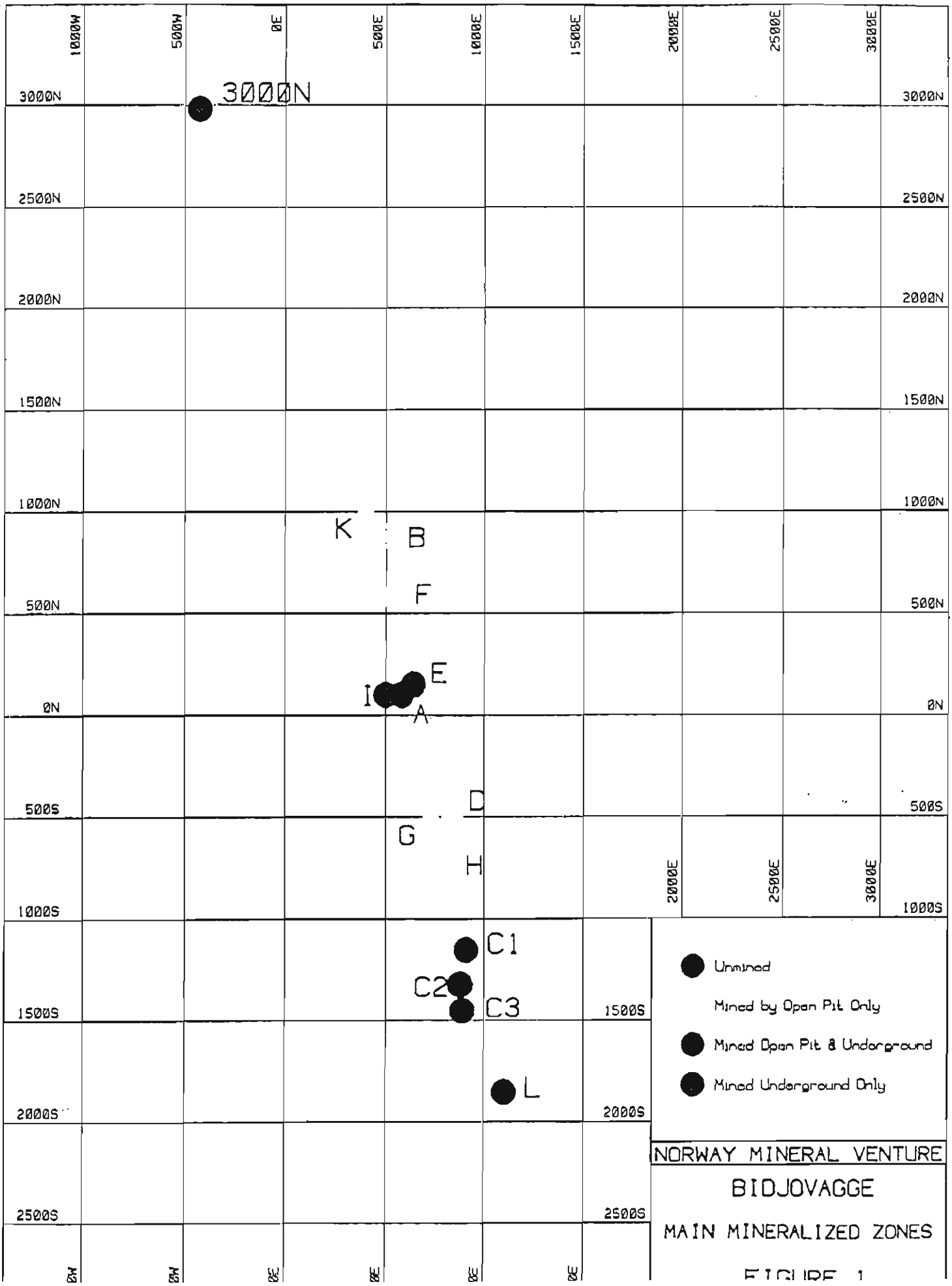
Mineralization occurs over a north-south strike length of 10 kilometres with mining operations concentrated on a number of lenses and pods over a 2,500 metre strike towards the centre of the overall defined zone (Figures 1 and 2). Outokumpu carried out extensive exploration drilling, but concentrated on open pittable mineralization and potential ore immediately accessible to existing underground openings. As a result, many targets are still open to depth and some well-defined geophysical conductors have only been sparingly tested by exploration drilling with significant unexplored gaps.

The object of the current study is an evaluation of the total unmined resource, though the C zones have not been included in this preliminary study due to time constraints and the lack of detailed stoping plans. An examination of the sections, which include the main access levels and drifts, shows that most of the C zone ore has been extracted and only small remnants remain. Outokumpu includes only 21,000 tonnes of ore from the C ore bodies in their estimate of unmined ore. This report refers only to a measureable resource and any statements that a zone is mined out or virtually mined out does not imply that there is no potential for discovering further ore at depth or along strike.

METHODOLOGY

The data from over 1500 drill holes for a total of 146,000 metres of driling were obtained in ASCII files from Outokumpu and imported into the BORSURV software for plotting and processing. In addition plans of the underground workings and open pits were obtained for determining the mined out parts of the deposit. In the case of the open pit workings the final open pit topographies were fitted to block models computed for each zone using 2.5-metre down-hole composites to interpolate 5m x 5m x 5m blocks. In the case of the underground workings all the main workings levels and some of the access ramps were entered into the drill hole database.

In March 1996 preliminary resource computations were undertaken using block modelling at a number of the zones. In the case of the zones worked by open pit this allowed computation of both mined and unmined material. All the block models were computed from 2.5-metre down-hole composites using an ellipsoidal search with the longer axes aligned north-south and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C1
C2
C3
L
Unmined
Mined by Open Pit Only
Mined Open Pit & Underground
Mined Underground Only
NORWAY MINERAL VENTURE
BIDJOVAGGE
MAIN MINERALIZED ZONES
FIGURE 1

vertically. The 5m x 5m x 5m blocks were computed using inverse distance squared and the eight closest samples.

The current resource computations were undertaken using composites or zones defined by Garth Pierce. These defined zones were reviewed by plotting sets of sections for each of the zones and, where considered necessary, a few of the zone designations were changed. In a few instances missed intervals were averaged and named. The zone dips were measured on the sections and the BORSURV software used to compute the intersection angles for computation of true thicknesses. The dip values were also used to compute horizontal widths for the resource computations. The reserves were computed on north-south longitudinal sections using 5m x 5m blocks computed by inverse distance squared interpolation. In addition three-dimensional wireframe models were created for each zone and cut at 10-metre intervals by levels and east-west sections to test for continuity

OUTOKUMPU RESERVES

The table below summarises the remaining *in situ* reserves as computed by Outokumpu at cessation of their mining operations.

ZONE	TONNES	%Cu	g/t Au	Cut-off[1]
3000N	56,000	1.6	15.3	2.5
D	566,000	1.3	3.0	2.0
L	98,000	2.3	3.7	2.0
M	8,000	2.3	1.1	1.2
C3	5,000	1.0	10.4	2.0
C4	16,000	2.1	5.2	2.5
H	39,000	1.8	2.4	2.0
TOTAL	776,000	1.5	4.0	

[1]Copper equivalent (%Cu + g/t Au)

RESOURCE COMPUTATIONS

The resource computations were made using the methods outlined above at various gold equivalent cut-offs. Outokumpu used a copper equivalent of 1 g/t Au equalling 1% Cu, but it was decided that an equivalence of 0.80% Cu for 1 g/t Au would more closely represent current prices, though copper prices have fallen somewhat over the past few weeks. The cut-off used

in the computations is this gold equivalent based on 0.80% Cu equalling 1 g/t Au. In the absence of density data, a density of 2.85 tonnes/m^3 has been used throughout.

Results for tonnage and grade can vary quite widely in any resource computation due to differences in methodology, selection of cut-off and, more importantly, differences of interpretation and selection of intervals for compositing. As requested, the current resource figures have been computed to indicate the deposit's potential and should be regarded as a geological resource. For purposes of mining, more rigorous critera regarding accessibility and continuity would have to be applied to the resource computation. Nevertheless, the current computation has not been an attempt at making a mineral inventory of every single unmined block of mineralized material making cut-off. Isolated intersections with poor continuity and small amounts of ore left just below or outside pit boundaries have not been included. Thus, statements that a particular zone has been mined out do not mean that no ore remains, but rather that such remnants as might be present are insignificant.

3000N Zone

The 3000N Zone, which was not worked by Outokumpu, lies beneath 35 to 38 metres of Cambrian sediments and was discovered by drilling along an EM conductor. The zone is gold-rich compared to the average Bidjovagge ore and, although good copper grades occur, there is no correlation between gold and copper. As a result, it is difficult to maximise both copper and gold in a resource calculation since one tends to be maximized at the partial expense of the other. The results of the computation north of 2900N using the parallel defined zones, TN11 and TN21, for the resource computation on a north-south longitudinal gives the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	136,830	1.47	7.89	3.09
2.5	127,610	1.49	8.40	3.17
3.0	108,050	1.46	9.83	3.21

The B and K(Karin) Zones

Both these adjacent, parallel zones were worked as open pits by Outokumpu and neither is included in the inventory of remaining reserves quoted by Outokumpu. In the case of the B Zone there is very little material remaining outside the pit boundaries so that it has been essentially mined out. However, sufficient mineralization still lies below the K pit to warrant a resource calculation. It is not clear why this material was not included by Outokumpu, but they must have decided that the tonnage and grades would not support deepening the pit or ramping down below the pit as they had done at some of the other zones. It is clear that the best parts of this gold-rich

zone, which would have averaged over 10 g/t Au in the pit, has been mined out and the remaining material is marginal. However, Outokumpu have included marginal material from elsewhere, particularly the D Zone, in their inventory of remaining reserves.

From the March 1996 block model calculations it is estimated that approximately 250,000 tonnes of ore have been extracted from the B Pit and 150,000 tonnes from the K (Karin) Pit. In the case of the B Pit copper grades would have averaged around the overall deposit grade with gold grades a somewhat below the deposit average. The reverse would have been the case for the K Pit with copper grades well below the deposit average and gold grades well above the deposit average at 10 g/t or more.

The results of the computation north of 850N using the defined zone, K11, for the resource computation on a north-south longitudinal give the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	111,915	0.31	4.52	3.73
2.5	91,595	0.32	5.09	3.64
3.0	81,400	0.33	5.42	3.58

The F (Franciska) Zone

This zone, 300 metres south of the B Pit, is a continuation of the B Zone mineralization and was worked as a small pit to depths of 30 to 35 metres. From the March 1996 block model calculations it is estimated that 45,000 to 50,000 tonnes of ore and 90,000 tonnnes of waste were removed from the pit with both copper and gold grades at or close to the overall deposit average. The old pit is currently filled with waste rock.

