

3192

REPORT TO
ACAPLONC MINING AND DEVELOPMENT CO. LTD.
ON
GEOPHYSICAL SURVEYS
OF A PART OF ITS
MAKELSTIN CLAIM GROUP

BY

SHERWIN F. KELLY, P. ENG.
MERRITT, B. C.

92 I / 2W

AUGUST 20, 1971

Report on
Geophysical Surveys
to

Acapulco Mining & Development Co. Ltd.

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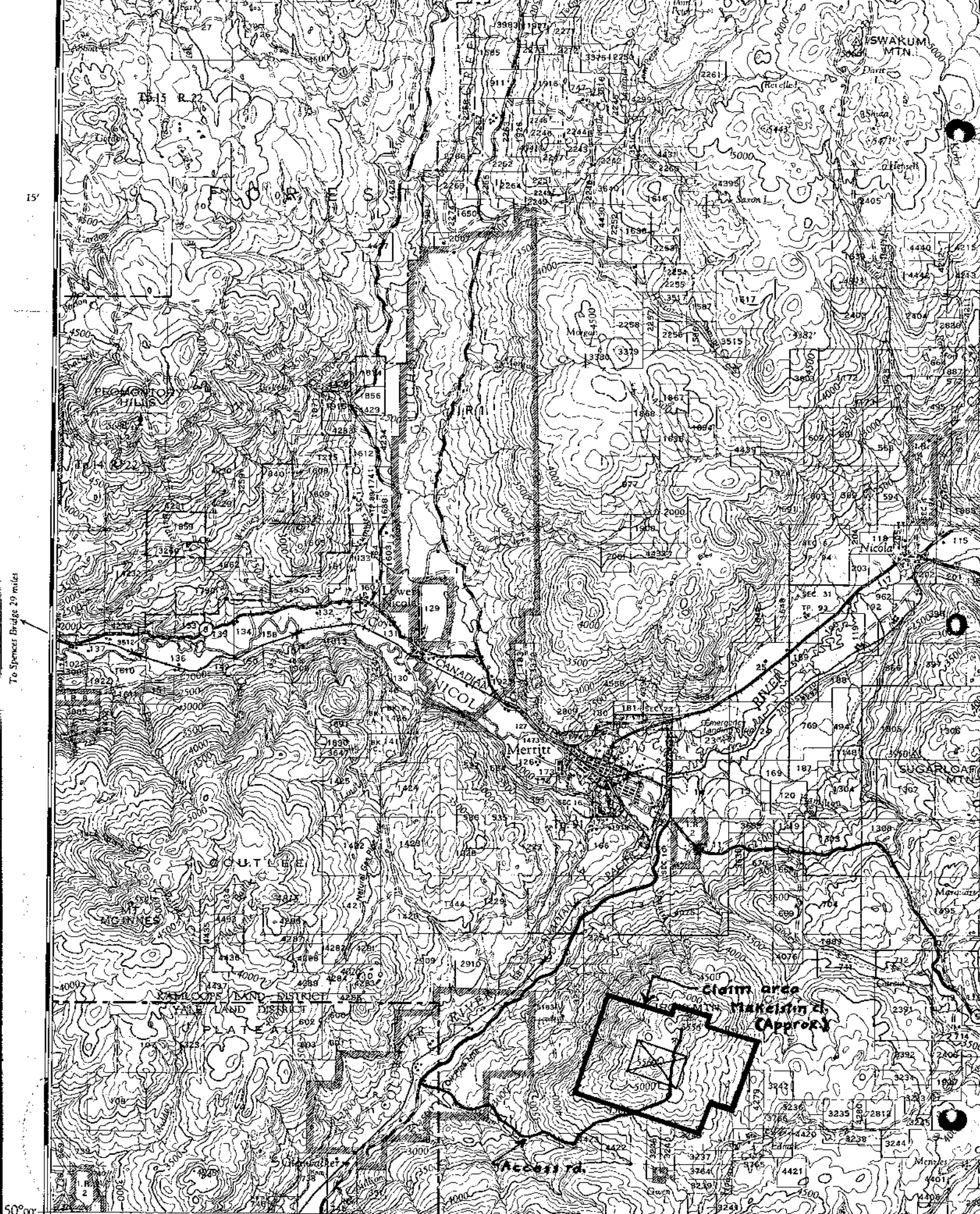
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To Spences Bridge 29 miles

50°00'

121°00'

Merritt, B.C. Sheet 92 1/2. Scale, 1 inch = 2 miles.

