

1214 Eastview Rd.  
North Vancouver, B.C.  
988-4944

94D

# NORTHSTAR COPPER MINES LTD.

800578

August 29th, 1972.

Dear Shareholder:

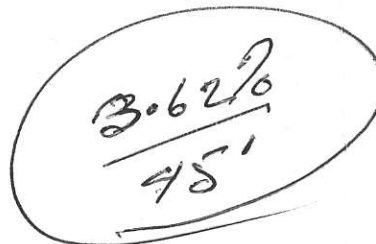
Our latest drill hole is extremely encouraging.

From:

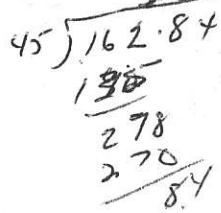
124 ft. to 131 ft. (7)	.59% copper		4.13
131 ft. to 143 ft. (2)	<u>2.16% copper</u>	.28 oz./ton silver	25.92
143 ft. to 154 ft. (11)	.05% copper		155
154 ft. to 163 ft. (9)	<u>7.00% copper</u>	.29 oz./ton silver	63.00
163 ft. to 166 ft. (3)	<u>22.5 % copper</u>	.64 oz./ton silver	67.50
166 ft. to 169 ft. (3)	.58% copper	.04 oz./ton silver	1.742

Drilling is continuing.

Yours very truly,

$$\frac{3.62}{45}$$

$$45 \overline{) 162.84}$$

Robert M. Tait,  
President

RMT/ab

Bob Tait  
1214 Eastview Rd.  
North Vancouver B.C.

REPORT OF CURRENT MINERAL EXPLORATION  
AND RECOMMENDATIONS FOR FURTHER DEVELOPMENT OF THE MINING PROPERTIES OF  
NORTHSTAR COPPER MINES LTD. (N.P.L.)

Property

The writer is informed that Northstar Copper Mines Ltd. (N.P.L.) holds by location 125 mineral claims in good standing in the Omineca Mining Division, British Columbia, as follows:

	<u>Name of Mineral Claim</u>		<u>Record Number</u>	
B/S	Bobo 1-12 inclusive	OK	33706 - 33717	12
	Bobo 13-16 inclusive	OK	60731 - 60734	4
	Can 1-5 inclusive	OK	48584 - 48588	5
	May 1-4 inclusive	OK	59310 - 59313	4
B/S	Fred 1-12 inclusive	OK	33694 - 33705	12
B/S	Ged 1-12 inclusive	OK	40650 - 40661	12
B/S	John 1-8 inclusive	OK	41222 - 41229	8
B/S	Kiwi 1-8 inclusive	OK	42498 - 42505	8
B/S	Marg 1-6 inclusive	OK	33718 - 33723	6
B/S	Maori 1-8 inclusive	OK	42490 - 42497	8
	Ski 2 -10 inclusive	OK	48590 - 48598	9
B/S	Sun 1-8 inclusive	OK	42159 - 42166	8
	Tina 1-4 and 9-13 inclusive	OK	51846-49, and 51851-5	4
	Har 1-14 inclusive	OK	60751 - 60764	5
	Wick 1-4 inclusive	OK	48580 - 48583	14
				4

The Company's management has informed the writer that Northstar Copper Mines Ltd. (N.P.L.) is the recorded and beneficial owner of the above-described mineral claims, and they are all in good standing.

Location and Access

The property is in the Cariboo Heart range which is a western outlier of the Hogem mountains, approximately 25 miles

north of the north end of Takla Lake, at Latitude 56 degrees 2 minutes north, longitude 126 degrees 16 minutes west. The surface which ranges in elevation from 4,000 feet to above timber-line at 5,500 feet is densely forested and bedrock is largely concealed beneath a comparatively thin mantle of soil and unconsolidated glacial till.

Takla is the northern-most of a chain of lakes navigable for seven months of the year that connects with rail head and the highway system at Ft. Ste. James. The area of interest is most accessible by float planes which can land on Kaza Lake near the property.