There is material below the pit, but as in the case of the K Zone material it is not included in Outokumpu's inventory of remaining reserves, no doubt due to the marginal nature of the remaining drill indicated resource.

The results of the computation between of 510N and 620N using the defined zone, B21, for the resource computation on a north-south longitudinal give the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	41,335	1.51	3.29	3.02
2.5	35,995	1.57	3.64	3.06
3.0	33,300	1.63	3.82	3.08

The A, I (Inger) and E (Eva) Zones

These zones, comprising the A Zone flanked immediately to the east and west by the smaller E (Eva) and I (Inger) zones respectively, were worked initially as three separate pits which partly merged as one overall pit as work progressed. All three zones were worked underground below the pits from ramp access. The I (Inger) Zone was worked to a depth of 25 metres from the pit, but this worked depth was extended to 50 metres by stoping from the 597 level run below the pit from the main A Zone ramp. The E (Eva) Zone was worked to depths of 45 to 50 metres from the open pit, but this was extended to 70 metres by stoping from the 577 level run below the pit. The central A Zone was worked to depths of 60 metres from the open pit, but this was extended to depths of 125 metres by a number of levels below the pit and to the north following the plunge of the mineralization down to the 520 level.

From the block model calculations it is estimated that over 400,000 tonnes of ore were mined from the pits with a copper grade somewhat better than the overall deposit average and a gold grade below the deposit average at around 3 g/t. It is not known what was extracted from the underground workings since detailed stope plans have not been made available. However, all the main access ramps and levels developed in ore are in the database and have been plotted on the working sections so it is possible to see where stoping was undertaken. The underground workings at the A Zone are quite extensive and it is likely that at least 200,000 tonnes of ore were mined from underground.

There are some remnants below the 597 level under the I (Inger) pit, below the 577 level beneath the A pit between 120N and 150N, and below the 520 level between 200N and 240N.

The D and G (Gerd) Zones

The D Zone was worked as an open pit to a depth of 60 metres and the much smaller G (Gerd) zone 100 metres to the southwest was worked to a depth of only about 20 metres. It is estimated that 220,000 to 250,000 tonnes or ore were mined in these open pits. The copper grade was at or just below the deposit average, but the gold grade was probably 50% or more higher than the deposit average of 4 g/t. Only small remnants of ore remain below the G pit and it has not been included in the resource estimate.

The results of the computation between of 600S and 370S using the defined zone, D11, for the resource computation on a north-south longitudinal give the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	318,440	1.35	3.76	3.08
2.5	295,270	1.39	3.96	3.07
3.0	265,070	1.43	4.25	3.11

The D pit was the most extensively drilled of the open pit workings by Outokumpu who traced the zone down to a depth of 300 metres. Both the G (Gerd) and D pits are currently full of tailings.

The H (Hilde) Zone

The H (Hilde) zone was worked to a depth of approximately 25 metres in a short narrow pit over a strike length of about 60 metres. A drift, referred to as the H Tunnel, was driven north about 25 metres beneath the deepest part of the pit on the 630 level from the underground workings at the C1 zone. No ore was mined, but some limited exploration drilling was undertaken from the drift. Mineralization at the H zone extends approximately 100 metres south of the open pit at shallow depths below economic pit depths and it would appear that the H Tunnel must have been planned to mine this material underground.

The results of the computation between of 860S and 740S using the defined zone, H11, for the resource computation on a north-south longitudinal give the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	80,740	1.61	4.30	2.78
2.5	79,895	1.62	4.33	2.79
3.0	72,770	1.69	4.61	2.91

The L (Laura) Zone

The L (Laura) zone between 1720S and 1920S is a narrow, steeply dipping to vertical zone discovered by drilling along the main trend to the south of the C zone ore bodies. The L2 defined zone has been intersected in 27 holes and mineralization greater than the 2.0 g/t Au Eqv cut-off has been intersected in 10 of the holes between co-ordinates 1800S and 1920S and between elevations 530 to 680.

The zone plunges steeply to the south and would have to be worked from underground. However, south of 1850S there are no holes which could have intersected the zone above a depth of 80 to 100 metres and the shallowest holes north of 1850S intersect the zone at depths of 35 to 40 metres so that the zone has not been explored at depths amenable to open pitting. Outokumpu does not appear to have made any plans for mining this zone.

The results of the computation between of 1930S and 1790S using the defined zone, L2, for the resource computation on a north-south longitudinal give the following results:

Cut-off	TONNES	%Cu	g/t Au	H. Width
2.0	147,925	1.44	2.56	4.75
2.5	136,960	1.46	2.70	4.85
3.0	100,025	1.65	3.18	4.96

Total Resource

All the zones computed using a cut-off of 2.0 gold equivalent are summarised as follows:

ZONE	TONNES	%Cu	g/t Au
3000N	136,830	1.47	7.89
K	111,915	0.31	4.52
F	41,335	1.51	3.29
D	318,440	1.35	3.76
H	80,740	1.61	4.30
L	147,925	1.44	2.56
TOTAL	837,185	1.28	4.35

All the zones computed using a cut-off of 2.5 gold equivalent are summarised as follows:

ZONE	TONNES	%Cu	g/t Au
3000N	127,610	1.49	8.40
K	91,595	0.32	5.09
F	35,995	1.57	3.64
D	295,270	1.39	3.96
H	79,895	1.62	4.33
L	136,960	1.46	2.70
TOTAL	767,325	1.32	4.63

All the zones computed using a cut-off of 3.0 gold equivalent are summarised as follows:

ZONE	TONNES	%Cu	g/t Au
3000N	108,050	1.46	9.83
K	81,400	0.33	5.42
F	33,300	1.63	3.82
D	265,070	1.43	4.25
H	72,770	1.69	4.61
L	100,025	1.65	3.18
TOTAL	660,615	1.37	5.16

CONCLUSIONS

The resource computation using the cut-off of 2.0 g/t gold equivalent shows that there are 837,000 tonnes grading 1.28% Cu and 4.35 g/t Au. This is eight per cent more tonnes at a somewhat lower copper grade and slightly higher gold grade than the Outokumpu total of 776,000 tonnes. However, a direct comparison is not strictly valid since the zones used in the two computations are not exactly the same and slightly different cut-offs were used. A total of 24,000 tonnes are given in the Outokumpu table for the M and C4 zones for which no location is given on any of the available plans so that it is not known where they are.

In the case of the 3000N, H and L zones the Outokumpu reserves contain just over half the tonnes at slightly higher grades compared to the present computation. This is particularly marked in the 3000N zone where the Outokumpu estimate has clearly focused on maximising the gold grade by limiting the resource to the central part of the zone. In all three of these zones the Outokumpu estimate can definitely be considered as conservative.

In the case with the D zone, which accounts for 73% of the Outokumpu tonnage, the current estimate contains significantly less tonnage than the Outokumpu estimate, though the grade is slightly higher grade. The current estimated tonnage could be increased by including some lower grade material to bring the grade down closer to Outokumpu's grade figure, but there would still be a shortfall and it is considered that the Outokumpu estimate for ore remaining below the D pit is too high.

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B.Sc., M.Phil., M.I.M.M., C.Eng.
9th July, 1996

5b SOIL GEOCHEMISTRY SURVEY—Au -Cu

Background

The depth of the overburden cover in the Bidjovagge area suggested that a regional soil survey could be an effective means of outlining new near surface copper-gold mineralization. The Bidjovagge airborne data defines a broad fold structure with a strong magnetic/electromagnetic response . All known ore zones can be seen to lie along this conductive trend and it was this geophysical target that was used to control soil sample coverage.***(Figure #5)***

The Outokumpu mine grid was reestablished using hip chains and flagging ; small wooden pickets were placed at 100 to 150 meter intervals along wing lines and at 50 meter centers along the main baselines. Soil samples were taken at 25 meter centers along east -west trending lines spaced at 50 to 200 meter intervals. Areas with obvious contamination were not sampled but assay results show that contamination was still a problem at several sites.

Sampling Details

Sampling was done with small hand trowels and sample sizes varied from 100 to 150 grams . Soil conditions were noted and each site was labeled and flagged .Samples were labeled using grid coordinates to allow easy sample identification for subsequent plotting routines. Samples were taken to base camp to be dried when possible before shipment by air to M-Tech Labs in Halifax for Cu-Au analysis.

Upon receipt of the samples M-Tech Labs sorted , logged and placed the samples in dryers set at 140 * F. Soils were then sieved through an 80 mesh Tyler stainless steel screen . Base metals were detected using .5 g of the pulp material which was then weighed and digested with Aqua Regia at 200* F for one hour .The samples were then cooled and made to 10 ml. volume with deionized water .A Varian Spectra 20 A.A.Spectrometer was used to quantify metals using external standards .The detection level for copper is 1 ppm. Reference material , duplicate samples and blanks were done for every tray of assay samples . Gold detection is done by fire assay with an A.A. finish using a 30 gram sample ;detection limits are 10 ppb.

Results

A complete list of assay results is given in ***Appendix #1***. Sample locations in ***Appendix #1b*** are given in mine coordinates which have been corrected for accuracy from the original grid locations in cases where the field grid lines deviated . A detailed list of soil assay results as received from M-Tech Labs is included in ***Appendix # 1c*** .

Gold results are shown on ***figure # 6a,6b*** attached .The survey returned values up to 1690 ppb but for the most part gold values greater than 50ppb defined the main zones of mineralization . Gold values greater than 1 gram were limited in distribution and appear to represent areas of contamination .

Copper results are illustrated on ***figure # 7a,7b*** and show copper values ranging up to 3100 ppm against typical background levels of 20 to 40 ppm . Copper assays greater than 50 ppm appear to delineate the mineralized horizons . Copper contamination was less obvious than that for gold but did effect a small portion of the sample sites .

Conclusions

Sample contamination for the most part was limited and the soil survey appears to clearly outline the prospective stratigraphy at a Bidjovagge . For the most part Cu and Au soil anomalies were coincident .Copper anomalies were more consistent and wide spread but the strongest gold responses matched zones of copper enrichment .

Despite the strong anomaly pattern defined by the soil survey , initial drill testing of several of these targets has been disappointing . Follow-up drilling intersected highly altered sediments with anomalous copper and gold values but no significant mineralization has as yet been intercepted in testing these soil anomalies .The soil survey seems to have been successful in delineating the host stratigraphy but has not yet proven effective in isolating higher grade mineralization along the target horizons . Only a limited amount of the follow-up drill program was however based on geochemistry so it is probably premature to down grade the value of this survey data .

5c LOW GRADE STOCKPILE -- Sampling Program

Background

Outokumpu Oy placed lower grade mineralization from both its underground and open pit development operations on a series of low grade stockpiles .Stockpiled material was not crushed and was simply broken ore from production faces. The material was fairly well sorted and contained very little graphite ; the low grade ore was however highly variable in size , ranging from fine gravel to coarse blocks of rock greater than 1 meter across. The stockpiles were clearly separated from the waste rock dumps and had been placed in dry ,well drained locations , adjacent to the main access roads at the site . ***Figure # 8*** shows the location of the low grade stockpiles which were sampled in 1996 .