Fig. 1

REPORT TO
ACAPLOMO MINING & DEVELOPMENT CO. LTD. (N.P.L.)
ON GEOPHYSICAL SURVEYS
OF A PART OF ITS MAKELSTIN CLAIMS

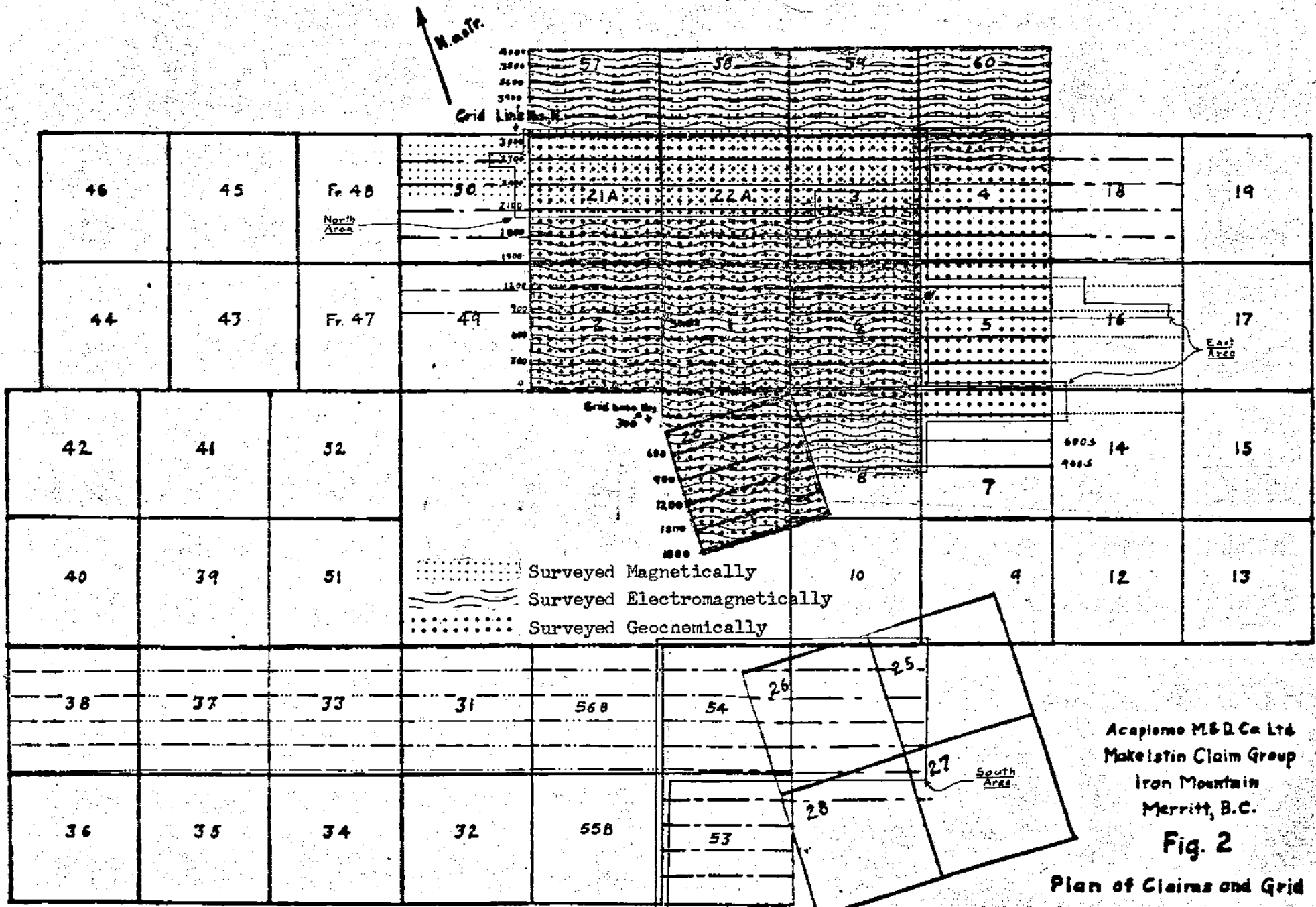
INTRODUCTION

In July, 1971, a geophysical survey by magnetic and electromagnetic techniques was conducted on several of the Makelstin group of mineral claims on Iron Mountain. This group of some 60 claims, belonging to Acaplomo Mining & Development Co. Ltd. (N.P.L.), covers the top of Iron Mountain on the southeast outskirts of Merritt, in the Nicola Mining Division of British Columbia. The elevation is about 5,500 ft. The work was conducted on claims in Aca #1 group and on claims in Aca #2 group. Affidavits covering the assessment work thus performed were filed in the office of the Mining Recorder in Merritt, on July 28th, 1971. This report is submitted in support of those affidavits.

LOCATION AND ACCESS

The Makelstin group of some 60 mineral claims extends north and south along the ridge of Iron Mountain and down both its east and west flanks, about 5 miles southeast of Merritt. The co-ordinates are $120^{\circ} 45'$ west longitude and $50^{\circ} 2'$ north latitude. Figure 1 shows the approximate outline and location of these claims, entered on a portion of the Merritt topographic sheet, 921/SE.

Access to the claims is via the Coldwater Road, a gravel highway which runs southerly from the east boundary of the town of Merritt. This



Acapitmo M.B.D. Co. Ltd
 Makelstin Claim Group
 Iron Mountain
 Merritt, B.C.

Fig. 2
 Plan of Claims and Grid Lines
 Scale 1 in. = 1500 ft.

Sherrin F. Kelly, P. Eng.
 Feb 24, 1971

road is followed for about 6 miles to Kwinshatin Creek, where a gravel road turns off to the east. This latter road swings north and goes to the top of the mountain, to provide servicing access for some micro-wave towers located on the summit. It is a graded road, suitable for passenger cars. The distance from the turnoff to the summit of the mountain is about 8 miles. This access road traverses the middle of the Acaplomo holdings and passes within a couple of hundred feet of the old shaft.

SITES OF THE WORK

The magnetic and electromagnetic surveys reported on herein, were carried out along pre-existing grid lines. It was difficult to follow some of the lines and occasionally impossible to locate pickets for the stations, as logging operations have recently been conducted over some of the claim area.

The work applicable in Aca #1 group was conducted on claims Makelstin #3, #22A, #21A and #50. The work to be applied in Aca #2 group was carried out on claims Makelstin #4, #5, #7, #16, #25, #26, #28, #53 and #54; see figure 2. The surveys were conducted with a vertical force flux-gate magnetometer and a VLF electromagnetic receiver.

In the northern area, on claims Makelstin #3, #22A, #21A and #50, electromagnetic work with the VLF instrument was carried out on portions of lines 2100N, 2400N, 2700N and 3000N to fill in a gap in that area where such work had not previously been completed. There was no gap here in the magnetic observations.

In the eastern area, magnetic work only was conducted on claims Makelstin #4, #5, #7 and #16. The auxiliary Base Line No. 2 was run

along the west boundaries of claims Makelstin #4, #5 and #7 and four reconnaissance profiles 1200N, 900N, 0 and 300S, were run easterly therefrom on claims Makelstin #5, #7 and #16. These were preliminary probes only, to test for the type of magnetic pattern in this area. As the work continues, the remainder of that area will be completely covered.

In the southern area, both magnetic and electromagnetic profiles were run easterly from the baseline which extends north and south, along the west boundaries of claims Makelstin #53 and #54. This baseline is on the prolongation to the south, of Base Line No. 1. The profiles extended easterly from this baseline, across claims Makelstin #53, #54, #25, #26 and #28, along lines 3000S, 3300S, 3600S, 3900S, 4200S and 4500S.

INSTRUMENTS USED

For the magnetic survey, a vertical force flux-gate magnetometer was employed. It was manufactured by Scintrex Ltd. of Concord, Ontario. In previous work, an MF-1 model had been used, but the one employed in this survey was an MF-2 model, serial no. 102004. Since a different instrument was now being employed, it was deemed advisable to re-run portions of the baselines in order to provide a comparison between the results with the two different instruments.

For the electromagnetic work, the same Ronka EM-16 was utilized as before, manufactured by Geonics Ltd. of Toronto, Ontario, with serial no. 78.

The Ronka EM-16 instruments are designed to tune in on one or more radio stations of the U.S. Navy, set up to communicate with ships at sea, particularly submarines. The electromagnetic waves emitted by these stations, in the 15 to 25 kiloHertz (kHz) band, propagate through the ground (as well as above the surface) and are subject to distortion by sub-surface conductivity

contrasts. Such contrasts may arise from overburden variations, wet shear zones or faults, formational contacts and especially from metallicly conductive, sulphide mineral deposits.

The distortions of the electromagnetic field resulting from such contrasts, are measured with this instrument. With it, observations are made of the tilt of the ellipse of polarization of the primary field (the in-phase component) and of the ratio of the out-of-phase (quadrature component) secondary vertical field, to the primary horizontal field.

SOUTH AREA

Procedures, Magnetic

The MF-2 flux-gate magnetometer was set to read on the 10K scale and adjusted to register 760 at Base Station 1. The readings were then plotted as profiles along the mapped grid lines to which they refer. A reading of 720 had been accepted for the datum, or zero value for this area, as described in my report of December 4, 1970. The readings were therefore plotted against that value as zero, but were entered as gamma values, not scale reading. The gamma value, however, is ten times the scale reading. See figure 3.

The instrument reading at any point, can be determined by dividing the recorded gamma value by 10 and adding it to the datum reading of 720. Thus, on figure 3, at Station 2200E on Line 3000S, the plotted value is -100. Dividing this by ten and adding the resultant -10 to the datum value of 720, indicates that the instrument read 710 at this station.

A base station had been established close to the intersection of the access road and Line 4500S, near Station 2800W, for the survey described in my report of March 31, 1971. This was designated Base Station 2, and was used for the work in the south area, described below. It was tied to the

main Base Station 1, on the west side of the access road where it crosses Line 3000N. The accepted value for this main, Base Station 1, is a reading of 760 on the 10K scale (i.e. 7,600 gammas). Base 2 was found to have a value of 719. This is discrepant with the value of 756, found in the earlier work and will be discussed further below.

Readings were taken at 100 ft. intervals along Base Line 1, which follows the west boundaries of claims Makelstin #53 and #54, from Lines 3000S to 6000S. The readings were tied to Base 2 by making observations on that base at the start and at the termination of the recordings along the base line. Correcting the reading at each station for diurnal variation, then fixed an accurate value for each of the base line stations. Any of them could therefore be used as a check-point, for determining diurnal variations during the grid line readings.

Readings were taken at 100 ft. intervals along lines 3000S to 4500S, extending 3000 ft. easterly from Base Line 1. On a couple of lines, the intervals are a little longer. These were where missing pickets necessitated pacing the intervals and then correcting the station spacings on arriving at a checkpoint. This also explains the southwesterly deviation of the eastern segment of Line 4500S. See figures 3 and 4.

Procedures, Electromagnetic

The VLF readings were taken along the same grid lines, but not along the base line. The values plotted for the in-phase component, are the percent slope, or tangent of the angle of inclination of the instrument, when recording a minimum audio signal. The tilt is positive if away from the operator's body, negative if toward it. As the tilt points towards the disturbing

conductive formation (positive if in front of the operator , negative if behind him) it is necessary to know the direction the operator was facing, when making the observation. The operator faced west in all of the work on Iron Mountain. The tilt indicates the angle of inclination of the ellipse of polarization of the primary field.