### Geology

The area is underlain by volcanic and sedimentary rocks belonging to the Takla Group of Upper Triassic age. Except for a few feldspar porphyry dykes, no intrusive rocks are present. These strata are not greatly metamorphosed and only moderately folded but may be dislocated by an undetermined number of faults.

Cupriferous minerals, including in order of abundance bornite, chalcocite and native copper, together with their oxidized derivatives such as malachite and tennorite, occur in the vesicular and fragmental tops of porphyritic basalt lava flows as well as in at least one bed of tuffaceous shale. This is one unit of a marine sequence of sediments interbedded with the lavas. Copper is present also in massive sulphide veins and stringer zones.

### Exploration activities

Between August 19th and August 26th, 1968, the writer examined exploration work in progress on the property of Northstar Copper Mines Limited (N.P.L.) near Kaza Lake, British Columbia. A list of recommendations concerning work for the balance of the current season was left with R. M. Tait, manager.

With opening of navigation on Takla Lake about May 15th, equipment including a D8H Caterpillar bulldozer and a diamond drill with necessary supplies and fuel was barged to the north end of the Lake. From there the bulldozer was used to make a road some 30 miles to Kaza Lake. As observed from a helicopter traverse, the road crosses a drift-covered region of low relief, its sparse timber interrupted by large burns. Generally the road has low grades and easy stream crossings. Gravel deposits are visible at a number of points along the route. Making this road servicable for trucks will require

some re-routing and gravelling of swampy sections.

Since its arrival on the property the bulldozer has been used to make approximately 10,000 feet of trenches and move the diamond drill. Ten AQ diamond drill holes totalling 1399 feet had been completed by August 25th.

Bulldozing in the vicinity of the RMT showing confirmed a suspicion formed as a result of last year's work; namely, that the copper-bearing shale bed with its associated tuffs and limestone comprises a remnant of the hangingwall of an east-dipping fault, now isolated by the modern erosion surface. Location of the displaced portion in the footwall of this fault is not presently known.

Tabular masses of native copper heavily encrusted with malachite (one weighed 22 pounds) were discovered in a bulldozed trench at 132°00N 57°50E. Subsequent deeper excavation revealed several ½-inch stringers of calcite containing small masses of chalcopyrite in sheared andesite porphyry. These are believed to be the source from which the native copper was derived through a process of weathering near the surface. Such secondary copper, though spectacular, usually has little significance in terms of economic deposits. However, further excavation to fresh rock should be done in this area.

An area stripped by bulldozer about 300 feet south of the BC showing exposed a network of sub-parallel chalcocite-bornite veins from ½-inch to 18 inches wide, distributed across widths of from 25 to 35 feet and almost continually visible for a length of 200 feet. The veins are identical in mineralogy and attitude to the vein at the BC showing and clearly represent a southward extension of that exposure. Data relative to channel samples taken by the writer from a trench excavated by hand across this vein zone are tabulated below. Distances are given from the east end of this trench westward.

Sample number	Position	Material sampled	Length (feet)	Gold oz/t	Silver oz/t	Copper %
7172	0.0-10.0W	Andesite porphyry	10.0	tr	0.15	0.65
7173	10.0-15.5	4 veins excluding intervening rock	1.33	0.01	5.60	32.00
7174	same	Intervening rock	4.17	tr	0.10	0.70
7175	15.5-25.5	Andesite porphyry	10.0	tr	0.15	0.90
7176	25.5-26.75	Vein with irreg. str. of sulphide	1.25	tr	0.90	7.20
7177	26.75-36.75	Andesite porphyry	10.0	tr	tr	tr

The calculated weighted average values across a width of 26.75' are:

Gold, tr; silver, 0.40 oz/ton; and copper, 2.93%

A trench bulldozed in an easterly direction across the CV showing, about 500 feet south 30 degrees west from the place described above intermittently exposes disseminated copper sulphides as well as bornite-chalcocite veins and stringers across a width in excess of 150 feet. It appears that a north-trending zone, bounded on the west by gougy, faulted andesite porphyry and with an unknown eastern boundary exists at this place. Four samples were taken for the writer by A. J. Sinclair, P.Eng., from an uncompleted trench excavated by hand in the floor of the bulldozer trench. Data concerning these samples are given below. Distances are measured from the western boundary fault eastward. Nos. 7184, 7185 and 7186 were chip samples because that part of the trench was flooded, No 7187 was a channel sample.