Sampling Details

The stockpiles are typically oval in shape with long dimensions varying from 50 to 200 meters in length. Sampling procedures involved taking 0.5 to 1.0 kilogram grab samples at 5 meter intervals along sample lines across the top of each pile. Individual grab samples were then combined to form larger composite samples for analysis .The maximum sample composite was 5 separate grab samples representing a 25 meter traverse across the stockpile . Perpendicular traverse lines were selected to sample both the long and short axis of every dump site .

Samples were sent to M-Tech Labs for analysis . M-Tech processed the low grade broken rock samples in the same way that it subsequently processed all drill core . In this instance however BCLX requested the lab first divide each composite sample into 4 roughly equal subsamples . Each subsample was then processed separately to try and gage variability within each composite sample.

The lab's procedure was to initially reduce and homogenize each coarse rock sample with a jaw and cone crusher . Crushed material was then passed through a Jones riffle to obtain a 200 to 250 gram subsample which was then pulverized in a ring pulverizer to obtain a minus 150 mesh pulp. The pulps were then analyzed using the same procedures described in section 5b of this report .

Results

Table # 1 , gives a break down of the assay results for this sampling program , together with a very conservative mineral inventory for this material . This inventory was made to give a preliminary indication of the grade and tonnage of the low grade ores which were placed on these stockpiles .This assessment was done in very cursory manor only ; with the idea of simply establishing an order of magnitude for this material .

The grade and tonnage figures given in Table # 1 should therefore not be seen as definitive . A much more comprehensive sampling and surveying program would be required to properly assess this low grade reserve.

TABLE # 1

Dump	East-West	North South	Perimeter	Height	Tonnage **	AU grams	CU percent
A	*23 m*	*48 m*	*107 m*	*1.5 m*	2,650 t	1.12g	.68%
B	*87m*	*100 m*	*305 m*	*5.0 m*	74,500 t	2.36g	.47%
C	*32 m*	*67 m*	*198 m*	*3.0 m*	13,500 t	6.83g	1.19%
E	*60 m*	*85 m*	*451 m*	*4.5 m*	42,050 t	3.17g	.73%
G	*70 m*	*61 m*	*217 m*	*4.0 m*	29,730 t	1.56g	.73%
M-K	*42 m*	*100 m*	*262 m*	*2.0 m*	20,480 t	2.20g	.37%
O	*58 m*	*73 m*	*200 m*	*3.5 m*	20,360 t	2.00g	.95%
Q	*75 m*	*93 m*	*275 m*	*4.0 m*	41,960 t	.84g	.39%.
X	*70 m*	*50 m*	*180 m*	*3.0 m*	16,540 t	.78g	.39%
Y	*75 m*	*36 m*	*177 m*	*2.5 m*	11,330 t	2.45g	1.00%
Y2	*75 m*	*50 m*	*250 m*	*3.5 m*	27,562 t	1.70g	1.05%
H1	*30 m*	*85 m*	*220 m*	*3.0 m*	15,260 t	1.16g	.32%
H2	*35 m*	*20 m*	*104 m*	*1.5 m*	1,680 t	1.16g	.32%
F2	*65 m*	*35 m*	*145 m*	*2.2 m*	7,620 t	.78g	.65%

***Tonnage* = 325,222 @ 2.11g/t Au /0.64%Cu**

*** A specific gravity of 2.1 was used for broken rock*

5d DIAMOND DRILL PROGRAM

Background

A total of 2673 meters of BQ diamond drilling were completed in the 28 holes which HMC drilled at Bidjovagge in 1996 .***Terje Holmen Diamant Boring*** was awarded the initial drill contract in June and the first drill holes were collared July 15th. The contractor elected to complete the contract with standard drilling equipment because the holes were shallow and required light weight mobile rigs. Muskeg mounted Diamec 251 hydralic drills were used for this purpose .

Production was slow, averaging only 15 to 20 meters per day , requiring two rigs to be used so that geological support could be used efficiently . Attempts to use wire line equipment did not improve productivity . Given the typical 15 day turn around time required to prepare core samples , ship and receive assays , the slow rate of drilling actually proved beneficial and allowed the program the flexibility to respond to assay results.

Terje Holmen's crews completed the first 21 drill holes of the program by early October but did not have winterized equipment available to complete the last seven holes of the program when drilling resumed October 30th . ***Geo Drilling A/S*** completed the last phase of the program in a very efficient manor given the time of year and adverse weather conditions at the time.

Drill Targeting - figure # 9

HMC initially planned to test the down dip extensions of the known mineralization at Bidjovagge and the first drill holes were targeted for this purpose . Results of holes such as 96-1 suggest this approach was valid but in the course of completing the initial three holes in this program encouraging results were received for the soil survey and the first of the low grade stockpiles. HMC then made the decision to direct the remainder of the first years exploration drilling to test shallow targets.

Drill holes 96-1 to 96-3 were targeted at the down dip extensions of known mineralization .Holes 96-4 to 96-17 tested a series of near surface geochemical or geophysical anomalies along the strike extent of the main Bidjovagge stratigraphy . Drill holes 96-18 to 96-26 were collared to follow

up on a zone of mineralization found near surface , in drill hole 96-13, between the F and B open pits. A complete summary of drill collar locations, , hole depths and orientations is listed below.

Table # 2

DDH #	*easting*	*northing*	*elevation*	*dip*	*azimuth*	*depth*
1. **B96-1**	*649.00*	*888.60*	*616.00 m asl.*	*-46.00*	*270.00*	***203.00m***
2. **B96-2**	*870.00*	*-1020.00*	*690.00 m.asl*	*-60.00*	*270.00*	***109.40m***
3. **B96-3**	*596.00*	*915.00*	*610.00 m asl.*	*-58.00*	*270.00*	***158.00m***
4. **B96-4**	*430.00*	*1050.00*	*610.00 m asl.*	*-35.00*	*100.00*	***143.00m***
5. **B96-5**	*382.00*	*100.00*	*650.00 m asl.*	*-43.00*	*90.00*	***148.30m***
6. **B96-6**	*657.00*	*5.00*	*649.00 m asl.*	*-40.00*	*270.00*	***67.10m***
7. **B96-7**	*455.00*	*-250.00*	*654.00 m asl.*	*-45.00*	*90.00*	***56.70m***
8. **B96-8**	*390.00*	*550.00*	*614.00 m asl.*	*-45.00*	*90.00*	***50.50m***
9. **B96-9**	*477.00*	*400.00*	*625.00 m asl.*	*-40.00*	*90.00*	***106.60m***
10. **B96-10**	*490.00*	*310.00*	*625.00 m asl.*	*-40.00*	*90.00*	***70.50m***
11. **B96-11**	*400.00*	*112.00*	*650.00 m asl.*	*-46.00*	*90.00*	***175.60m***
12. **B96-12**	*614.00*	*1750.00*	*585.00 m asl.*	*-35.00*	*90.00*	***53.30m***
13. **B96-12a**	*720.00*	*1800.00*	*575.00 m asl.*	*-40.00*	*270.00*	***85.00m***
14. **B96-13**	*497.50*	*710.00*	*612.00 m asl.*	*-40.00*	*90.00*	***172.00m***
15. **B96-14**	*620.00*	*1268.00*	*620.00 m asl.*	*-40.00*	*270.00*	***75.00m***
16. **B96-15**	*702.00*	*-70.00*	*655.00 m asl.*	*-40.00*	*270.00*	***92.00m***
17. **B96-15a**	*615.00*	*-70.00*	*605.00 m asl*	*-40.00*	*270.00*	***43.30m***
18. **B96-16**	*-300.00*	*1450.00*	*580.00 m asl.*	*-40.00*	*270.00*	***76.50m***
19. **B96-17**	*405.00*	*-1050.00*	*650.00 m asl.*	*-40.00*	*90.00*	***143.30m***
20. **B96-18**	*488.00*	*730.00*	*611.00 m asl.*	*-45.00*	*90.00*	***100.00m***
21. **B96-19**	*485.00*	*690.00*	*607.50 m asl.*	*-40.00*	*90.00*	***100.00m***
22. **B96-20**	*512.00*	*730.00*	*611.00 m asl.*	*-45.00*	*270.00*	***72.00m***
23. **B96-21**	*511.00*	*745.00*	*611.00 m asl.*	*-45.00*	*270.00*	***55.00m***
24. **B96-22**	*473.00*	*710.00*	*609.00 m asl.*	*-43.00*	*90.00*	***112.50m***
25. **B96-23**	*510.00*	*765.00*	*611.00 m asl.*	*-45.00*	*270.00*	***50.00m***
26. **B96-24**	*510.00*	*785.00*	*611.00 m asl.*	*-50.00*	*270.00*	***45.70m***
27. **B96-25**	*515.00*	*700.00*	*609.00 m asl.*	*-60.00*	*270.00*	***38.20m***
28. **B96-26**	*495.00*	*700.00*	*609.00 m asl.*	*-45.00*	*90.00*	***70.00m***

Total meters drilled = 2672.50

Drill Results / Conclusions

Table # 3 gives a list of drill results as reported by HMC in it's public releases . Detailed drill data including summary drill logs, assays, sections and field logs are included as ***Appendixes # 2 a,b,c and d*** .

The 1996 drill program failed to delineate any significant new zones of near surface mineralization .Copper and gold values were however wide-spread and the alteration system is extensive . Drill holes such as 96-13 show the tenor of the mineralization that still remains to be tested near surface . Deeper intercepts such as those in 96-1, 96-5 and 96-11 indicate the potential for deeper zones of mineralization at Bidjovagge . For the most part the Bidjovagge ore zones are poorly tested below 150 meters .

The style of mineralization at Bidjovagge is fairly unique and can best be described as fracture controlled sulfide ores which most commonly take on a stockwork appearance .The mineralization is best developed as replacement zones superimposed on a highly altered calcareous sedimentary succession .Within this stratigraphy copper -gold ores are spatially related to graphitic horizons and in some instances the best ores appear to be zones of intense alteration where these graphite beds have been completely replaced to sodium rich felsites . The mineralizing processes may in part be related to the mafic dike suite , principally alkaline gabbro and diabase sills , which intrude the host rocks . The ores do however show some features which are more characteristic of skarn or contact replacement copper - gold mineralization related to diorite or syenodiorite intrusions . At Bidjovagge such intrusives would have to be at depth and future exploration should at least consider this potential. The ores exposed at surface,could simply cap a more extensive hydrothermal cell at depth .

The ore forming processes at Bidjovagge are extensive and appear to go to depth ; further drilling is therefore strongly recommended. A proposal for this next phase of drilling is given in ***Part II*** of this report .Observations made in this proposal will also more clearly explain the results of the 1996 drill program.