The out-of-phase, or quadrature component, is measured perpendicularly to the primary field. The recorded value is the percent ratio of the vertical, out-of-phase secondary field to the primary field. It is an indicator of relative conductivity.

In general, when the in-phase observations change sharply from positive to negative, going westerly, and the quadrature does the reverse, producing sharp "cross-overs", a strongly conductive body is being traversed.

Results, Magnetic

The readings along Base Line 1 do not check completely with those recorded in my report of March 31, 1971. The present survey shows lower values than those previously recorded, possibly 400 gammas lower. This is about the discrepancy previously noted, between the reading of 756 set for Base 2 in the earlier survey and the one of 719 found this time. In the 1971 survey, the instrument reading at Base 1 was about 800, being 40 higher than its accepted value of 760. The reading at Base 2 was about the same, close to 800. This very high diurnal correction probably indicates that there was a magnetic disturbance at that time. The result was to make the value too high at Base 2 and all the profiles referred to it, too high in value as well.

The tie-in of Base 2 and Base 1 in this survey, on the other hand, showed no symptoms of magnetic disturbance, with even a minimal diur-

nal correction. At Base 2, the corrected reading of 719 was 41 divisions (410 gammas) lower than Base 1.

The magnetic profiles, on Lines 3000S to 4500S, show no strongly marked peaks or valleys and the magnetic relief is low. See figure 3. The total range between the maximum of 350 gammas and the minimum of -320, is only 670 gammas. Most of the range lies between +200 and -200 gammas, for a general relief of 400 gammas.

A noticeable feature of the profiles, and of the base line, is the decline in readings towards the south and east. The values in the negative range become more numerous and deeper, as the readings progress southwards, and the profiles also tend to decline towards the east.

Results, Electromagnetic

The VLF profiles along the same grid lines as above, also show no particularly striking features. See figure 5, on which the claim numbers and boundaries are also shown. There are no strong cross overs, although there are a few weak ones of dubious significance. In general, the profiles are flatter in the eastern segments of the lines than in the western portions. The in-phase component shows more variations than does the quadrature, which stays fairly close to the zero line, in the main. A moderately distinctive set of peak reactions does occur on all lines, however, starting between 700E and 1200E on Line 3000S and continuing south to between 1200E and 1700E on Line 4500S. A broad, distinctive dip in the in-phase component also is noticeable, from 1800E on Line 3600S to Station 2060E on Line 4500S.

Interpretation

The magnetic contours are shown on figure 4. The claim numbers

and boundaries are also entered on this map, so the survey results may be related to the claim locations. The contours evince a general elongation in a northwesterly direction, referred to grid north but which is actually slightly west of true north. This trend is closely paralleled by the trend of the peaks in the VLF in-phase component, mentioned above, extending from the vicinity of Stations 700E to 1200E on Line 3000S, southeasterly to the region of Stations 1200E to 1700E on Line 4500S. These peaks, as a matter of fact, correspond to a series of negative value magnetic contours with the same general trend.

Cross-overs appear on the west sides of the above-noted peaks in the in-phase component. As there is no sharp recovery from the reversed relationship, however, the indication probably is of a broad formation of slightly better conductivity, rather than of a relatively narrow vein formation. The cross-overs may then correspond to the contact of the formation causing the magnetic low on the east, with an adjacent one on the west, responsible for a slightly stronger magnetic reaction. This zone within which the cross-overs occur, should nevertheless be checked carefully when the soil survey is made.

Another band of magnetic depression contours, extending from Station 1700E on Line 3600S, southeasterly to Station 2060E on Line 4500S, lies along the zone of distinctive, broad dips in the in-phase component, noted above. The out-of-phase component exhibits little disturbance, however, and these reactions may possibly be an effect of conductive overburden.

The predominance of negative, depression contours in the south and east portions of this area, plus the discrepancy between the two sets of base line readings, raise queries as to how the magnetic picture should be

presented. The question can be answered by expanding the survey area and by further checking of the base correlations and base line readings.

The first point requiring clarification refers to the correlation of the readings to the east of the base line with the higher readings to the west of it. This can be done by checking the bases, the base line and some of the grid line readings. This will show whether the reconciliation can be made by raising or lowering whole profiles, or if some lines will require re-running. The results will then give the true distribution of the declining values to the south and east and their relationship to the whole magnetic situation. It may be found desirable to choose a new datum, or zero, possibly an instrument reading circa 700. Most of the negative depression contours would thus be eliminated, and the intervening highs would be contoured instead, thereby representing the general magnetic picture more realistically.

The second point to be resolved, concerns the possible significance of the declining magnetic values to the south and east. Does this represent a regional gradient, or are the higher values to the north indicative of a large, anomalous area? To decide between these hypotheses will require extending the survey to the north and west to determine the gradients in those directions. This will show whether or not the central area, around the shaft, presents a magnetically anomalous zone of high values.

EAST AREA

Procedures, Magnetic

Base Line 2 was read magnetically at 300 ft. intervals, for the purpose of establishing stations on which checks could be made for diurnal variation. This base line runs south, along Stations 3000E, from Line 3000E to Line 900S. See figure 7. This map also shows claim numbers and boundaries.

A reading was taken on the main Base 1 station, observations were made along the base line and then a return check was made on Base 1. There was very little diurnal variation during that time.

Two profiles, 1200N and 900N, were run easterly from the base line to 4700E and 5900E respectively. They extend eastwards from the central portion of the east boundary of the area originally surveyed magnetically, where there was a zone of low magnetic relief, described in my report of December 28, 1968.

Two profiles, 0 and 300S were run easterly to 4700E. They extend eastwards from a southern area of high magnetic relief, as shown on the map in the above-noted report.

Results, Magnetic

There are some discrepancies in the readings at the intersections of this Base Line 2 with two or three of the profiles run during the 1968 survey. When the survey of this area is completed east of Base Line 2, check readings will need to be taken to resolve these differences.

This Base Line 2 shows the same trend to lower readings towards its south end, as was exhibited by the southern segment (3000S to 6000S) of Base Line 1. The south end of Base Line 2 (0 to 900S) is, however 2000 ft. north and 3000 ft. east of the north end (at 3000S) of the southern segment of Base Line 1. The low values comparable with those found from 0 to 900S on Base Line 2, occur on Base Line 1 from 4000S to 6000S. Thus, going west, the low values occur further south.

Profile 1200N lies in the negative range except for one, positive peak of 280 gammas near its western end, at Station 3700E. It shows a

tendency to lower, negative values towards the east. Profile 900N is in the negative range throughout its length. On both profiles, magnetic relief is but slight: 460 gammas on Profile 1200N and 320 gammas on Profile 900N.

Profile 0 has a couple of positive peaks of slightly over 200 gammas, at its west end, near Base Line 2. It declines to negative values towards the east. Profile 300S is negative, going to even lower values at its eastern end. It shows one positive peak of just over 100 gammas at Station 3700E. The total relief on Profile 0 is 430 gammas and on Profile 300S it is 400 gammas.

As these four profiles were reconnaissance probes only and are separated into two groups of only two each, the data recorded do not yet justify drawing a contour map.

Interpretation

The generally low values recorded on the two profiles, 1200N and 900N, continue eastwards from an area of low relief, shown first on the map, figure 3 accompanying my report of December 28, 1968 and discussed in further detail in my report of December 4, 1970. They indicate that in this vicinity, the zone of low relief continues east of Base Line 2.

The west end of Profile 0 shows moderate magnetic relief, but the values then decline to the east. At its west end, this line adjoins an area of moderately strong relief, shown on the map, figure 3 in my report of December 28, 1968. The reactions on Profile 0 indicate that the strong relief dies out quickly east of Base Line 2. The results on Profile 300S indicate that the zone of low relief is here encroaching still farther west.

