GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION, ELECTRICAL SOUNDING AND SEISMIC SURVEYS

ON THE PROPERTY OF

SCURRY RAINBOW OIL LTD. (N.P.L.)

TASEKO LAKE AREA, CLINTON M.D.

BY

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SEPTEMBER 30, 1970

CLAIMS SURVEYED

TASEKO 1 - 184, 186, 187, RANDA, RENA, SUZANNE, MARIANNE, CHRIS MONIQUE,

BABLING BROOK 1, PERFECT DAY 2, FLAPJACK 1 & 2, OLD & RARE 3,

SPOKANE BLUE SKY 1, SPOKANE ROSY DAWN 2, SPOKANE BONANZA 3, SPOKANE LOOKOUT 4,

LIMONITE 1, 2 & 3, OLD & RARE,

SUMI 1 - 28, 30 - 39

SCUR FRACTIONS 1 - 5

LOCATION

7 MILES SOUTH EAST OF TASEKO LAKE

ON GRANITE CREEK

51 degrees 7', 123 degrees 24'

M.T.S. Map 92 - O - 3

FIELD WORK

JUNE 4th - AUGUST 24th, 1970

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Maps to accompany Geophysical Report by Takeo Yokoyama

I. INTRODUCTION

On Taseko Property, the exploration has been done intermittently by many companies. In 1969, Scurry Rainbow Oil Limited carried out IP and other surveys on Buzzer area and Rowbottom area. Large high IP anomalies were found at both areas. Consequently, several holes were diamond drilled.

In 1970, based on the contract with Scurry Rainbow Oil Limited, an exploration program including geological, geochemical and geophysical surveys was carried out by Sumitomo Metal Mining Canada Ltd. from late in May to the middle of September. About 60 percussion holes were drilled to test the results of the surveys.

So far as geophysical prospecting is concerned, an induced polarization survey, a magnetic survey, a shallow seismic survey and an electrical sounding survey were carried out. Owing to the size of the property, the IP survey was done by two crews to shorten the time of the reconnaissance survey. Two sets of McPhar instruments were employed. As the IP survey for Scurry Rainbow Oil Limited in 1969 was carried out by Canadian Aero Mineral Surveys Limited using their self-made time domain system, the frequency effect was observed using the same configuration on several lines at both Buzzer and Rowbottom areas in order to check the preciseness of last years results and also to compare the frequency effect (%) with the chargeability (m-sec.).

The principal geological feature of this property is the intrusion of granodiorite into andesite. The contact extends east-west across the northern part of the property.

There are several scattered showings on the property such as Spokane, Syndicate, Motherlode, Empress, Buzzer and Rowbottom. The main purpose of this year's exploration work is to find a new porphyry type copper ore body or clue to it in relatively flat area along the contact zone which is covered with overburden. One of the most promising areas was the Empress. In addition, it was planned to investigate the Buzzer and Rowbottom showings and their possible extensions.

Consequently, the purpose of geophysical work is as follows:

1) to detect the location of the contact zone
2) to delineate the zone of mineralization
3) to investigate the showing in some detail
4) to determine the extent of Buzzer and Rowbottom showings by checking IP results made in 1969
5) to examine the depth of overburden
6) to decide the drill hole sites based on the results obtained from above mentioned items

SUMMARY AND CONCLUSIONS

Geophysical work was very successful and geophysical prospecting itself was useful and effective. Magnetite was found in abundance in the holes drilled in order to test the magnetic anomalies. The location of the contact zone was distinctly outlined from the resistivity results. Metal sulphides are abundant in the core of holes which penetrated IP anomalies. Most of these are situated in the northern part of the contact zone. Some mineralization including a small amount of copper was discovered by IP and magnetic surveys.

As the result of the shallow seismic survey and succeeding trenching and drilling, it became clear that the overburden is much shallower than supposed.

The silicified rocks distributed in the northern part of the property contain a large amount of pyrite resulting in strong IP anomalies. Since high frequency effect does not always indicate high grade copper mineralization, the high pyrite content of the rocks weakened the effectiveness of the IP survey and prevented the detection of copper rich mineralization. No geophysical method is effective only for copper. Geophysics can detect metal sulphides and oxides but it is not the divine tool to find a copper deposit.

It is still possible to find an ore body in this property, but judging from the assay results which have been taken from the surface trenches and the drill holes, the grade might be too low to make a mine in this place. In conclusion, the Taseko Property is not considered to be very promising.

II. IP AND RESISTIVITY SURVEYS

An induced polarization survey was carried out from June 4th to August 24th. In order to cover such a large property in one summer season, the field work was done by two IP crews. IP measurements were made by means of the variable frequency method using the McPhar Induced Polarization System, Model 654 and Model 660. The latter is the improved type of the former, and on accuracy and stability, especially under the condition of high contact resistivity, it could be said to be much better.

Frequencies of 5 H_z and 0.3 H_z were used on the survey. The pole-dipole configuration was adopted throughout the survey. At the start, 400 ft. separation and 400 ft. spacing were used to cover all Sumitomo lines. The rocky, steep topography prohibited making observations in some parts of the property. The IP crews often had difficulty in getting a good ground contact on account of very dry ground. In case of small current due to high contact resistivity, the transmitter operator had difficulty in sending a stable current using Model 654 system. Accordingly, only 55 line miles were covered with an electrode separation of 400 ft. as a reconnaissance survey. For the anomalous zones obtained from the above mentioned survey, more detail surveys with electrode separation of 200 ft. and movement of 200 ft. were made. A total of 28.5 line-miles were surveyed with 200 ft. separation. Over part of the anomalous zone, a 400 ft. separation survey was repeated using Model 660 with intervals of 200 ft. A total of 3900 ft. was surveyed with

lines 12 E and 16 E on the Empress area as it was considered to be the most promising. Measurements on 8 line-miles were done on Rowbottom and Buzzer lines using the same pole-dipole array, the same electrode separation (200 ft.) and the same intervals (200 ft.) as last year. Altogether more than 90 line miles of IP survey were carried out.

The data obtained from the IP survey are expressed as frequency effect (unit: %) and apparent resistivity (unit: ohm-feet /2π). Metal Factor, which is usually regarded as an important parameter in the case of the frequency domain survey, was omitted because it is not worthy of notice in this property. Metal Factor is calculated from the frequency effect divided by the apparent resistivity to emphasize anomalies located in the low resistivity zone. Use of Metal Factor may mislead the reader in the exploration of the pyrite zone. The data are presented as contoured plans of apparent resistivity and frequency effect for 200 ft. and 400 ft. separation using a scale of 1"=400'. Though many lines were covered with both 200 ft. and 400 ft. separation, the section profiles of all observed lines are not shown. Some section profiles considered to be note-worthy are presented with magnetic anomaly profiles.

1) RESISTIVITY

Generally speaking, apparent resistivity is very high (500 - 4000 ohm ft.) in the southern part of the property and low (50-500) in the northern part. With reference to surface geology, granodiorite is presumed to be distributed in high resistivity area of more than 500 ohm ft./2π and andesite and altered rocks near the contact zone are presumably located in low resistivity area of less than 500 ohm ft./2π. The contour line of 500 ohm ft./2π corresponds to the boundary of unsilicified granodiorite on geological map. The northern area, where very low apparent resistivity of less than 100 was obtained, could be covered with deep overburden unless strong IP anomalies were detected there. Since there is much scattered pyrite in this property, the value of apparent resistivity could be lowered by the existence of a great amount of pyrite. In the case of the exploration of porphyry copper type ore deposits, the apparent resistivity itself has little significance as a direct tool because topography and variation of overburden thickness usually change the value of the apparent resistivity more than a small amount of metal sulphides does. However, the resistivity results contributed to the exploration by outlining the contact zone.

2) FREQUENCY EFFECT

The back ground value of the frequency effect is quite high, especially in the northern part of the property. The frequency effect values of more than 5% are contoured as an anomaly. In the northwest part of the property, a broad strong IP anomaly was detected. This anomaly is of almost the same size and value as the one in the Buzzer area. It is called the 'West Anomaly'.

In addition to this anomaly, IP anomalies were observed at Empress area, Buzzer showing area, Rowbottom showing area, West Buzzer area, North Buzzer area and East Empress area. On Syndicate, Spokane and Motherlode ore bodies, the measurements could not be done owing to a steep topography and a rock slide. Only two IP anomalies, that is, Rowbottom and Buzzer Showings Anomalies are presumed to be situated in granodiorite. Other anomalies newly obtained in this year were assumed to be located in volcanics where there is some amount of scattered pyrite.

From the geological point of view, these anomalies were hardly expected except the Empress anomaly which coincided with a notable geochemical anomaly in shape and location.

3) DETAILS ON ANOMALIES

WEST ANOMALY AREA

West Anomaly which lay between 0 line and the west end line is a very large one. Its size is about 10,000 ft. x 2,500 ft. This anomaly is considered to be mainly caused by scattered pyrite. Stronger anomalies in this zone might indicate pyrite concentration in volcanics. As there was still a chance to find copper mineralization, scattered reconnaissance drill holes were planned. Following the opinion of the geologists that the zone close to the geological boundary between granodiorite and andesite was more promising, the south end zone of the anomaly was stressed when planning the drill holes. In the area between this anomaly and the Syndicate showing, mineralized outcrops were found. Though this area was promising from a geological point of view and was named North Syndicate, no IP anomaly was detected.

Very high values were detected in both Buzzer and Rowbottom areas. Chargeability attained 100 m-sec. at the maximum. The anomalous area was quite large at the Buzzer claims, and several diamond drill holes were made in order to test the anomaly. Copper mineralization was found in the holes around the Buzzer showing but elsewhere promising results were not obtained. According to the IP results, the Buzzer showing ore body is thought to be small, while the Rowbottom showing anomaly might be expected larger.

In order to check the results and also to compare the frequency effect(%)with the chargeability(m-sec.), the frequency domain survey was carried out using McPhar IP unit Model 660. The same configuration and separation was adopted. Measurement was done on 5 lines around the Rowbottom showing and 16 lines on the Buzzer claims. Part of the results are shown in Fig. 3-0.

In general, the results were almost the same. The anomalies resembled each other in shape. On the whole, frequency effect values corresponded to chargeability ones, though value of M. looked sharper in response. On the apparent resistivity, last years results show more irregularity. And too low values were measured on some lines especially on the Rowbottom grid where it was difficult to get a good ground contact. Considering that the measurements were done using different methods and different types of instruments, the small difference could be disregarded. Therefore, the results obtained last year might be accepted with confidence. Consequently, no further survey was done in these areas.

WEST BUZZER AREA

The West Buzzer anomaly was located alongside the Buzzer grid and could be regarded as a part of a large Buzzer anomaly. It is situated on or close to the volcanic-granite contact presumed from the resistivity results. This anomaly was accompanied by a remarkable magnetic anomaly. Although this anomaly is not very large, it was considered to be noteworthy. In order to test the IP and magnetic anomalies, three holes were recommended.

NORTH BUZZER AREA

The narrow high resistivity anomaly running in a NE-SW direction might indicate a dyke. North Buzzer anomaly lay in the north west corner of Buzzer grid and was definitely the end of the Buzzer anomaly. It was accompanied with magnetic anomalies. As the anomaly was located in volcanics far from the contact it was not considered to be very important from the geological point of view and only one drill hole was recommended to test it. Since the anomaly continues to the east, further drill holes might be recommended if the first one intersects good mineralization. Although the recommended hole was not completed(it was stopped at 20 ft. owing to bad drilling conditions)some copper mineralization was detected.

4) COMPARISON BETWEEN FREQUENCY DOMAIN SURVEY & TIME DOMAIN SURVEY

As mentioned above, an IP survey was carried out by Canadian Aero Mineral Surveys Ltd. on the Buzzer grid and the Rowbottom grid in 1969. Measurement was done with the time-domain method using an engine generator, a transmitter designed by themselves and Newmont-type receiver manufactured by Data Control System Inc., Danbury, Connecticut. A three-electrodes array was used with 200 ft. separation.

EMPRESS AREA

This was considered to be most noteworthy place in the property. An old short drill hole showed that there existed copper-moly-gold mineralization. As a result of soil sampling, Cu and Mo anomalies were obtained. High grade float accompanied with a large content of magnetite were found. A large IP anomaly were detected, and it coincided fairly well with the geochemical anomalies in shape. Two stripes of high magnetic anomalies were observed. Furthermore, the Empress anomaly was supposed to be located close to the boundary of the intrusive rock. The size of the anomaly was considered to be big enough. Except for the fact that there existed some pyrite and that this might cause the IP anomaly, the Empress anomaly was promising from every point of view. Grid drilling was adopted except two drill holes for testing magnetic anomalies. Judging from IP section profiles, dyke-like causative bodies were presumed. Accordingly, angle holes were recommended geophysically. They could have a chance to hit sulphide concentration apart from the question whether the IP anomaly indicates pyrite or chalcopyrite.

EAST EMPRESS AREA

A relatively low anomaly was detected by the 200 ft. separation survey to the east of the Empress anomaly. This anomaly was not obtained using the 400 ft. separation measurement. As a weaker anomaly sometimes indicates copper mineralization where much pyrite is distributed, testing of this anomaly was included in the latter stage of the drill work.

Based upon the last year results, Buzzer showing ore body might extend to the south-east along the Taseko River but there was little possibility that the ore body would extend to the north or the west. However, judging from the shape and size of the IP anomaly, a small ore body of the order of 1,000,000 tons at the maximum might be expected. Therefore, from geophysical point of view no drill holes were recommended in order to test the size of the ore body, because the grade had been checked by diamond drillings.

Considering the drill results made in the last year, it was supposed that a large content of pyrite caused such a big anomaly in the Buzzer area. Judging from the resistivity results, granodiorite is presumably distributed in only surroundings of the showing. The anomalies which seemed to be the end of the Buzzer anomaly were detected on the new grid. They were named West Buzzer Anomaly and North Buzzer Anomaly. It was intended to check these anomalies first. If copper mineralization is found, the large anomaly in the Buzzer area should be checked at a later stage of the exploration.

On the Rowbottom showing, the size of anomaly was big enough to postulate a workable ore body. The value obtained was quite high assuming little pyrite. Geophysically, this anomaly seemed to be very promising. As rock samples taken at the outcrop looked like typical disseminated ore, the most important thing considered was to examine the grade by drill holes. Accordingly, 7 holes S20-S26 were recommended in order to test the grade of the causative body. S-21 drill hole was recommended to check an apparantly barren area.

Many copper bearing outcrops were found in the upper part of Granite Creek. Also, a lot of copper bearing float was found on the right hand bank of the creek. Accordingly, a 200 ft. separation IP survey was tried to determine where they came from on line 12W and 16W. No anomalous values were observed. No mineralization or a very small amount of metal sulphides are supposed in the bed rock.

III. MAGNETIC SURVEY

A Magnetic survey was carried out from June 8th to August 19th, 1970 on the Taseko Lake property.