TABLE # 3

DRILL RESULTS – 1996 BIDJOVAGGE PROJECT
DRILL HOLES #1 TO #13 INCLUSIVE

A. NEW MINERALIZATION — ZONES FOUND IN PHASE 1 PROGRAM

Zone Name	Hole #	From	To	Meter	Au g.p.t.	Cu %	Remarks
N Zone	96-13	12.0	64.0	52.7	1.49	0.22	Hole collared in new gold zone between F and B Pits
	including	12.0	29.0	17.0	3.71	0.07	
		12.0	22.0	10.0	5.34	0.09	
	98-13	95.9	124.2	28.3	0.25	0.26	
I West	96-5	103.5	114.5	11.0	2.09	0.78	Shallow sulfide zone 30 meters west of I Pit
	including	108.0	114.5	6.5	3.42	0.82	
I West	96-11	89.0	104.0	15.0	0.78	0.38	As above
	including	93.4	100.0	6.6	1.48	0.46	
	or	96.5	100.0	3.5	2.59	0.21	

Holes #96-7, #96-8, #96-9, #96-10 and #96-12 were collared on other grassroots targets and returned no significant assays.

B. KNOWN ZONES – EXTENDING KNOWN RESERVES

B Zone	96-1	158.7	176.0	17.3	2.77	0.30	B Zone down plunge – 50 meters below open pit
	including	158.7	170.0	11.3	3.95	0.46	
		160.0	164.0	4.0	10.38	0.32	
C Zone	96-2	31.0	69.1	38.1	0.13	0.41	C Zone north extension
B Zone	96-3	No significant assays					B Zone north extension
K Zone	96-4	31.5	58.0	26.5	0.25	0.78	K Zone 50 meters north of K Pit at 40 meters depth
	including	43.0	45.0	2.0	6.38	0.21	
A Zone	96-6	25.0	36.7	11.7	0.12	0.25	A Zone 40 meters below pit, hole abandoned before reaching main zone

DRILL RESULTS – 1996 BIDJOVAGGE PROJECT
DRILL HOLES #14 TO #26 INCLUSIVE

Zone Name	Hole #	From	To	Meter	Au g.p.t.	Cu %
N Zone	96-18	2.0	6.0	4.0	4.56	0.01
		16.0	82.0	66.0	0.30	0.22
	including	26.0	36.0	10.0	1.04	0.04
	96-19	56.0	88.0	32.0	0.29	0.33
	including	82.0	88.0	6.0	1.13	0.24
	96-20	14.0	36.0	22.0	0.56	0.07
	including	16.0	20.0	4.0	1.78	0.04
	96-23	1.5	38.0	36.5	0.13	0.24
	including	30.0	38.0	8.0	0.40	0.47
	96-25	10.0	18.0	8.0	1.49	0.05
	including	10.0	14.0	4.0	2.72	0.02
	96-26	12.0	70.0	58.0	0.15	0.17
Geochem Targets	96-15	110.0	122.0	12.0	0.45	0.43

Holes #96-14, #96-16 and #96-17 tested geochem targets which proved to be barren. Holes #96-21, #96-22 and #96-24 tested the North extension of the N Zone but returned no significant assays.

STATEMENT OF QUALIFICATIONS

I , ***Garth A Pierce*** , hereby certify :

1. I am a consulting geologist working for ***BCLX Consulting Ltd.***; a private geological consulting business which I own. My business and permanent address is , 40 Alline Street , Wolfville , Nova Scotia.

2. I am a graduate of ***Mount Allison University*** , Sackville , New Brunswick with the degree of ***Bachelor of Science - Geology major- 1974*** .

3. I have been continually employed as a geologist since 1974 ; Through 1976 with the New Brunswick government ; until 1993 with Noranda Minerals ; and since 1993 managing my own consulting firm.

4. I am a member of the ***Prospectors and Developers Association of Canada***.

5. I am a former director of ***Hendricks Minerals Canada(HMC)*** for whom this report was written . Through this assocation my company received shares in the company . I resigned as a director in December of 1995 but still hold shares in the company .

6. This report is based on my personal supervision of the exploration program carried out by ***HMC*** at Bidjovagge during 1996. I assisted in both the geochemical survey and low grade stockpile sampling programs . During the drill program I assisted in logging the core and selecting core samples for analysis.

7. I was retained by the company to supervise the program and therefore consent to the use of this report by the company for assessment purposes and for submission to any third parties that choose to review the data base .

Dated at ***Wolfville ,Nova Scotia***
January 30 ,1997

Garth Pierce (Bsc.)
BCLX CONSULTING LTD.

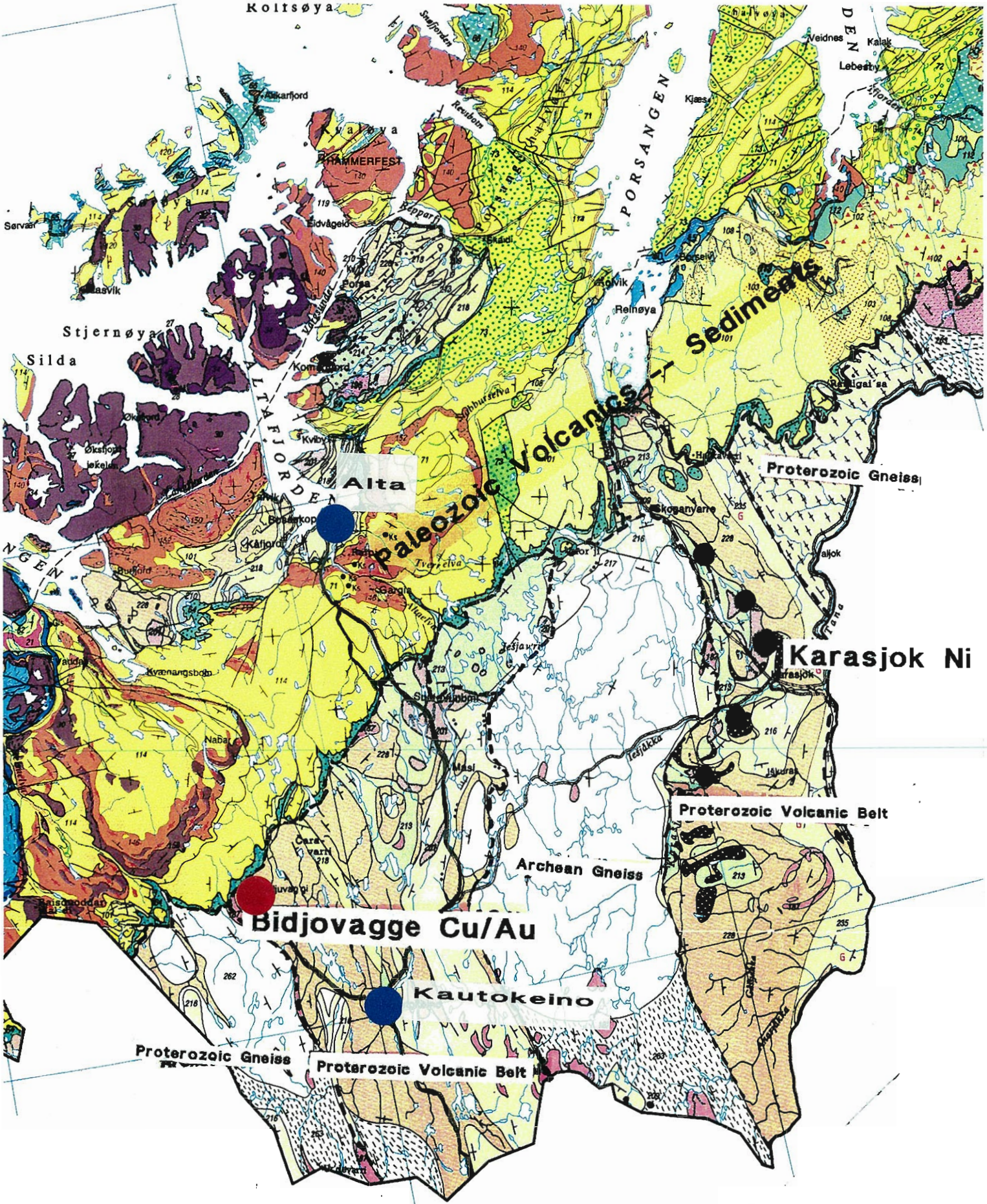

Alta
Paleozoic Volcanics
Sediments
Proterozoic Gneiss
Karasjok Ni
Proterozoic Volcanic Belt
Archean Gneiss
Bidjovagge Cu/Au
Kautokeino
Proterozoic Gneiss
Proterozoic Volcanic Belt
HAMMERFEST
Stjernøya
Silda
Kvaløya
Koltsøya
PORSANGEN
ALTAFJORDEN