The predominantly low values on all these profiles, together with the low values at the south end of Base Line 2, imply that the area of

lower (negative) values found in the south area, (previously described) may swing around to the east and north. They thus would tend to isolate and bound the zone of strong magnetic relief, central to the earlier surveys, re-enforcing the suspicion that the area of high values and strong relief may be magnetically anomalous. Further extension of the magnetic survey is needed to complete the picture.

NORTH AREA

Procedures, Electromagnetic

The Ronka M-16 VLF receiver, was employed on Lines 2100N to 3000N, to read profiles east and west of Base Line 1. Observations extended westerly to Stations 1500W to 1700W, except that Profile 2700N went to 2000W. To the east, Profile 2100N extended to 1800E and 3000N extended to 4000E; the others went to 3100E. The work was conducted mainly on claims Kakelstin #21A, #22A and #3, with minor extensions onto #50 to the west and #4 to the east.

This work was designed to fill a gap which had existed between two VLF survey areas, to the north and to the south.

Results, Electromagnetic

In accordance with prior experience in this area, the power line serving some TV and radio receivers and transmitters nearby, created profound disturbances in the readings taken in its immediate vicinity. This power line is suspended in the trees and runs along or close to the base line. Its presence is responsible for omitting readings near the base line on some profiles.

See figure 6; claims names and boundaries are also shown on this map.

A noticeable feature of the results on these profiles, is the predominantly positive trend of the in-phase component east of the base line and its negative character west of the base line. The quadrature varies above and below the zero line in both areas.

There are few distinctive cross-overs. There is one, however, at Station 3300E on Profile 3000N. Another occurs at Station 800E on Profile 2100N. A weak one appears at Station 2200E on Profile 2700N, and a questionable, near approach, at Station 2800E on Profile 2400N.

West of the base line, the cross-overs are dubious, but there are a few weak cross-overs or near cross-overs, as at: Stations 800W and 1200W on Profile 3000N; Station 700W, Profile 2700N; and maybe 800W on Profile 2100N.

Interpretations

In general appearance, these profiles conform to the pattern of low electromagnetic relief (in terms of cross-overs) which characterizes the results in the area to the south. These were depicted on the map, figure 8, accompanying my report of December 28, 1968.

Profile 3000N marks the boundary between the area to the south, just mentioned, and that to the north in which a number of pronounced cross-overs do occur. These are shown on the Figure 7 in my report of January 4, 1971. This boundary is also the boundary between an area of high magnetic relief to the north and one of low magnetic relief to the south. The boundary is also marked by some high soil silver anomalies, mentioned in my report of December 28, 1968.

In evaluating the cross-overs in this area, the odd contrast between the reactions east and west of the power line, must be kept in mind. This contrast raises a question as to whether or not that power line is exer-

ting a wide-spread effect, more moderate but more extensive than that observed within a couple of hundred feet. A more careful look at dubious cross-overs may therefore be indicated.

The cross-over at 3300E on Profile 3000N corresponds with a strong geochemical silver anomaly. The cross-over at Station 2200E on Line 2700N, corresponds with a weak geochemical copper anomaly. The one at 800E on 2100N, lies within the edge of a strong copper anomaly. West of the base line, the dubious, near cross-overs are generally close to copper, silver and zinc soil anomalies.

GENERAL CONCLUSIONS

The survey herein reported has filled in a gap existing from prior work and indicated an interesting question for further investigation to answer.

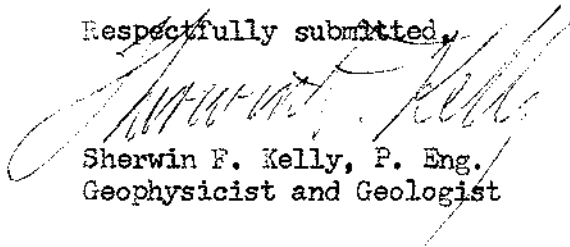
The pre-existing gap in the VLF surveys, between Lines 2100N and 3000N has been covered. The results indicate that the area covered belongs in the zone to the south, of flat electromagnetic relief (in terms of cross-overs). The boundary between that zone and the one of strong reactions north of Line 3200N therefore lies between Lines 3000N and 3200N. This is also the boundary between an area of high magnetic relief to the north and one of low magnetic relief to the south, probably indicative of east-west faulting, and is furthermore a zone of strong silver anomalies.

The magnetic work to the east and south, showed declining magnetic values in those directions. This may require a revision of the previously chosen datum, or zero. It may be advisable to place the datum at a lower instrument reading in order to avoid a multiplicity of depression contours.

There is also some indication that the first areas of measurement, centered around the old shaft, may be surrounded by much lower values. If so, that area could conceivably be found to be magnetically anomalous. From the point of view of possible mineral deposition, that might be quite interesting as it could indicate a subjacent intrusive with possible accompanying hydrothermal alteration and replacement.

Continued exploration, both magnetically and electromagnetically is definitely indicated, which should be supplemented by a continuing program of soil surveys.

Respectfully submitted,



Sherwin F. Kelly, P. Eng.
Geophysicist and Geologist

Herritt, B. C.
August 20, 1971

Declaration of Expenditures

The geophysical surveys herein reported, were conducted, under my supervision, as follows:-

The field work, carried out from July 23 to 28, 1971, was performed on a contract basis, by Robert Veale, assisted by E. Wilkie.

On Group Aca No. 1

3.47 miles of VLF observations, @ \$50 per mile.....	\$173.50
Rental of truck, one day.....	20.00
Rental of VLF instrument, one day.....	10.00
Towards preparation of this report.....	50.00
	<u>\$253.50</u>

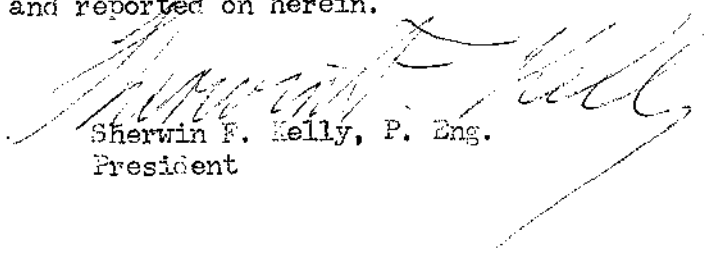
On the affidavit of July 28, 1971, the mileage was listed as 3.33. The revised figure above, 3.47 miles, is correct. Only \$200 was claimed at that time.

On Group Aca No. 2

3.44 miles of VLF observations @ \$50 per mile.....	\$172.00
6.26 miles of magnetic observations @ \$50 per mile.....	313.00
Rental of VLF instrument, one day.....	10.00
Rental of truck, two days.....	20.00
Towards preparation of this report.....	250.00
	<u>\$765.00</u>

On the affidavit of July 28, 1971, the VLF mileage was listed as 3.7 miles; the revised figure of 3.44 above, is correct. The magnetic survey mileage was given as 5.97; the revised figure above, 6.26 miles, is correct. Only \$700 was claimed on that affidavit.

I hereby certify that the above expenditures were duly and properly incurred for the work performed and reported on herein.