Sample #	Position	Length (feet)	Gold oz/ton	Silver oz/ton	Copper %
7184	22 - 30'E	8	tr	tr	0.20
7185	30 - 40'E	10	0.005	0.15	0.15
7186	40 - 51'E	11	tr	0.15	1.05
7187	51 - 57'E	6	tr	0.45	3.00

These assays cannot be averaged because sampling of the zone is incomplete, but they do indicate the presence of copper in significant amounts. This zone may well be a faulted extension of the BC showing and vein zone mentioned previously. Extension of the zone a further 150 feet southerly is suggested by the occasional appearance of large pieces of bornite-chalcocite vein material in another bulldozer cut being started at the time of the writer's departure.

Data concerning diamond drilling completed up to August 25th during the current year are summarized below. The writer inspected the core but did not log it in detail.

Hole #	Collar-Coords Elevation	Bearing	Slope	Length	Remarks
10	12200N6600E 4595'	S60°W	-45°	360	Mineralized section 136 - 188'
11	same	S50°E	-45°	335	Apparently barren
12	same	-	Vert	132	Abandoned
13	12350N6360E	195°			

Hole #	Collar-Coords Elevation	Bearing	Slope	Length	Remarks
Continued					
	4670'	S15 <sup>0</sup> W	-45 <sup>0</sup>	288	Mineralized section 256-288
14	same	-	Vert	132	Abandoned
15	same	S60 <sup>0</sup> W	-45 <sup>0</sup>	-	Drilling

The mineralized intersection in Hole #10 from 136' to 188' is very similar to that in Hole #5 drilled in 1967. Bornite virtually the only metallic mineral, occurs as disseminations and irregular veinlets in brecciated andesite porphyry. Based on assays of split samples taken by R. M. Tait, this 52-foot intersection has a weighted average grade of 1.59% copper. The mineralized intersection in Hole #13 from 256' to 288' is quite different in appearance. Fine-grained chalcopyrite and pyrite are sparsely disseminated in andesite porphyry. Although assays are not yet available, this intersection is likely to be of much lower grade than that in Hole #10, and probably represents a different mineralized zone.

#### Summary and Conclusions

During the present season up to August 25th, about 10,000 feet of bulldozer trenching and 1399 feet of diamond drilling had been completed. One mineralized outcrop was shown to be only a remnant isolated by a fault of presently unknown displacement. However, other mineralized isolated outcrops have been so enlarged and connected as to suggest a zone of copper mineralization of the order of 1,000 feet long and from 25 to at least 150 feet wide. A good deal of work must be done, however, before the ultimate dimensions and grade of this zone can be determined.

#### Recommendations

Discoveries to date on the property of Northstar Copper Mines Limited are considered to be of sufficient economic significance to warrant further exploration and development. The recommended program directed primarily to defining and measuring mineralized zones already indicated includes bulldozing, hand trenching, bulk sampling and diamond drilling. It is recommended further that the program be under the immediate supervision of a professional manager with a geologically-trained assistant.

Estimated Costs

Diamond drilling - 5000' BQ size @ \$12.00/ft	\$60,000
Bulldozing - D8H machine 500 hours @ \$40/hr	20,000
Hand trenching, bulk sampling, assaying	10,000
Professional supervision	10,000
Camp operation and transportation	15,000
	<hr/>
Total -	\$115,000

Respectfully submitted



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Wm. H. White, P. Eng.