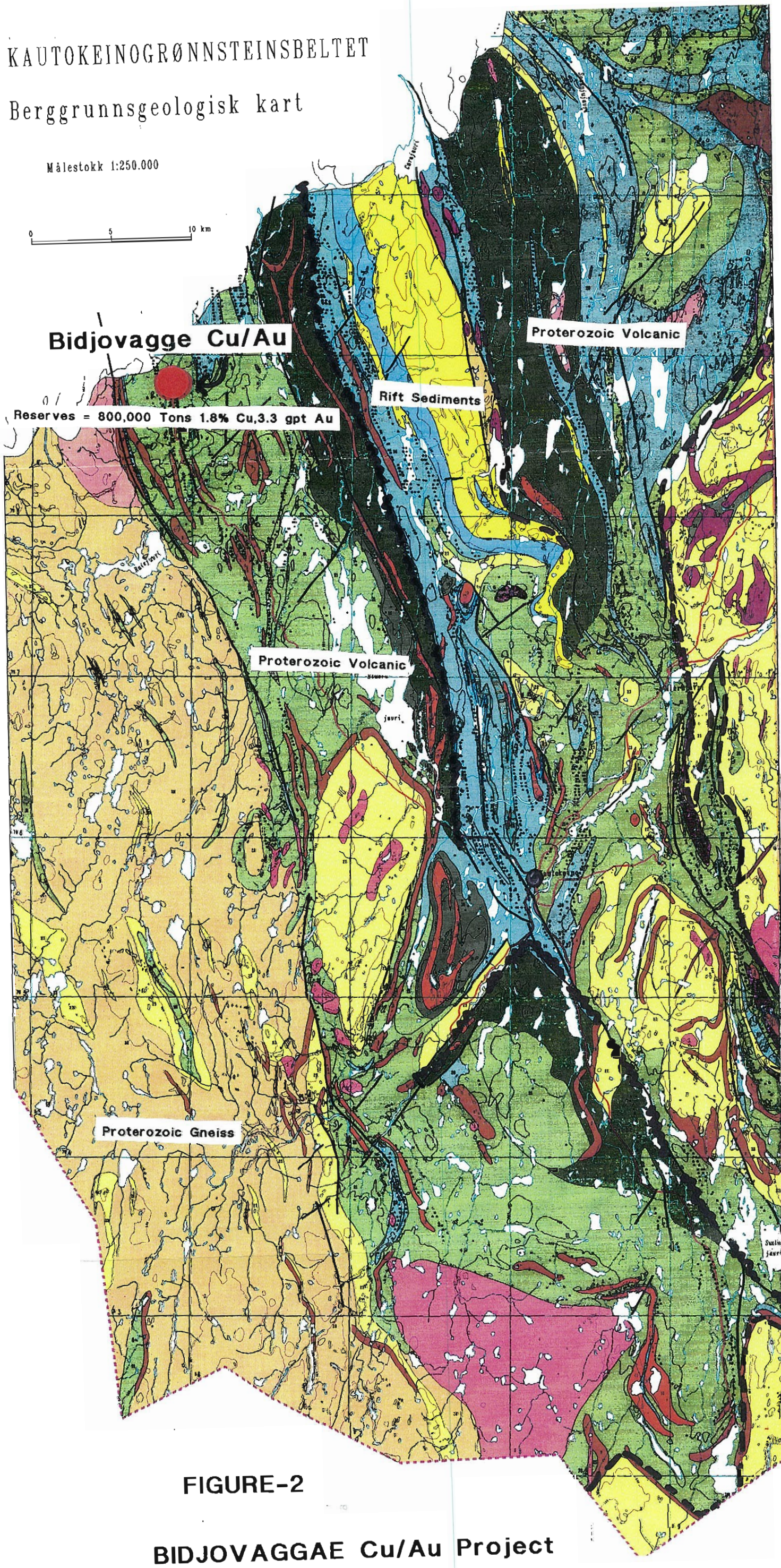
FIGURE-1

KAUTOKEINOGRØNNSTEINSBELTET

Berggrunnsgeologisk kart

Målestokk 1:250.000

0 5 10 km



Kart 1, NGU Rapport 92.143

Tegnforklaring

1 Kaledonske dekkebergarter og senproterozoiske sedimenter (Dividalgruppa).

Dyp- og gangbergarter av antatt tidligproterozoisk alder

2 Granitt.
3 Granodioritt.
4 Kvartsmonzonitt, kvartsdioritt og tonalitt.
5 Gabbro/metagabbro.
6 Peridotitt.
7 Albittdiabas.
8 Diabas (remanent magnetisk).
9 Diabas/metadiabas.
10 Diabas (ofittisk tekstur).

Sedimentære og vulkanske bergarter av antatt tidligproterozoisk alder
Lite omdannede (lav grad og lavere)

11 Sandstein, feltspatførende, dels kvartsittisk, stedvis konglomerat- og siltsteinslag.
12 Leirskifer med siltsteinslag.
13 Kalkstein- og dolomittmarmor.
14 Leirskifer/tyllitt, dels grafitt- og magnetittførende, underordnet albittfelsitt og tuff/tuffitt.
15 Grønnstein/-skifer, omdannet basaltisk tuff/tuffitt.
16 Grønnstein, omdannet basaltisk lava, stedvis agglomeratlag.
17 Grønnstein/-skifer, udifferensierte basaltiske vulkanske bergarter, dels med diabasganger.

Noe omdannede (middels grad og høyere)

18 Albittfelsitt, omvandlede sedimentære og vulkanske bergarter.
19 Kalkstein- og dolomittmarmor.
20 Glimmerskifer og gneis (i nær), dels grafittførende, lokalt marmor- og albittfelsittlag, opprinnelige pelittiske sedimenter.
21 Amfibolitt, omdannede basaltiske vulkanske bergarter, dels med diabasganger og grafittskifer.
22 Amfibol-olivin-kloritt bergart, omdannet ultramafisk bergart (komatiitt).
23 Kvartsitt, sandstein og gneis, dels glimmerrike lag, opprinnelige psammittiske sedimenter.

Sedimentære og vulkanske bergarter av mulig senarkeisk alder
Noe omdannede

24 Amfibolitt, omdannete basaltiske vulkanske bergarter, dels med diabasganger.
25 Amfibol-olivin bergart, omdannete ultramafiske vulkanske bergarter.
26 Glimmerskifer og gneis, opprinnelige pelittiske sedimenter.
27 Konglomerat og gneis, opprinnelige psammittiske sedimenter.

Raisædno gneiskomplekset

28 Granittisk og granodiorittisk gneis, dels med lag av kvartsitt og amfibolitt, antatt dannet ved migmatittisering av sedimentære og og vulkanske bergarter fra grønnsteinsbeltet.

Jergul gneiskomplekset

29 Granittisk til tonalittisk gneis, omdannede dyp- og overflatebergarter.

Geologiske og geofysiske symboler

Bergartsgrense
Grense for metamorfosegrad, antatt
Forkastning
Elektrisk leder, grafittskifer/sulfider
Blotning eller godt blottet område

NGU NORGES GEOLOGISKE UNDERSØKELSE

Geologiske observasjoner fra foreløpige og trykte berggrunnskart (M 1:50.000) sammenstilt av I. Lindahl og T. Mikalsen (1833 III, vestlig del) K. Nilsen (1833 III, østlig del), K.I. Olsen (1832 I-IV, 1833 II, 1932 III,IV), J.S. Sandstad (1833 IV) og A. Solli (1833 I, 1933 III),IV).

Elektriske ledere er beregnet fra elektromagnetiske helikoptermålinger.

Geofysisk tolkning av forkastninger av O. Olesen.

Kartet er framstilt på digital form av J.S. Sandstad etter samtolkning av geologiske og geofysiske data ved bruk av det geografiske informasjonssystemet Arc/Info og bildebehandlingssystemet Erdas. Kartet er plottet på en Calcomp 5600 plotter ved NGU.

Norsulfid/Outokumpu har bidratt med økonomisk støtte til dette samarbeidsprosjektet med NGU og Universitetet i Oslo.

Referanse til kartet: Sandstad, J.S. 1992: Kautokeinogrønnsteinsbeltet - Berggrunnskart, M 1:250.000 Norges geologiske undersøkelse

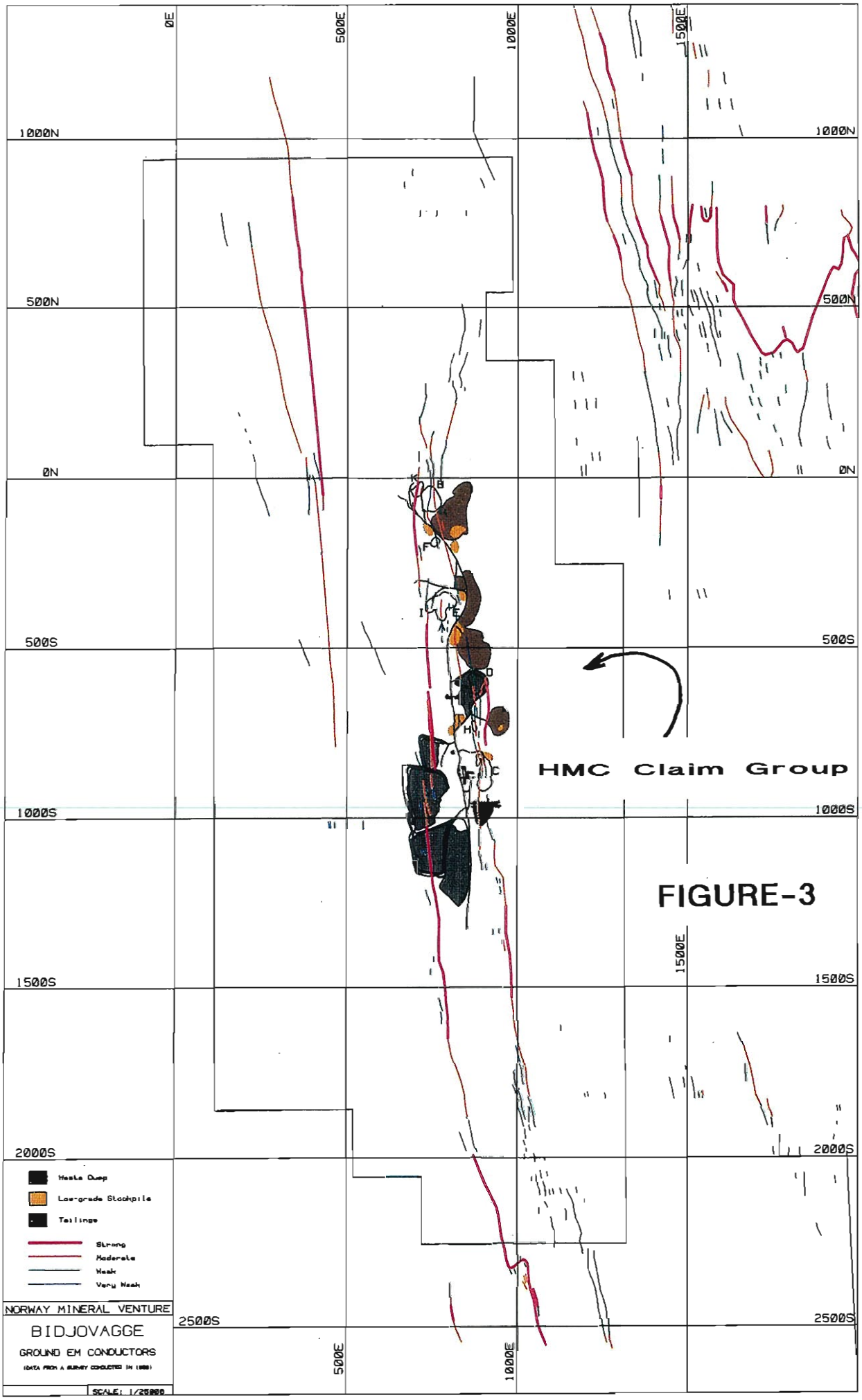
Digitalt topografisk kartgrunnlag fra Statens Kartverk Serie N250 - vektor. Høydekurver 100 m.