The vertical component of the magnetic field was measured by using a McPhar M-700 flux-gate type magnetometer. The accuracy of the instrument is 20 gammas. Observations were made every 100 ft. along the grid line. In anomalous areas, the measurements were taken every 50 ft. In addition to the Sumitomo grid(about 90 line-miles), Buzzer grid(about 21 line-miles) and Rowbottom grid(about 5 line-miles) were covered. Therefore, the total number line-miles was more than 120 including the East-West base lines. The base station was set at 8 E, 8 N near the camp. The reading was taken at the base station at least twice a day. No big variation was found on any measuring day. Diurnal variation at the base station was observed on June 9th and 22nd. The variation between 7 and 21 o'clock was less than 50 gamma. It is shown in Fig. 3-31. As Magnetic anomalies were quite high in this property compared with the diurnal variation and the readings varied considerably from station to station, the correction for the diurnal variation was omitted. In this case 50 gammas error would not have a big effect on qualitative interpretation. Magnetic results are shown in a plan maps (Fig. 3-5). Section profiles are provided for large anomalies at West Buzzer Area, Empress Area and West Anomaly Area. (Fig.3-32,3-33 & 3-34). As the percussion drilling started in the midst of the survey, the precise quantitative interpretation, for instance a model calculation or a simulation using digital computer wasn't made.

dimensional dyke models at the magnetic inclination of 70 degrees were used to interpret the data.

Background values were quite irregular in this property. It might indicate a number of small shallow magnetic bodies. Quite strong anomalies more than 1000 gamma were measured, with a maximum of 5000. Generally, the anomaly has a direction of EW or ENE-WSW. Most of the anomalies were presumably caused by shallow and narrow dyke-like bodies of say 20 ft. depth and 100 ft. width. Magnetic susceptibility was to be more than 1×10^{-2} and it might be compared with a few percents of magnetite. Strong anomalies were mainly observed in volcanics. Relatively uniform values were measured in granodiorite except in the North Syndicate area. As it is possible that a large amount of magnetite is accompanied with high grade copper mineralization, magnetic anomalies with IP anomaly were recommended for drilling. A detailed description for each anomaly follows.

In North Syndicate area, there were many relatively low anomalies in a belt-like zone with NE-SW direction. No magnetic anomaly was detected around the Rowbottom and Buzzer showings. The North Syndicate anomaly was the only anomaly obtained in the granodiorite area. These anomalies lay in the high resistivity zone. The causative bodies are believed to be very shallow and could be attained by trenching. However, as there are outcrops bearing some copper around there, three drill holes were recommended to investigate the relationship between magnetic anomalies and copper mineralization, using the assay result of holes drilled.

In the West Anomaly area, two big anomalies in both scale and value were obtained. Two drill holes were recommended on the line 8W and 44W. These holes were more interested in the area where IP anomaly did not always indicate copper mineralization due to an existance of pyrite. But drill holes could not be completed owing to deep overburden of more than 40 ft.

In the Empress area, two strong anomalies running east and west were detected. Since a massive magnetite float bearing high grade copper was found, the magnetic anomalies were considered to be very important. As a fairly large amount of pyrite was found by trenching, magnetic anomalies were stressed in planning the drill sites from geophysical point of view. Actually, vertical grid drilling was adopted except two angle holes for each magnetic anomaly. A great amount of magnetite was found in the holes, but the relationship between magnetite and copper mineralization has not yet come to light.

In the West Buzzer a shallow massive body was presumed to cause the anomaly. The anomaly was not big enough, even if it indicates the ore body. However, three holes were recommended and the first hole of this year was drilled for this anomaly as the remarkable magnetic anomaly was accompanied by an IP anomaly. As a result, some copper was obtained in addition to a large amount of pyrite and magnetite.

In the North Buzzer, two stripes of magnetic anomalies were detected and were accompanied by an IP anomaly. One hole was planned but was not achieved. On the Buzzer grid, there were some anomalies but the drill holes for them were not recommended because it was considered that the valuation of magnetic anomalies could be made by the drill holes in West Buzzer and North Buzzer.

IV. SEISMIC SURVEY

Unless the depth of the overburden is less than 20 ft., it is very expensive to reach bedrock by bulldozer trenching. For the purpose of selecting areas for trenching, a shallow seismic survey was made with a Ronka FS-3 Portable Facsimile Seismograph manufactured by Kenting Ltd.

The refraction survey was done to determine the depth of overburden at selected points on the Empress area, West Buzzer area and Rowbottom area from July 21st to August 11th. A hammer impact was used as an energy source. The measurement was generally taken at every 100 ft. along the cut line. A bad signal to-noise ratio and the noise produced by operator and impactor prevented obtaining an undisturbed time travelling curve. Distinguishing the signal from the noise on the recorder paper was hard in the 'Hammer Seismic' instrument and the writer had a difficulty in choosing the proper answer among a few possible interpretations.

In principal it is not difficult to distinguish bedrock which has a velocity of more than 8000 ft. per sec. from the overburden in which velocities range from a little less than 1000 f.p.s. to about 3500 f.p.s. even if there exists intermediate layers like compact moraine, clastic rocks and weathered bedrock which possesses velocites of 3500-8000 f.p.s. The measuring system of the instrument comes into question considering that there is a risk of misjudging the velocity of the deeper layer.

Observation was made at 147 stations. Not all the results obtained from the seismic survey are shown. Generally speaking, shallow overburden is presumed in most parts of the property. Over-

trenches may fairly be called a success in that they reached bedrock, more explicit results are desired on depth to bedrock by seismic methods.

V. ELECTRICAL SOUNDING SURVEY

The electrical sounding survey was planned to investigate the proper resistivity of the bedrock and the overburden as well as to compare the observations on depth to bedrock with the seismic results. To know the proper resistivity of rocks distributed in the property will be of great help to interpreting IP results. Because of a tight schedule, only one day, August 20th, was found to make the survey. Schulumberger array was adopted. MN/2 of 1 meter(the half distance between 2 potential electrodes), AB/2 (half of the current electrode separation) of 3, 4, 5, 6, 8, 10, 13, 16, 20. 25, 30, 40, 60, 80 and 100 meters was employed. McPhar Induced Polarization System, Model 654 was used with the frequency of 5 H_z. Stations 16W, 103 S and 16W, 105 S were chosen as testing points. Bulldozer trenching was planned at these locations because of a lot of mineralized float. Schulumberger master curve for two layers was employed for the interpretation. The results obtained are as follows:

16W 103 S

R_1 = 1300 Ω-m (about 650 - feet/2$\bar{n}$) d_1 = 2.4 m (about 7 ft.)

R_2 = 5200 Ω-m (about 2600- feet/22)

16W 105 S

R_1 = 1500 Ω-m (about 750 - feet/22) d_1 = 3.3 m (about 10 ft.)

R_2 = 300 Ω-m (about 50 - feet/22) d_2 = 7.6 m (about 22 ft.)

R_3 = 1860 Ω-m (about 930 - feet/22)

For a reference, the seismic results are as follows:

16W 104 S

V_1 = 700 f.p.s. d_1 = 1 ft.

V_2 = 1650 f.p.s. d_2 = 4 ft.

V_3 = 3300 f.p.s. d_3 = 12 ft.

V_4 = 6500 f.p.s.

16W 105 S

V_1 = 900 f.p.s. d_1 = 3 ft.

V_2 = 3000 f.p.s. d_2 = 15 ft.

V_3 = 5000 f.p.s.

16W 106 S

V_1 = 800 f.p.s. d_1 = 4 ft.

V_2 = 1200 f.p.s. d_2 = 7 ft.

V_3 = 3200 f.p.s.

Station 16W 103 S is located at 100 ft. from Rowbottom Creek where outcrops of copper-mineralized are found. Therefore, shallow overburden was expected at 16W 103 S. Depth to bedrock could be greater at 16W 105 S The high velocity layer which seems to be the bedrock could not be obtained at either station by seismic methods. If the 5000 - 6500 f.p.s. layer is the weathered bedrock, the thickness of overburden is presumed to be 17 or 18 ft. around 16W 105 S. On the other hand, overburden thickness of 7 ft. and 32 ft. are obtained from the electrical sounding at 103 S and 105 S respect

It is hard to say that the seismic results exactly coincide with the electrical sounding ones. The depth to bedrock was several feet at a trench near 103 S. The proper resistivity of bedrock obtained from the electrical sounding survey, which consisted of granodiorite, is very high. It corresponds to the results of the apparent resistivity survey.

Electrical Sounding Survey might be more useful for parts of the property covered by deep overburden. More observations are needed to discuss the proper resistivity of rocks distributed in this property.

VI. CONCLUSION

Drill sites were decided, based on the geophysical results, at North Buzzer, West Buzzer, East Empress, the eastern part of West Anomaly and Rowbottom where distinct indications were not obtained except by geophysics. As an IP anomaly coincided with the Geochemical anomaly the drilling pattern was determined from geological point of view in the Empress area. In the West Anomaly area, the drill sites were mostly scattered around the geological contact with appropriate intervals because the IP anomaly was not considered to indicate copper mineralization. All angle holes drilled were planned for magnetic anomalies. Some angle holes planned had to be changed to vertical holes owing to unavoidable circumstances.

The drill holes recommended from the geophysical point of view are as follows:

WEST BUZZER

NO.	LOCATION	DIRECTION	REASON	THICKNESS OF OVERBURDEN	RESULTS
S-1	56E ON	90°	IP &MAG.	25'	Δ
S-2	56E 3S	90°	"	10'	
S-19	52E ON	45° S	"	14'	

NORTH BUZZER

S-20A	49E 2 ON	45° N	IP & MAG.		abandoned Δ

EMPRESS

S-3	14E 2S	90°	GEOL.,CH.,IP	7'	
S-4	14E 6S	90°	"	20'	Δ
S-5	14E 10S	90°	"	12'	
S-6	6E10S	90°	"	5'	
S-7	6E 2S	90°	"	20'	
S-8	6E 6S	45° S	MAG.	20'	abandoned
S-9	16E 12S	45° N	"	11'	not completed °
S-10	14E 14S	90°	GEOL.,CH.,IP	10'	°

NO.	LOCATION	DIRECTION	REASON	THICKNESS OF OVERBURDEN	RESULTS
EAST EMPRESS					
S-58	46E 2S	90 degrees	IP	30'	
S-59	30E 2N	90 degrees	IP	40'	
S-60	40E 8S	90 degrees	IP	10'	
WEST ANOMALY					
S-27	12W 6S	90 degrees	IP	26'	
S-28	16W 2N	90 degrees	IP	8'	
S-29	8W 85N	45 degrees S	MAG. & IP	40 + '	abandoned
S-35	28W 4S	90 degrees	CH., IP	20'	
S-36	28W 5N	90 degrees	IP	18'	
S-37	36W 9N	90 degrees	IP	10'	x
S-43	56W 2N	90 degrees	IP	9'	x
S-44	56W 8N	90 degrees	IP	10'	x
S-46	44W 10N	45 degrees S	MAG.	20'	abandoned
S-49	72W 2S	90 degrees	IP	10'	x
S-50	28W 20N	90 degrees	IP	10'	x
S-51	34.5W 20.5N	90 degrees	IP	30'	x
S-57	44W 20N	90 degrees	IP	10'	x
NORTH SYNDICATE					
S-31	68W 19S	45 degrees S	MAG.	26'	
S-32	28W 10S	45 degrees S	MAG.	10'	not completed
ROWBOTTOM (ROWBOTTOM GRID)					
S-20	6E ON	90 degrees	IP	10'	△
S-21	3E ON	90 degrees	IP	10'	
S-22	3W ON	90 degrees	IP	15'	o
S-23	0E ON	90 degrees	IP,GEOL.	10'	△
S-24	3E 4N	90 degrees	IP	18'	o
S-25	6W 8S	90 degrees	IP	10'	
S-26	6W 4S	90 degrees	IP	20'	

Percussion drillings were used. Four holes (S61-S64) were added later in the Rowbottom area based on the results of holes mentioned above.

The length of holes planned were 200 ft. for vertical holes and 300 ft. for angle holes.

The symbol used in the list is as follows:

o more than 0.2% Cu. in average

△ more than 0.2% Cu. in some parts

x no copper mineralization

As geophysical crews were pressed for time, some holes recommended might not have been put in the best place. Recommendations were made without precise calculation.

Though most of angle holes for magnetic anomalies were not completed, they proved the existence of magnetite in abundance.

As holes S-29 and S-46 in the West Anomaly area did not reach bedrock, the causative bodies were not ascertained. Rich pyrite was found in the holes drilled for IP anomalies. Although copper mineralization was detected all over the property, the grade was too low. Only in several holes, copper grade of more than 0.2% in average were obtained. Every ore body is clearly too small in scale and too low in grade to make workable mines. To the west of the Empress, unfortunately no clue to an ore body was obtained along the contact zone. This sharply lowers the value of the property. Although it may be still possible to find an ore body in this property, it is considered that the possibility of a mine is becoming smaller and no further exploration work is recommended.

Exploration expenses should apply towards other properties which possess more possibilities.

It may be given as a conclusion that the Taseko property is not considered promising.

The following personnel were associated with the geophysical surveys:

TAKEO YOKOYAMA	GEOPHYSICIST
ATSUMU NONAMI	IP OPERATOR,DRAFT
CUS HUCKVALE	IP OPERATOR
WENNY MACURA	"
LYLE JENKINS	"
AKIRA KOBATASHI	IP HELPER
GLEN CHURCHER	"
CASJE VAN RIKXOERT	"
SCOTT ALPEN	"
LORNE LITTLEMORE	"
RICK BODEN	"
BOB KING	"
ANDREW TOKUNO	MAGNETOMETER OPERATOR
DOUG ROGERS	SEISMIC OPERATOR
TOMMY DILLABOUGH	SEISMIC HELPER
SHARON BEALS	DRAFT

SEPTEMBER 30, 1970
VANCOUVER, B.C.

RESPECTFULLY SUBMITTED

Takeo Yokoyama

Takeo Yokoyama, M.Sc.
Geophysicist

STATEMENT OF QUALIFICATIONS

I received a Bachelor of Science degree from Kyoto University in 1960 in Geology.

I received a Master of Science degree from Kyoto University in 1962 in Geophysical Geology.

I have been continuously employed on most types of geophysical surveys and related work, since graduation, for Besshi Mine and Sumitomo Metal Mining Co. Ltd.

I have had six years experience as Geophysicist on Induced Polarization surveys.

Takeo Yokoyama

Takeo Yokoyama

Approved:

G.R. Hilchey

Gordon R. Hilchey, P. Eng.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of

I, E. Stonehocker, Project Manager Taseko Project

of Sumitomo Metal Mining 1022 - 510 W. Hastings,Vancouver

in the Province of British Columbia, do solemnly declare that

The following salaries during said periods were incurred in connection with the induced Polarization Survey on Taseko Property.