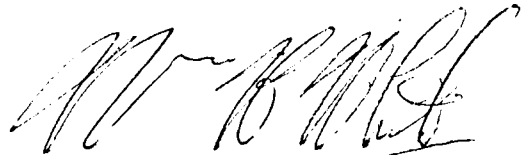
October 4th, 1968.

4778 West 2nd Avenue,  
VANCOUVER, 8, B.C.

CERTIFICATE

I, William Harrison White, P. Eng., hereby certify  
that:-

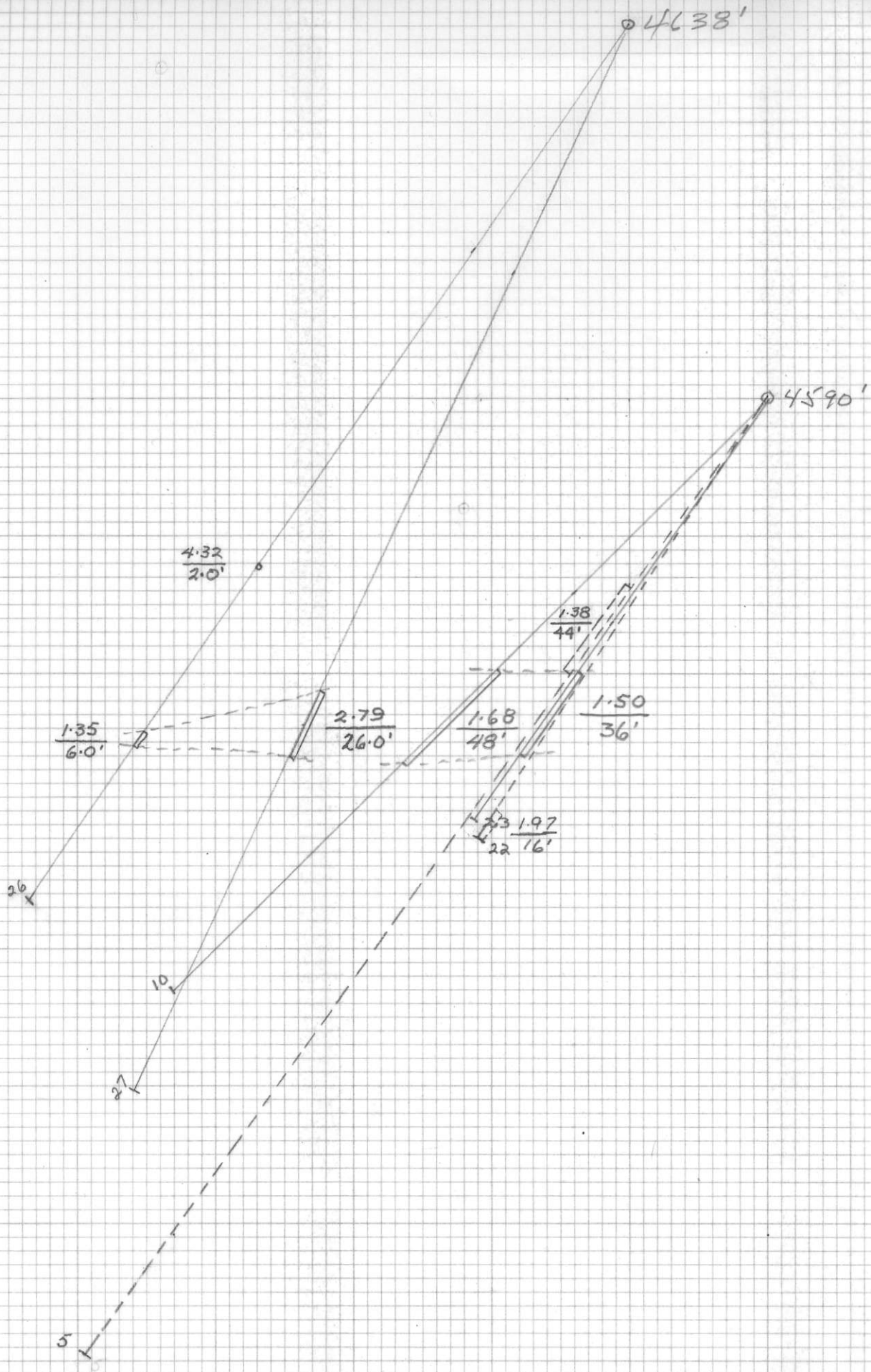
- (a) I am resident of Vancouver, British Columbia, at the above address which is also my office.
- (b) Since 1946 I have been a registered Professional Engineer (Geological) of B.C. and a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- (c) I hold a B.A. Sc. degree in Mining Engineering and an M.A. Sc. degree in Geological Engineering from the University of British Columbia and a Ph.D. degree in geology from the University of Toronto.
- (d) I have no interest, direct or indirect (other than professional interest) in Northstar Copper Mines Ltd. (N.P.L.) or its properties.
- (e) The findings of the accompanying report are based on my personal examinations of the mining properties during the period from August 19th to August 26th, 1968, and information supplied to me by the management of Northstar Copper Mines Ltd. (N.P.L.).