UTM-grid 10.000 m i sone 34

FIGURE-2

BIDJOVAGGAE Cu/Au Project

SYSTEM


0E
500E
1000E
1500E
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
HMC Claim Group
FIGURE-3
Waste Dump
Low-grade Stockpile
Tailings
Strong
Moderate
Weak
Very Weak
NORWAY MINERAL VENTURE
BIDJOVAGGE
GROUND EM CONDUCTORS
SCALE: 1/25000

0E 500E 1000E 1500E

1000N 500N 0N 500S 1000S 1500S 2000S 2500S

ALBITE FELS

GRAPHITE SHALE

SEDIMENTARY GREENSTONE

MIXED ROCKS: LIMESTONE/GREENSTONE/DIABASE

DIABASE, MAGNETIC

DIABASE, NONMAGNETIC

COPPER ORE

COPPER MINERALIZATION, MOSTLY LOWGRADE

A-D ORE BODIES

FIGURE-4a

NORWAY MINERAL VENTURE

BIDJOVAGGE

GEOLOGY

(after Geological Survey of Norway)

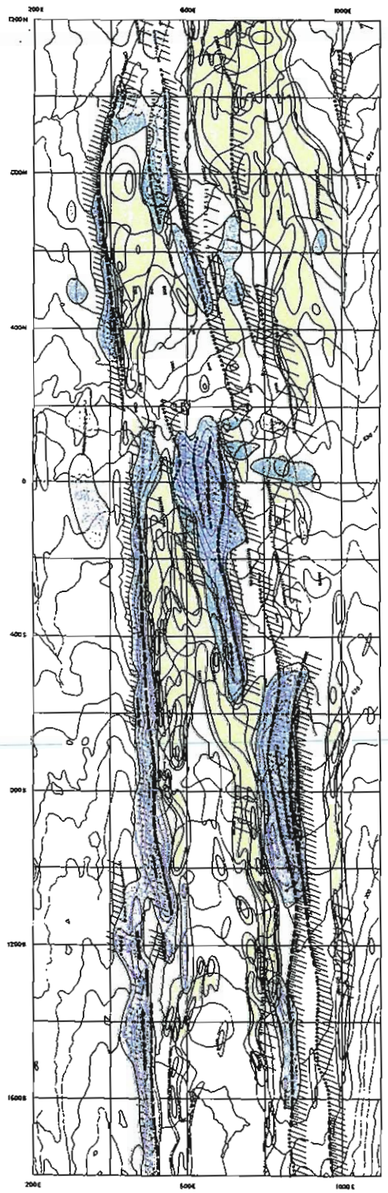
SCALE: 1/10000

THE BIDJOVAGGE AREA

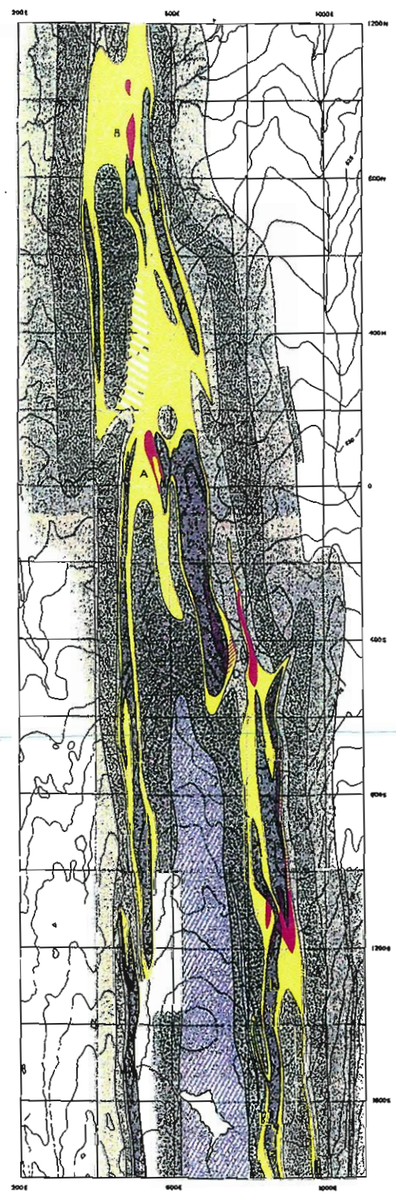
FINNMARK - NORWAY

BY CARL O. MATHIESEN

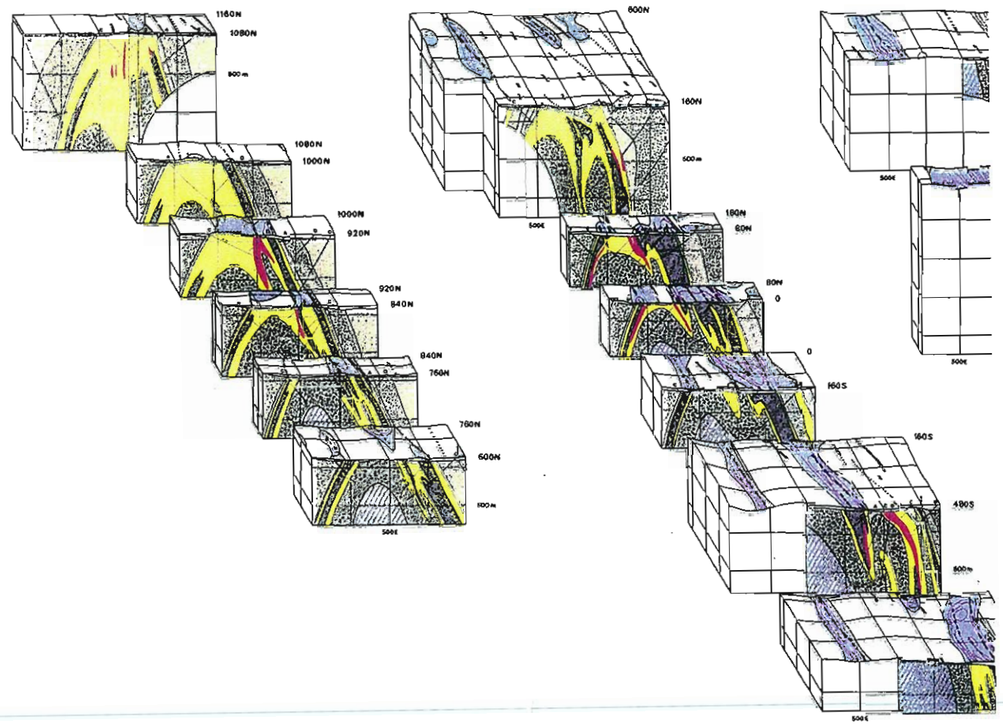
GEOPHYSICAL MAP



GEOLOGICAL MAP



BLOCK DIAGRAMS



GEOPHYSICAL DESIGNATIONS

strong / weak — ELECTROMAGNETIC ANOMALIES

SELF POTENTIAL ANOMALIES
Contours at: −200, −400, −600, −800 mV

MAGNETIC ANOMALIES ≥ 1000 γ
Contours at: 1000, 2000, 4000, 6000 γ

DRILL HOLE

GEOLOGICAL DESIGNATIONS

- ALBITE FELS
- GRAPHITE SHALE
- SEDIMENTARY GREENSTONE
- MIXED ROCKS: LIMESTONE/GREENSTONE/DIABASE
- DIABASE, MAGNETIC
- DIABASE, NONMAGNETIC
- COPPER ORE
- COPPER MINERALIZATION, MOSTLY LOWGRADE
- A-D ORE BODIES

FIGURE-4b

0E
500E
1000E
1500E
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
Karin
B
Francisko
Inger
Eva
D
Gerd
Hilde
C
Waste Dump
Low-grade Stockpile
Tailings
FIGURE-5
Strong
Moderate
Week
Very Week
NORWAY MINERAL VENTURE
BIDJOVAGGE
GROUND EM CONDUCTORS
(DATA FROM A SURVEY CONDUCTED IN 1958)
SCALE: 1/10000

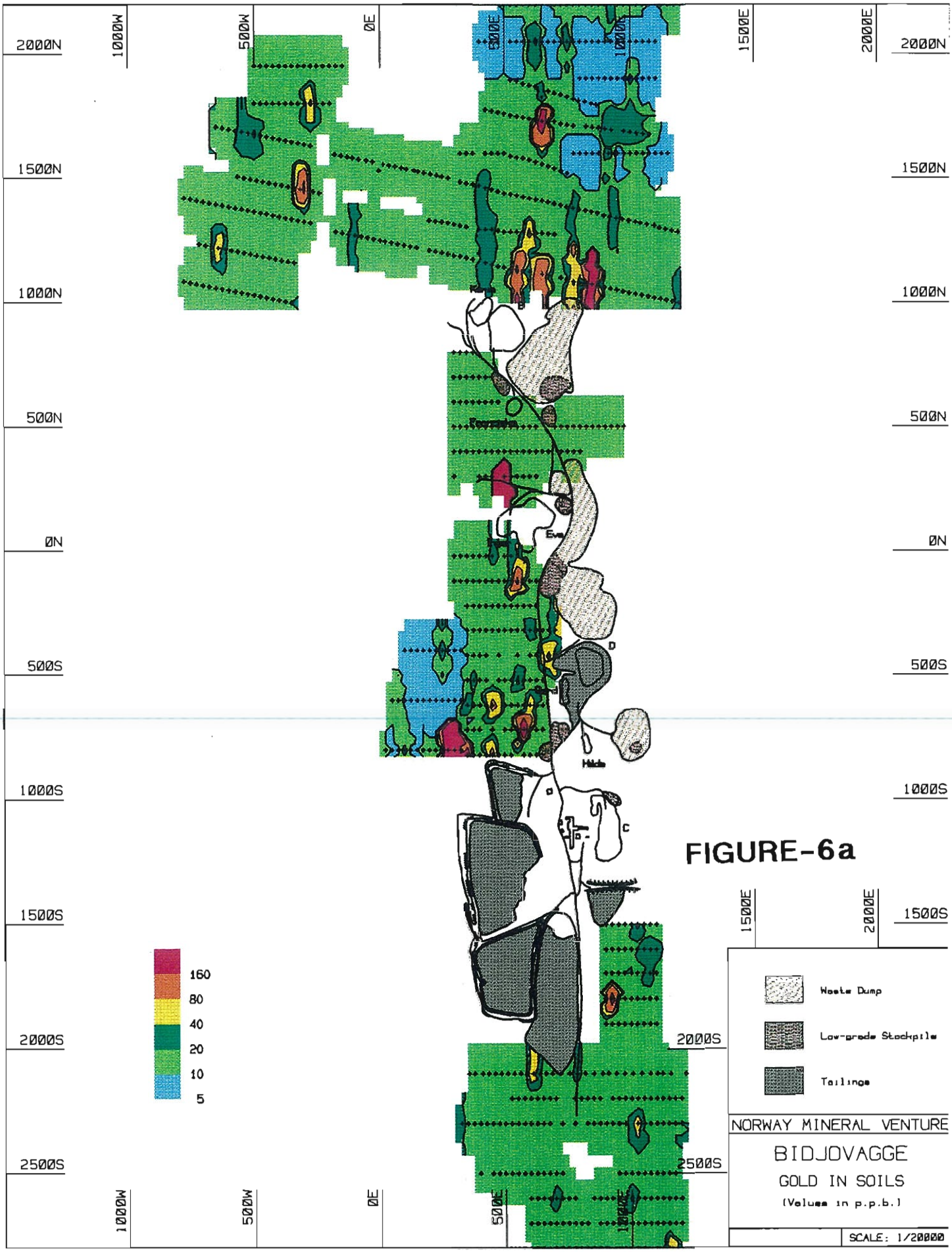

2000N
1500N
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
1000W
500W
0E
500E
1000E
1500E
2000E
160
80
40
20
10
5
Waste Dump
Low-grade Stockpile
Tailings
NORWAY MINERAL VENTURE
BIDJOVAGGE
GOLD IN SOILS
(Values in p.p.b.)
SCALE: 1/20000