NAME	DATE	RATE PER MO.	AMOUNT
Takeo Yokoyama	June 1 - Sept 30	@$1200.00	$4800.00
Atsumu Nonami	" "	@$800.00	$3200.00
Cus Huckoale	" "	@$550.00	$2200.00
Wenny Macura	" "	@$550.00 & 575.00	$2275.00
Lyle Jeakens	" "	@$550.00	$2200.00
Akira Kobayashi	" "	@$425.00	$1700.00
Glen Churcher	" "	@$425.00	$1700.00
Casse VanRikxooert	" "	@$425.00	$1700.00
Scott Alpen	" "	@$425.00	$1700.00
Andrew Takono	" "	@$425.00 & 450.00	$1750.00
Bob King	July 4 - "	@$425.00	$1275.00
Doug Rogers	Sept 1 - "	@$550.00	$550.00
Rick Boden	July 1 - Aug 31	@$400.00	$800.00
Lorne Littlemore	Aug 1 - Sept 30	@$425.00	$850.00
Tom Dellabourgh	Aug 15 - Sept 28	@$400.00	$670.00
		Total	$29020.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 13th day of January, 1971, A.D.

E Stonehocker

SUB-MINING RECORDER

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of

I, E. Stonehocker, Project Manager, Taseko Project

of Sumitomo Metal Mining 1022 - 510 W. Hastings, Vancouver

in the Province of British Columbia, do solemnly declare that

The following are Rental Fees on equipment used in connection with the Induced Polarization Survey on the Taseko Project.

#1	I.P. Unit	June 1 - Sept 30 @$600.00 per mo.	$2400.00
#2	I.P. Unit	June 1 - Sept 30 @$600.00 per mo.	$2400.00
1	4 Wheel Drive Landrover	June 1 - Sept 30 @350.00 per mo.	$1350.00
1	4 Wheel Drive 3/4 T. GMC	June 1 - Sept 30 @$350.00 per mo.	$1350.00
		Total	$7500.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

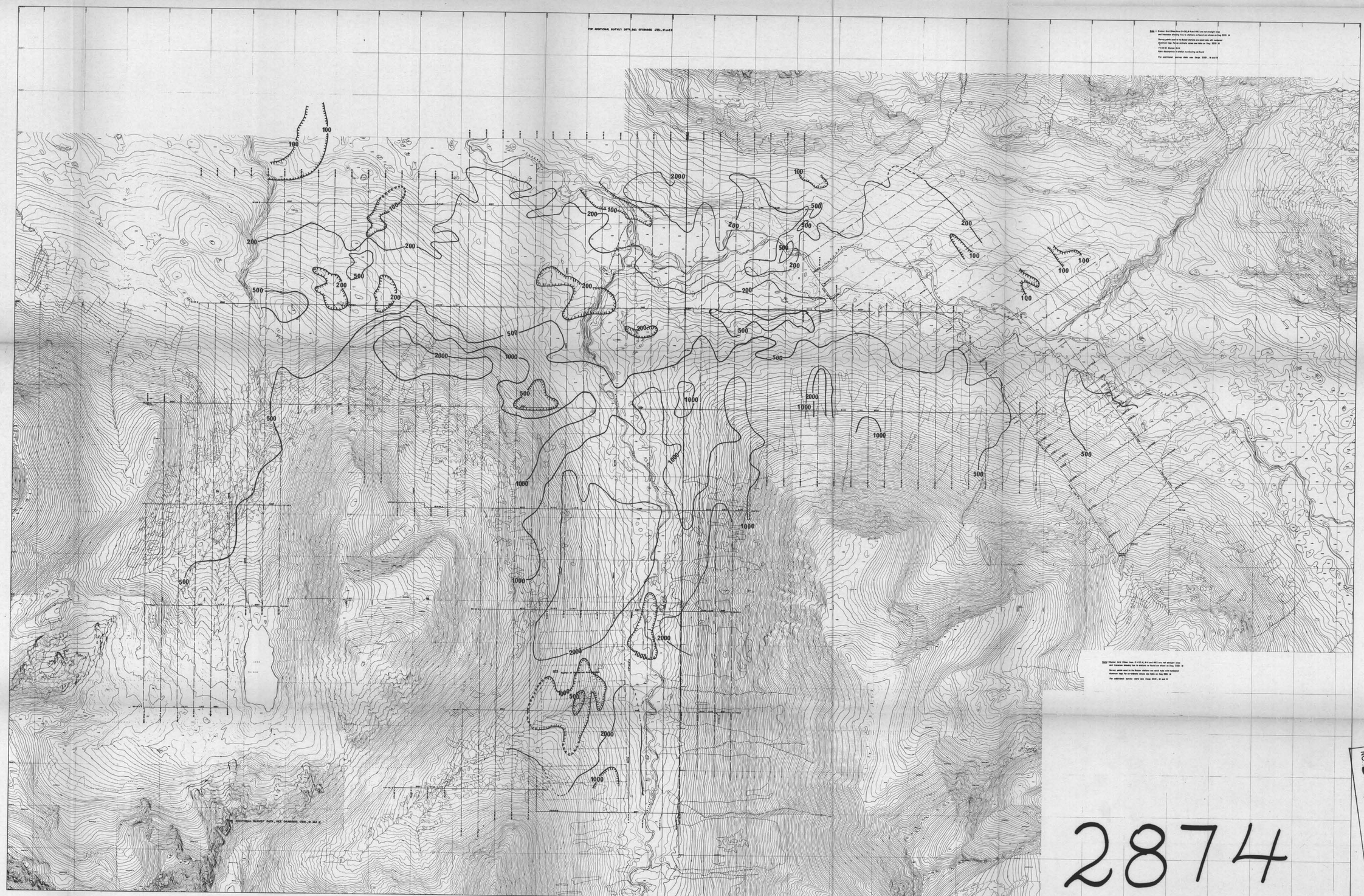
Declared before me at the City of Vancouver, in the Province of British Columbia, this 13th day of January, 1971, A.D.

E Stonehocker

SUB-MINING RECORDER

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o



Compilation note

Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress).
1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0817-0/0542?-1
McELHANNEY ASSOCIATES Job 0333-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control
Vert. Control
Targets
Photo Centre 27
Trench
Base line
Cut line
Old I.P. line
Power line
Contours 500
Spot elev. 320
Swamps
Tree lines
Rivers
Creeks
Roads

KEY MAP

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 1000' DATE: JULY 1970

Apparent Resistivity Anomly Plan Map

(unit : ohm- feet/2π)

FILE No: 3-6

2874

M-1

G.R. Gilchrist P.Eng.

To accompany Geophysical Report
By Takeo Yokoyama, Gephysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

WEST ANOMALY

NORTH SYNDICATE

EMPRESS

EAST EMPRESS

NORTH BUZZER

WEST BUZZER

BUZZER

BUZZER Showing

ROWBOTTOM

ROWBOTTOM Showing

Compilation note

Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.

Bearing derivation referred to stellar observations at Tag S.R.G. No. 1 (Empress) 1970. I.P. Survey Co-ordinates: 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0817-0/0542Z-1

McELHANNEY ASSOCIATES Job 0333-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

5% Frequency Effect

7% Frequency Effect

10% Frequency Effect

O S80 Drillhole and Drilling No.

LEGEND

Horiz. Control Δ
Vert. Control O
Targets +
Photo Centre 27
Trench
Base line

Cut line
Old I.P. line
Power line
Contours 100
Spot elev. 320
Swamps

Tree lines
Rivers
Creeks
Roads

KEY MAP

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 1000' DATE: JULY 1970

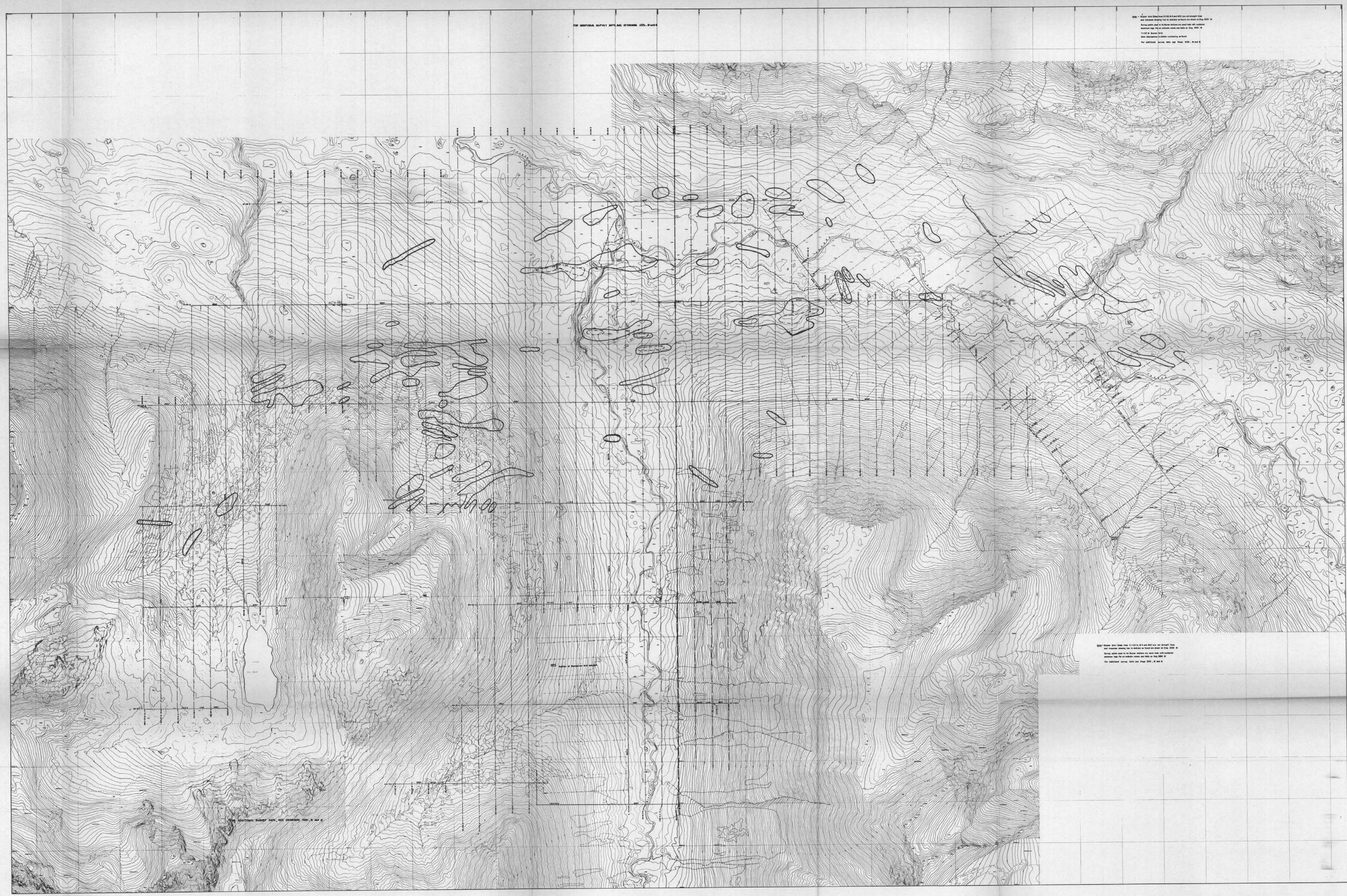
I.P. Anomaly Plan Map

(With Drillhole Location)

FILE No. 3-7

To accompany Geophysical Report
By Takeo Yokoyama, Gephysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G.R. McElhanney P.Eng



Compilation note
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress) 1970. I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 08117-0/05427-1
McELHANNEY ASSOCIATES — Job 0333-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control	Cut line	Tree lines	
Vert. Control	Old I.P. line	Rivers	
Targets	Power line	Creeks	
Photo Centre 27	Contours 500	Roads	
Trench	Spot elev. 320		
Base line	Swamps		

KEY MAP (D, B, C, A)

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY
SCALE: 1" TO 1000' DATE: JULY 1970

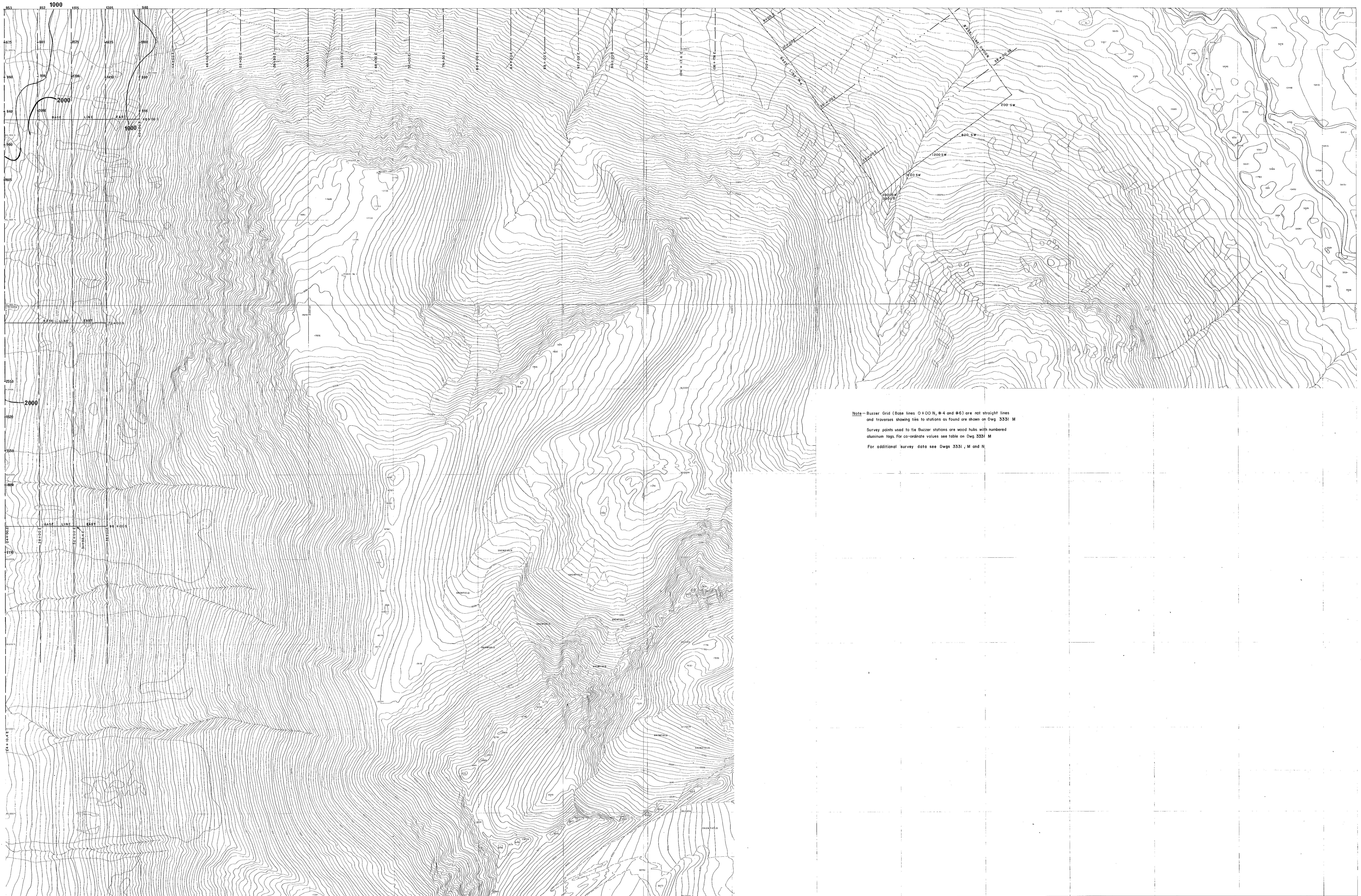
Vertical Magnetic Anomaly Plan Map
(unit : gamma)

FILE No. 3-8

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2674 MAP #3

To accompany Geophysical Report
By Takeo Yokoyama, Gephysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

J.R. Shirley P.Eng



To accompany Geophysical Report
By Takeo Yokoyama, Gephysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P. Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 08117-0/05427-1
McELHANNEY ASSOCIATES Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control .... △
Vert. Control .... ○
Targets .... +
Photo Centre 27
Trench ....
Base line ....
Cut line ....
Old I.P. line ....
Power line ....
Contours 300
Spot elev. .... •320
Swamps ....
Tree lines ....
Rivers ....
Creeks ....
Roads ....