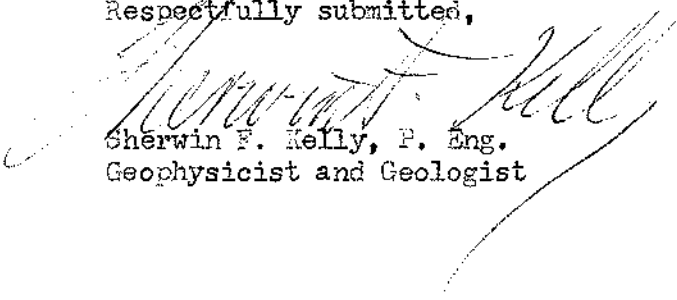

Sherwin F. Kelly, P. Eng.
President

CERTIFICATE OF QUALIFICATIONS

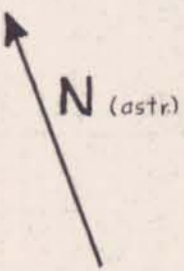
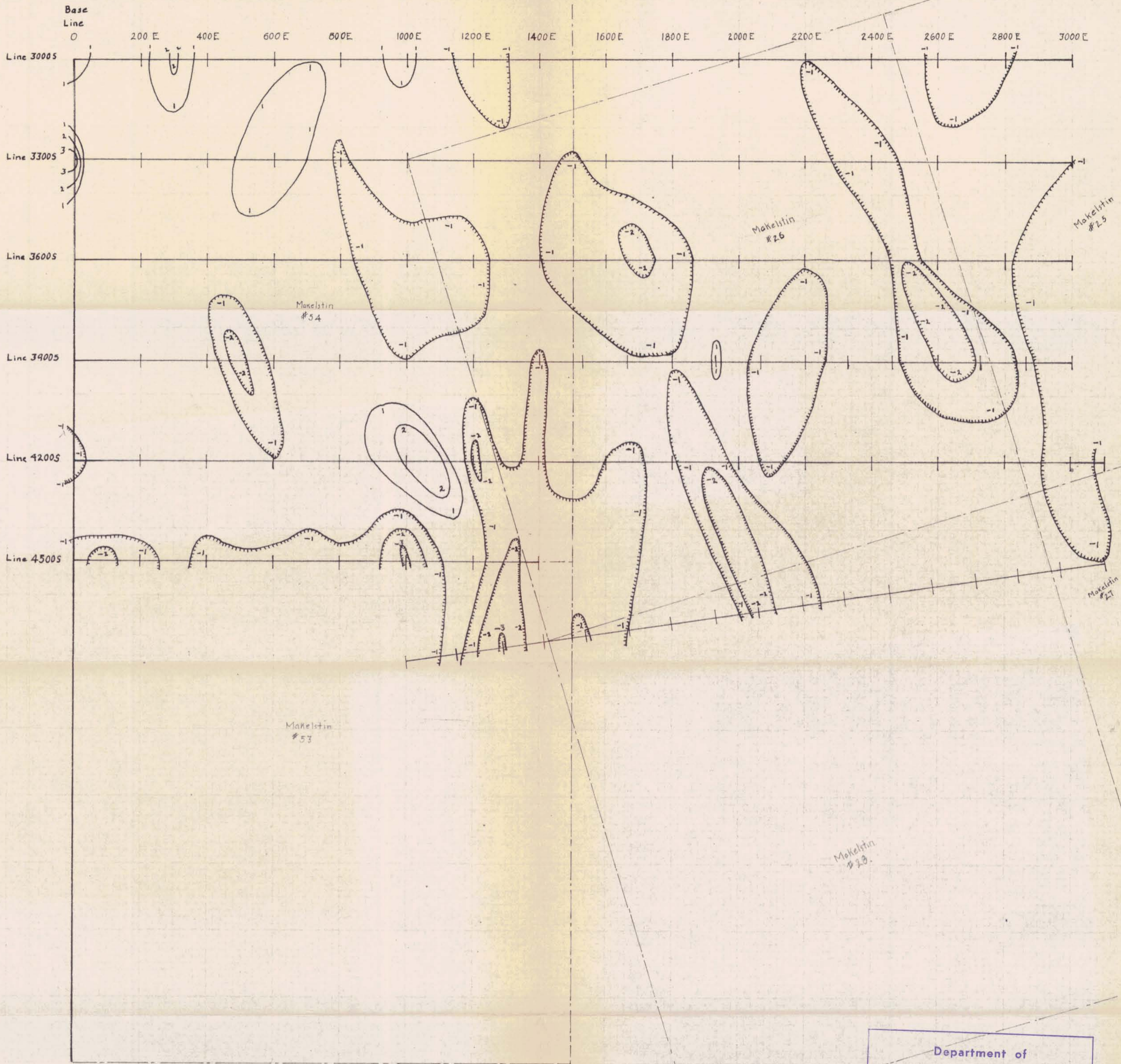
I, Sherwin F. Kelly, P. Eng., residing at the Adelphi Hotel in Merritt, B. C., certify that:-

- (1) I am a registered Professional Engineer in the Province of British Columbia.
- (2) I received the degree of B. Sc. in Mining Engineering from the University of Kansas in 1917.
- (3) I pursued graduate work in geology and mineralogy at the Sorbonne, Ecole des Mines and Museum d'Histoire Naturelle in Paris and at the University of Kansas and the University of Toronto. I also taught those two subjects at the two latter universities. I received my training in geophysics from Prof. Conrad Schlumberger of the Ecole des Mines, in Paris.
- (4) I have practised as a geologist and geophysicist in Europe, North Africa, United States, Canada, Mexico, Central America, South America and the Caribbean, since 1920. Since 1936, my work has been principally as a consultant.
- (5) This report of a geophysical survey conducted on a portion of the Makelstin group of mineral claims, held by Acaplomo Mining & Development Co. Ltd. (N.P.L.), is based on field work carried out under my direction.

Respectfully submitted,


Sherwin F. Kelly, P. Eng.
Geophysicist and Geologist

Adelphi Hotel
Merritt, B. C.
August 20, 1971



Acaplomo M. & D. Co. Ltd.
 Makelstin Claim Group
 Merritt, B. C.

Scale
 1 in. = 200 ft.
 0 100 200 ft.

Contour interval: 100 r.
 Contours numbered in
 hundred of gammas.
 Lines numbered in feet
 south of Line 0.
 Stations numbered in
 feet east of Base Line.
 --- Claim boundaries.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3192 MAP #4