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Wm. H. White, P. Eng





LONGITUDINAL SECTION A-A

HILLSIDE

A' 4600'

250 dip  
23' wide

22

10

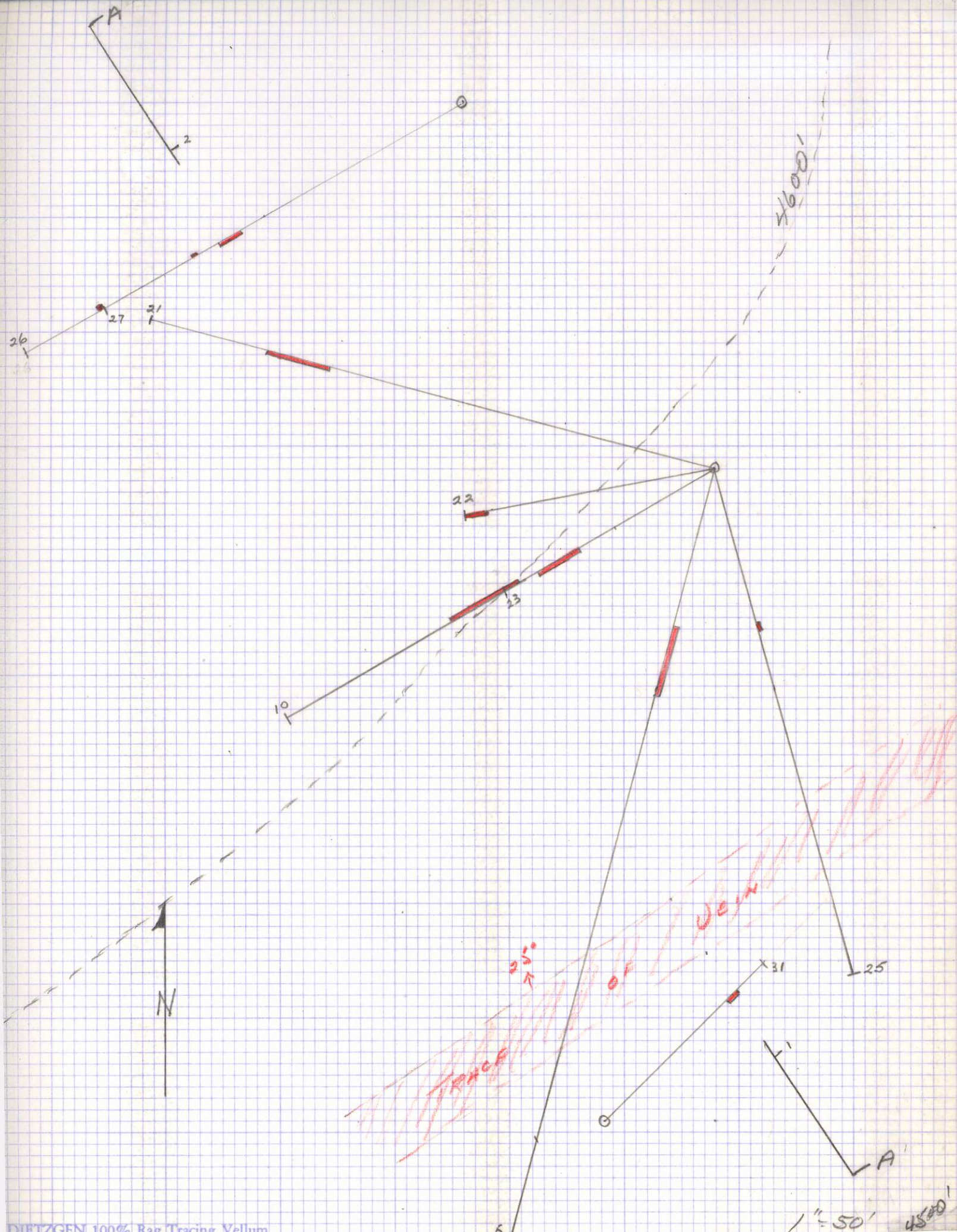
5

21

27

31

1" = 50'



140  
141  
49.