KEY MAP

D	B
C	A

N

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP

(unit : ohm-feet / 2π)

400 FEET SEPARATION POLE-DIPOLE ARRAY

FILE No. 3-1-A

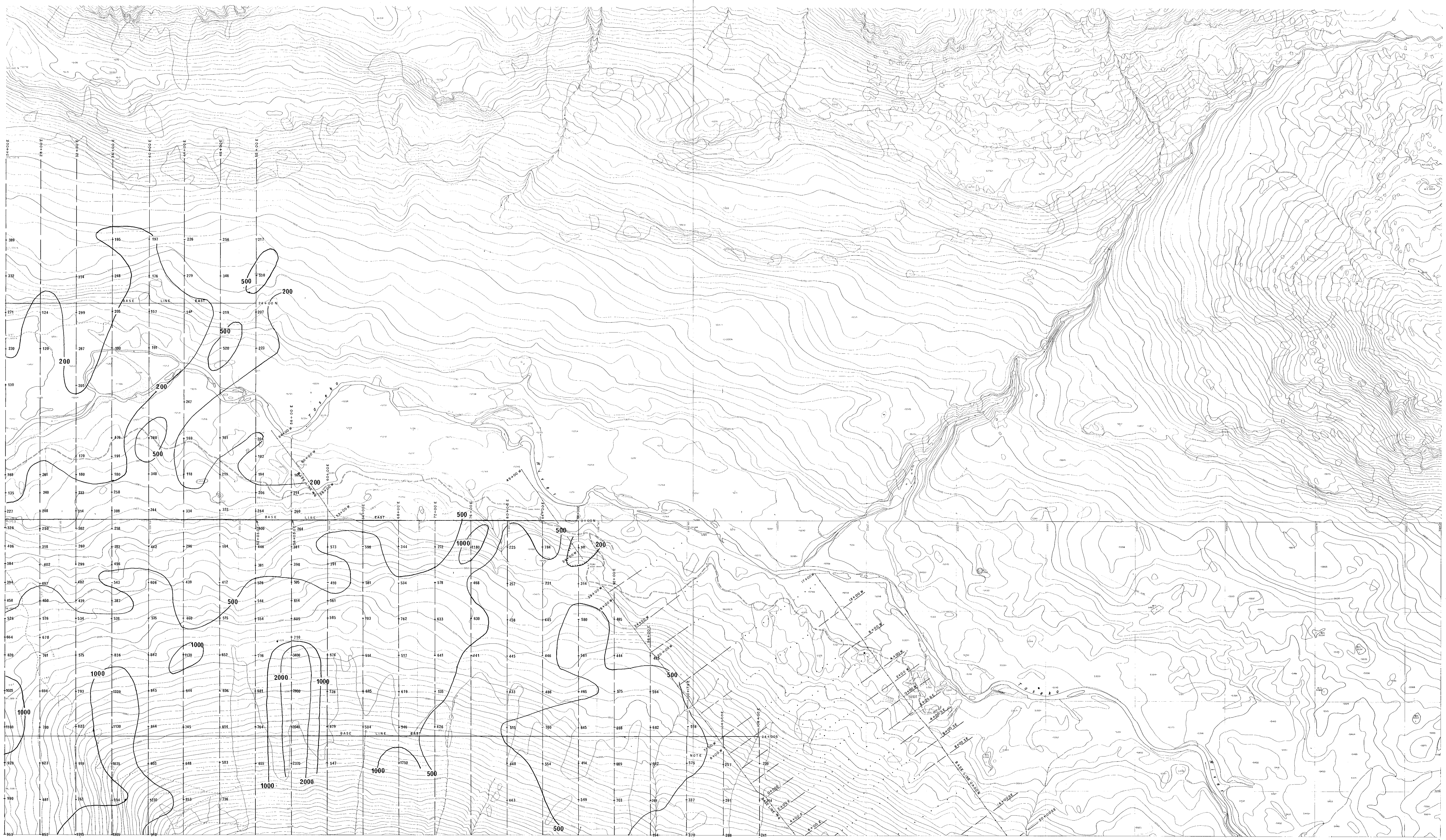
No 2574

Note — Buzzer Grid (Base lines 0+00, # 4 and # 6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

7+00 W Buzzer Grid
Note discrepancy in station numbering as found

For additional survey data see Dwgs. 3331, M and N



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2874 MAP #5

To accompany Geophysical Report
By Takeo Yokoyama, Gephysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P.Eng.

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S R O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD	Job 08117-0/05427-1
McELHANNEY ASSOCIATES.	Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND
Horiz. Control — Vert. Control — Targets — Photo Centre 27 — Trench — Base line — Cut line — Old I.P. line — Power line — Contours 300 — Spot elev. 320 — Swamps — Tree lines — Rivers — Creeks — Roads

KEY MAP
D B
C A
N

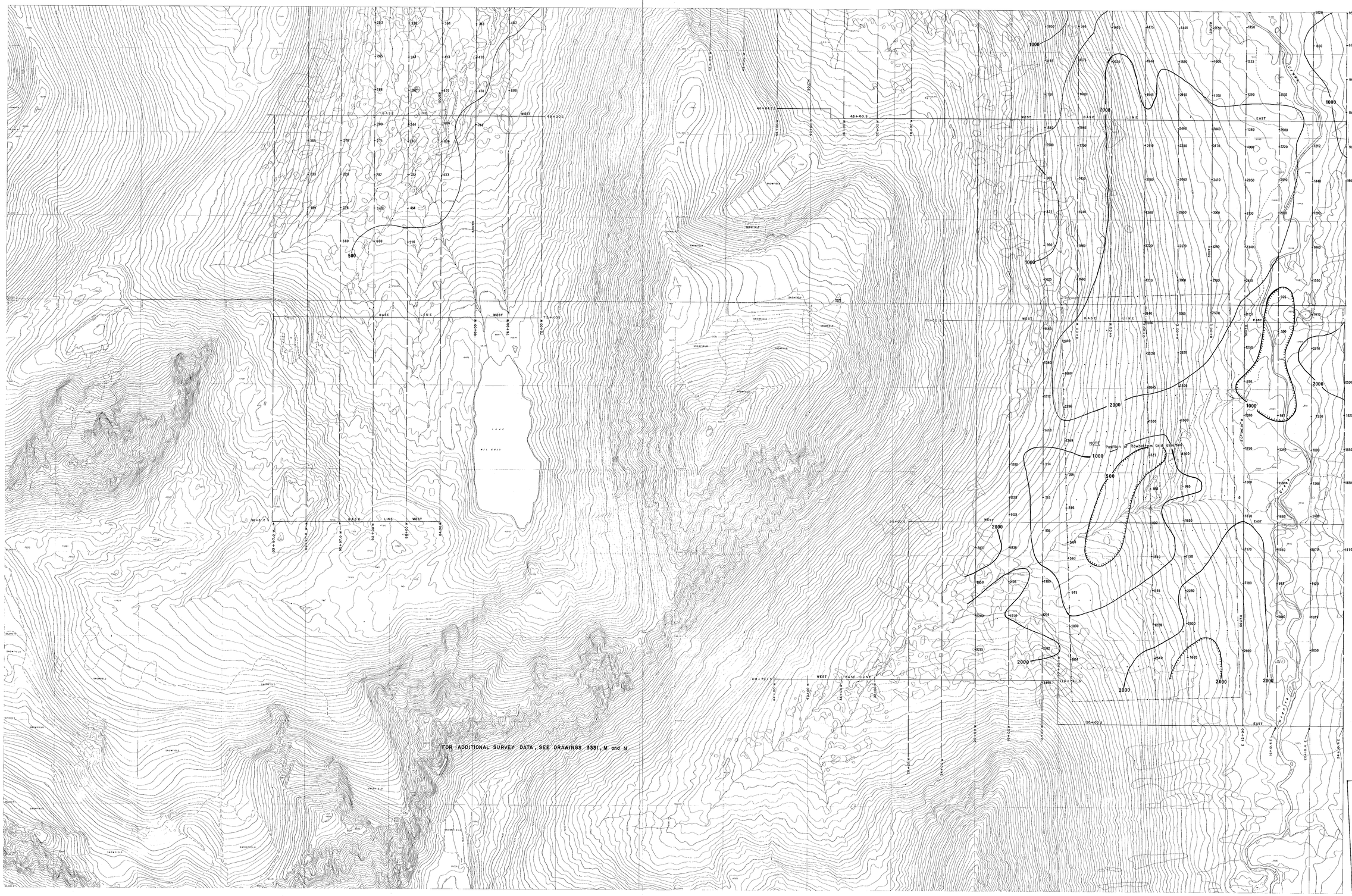
SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit: ohm-feet / 2π)

400 FEET SEPARATION POLE-DIPOLE ARRAY

FILE No. 3-1-B



Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0817-0/0542F-I
McELHANNEY ASSOCIATES Job 0331-D

ISSUED TO

REVISIONS				
No.	Made by	Date	Description	

LEGEND

Horiz. Control	Cut line	Tree lines
Vert. Control	Old I.P. line	Rivers
Targets	Power line	Creeks
Photo Centre 27	Contours 320	Roads
Trench	Spot elev. 320	
Base line	Swamps	

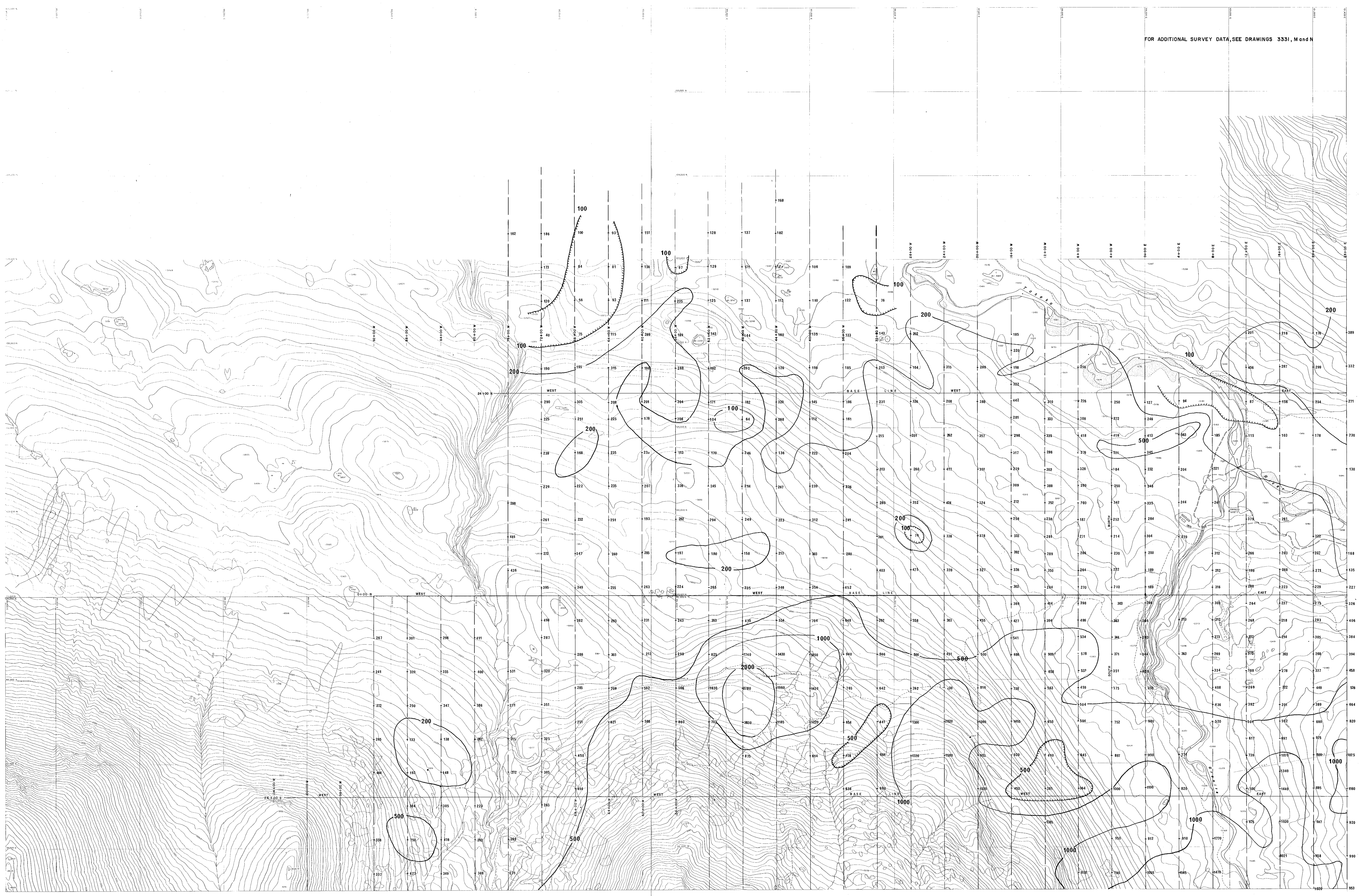
KEY MAP (D B / C A) N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY
SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit : ohm-feet / 2π)
400 FEET SEPARATION POLE-DIPOLE ARRAY
FILE No. 3-1-C

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

J. R. Hitchins P.Eng



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No.1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 08117-0/05427-1
McELHANNEY ASSOCIATES — Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control · Vert. Control · Targets · Photo Centre · Trench · Base line · Cut line · Old I.P. line · Power line · Contours · Spot elev. · Swamps · Tree lines · Rivers · Creeks · Roads