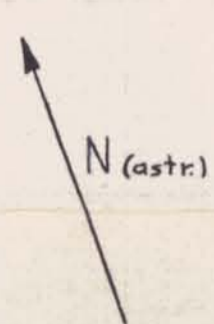
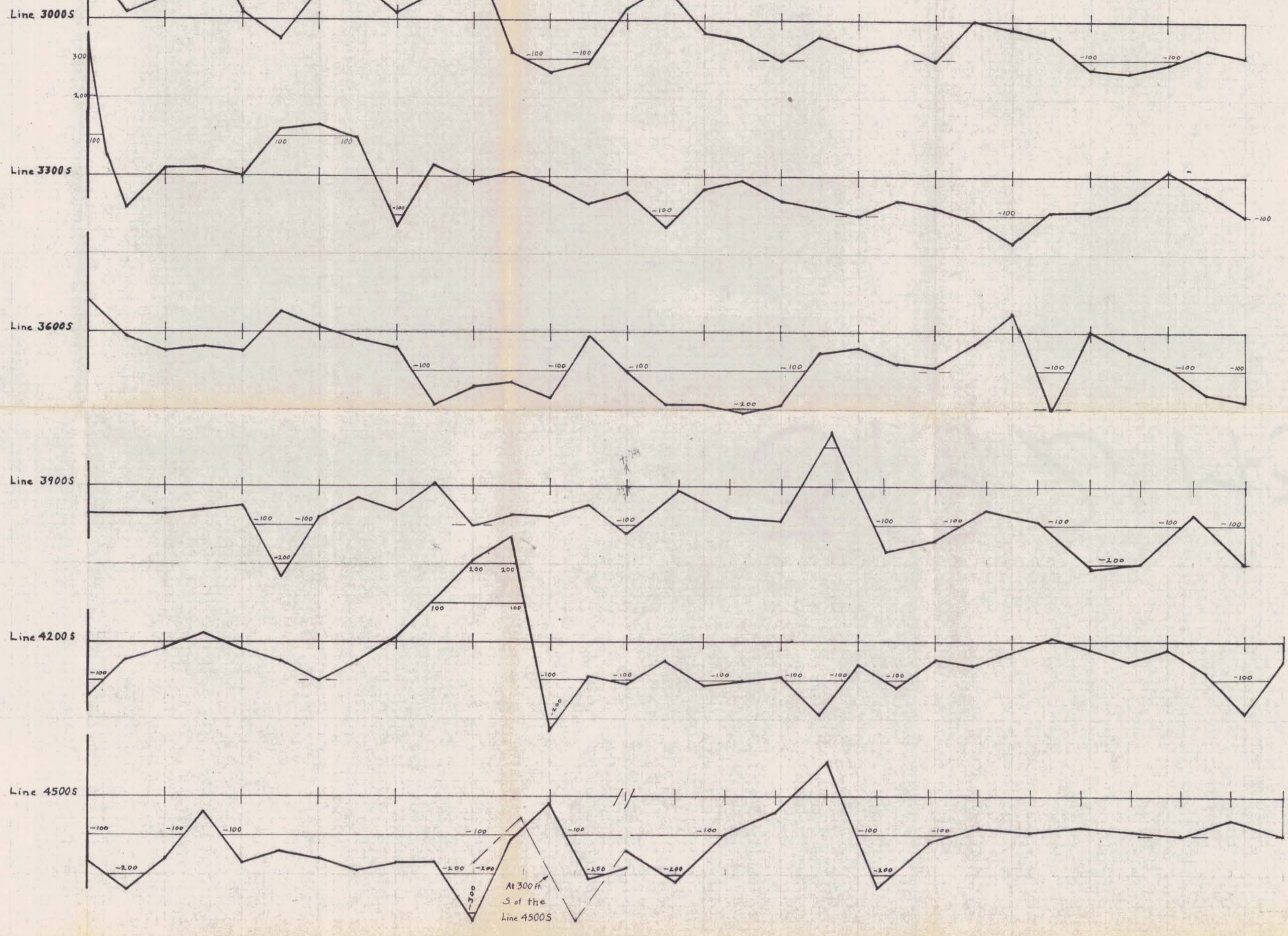
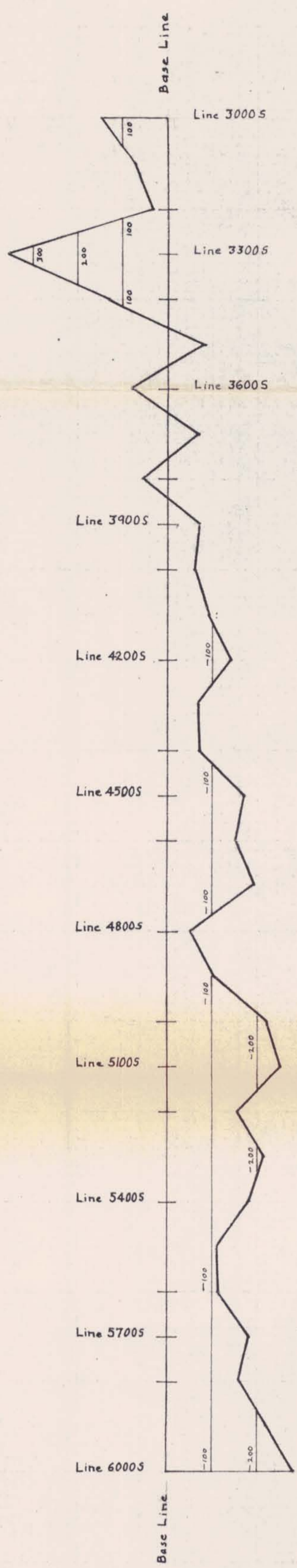
Fig. 4
 Magnetic Contours
 South Area

To accompany geophysical report by Sherwin F. Kelly, P. Eng., geophysicist
 and geologist, on the Makelstin group, Iron Mtn, Nicola Mining Division,
 dated Aug. 20, 1971.

Sherwin F. Kelly P. Eng.



Base Line
0 200 E 400 E 600 E 800 E 1000 E 1200 E 1400 E 1600 E 1800 E 2000 E 2200 E 2400 E 2600 E 2800 E 3000 E



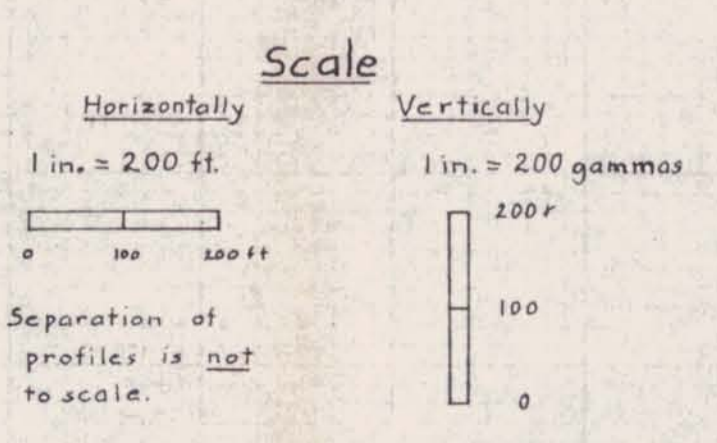
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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5192 MAP 13

Acaplomo M. & D. Co. Ltd.
Makelstin Claim Group
Merritt, B.C.

To accompany geophysical report by
Sherwin F. Kelly, P. Eng., geophysicist
and geologist, on the Makelstin group,
IronMtn, Nicola Mining Division,
dated Aug. 20, 1971.

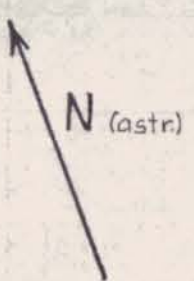
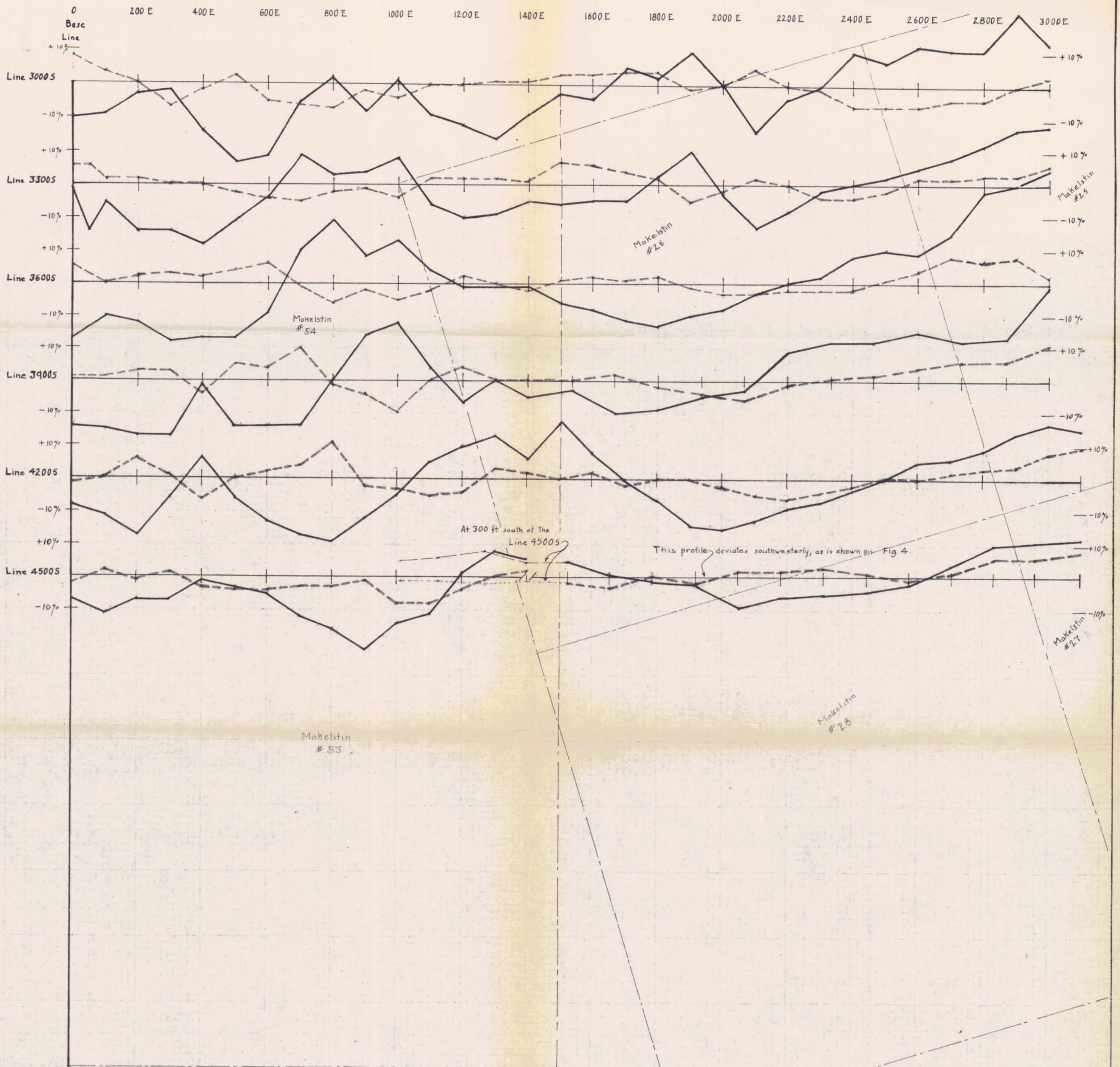
Sherwin F. Kelly P. Eng.