FIGURE-6a

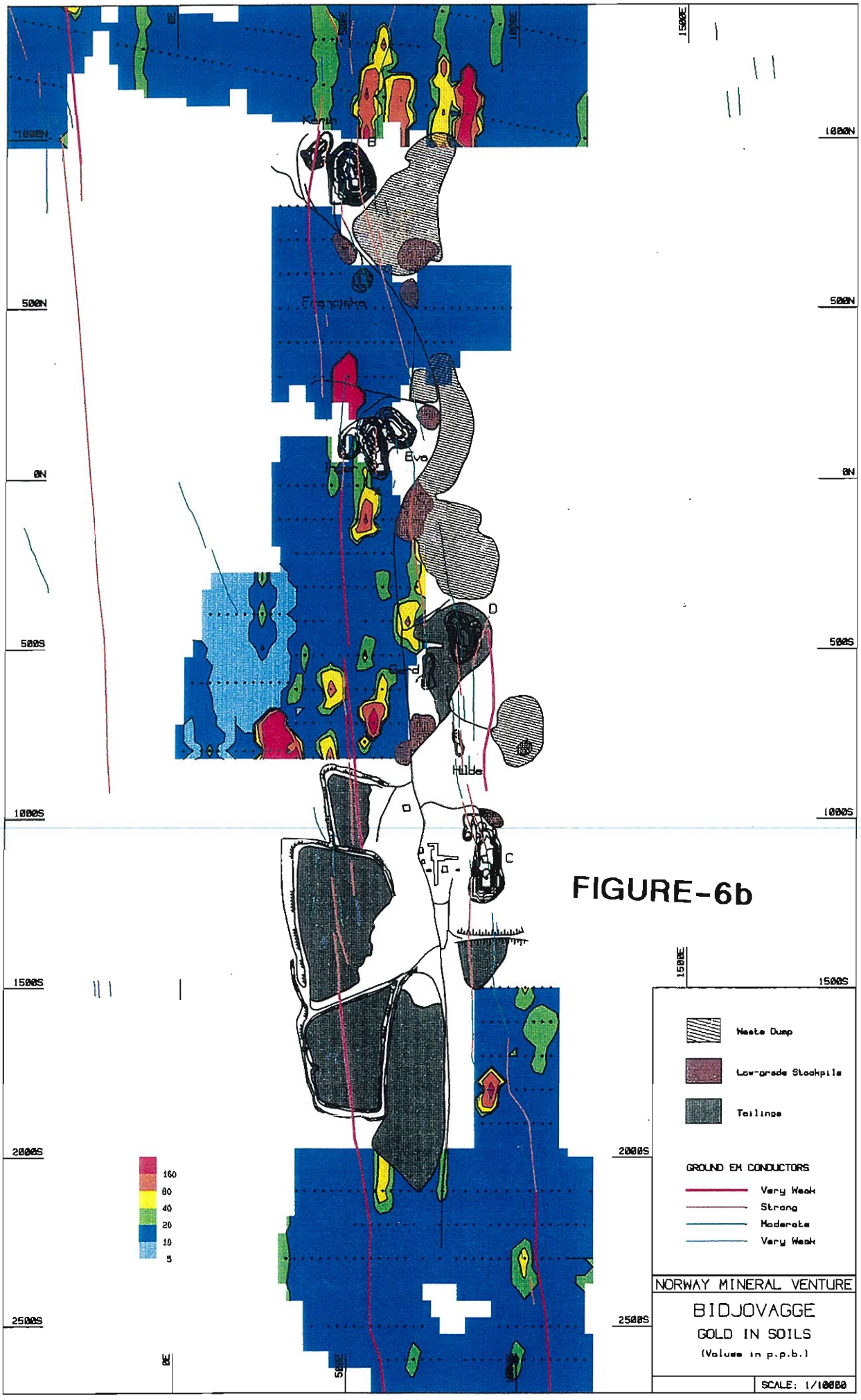

1500E
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
B
Franzisko
Eva
D
C
Hilde
160
80
40
20
10
5
Waste Dump
Low-grade Stockpile
Tailings
GROUND EM CONDUCTORS
Very Weak
Strong
Moderate
Very Weak
NORWAY MINERAL VENTURE
BIDJOVAGGE
GOLD IN SOILS
(Values in p.p.b.)
SCALE: 1/10000

FIGURE-6b

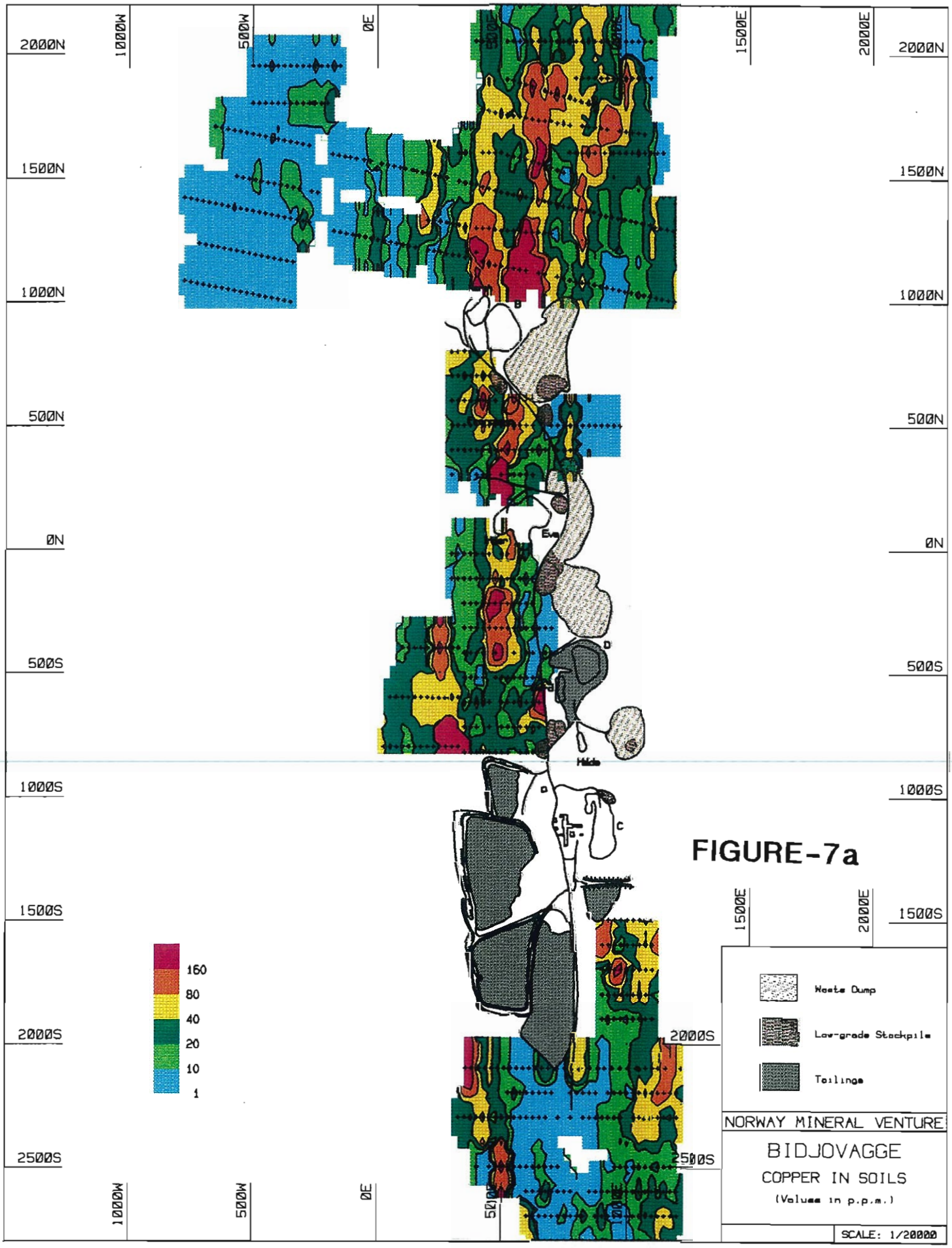

2000N
1500N
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
1000W
500W
0E
500E
1000E
1500E
2000E
160
80
40
20
10
1
Waste Dump
Low-grade Stockpile
Tailings
NORWAY MINERAL VENTURE
BIDJOVAGGE
COPPER IN SOILS
(Values in p.p.m.)
SCALE: 1/20000