KEY MAP (D B / C A) N

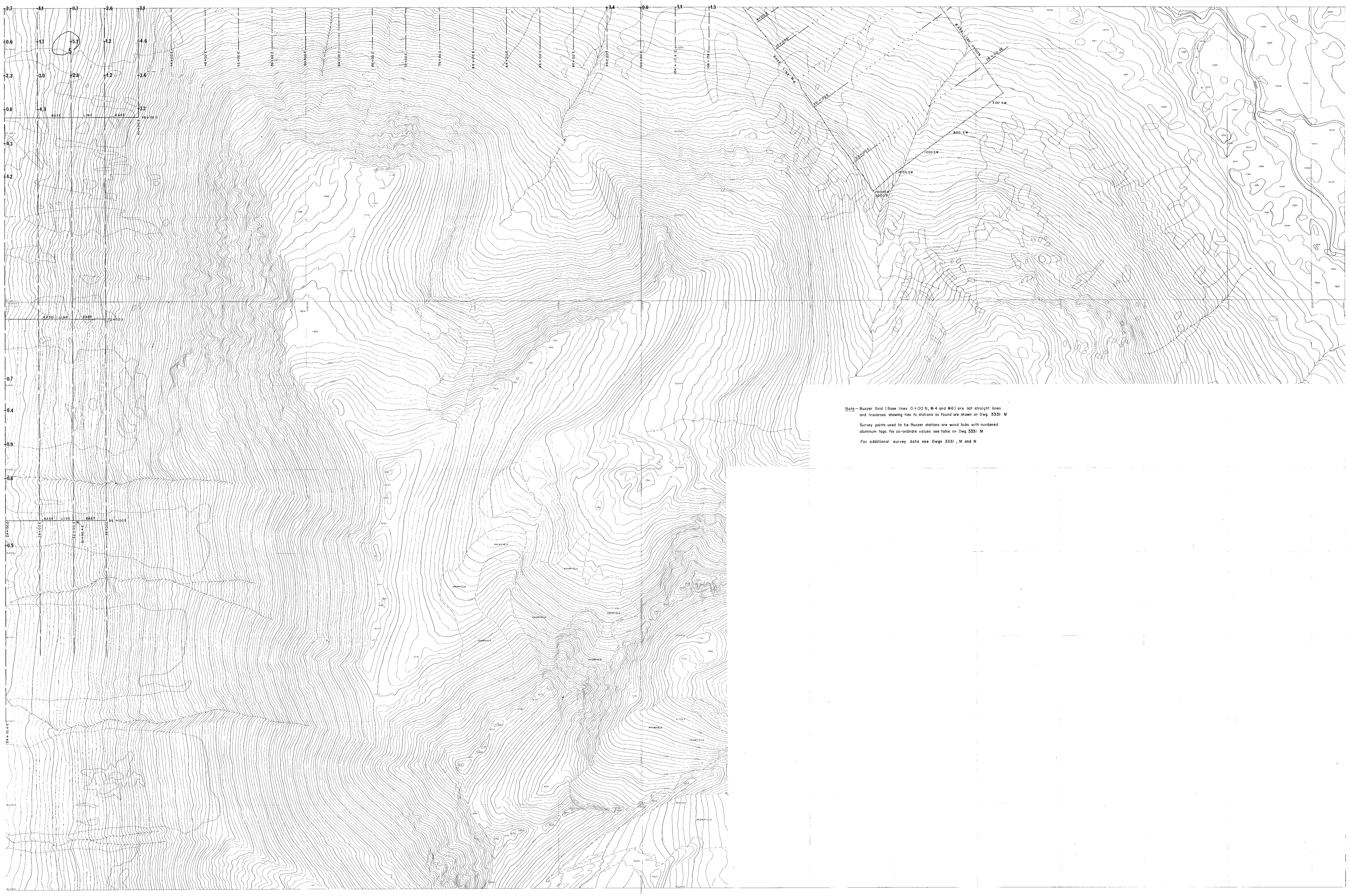
SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' — DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit : ohm-feet / 2π)

400 FEET SEPARATION POLE-DIPOLE ARRAY

FILE No. 3-1-D



Note — Buzzer Grid (Base lines 0+00 N, #4 and #6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

For additional survey data see Dwgs 3331, M and N

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P. Eng.

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 08117-0/05427-1
McELHANNEY ASSOCIATES. Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control .... △
Vert. Control .... ○
Targets .... +
Photo Centre 27
Trench
Base line
Cut line
Old I.P. line
Power line
Contours 300
Spot elev. .... ·320
Swamps
Tree lines
Rivers
Creeks
Roads

D	B
C	A

KEY MAP

N

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 400'   DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: % , 5 & 0.3 Hz)
400 FEET SEPARATION. POLE-DIPOLE ARRAY

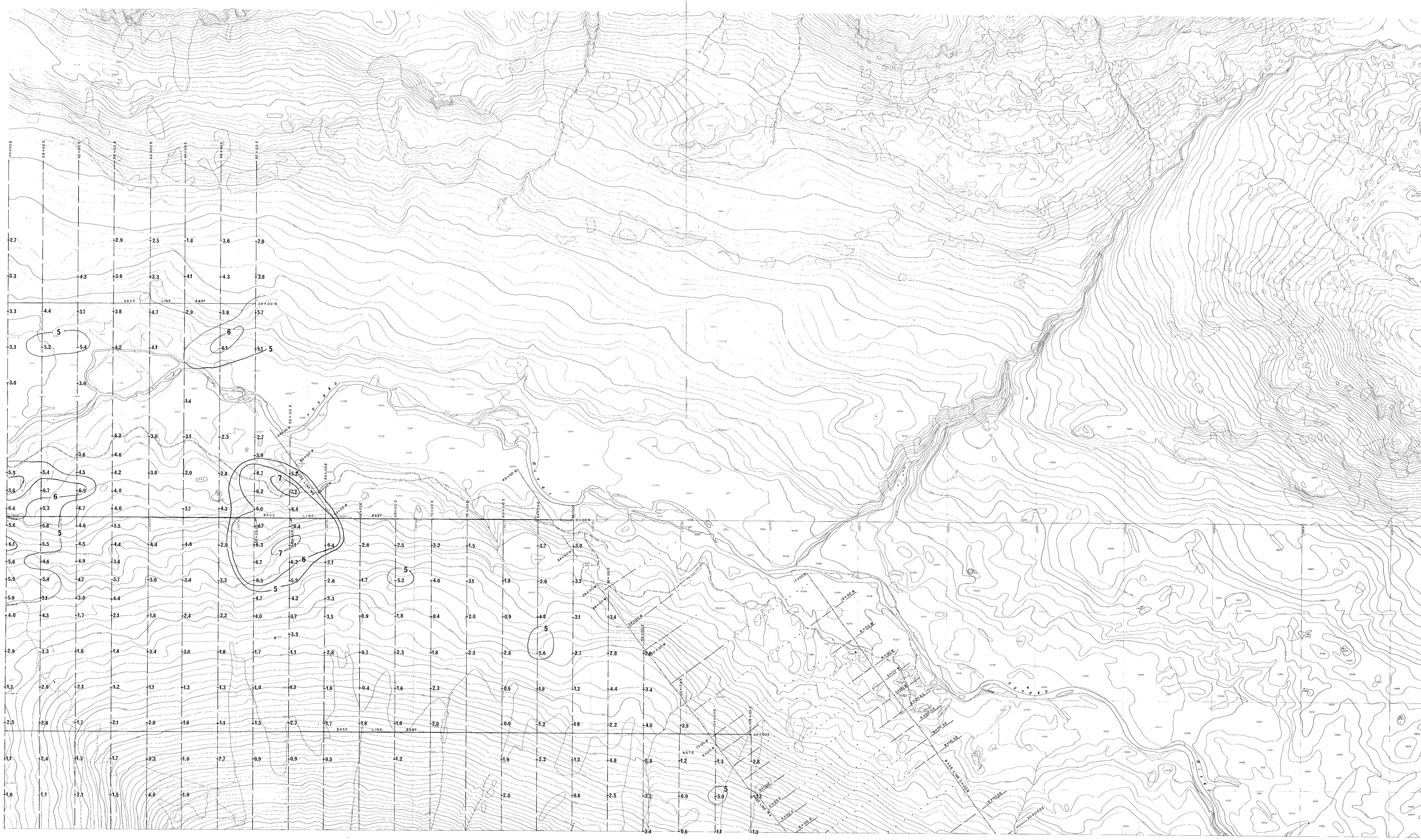
FILE No. 3-2-A

<u>Note</u> — Buzzer Grid (Base lines 0+00, # 4 and #6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

7+00 W Buzzer Grid
Note discrepancy in station numbering as found

For additional survey data see Dwgs. 3331, M and N



MAP #4 — REPORT — Resources

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 08117-0/05427-1
McELHANNEY ASSOCIATES — Job 03331-0

ISSUED TO

REVISIONS — No. | Made by | Date | Description

LEGEND
Horiz. Control · Vert. Control · Targets · Photo Centre 27 · Trench · Base line · Cut line · Old I.P. line · Power line · Contours 300 · Spot elev. 320 · Swamps · Tree lines · Rivers · Creeks · Roads

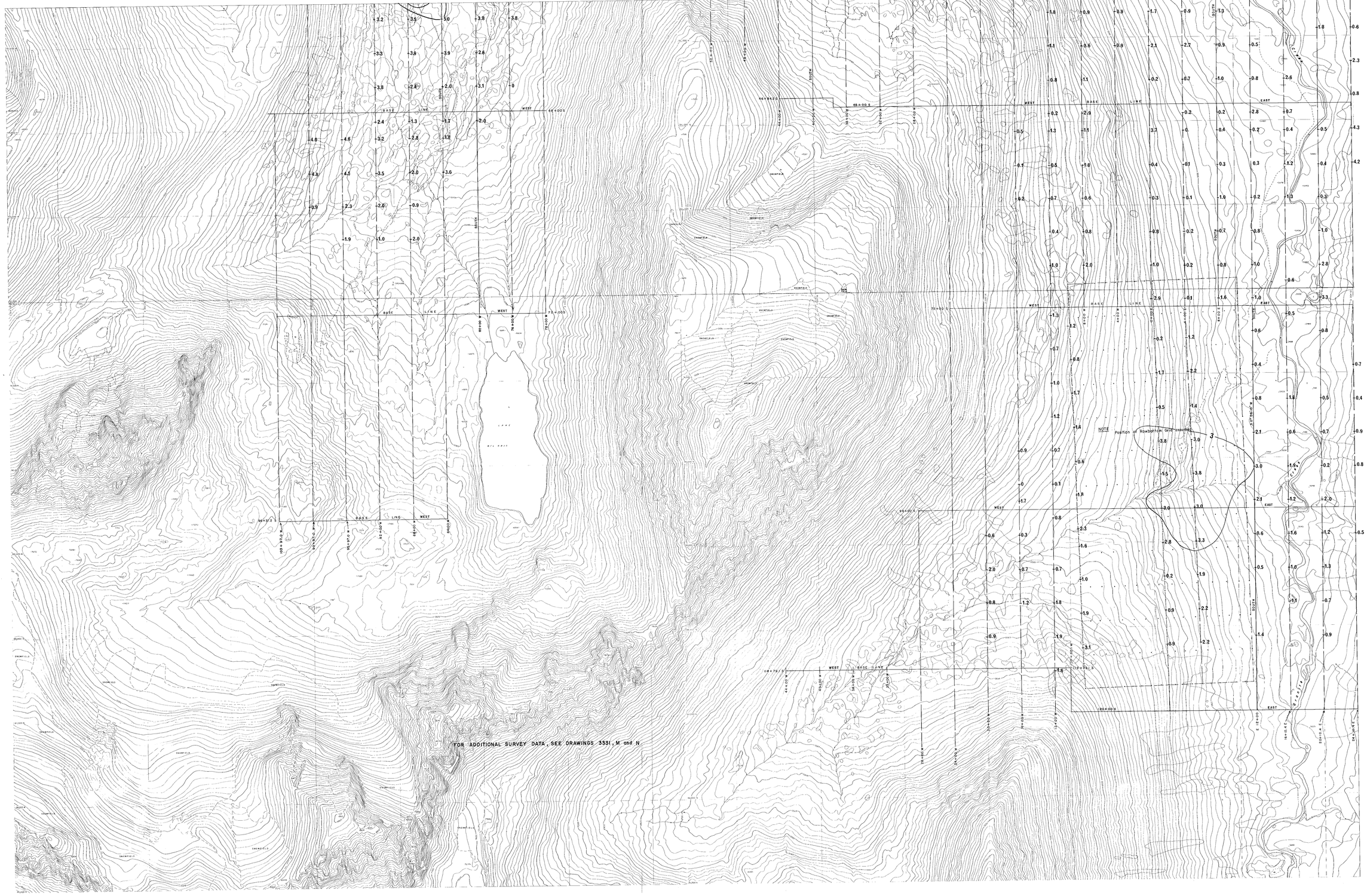
KEY MAP: D B / C A — N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' — DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: % , 5 & 0.3 Hz)
400 FEET SEPARATION, POLE-DIPOLE ARRAY

FILE No. 3-2-B



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2874 MAP

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Yaseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

A. R. Whitehouse P.Eng.

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25
Bearing derivation referred to stellar observations at Tag SRO. No.1 (Empress)
1970 I.P. Survey Co-ordinates. 0+00N, 0+00E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD Job 0817-0/0542-1
McELHANNEY ASSOCIATES Job 3331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control	Cut line	Tree lines	
Vert. Control	Old I.P. line	Rivers	
Targets	Power line	Creeks	
Photo Centre 27	Contours 300	Roads	
Trench	Spot elev. +320		
Base line	Swamps		

KEY MAP

D B
C A
N

SUMITOMO METAL MINING CANADA LTD.