Grid lines numbered in feet south of Line 0
Stations numbered in feet east of Base Line.

Fig. 3
Magnetic Profiles

South Area
Observations made with Scintrex
MF2 Flux Gate vertical force
magnetometer.

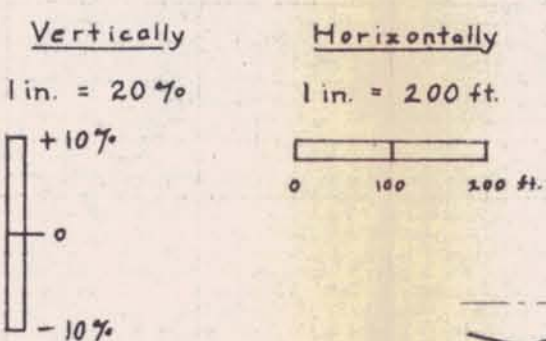


Acaplomo M. & D. Co Ltd.
Makelstin Claim Group
Merritt, B.C.

To accompany geophysical report by Sherwin F. Kelly,
P.Eng, geophysicist and geologist, on the Makelstin
group, Iron Mountain, Nicola Mining Division,
dated Aug. 20, 1971.

Sherwin F. Kelly, P.Eng.

Scale



Grid lines numbered in feet south of Line 0.
Stations numbered in feet east of Base Line.

Claim boundaries.
In phase.
Out-of-phase.

Fig. 5
VLF-EM Profiles

South Area

Observations made with
Geonics M-16 instrument.
Readings taken facing W.

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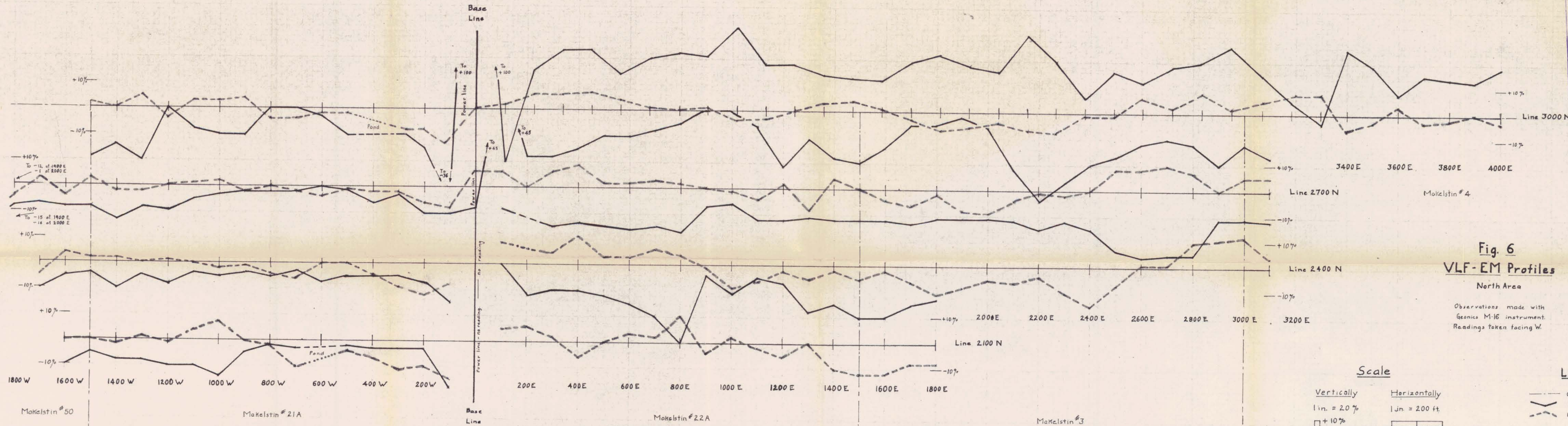
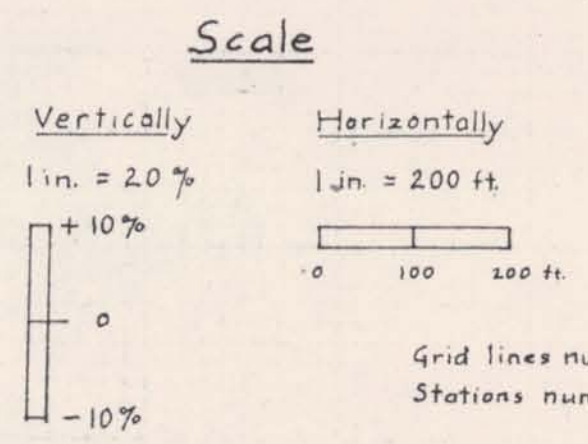


Fig. 6
VLF-EM Profiles
North Area

Observations made with
Geonics M-16 instrument.
Readings taken facing W.