DIAMOND DRILLING DATA

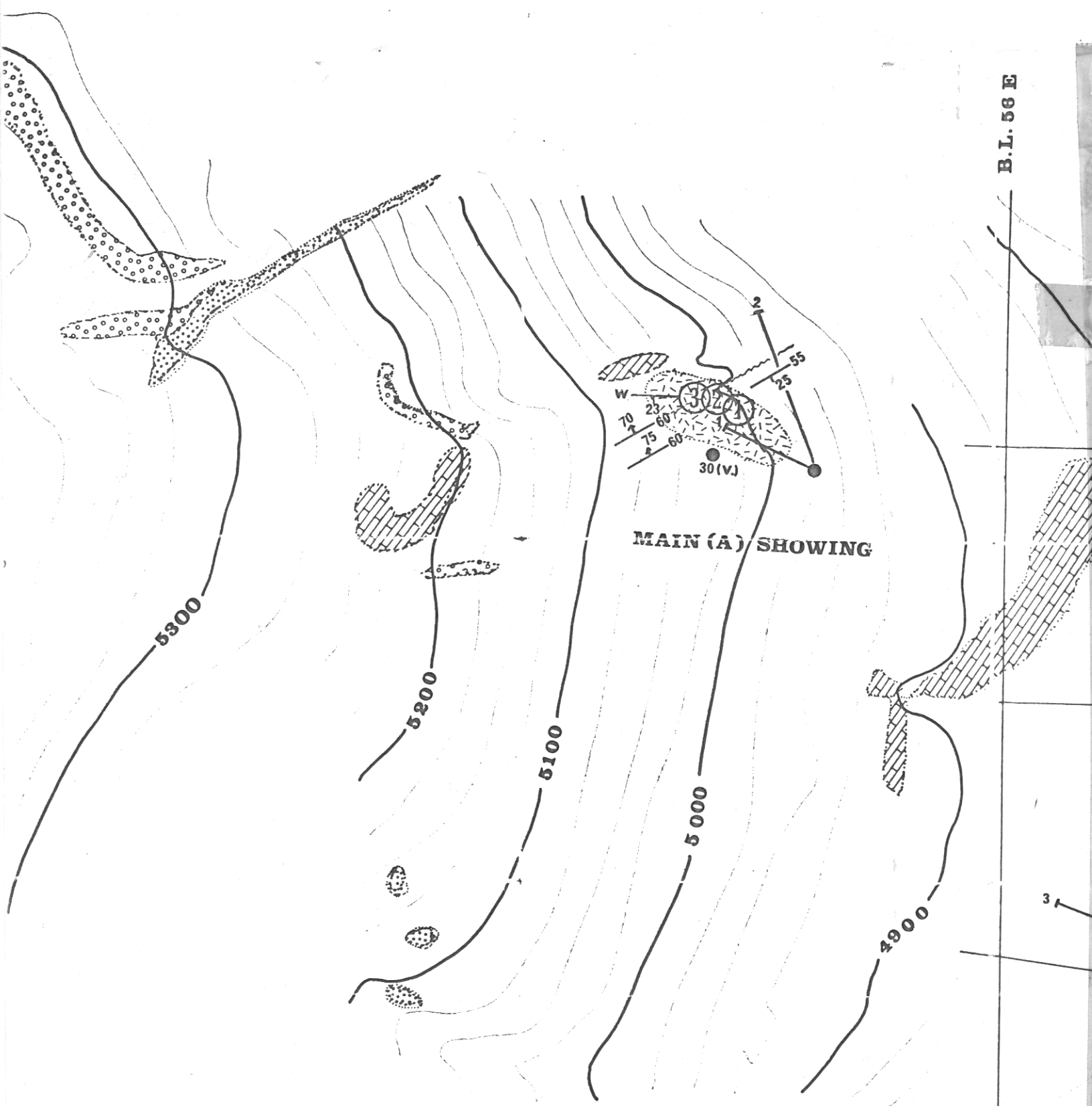
NORTHSTAR COPPER MINES LTD. 1967 - 1969






(Hole size: AQ)