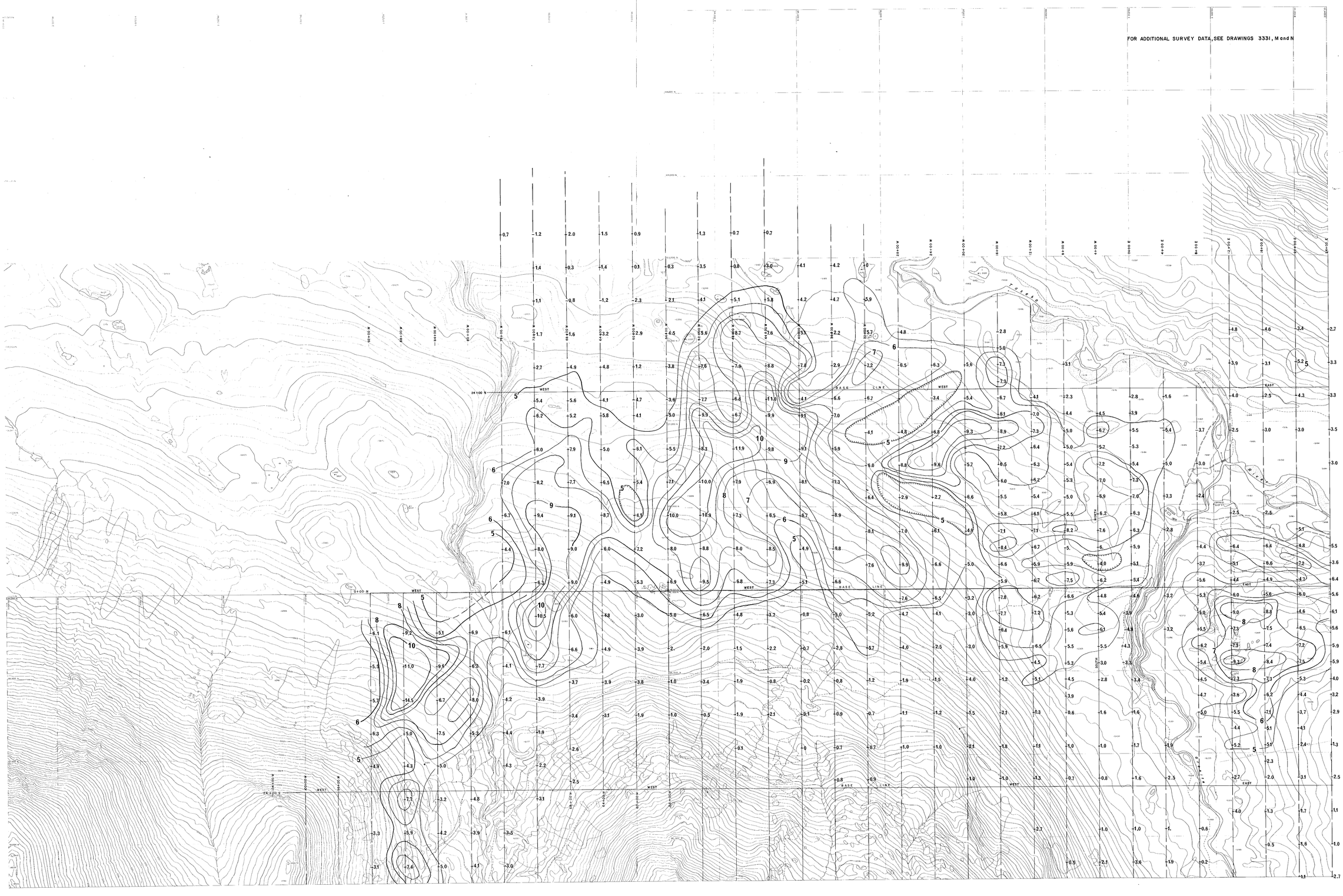
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: % ,5 & 0.3 Hz)
400 FEET SEPARATION. POLE-DIPOLE ARRAY

FILE No. 3-2-C

FOR ADDITIONAL SURVEY DATA, SEE DRAWINGS 3331, M and N



Assessment and Petroleum Resources
ASSESSMENT REPORT
NO. 2894 MAP

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 0811 / 0/05427-1
McELHANNEY ASSOCIATES — Job 3331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

- Horiz. Control
- Vert. Control
- Targets
- Photo Centre — 27
- Trench
- Base line
- Cut line
- Old I.P. line
- Power line
- Contours — 500
- Spot elev. — 320
- Swamps
- Tree lines
- Rivers
- Creeks
- Roads

KEY MAP: D | B / C | A

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit : % , 5 & 0.3 Hz)
400 FEET SEPARATION. POLE-DIPOLE ARRAY

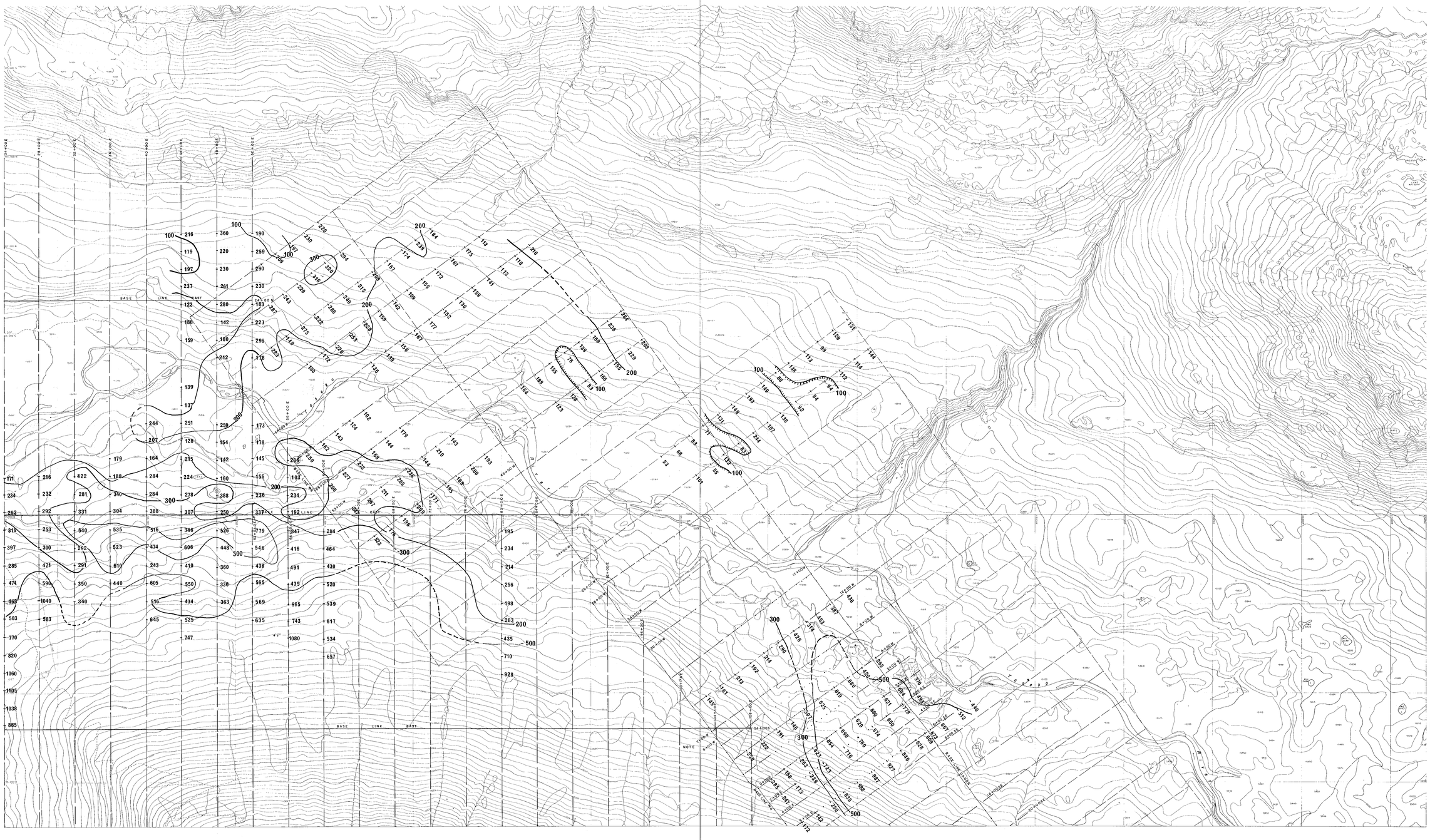
FILE No. 3-2-D

Note — Buzzer Grid (Base lines 0+00, ⊕4 and ⊕6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

7+00 W Buzzer Grid
Note discrepancy in station numbering as found

For additional survey data see Dwgs. 3331, M and N



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko Lake Area, Clinton Mining Division
Dated September 30 - 1970

G R McElhanney P Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress) 1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 08117-0/05427-1
McELHANNEY ASSOCIATES. Job 03331-0

ISSUED TO

REVISIONS

No.	Map No.	Date	Description

LEGEND

Horiz. Control ⊿	Cut line	Tree lines
Vert. Control ○	Old I.P. line	Rivers
Targets +	Power line	Creeks
Photo Centre ✦ 27	Contours 500	Roads
Trench	Spot elev. 320	
Base line	Swamps	

KEY MAP (D, B, C, A)

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit: ohm-feet / 2π)
200 FEET SEPARATION. POLE-DIPOLE ARRAY

FILE No. 3-3-B

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No.1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0811-0/0542-1
McELHANNEY ASSOCIATES Job 0331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

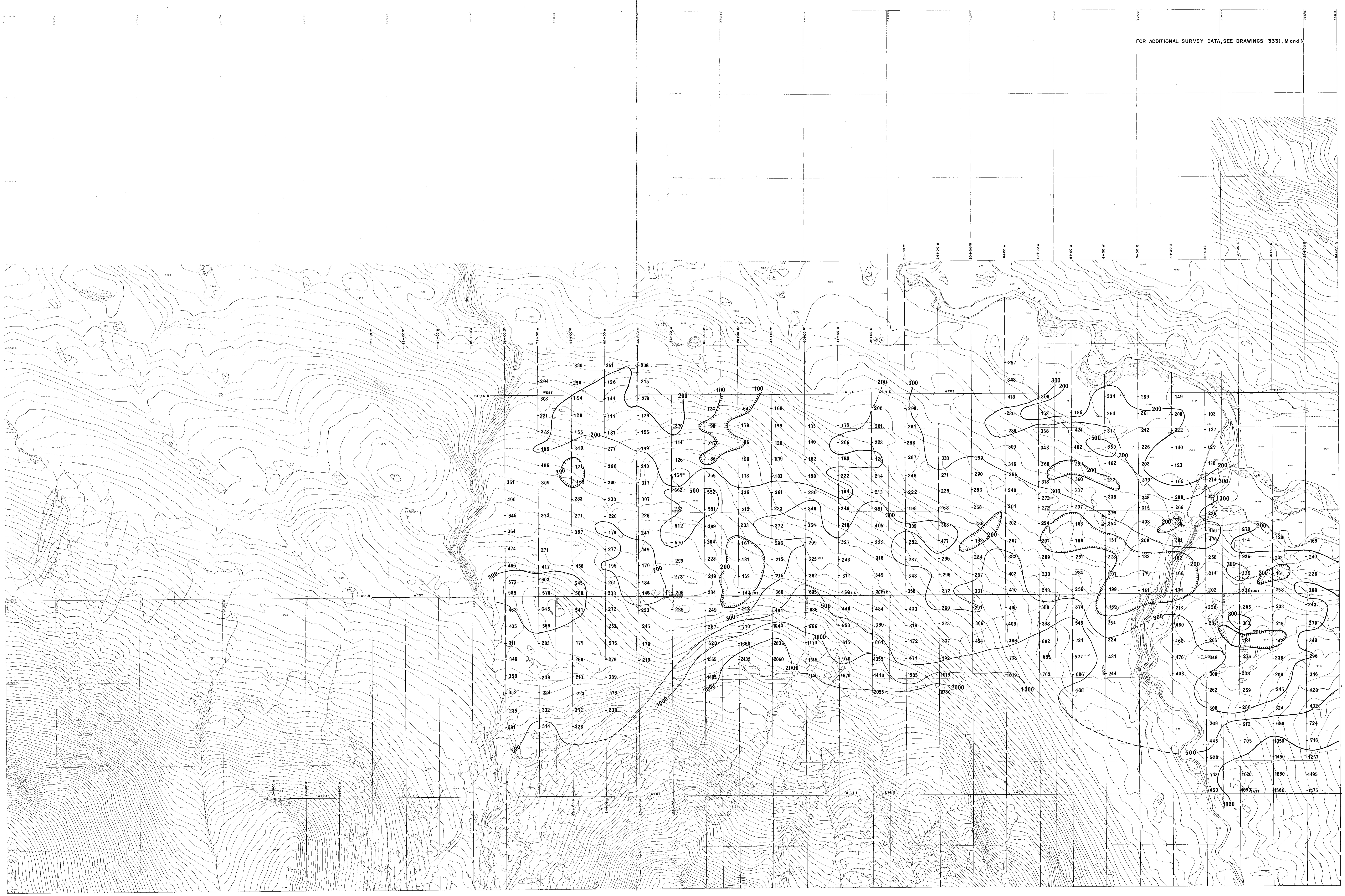
LEGEND

Horiz. Control ... Δ
Vert. Control ... ○
Targets ... +
Photo Centre ... ✦ 27
Trench ... ▭▭▭
Base line ...
Cut line ...
Old I.P. line ...
Power line ...
Contours ... 100 / 320
Spot elev ... •320
Swamps ...
Tree lines ...
Rivers ...
Creeks ...
Roads ...

KEY MAP (D B / C A) N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY
SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit: ohm-feet / 2π)
200 FEET SEPARATION. POLE-DIPOLE ARRAY
FILE No. 3-3-C



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2874 MAP #14

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

I. R. Hilchey P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag SRO. No. I (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 08117-0/05427-1
McELHANNEY ASSOCIATES — Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND
Horiz. Control — Vert. Control — Targets — Photo Centre 27 — Trench — Base line
Cut line — Old I.P. line — Power line — Contours 300 — Spot elev. 320 — Swamps
Tree lines — Rivers — Creeks — Roads

KEY MAP (D B / C A, N)

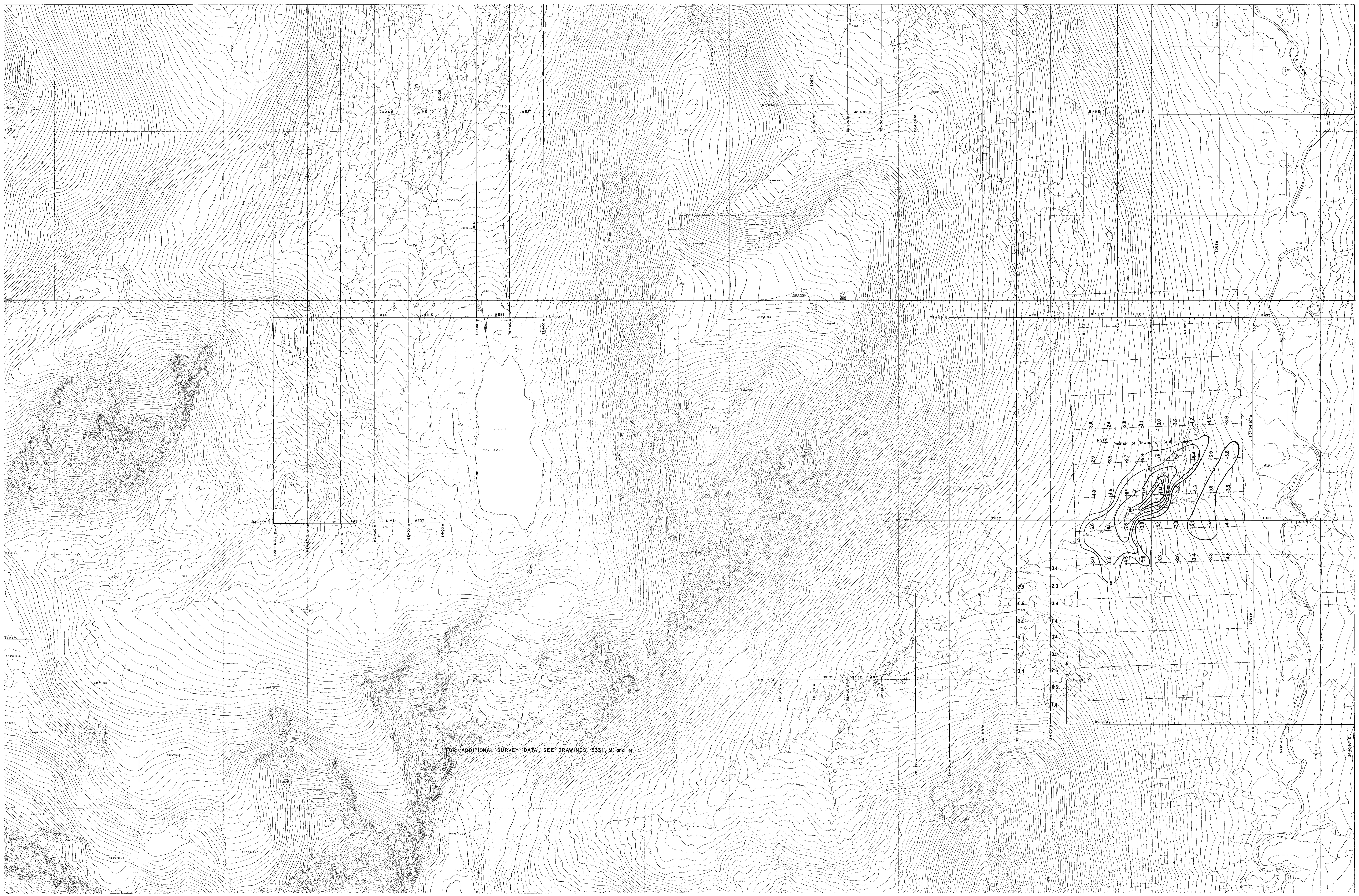
SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