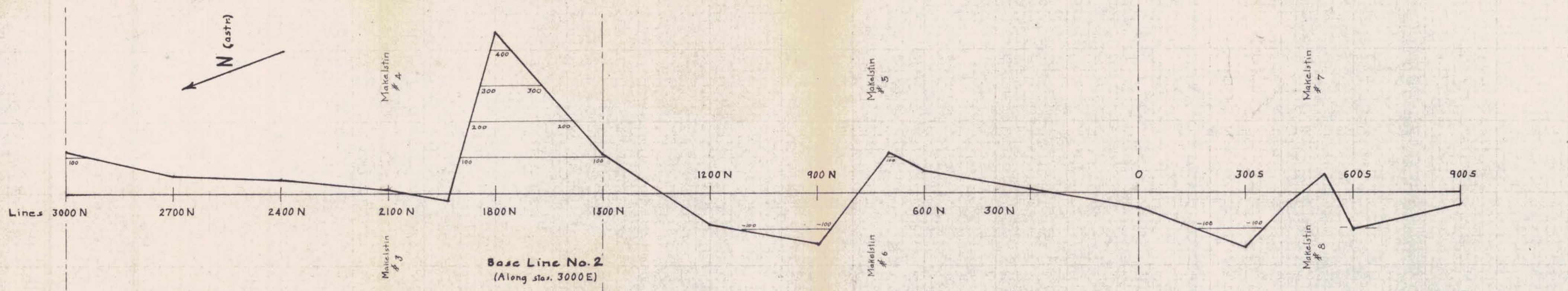


Legend

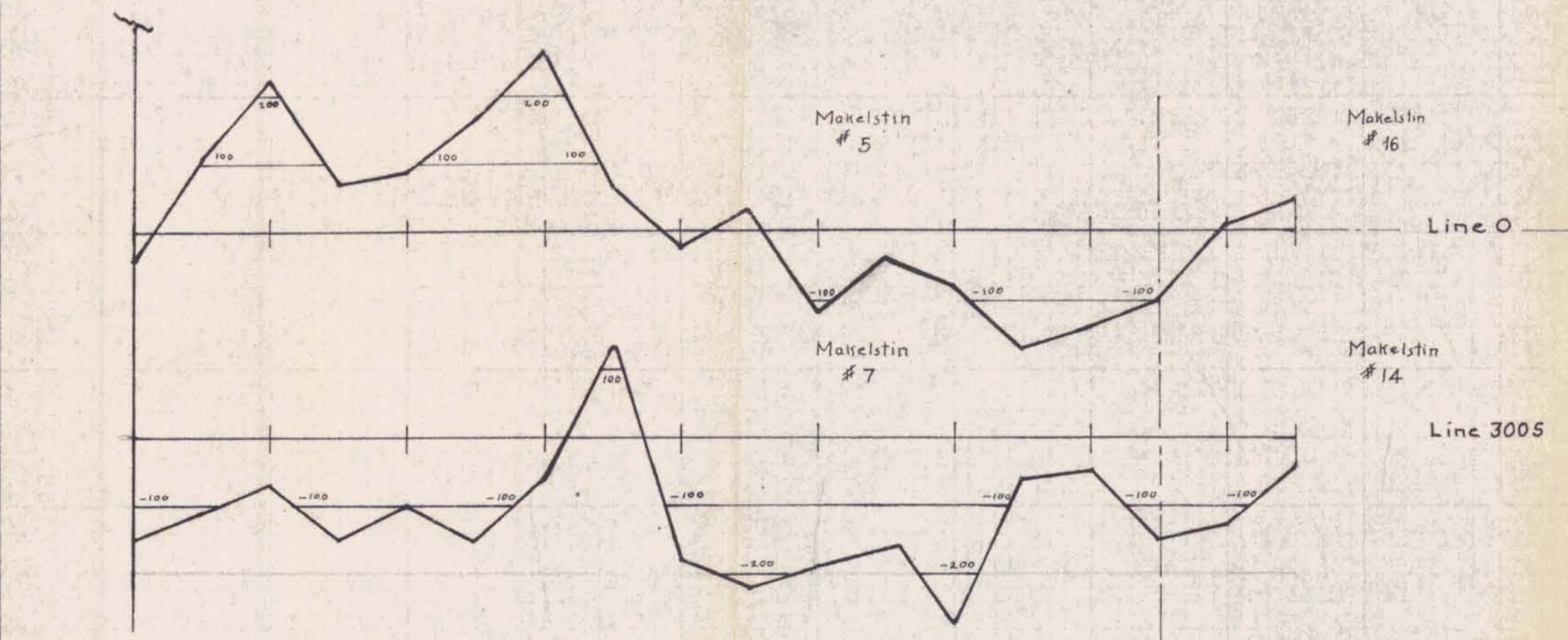
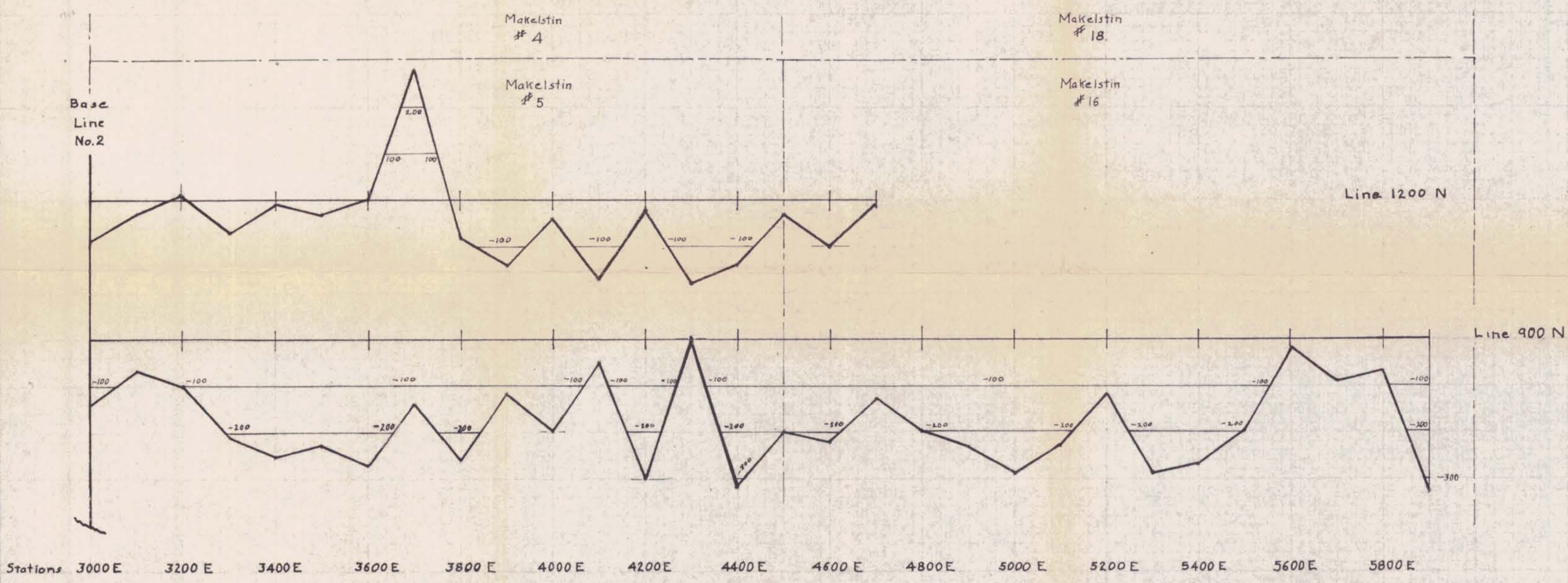
--- Claim boundaries.
— In phase.
- - - Out of phase.

To accompany geophysical report by Sherwin F. Kelly, P. Eng., geophysicist
and geologist, on the Makelstin group, Iron Mtn., Nicola Mining Division,
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Grid Lines

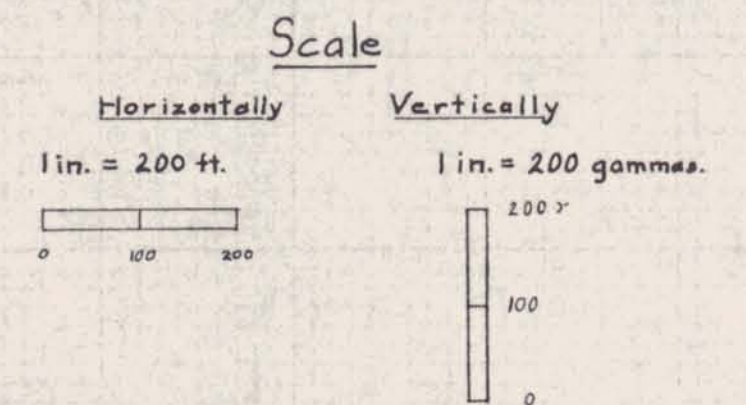


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Fig. 7
Magnetic Profiles
East Area

Observations made with Scintrex
MF-2 Flux Gate vertical
force magnetometer.

Grid lines numbered in feet
north and south of Line 0.
Stations numbered in feet
east of Base Line 1.
Base Line 2 is 3000 ft.
east of and parallel
to Base Line 1.
--- Claim boundaries.



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geophysicist and geologist, on the Makelstin group
Iron Mountain, Nicola Mining Division,
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Sherwin F. Kelly, P. Eng.

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