FIGURE-7a

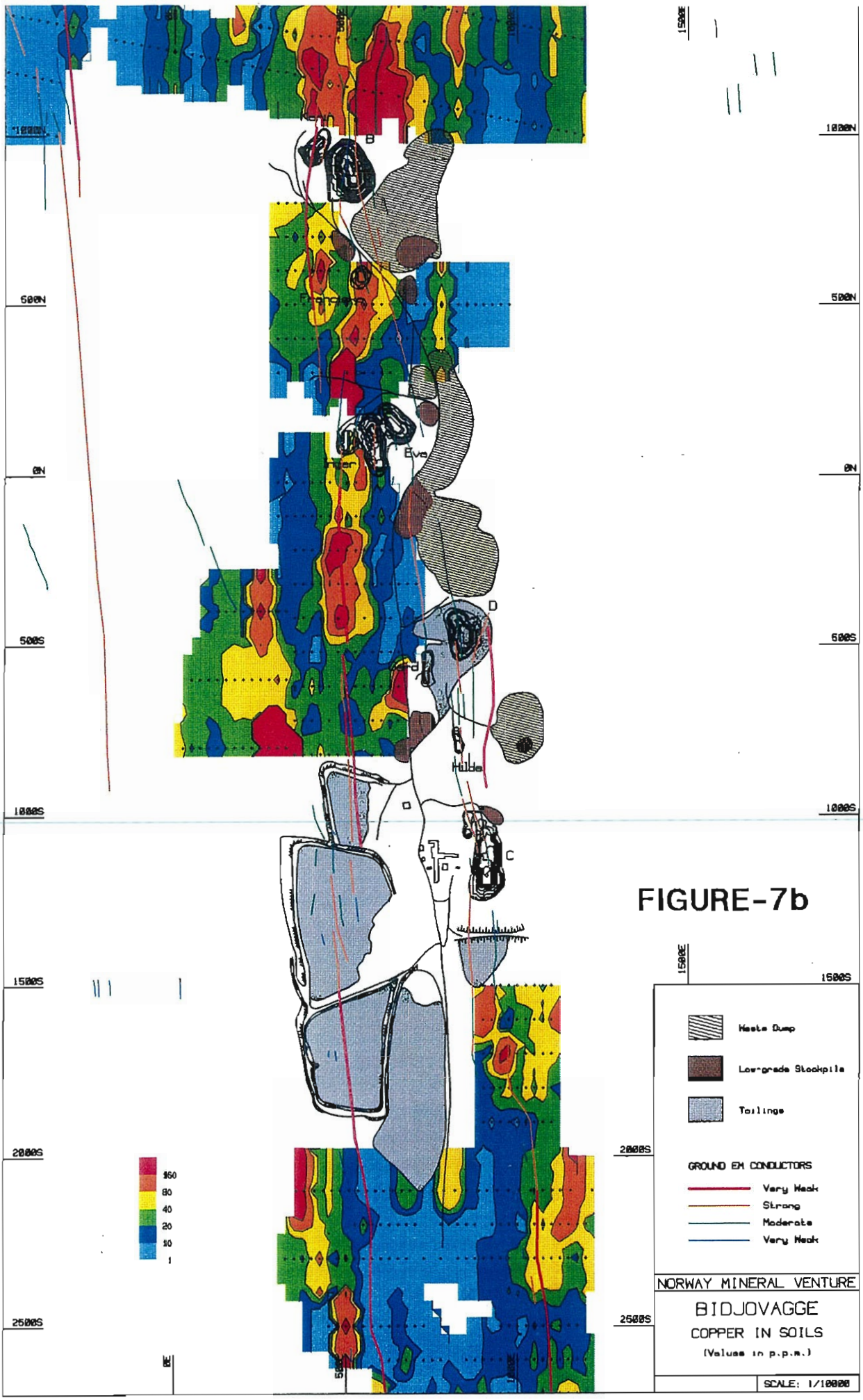

1000N
500N
0N
500S
1000S
1500S
2000S
2500S
1500E
B
D
C
Kevin
Eva
Hilda
160
80
40
20
10
1
Waste Dump
Low-grade Stockpile
Tailings
GROUND EM CONDUCTORS
Very Weak
Strong
Moderate
Very Weak
NORWAY MINERAL VENTURE
BIDJOVAGGE
COPPER IN SOILS
(Values in p.p.m.)
SCALE: 1/10000

FIGURE-7b

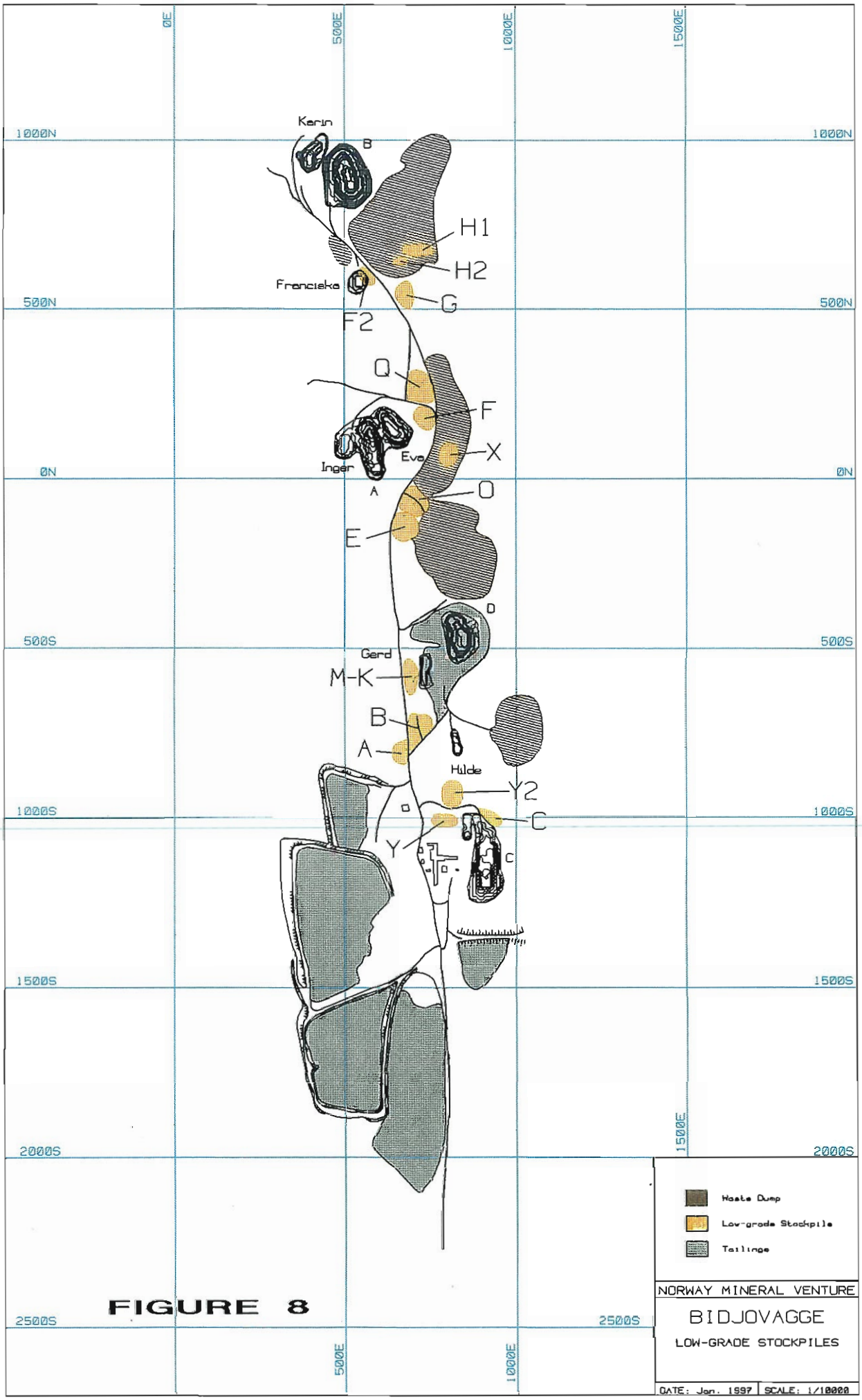

0E
500E
1000E
1500E
1000N
500N
0N
500S
1000S
1500S
2000S
2500S
Kerin
B
H1
H2
Francieka
G
F2
Q
F
Inger
Eva
X
A
O
E
D
Gerd
M-K
B
A
Hilde
Y2
C
Y
C
Waste Dump
Low-grade Stockpile
Tailings
NORWAY MINERAL VENTURE
BIDJOVAGGE
LOW-GRADE STOCKPILES
DATE: Jan. 1997
SCALE: 1/10000

FIGURE 8

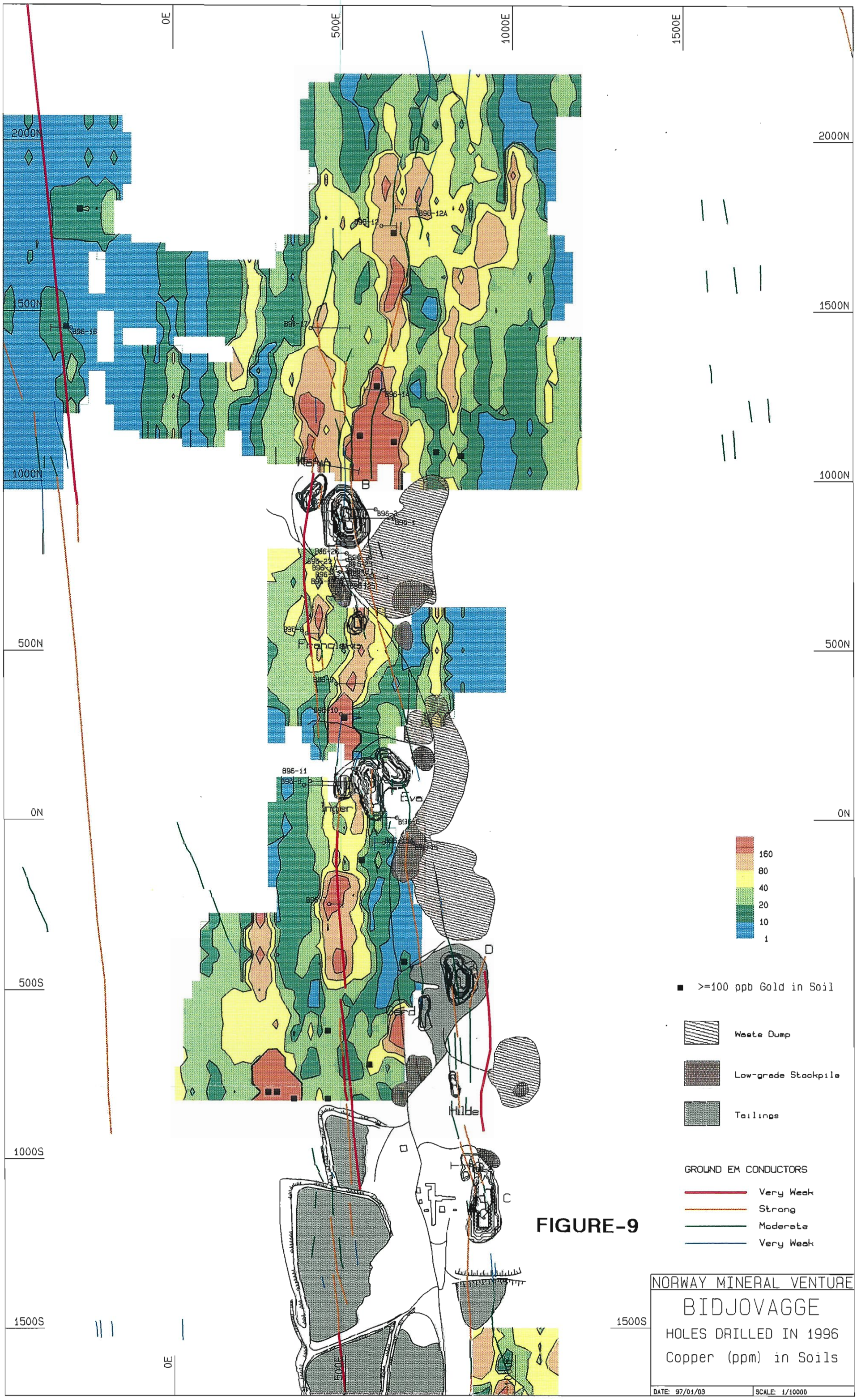


FIGURE-9

NORWAY MINERAL VENTURE

BIDJOVAGGE

HOLES DRILLED IN 1996

Copper (ppm) in Soils

DATE: 97/01/03 | SCALE: 1/10000