APPARENT RESISTIVITY PLAN MAP
(unit: ohm-feet / 2π)

200 FEET SEPARATION. POLE-DIPOLE ARRAY

FILE No. 3-3-D



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Hilchey P. Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 08117-0/05427-1
McELHANNEY ASSOCIATES — Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND
Horiz. Control · Vert. Control · Targets · Photo Centre 27 · Trench · Base line · Cut line · Old I.P. line · Power line · Contours · Spot elev. 320 · Swamps · Tree lines · Rivers · Creeks · Roads

KEY MAP
D B
C A
N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400'   DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: %, 5 & 0.3 Hz)

200 FEET SEPARATION. POLE-DIPOLE ARRAY

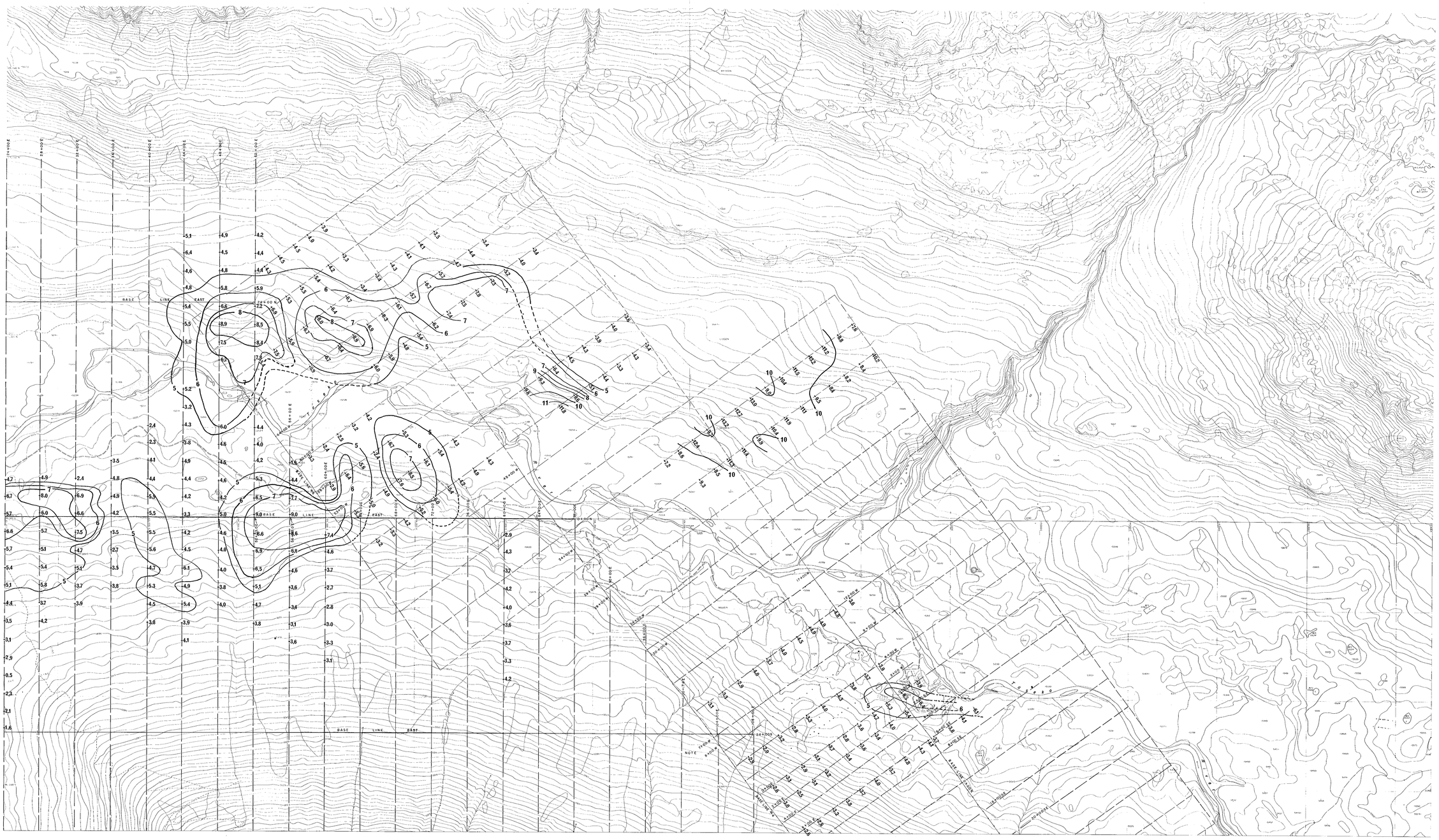
FILE No. 3-4-C

Note — Buzzer Grid (Base lines 0+00, #4 and #6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

7+00 W Buzzer Grid
Note discrepancy in station numbering as found

For additional survey data see Dwgs. 3331, M and N



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

A.R. Hickey P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag SRO, No 1 (Empress).
1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0817-0/0542-1
McELHANNEY ASSOCIATES. Job 0333-0

ISSUED TO

REVISIONS				
No.	Made by	Date	Description	

LEGEND

Horiz. Control △	Cut line	Tree lines
Vert. Control ○	Old I.P. line	Rivers
Targets +	Power line	Creeks
Photo Centre 27	Contours 300	Roads
Trench	Spot elev. 320	
Base line	Swamps	

KEY MAP (D, B, C, A, N)

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

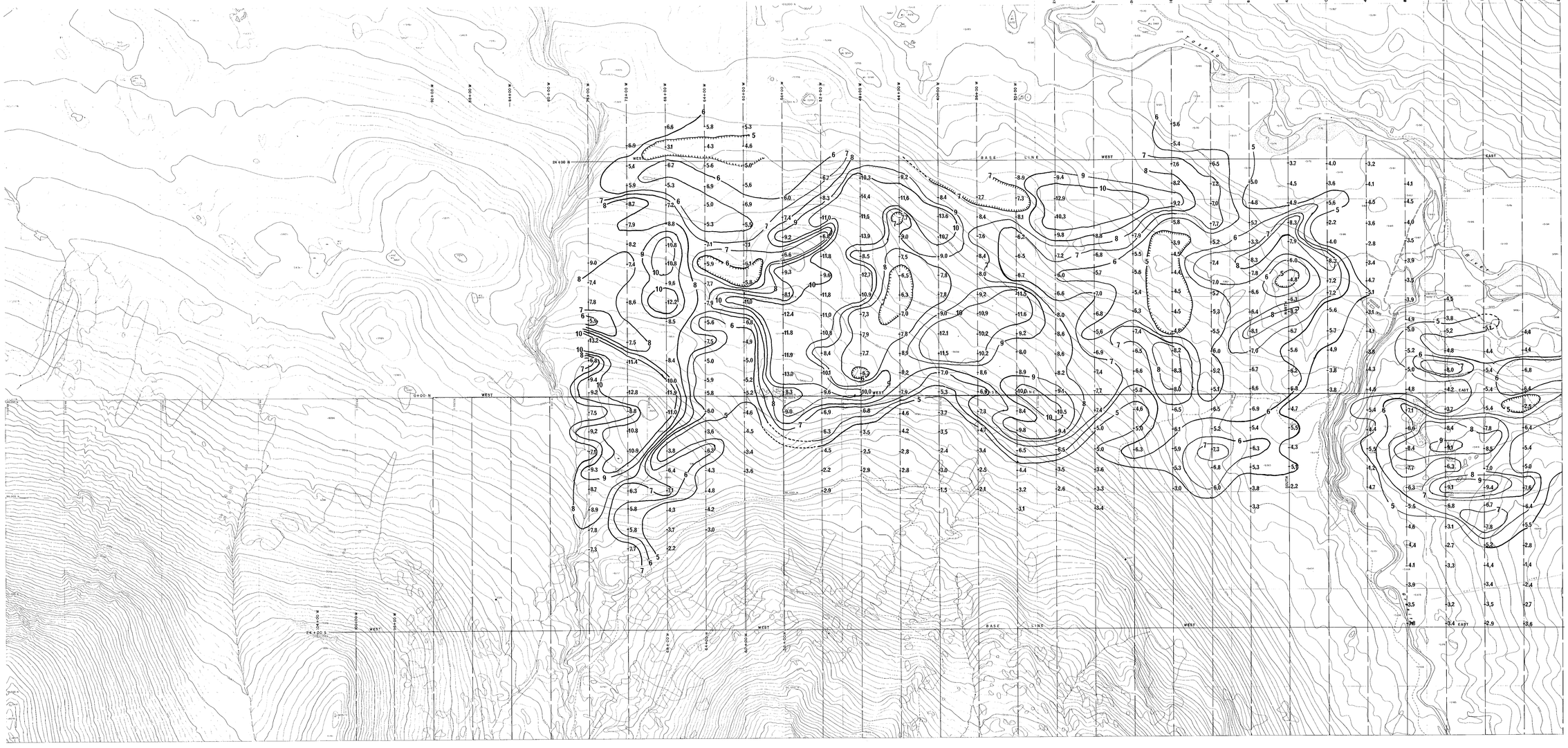
SCALE: 1" TO 400' DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: %, 5 & 0.3 Hz)

200 FEET SEPARATION. POLE-DIPOLE ARRAY

FILE No. 3-4-B

FOR ADDITIONAL SURVEY DATA, SEE DRAWINGS 3331, M and N



Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2874 MAP #17

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

G. R. Walchuk P. Eng

Compilation Note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD — Job 081-7.0/0542-1
McELHANNEY ASSOCIATES — Job 3331-0

ISSUED TO

REVISIONS			
No.	Made by	Date	Description

LEGEND

Horiz. Control ..... △	Cut line	Tree lines .....
Vert. Control ..... ○	Old I.P. line	Rivers .....
Targets ..... +	Power line	Creeks .....
Photo Centre 27	Contours 300	Roads .....
Trench	Spot elev. 320	
Base line	Swamps	

KEY MAP (D, B, C, A, N)

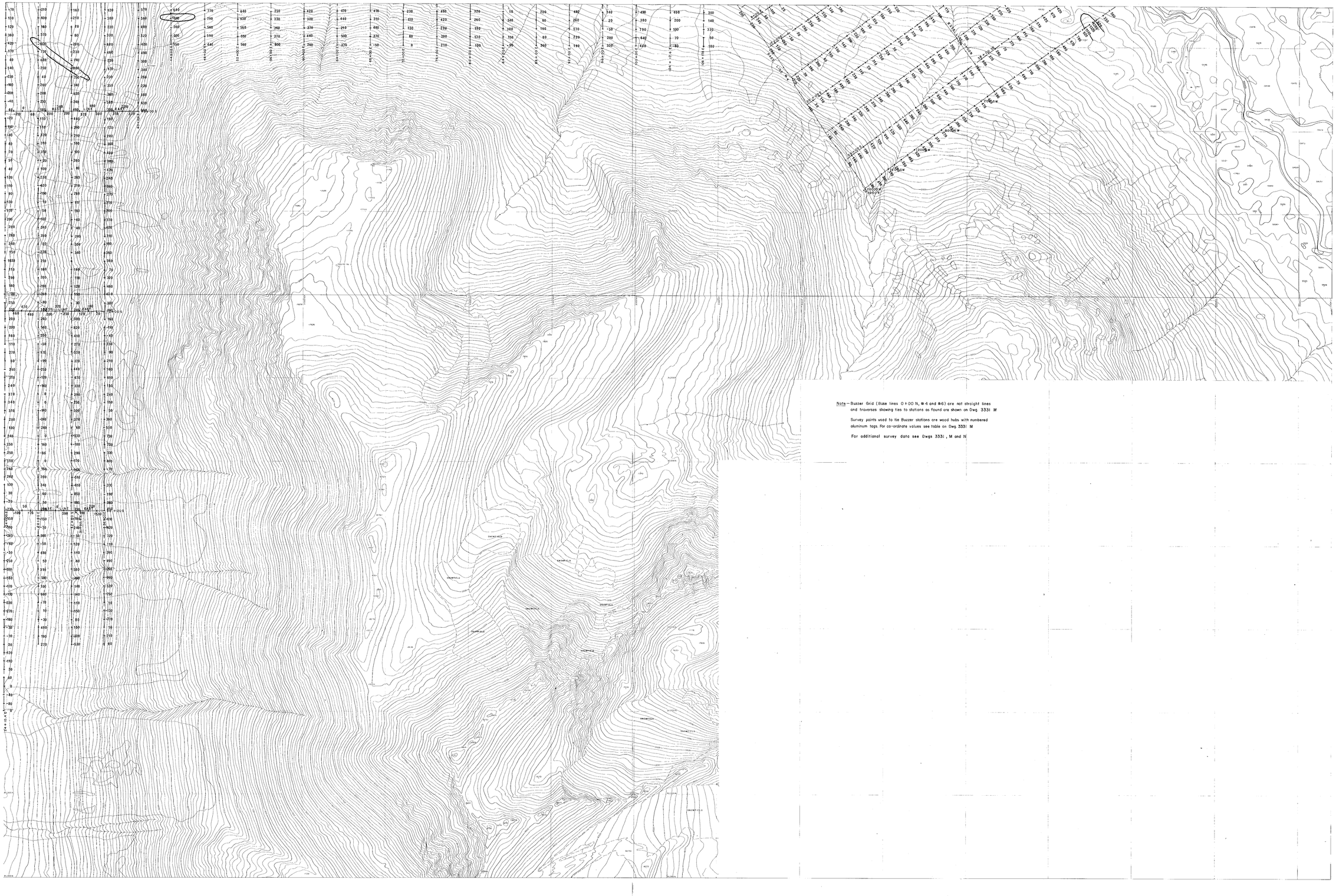
SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

FREQUENCY EFFECT PLAN MAP
(unit: %, 5 & 0.3 Hz)
200 FEET SEPARATION. POLE-DIPOLE ARRAY

FILE No. 3-4-D



Note – Buzzer Grid (Base lines 0+00 N, #4 and #6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

For additional survey data see Dwgs 3331, M and N

To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

J. K. Whiteley P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No.1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00E = Plan Co-ordinates 99,000.00 N; 99,000.00 E