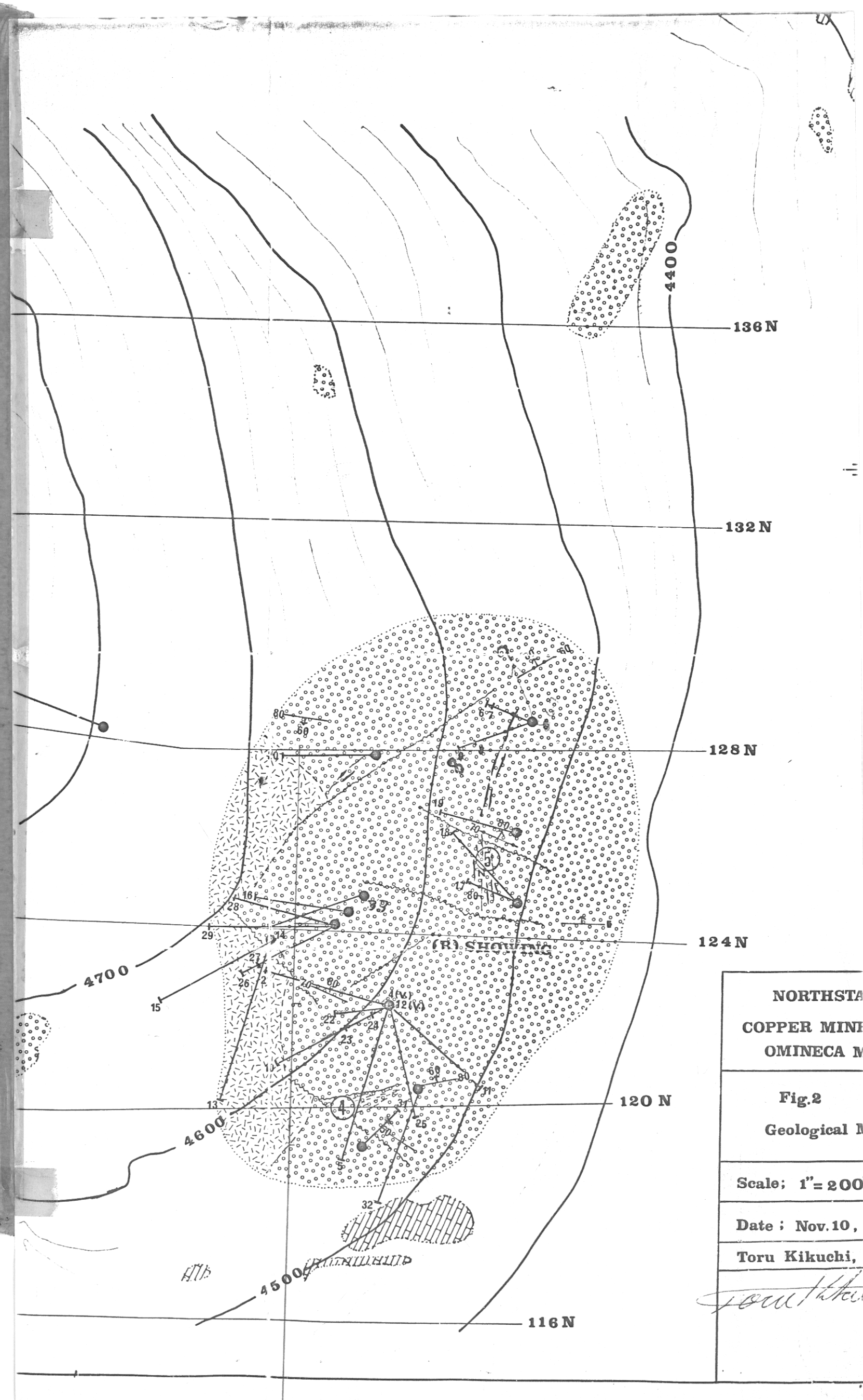
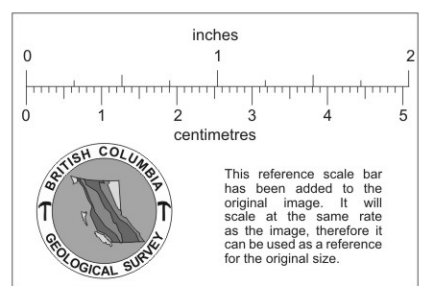
Hole No.	Depth	Angle	Azimuth	Remarks
1	248'	-50°	295°	
2	328	-50	340	
3	468	-45	290	
4	94	Vert.	-	abandoned
(5)	450	-45	195	101' - 145'; 1.38% Cu
6	125	-30	295	
(7)	102	-30	295	42 - 102 0.64 (incl. 58% Cu)
8	126	-20	250	
9	<u>150</u>	-20	350	
Total, 1967 2091				
(10)	306	-45	240	140 - 188 1.68
11	355	-45	130	
(12)	132	Vert.	-	0 - 7 1/2 1.52 abandoned
(13)	490	-45	195	17 - 25 0.40
14	80	Vert.	-	abandoned
15	271	-45	240	
16	252	-45	280	
17	105	-30	290	
18	227	-30	315	
(19)	174	-30	285	110 - 111 0.85
(20)	<u>178</u>	-45	270	0 - 10 0.28
Total, 1968 2624				
(21)	361	-45	285	247 - 287 1.14
(22)	194	-55	260	177 - 193 1.97 - abandoned.
(23)	186	-55	240	120 - 156 1.50
24	57	-70	240	abandoned
(25)	324	-45	165	110 - 166 4.29
(26)	386	-55	240	{ 237 - 239 4.32
(27)	427	-65	240	{ 311 - 317 1.35
28	496	-65	285	268 - 294 2.79
29	498	-60	268	
30	51	Vert.	-	
(31)	193	-60	45	{ 71 - 85 0.83
				{ 126 - 135 0.35
				{ 149 - 159 1.51
32	447	-60	200	
33	<u>454</u>	-65	245	
Total, 1969 4074				
Total, 1967 - 1969 8789'				

(See Fig. 2 for locations)

(This data was given by Mr. R. Teit to the writer.)



-  Andesite Porphyry
-  Green Volcanics
-  Shale, Tuff, Breccia
-  Limestone
-  Chip Sample No.



136 N  
132 N  
128 N  
124 N  
120 N  
116 N

NORTH STA  
COPPER MINI  
OMINECA M

Fig.2  
Geological M

Scale: 1" = 200'

Date: Nov. 10,  
Toru Kikuchi,

*Toru Kikuchi*