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0811Z-0/0542Z-1
McELHANNEY ASSOCIATES. Job 3331-0

ISSUED TO

REVISIONS			
No.	Made by	Date	Description

LEGEND

Horiz. Control	Cut line	Tree lines
Vert. Control	Old I.P. line	Rivers
Targets	Power line	Creeks
Photo Centre 27	Contours 500	Roads
Trench	Spot elev. 320	
Base line	Swamps	

KEY MAP (D B / C A) N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

VERTICAL MAGNETIC INTENSITY PLAN MAP
(unit : gamma)

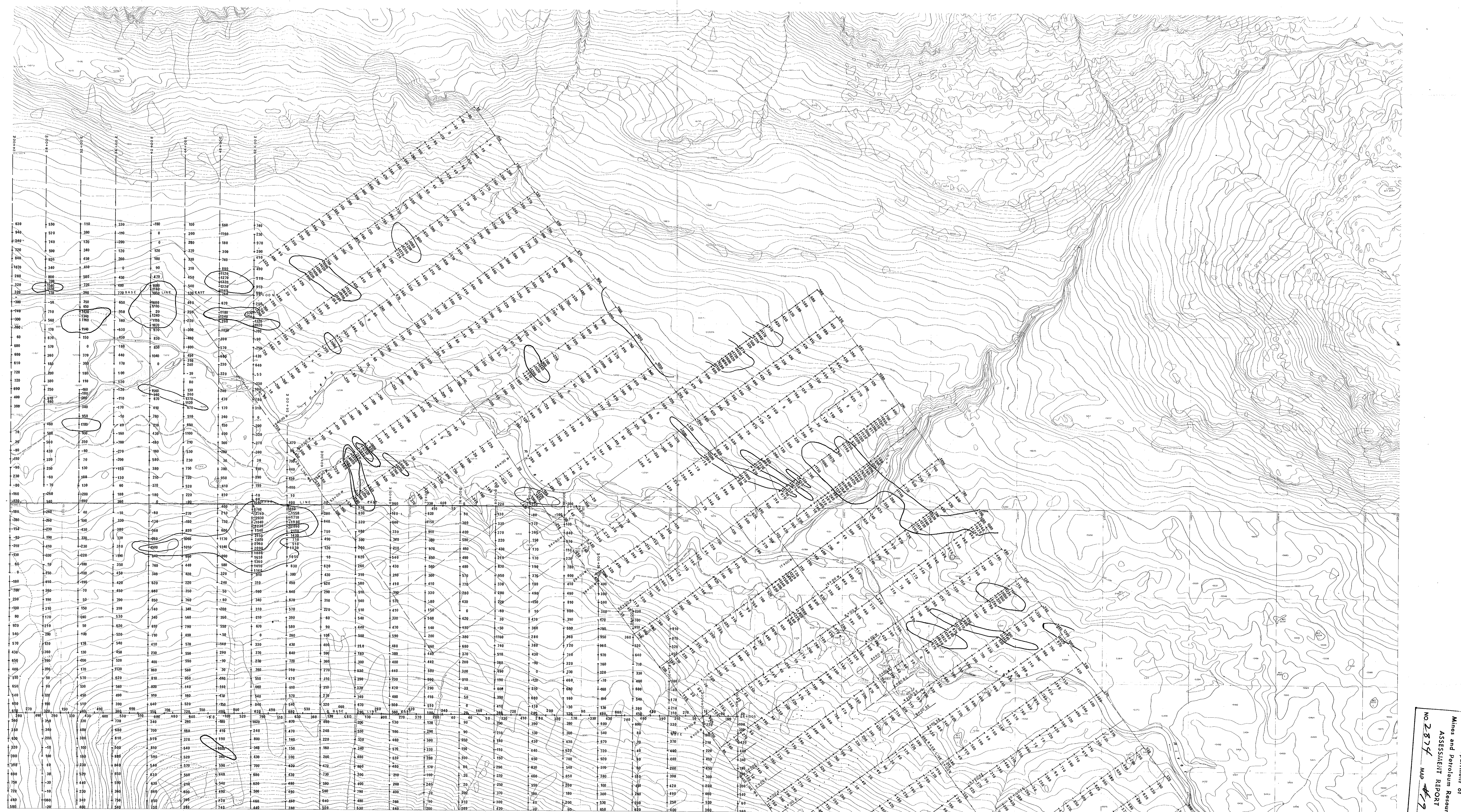
FILE No. 3-5-A

Note — Buzzer Grid (Base lines 0+00, # 4 and # 6) are not straight lines and traverses showing ties to stations as found are shown on Dwg. 3331 M

Survey points used to tie Buzzer stations are wood hubs with numbered aluminum tags. For co-ordinate values see table on Dwg. 3331 M

7+00 W Buzzer Grid
Note discrepancy in station numbering as found

For additional survey data see Dwgs. 3331, M and N



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division,
Dated September 30 - 1970

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00 E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 08117-0/05427-1
McELHANNEY ASSOCIATES Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control .... △
Vert. Control .... ○
Targets .... +
Photo Centre 27
Trench ....
Base line ....
Cut line ....
Old I.P. line ....
Power line ....
Contours 300
Spot elev. .... •320
Swamps ....
Tree lines ....
Rivers ....
Creeks ....
Roads ....

KEY MAP

D	B
C	A

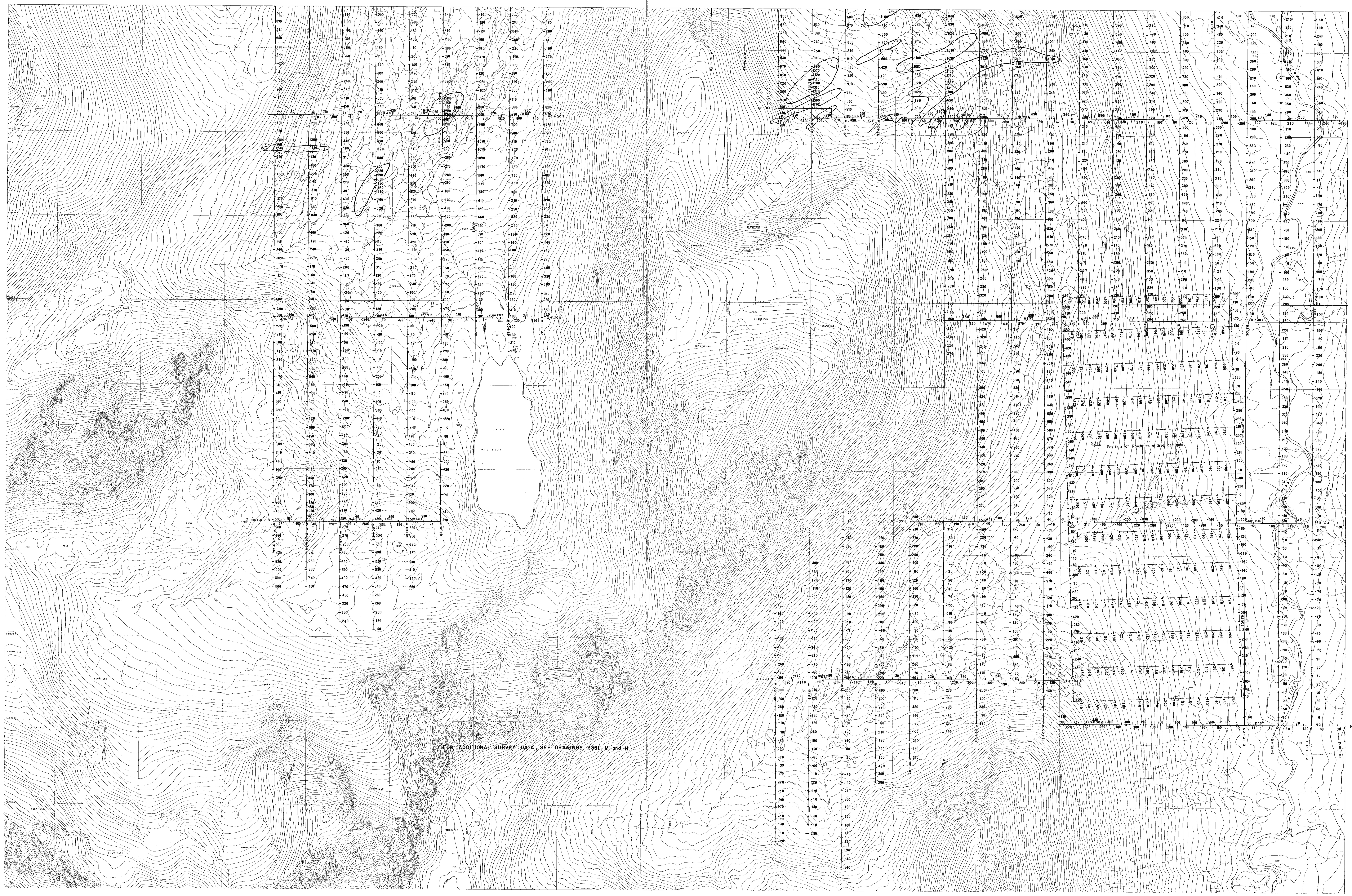
N

SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400'   DATE: JULY 1970

VERTICAL MAGNETIC INTENSITY PLAN MAP
(unit : gamma)

FILE No. 3-5-B



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

J. R. Hilchey P.Eng

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No. 1 (Empress)
1970 I.P. Survey Co-ordinates 0+00 N; 0+00E = Plan Co-ordinates 99,000.00 N; 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 08117-0/05427-1
McELHANNEY ASSOCIATES. Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control; Vert. Control; Targets; Photo Centre 27; Trench; Base line; Cut line; Old I.P. line; Power line; Contours 300; Spot elev. 320; Swamps; Tree lines; Rivers; Creeks; Roads

KEY MAP

D	B
C	A

N

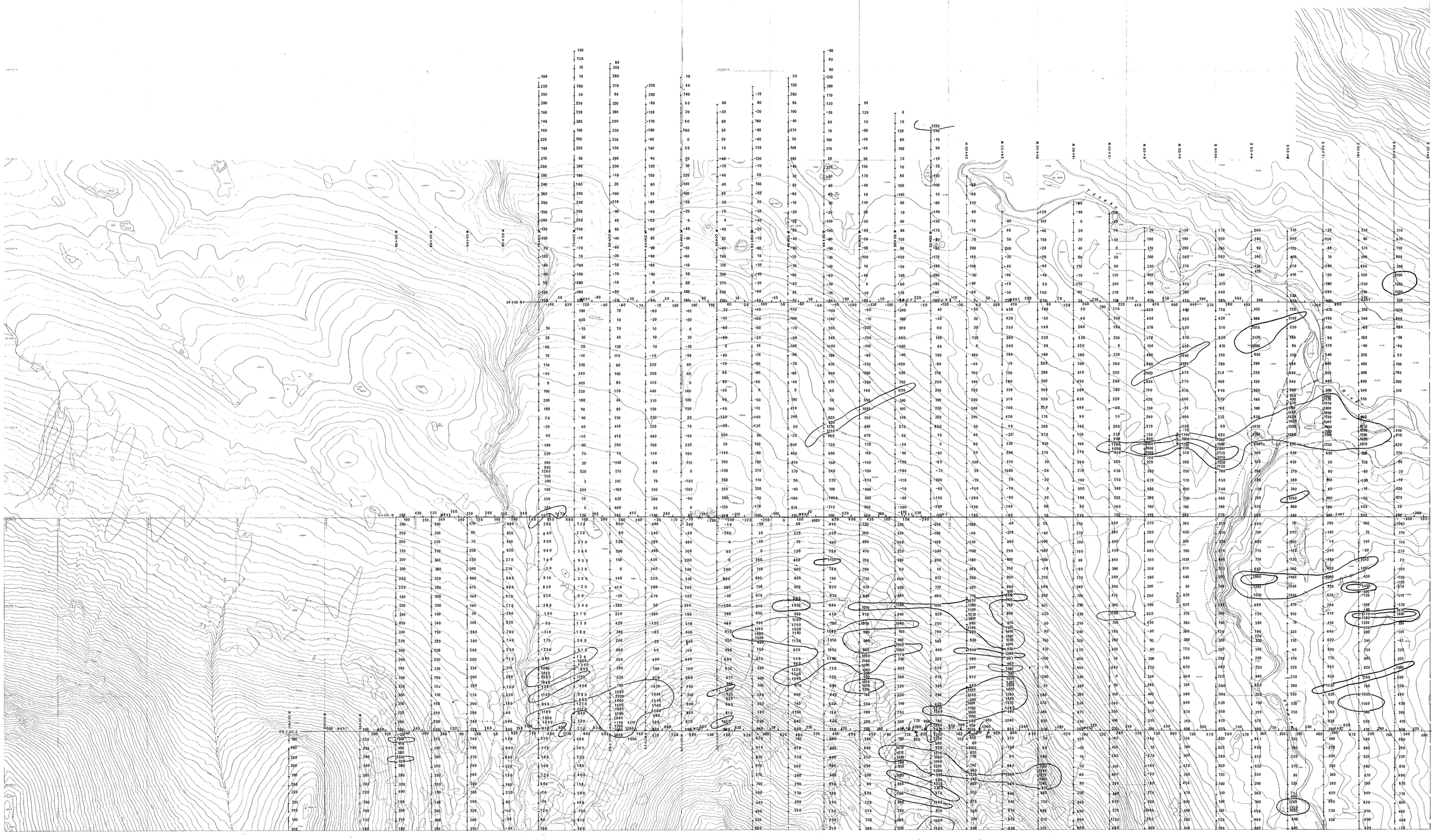
SUMITOMO METAL MINING CANADA LTD.
TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

VERTICAL MAGNETIC INTENSITY PLAN MAP
(unit : gamma)

FILE No. 3-5-C

FOR ADDITIONAL SURVEY DATA, SEE DRAWINGS 3331, M and N



To accompany Geophysical Report
By Takeo Yokoyama, Geophysicist
On Taseko Property in the Taseko
Lake Area, Clinton Mining Division
Dated September 30 - 1970

Compilation note:
Topographic mapping compiled from aerial photography flown September 1969. Elevations referred to Geodetic Datum. Grid north referred to true north through meridian 123°25'.
Bearing derivation referred to stellar observations at Tag S.R.O. No.1 (Empress).
1970 I.P. Survey Co-ordinates 0+00 N, 0+00 E = Plan Co-ordinates 99,000.00 N, 99,000.00 E.

McELHANNEY SURVEYING & ENGINEERING LTD. Job 0817-70/2542-1
McELHANNEY ASSOCIATES Job 03331-0

ISSUED TO

REVISIONS

No.	Made by	Date	Description

LEGEND

Horiz. Control	Cut line
Vert. Control	Old I.P. line
Targets	Power line
Photo Centre 27	Contours 300
Trench	Spot elev. 320
Base line	Swamps
Tree lines	
Rivers	
Creeks	
Roads	

KEY MAP

SUMITOMO METAL MINING CANADA LTD.

TASEKO PROPERTY

SCALE: 1" TO 400' DATE: JULY 1970

VERTICAL MAGNETIC INTENSITY PLAN MAP
(unit : gamma)

FILE No. 3-5-D