



52K13SE0053 63.3001 DIXIE LAKE

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C A R A V E L L E M I N E S L I M I T E D

REPORT

ON

EXPLORATION WORK IN "DOROTHY PROSPECT"
RED LAKE MINING DIVISION

CARRIED OUT UNDER

THE EXPLORATION ASSISTANCE AGREEMENT

WITH

THE MINISTRY OF NATURAL RESOURCES

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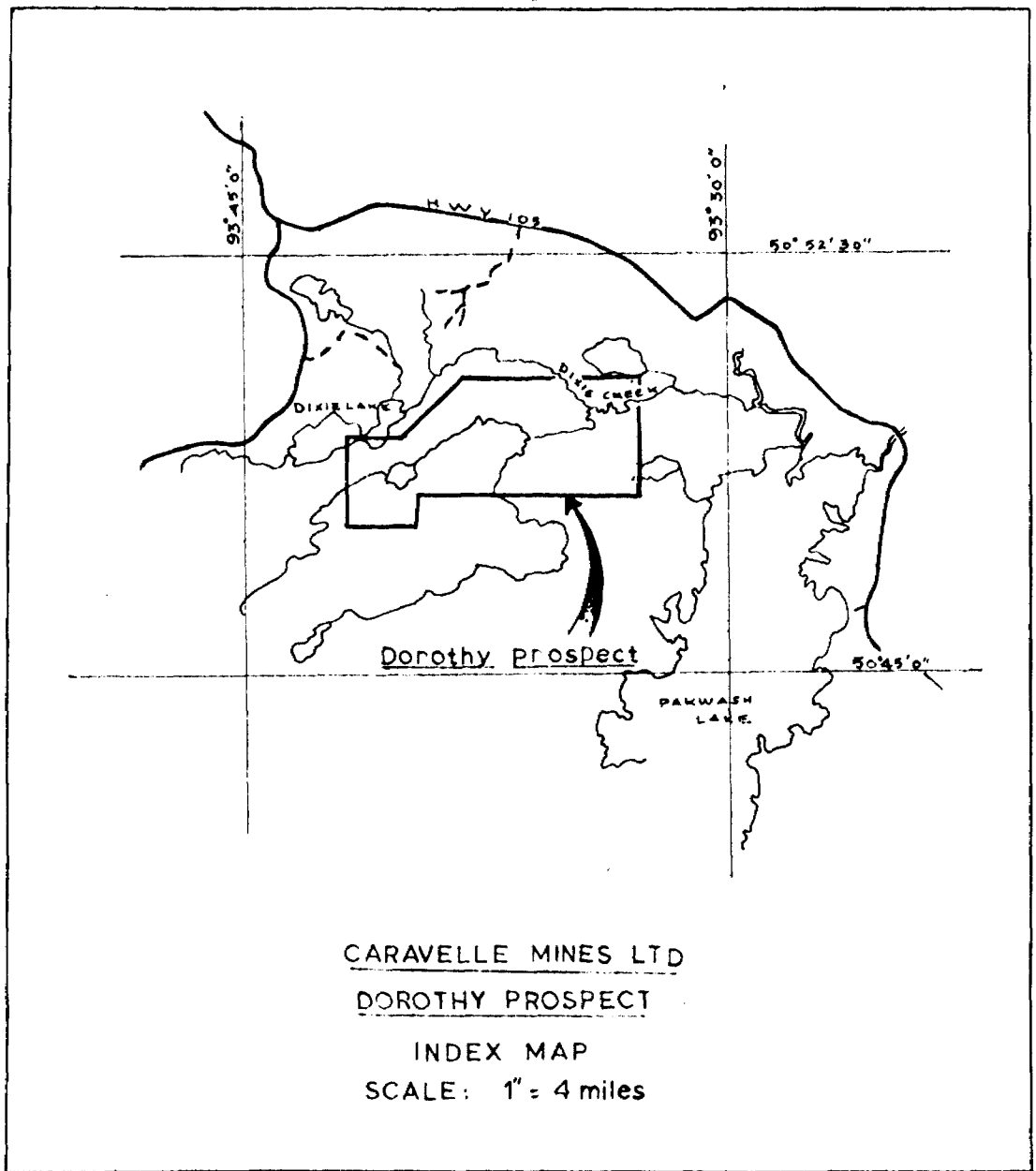
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ACKNOWLEDGMENT

The author is indebted to Dr. W. Domzalski, Consulting Geophysicist, for his guidance in carrying out all the geophysical surveys, for later reviewing the results obtained, and for his valuable help and suggestions in preparing this final report.

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CARAVELLE MINES LIMITED

EXPLORATION WORK IN "DOROTHY PROSPECT"
RED LAKE MINING DIVISION

CARRIED OUT UNDER THE EXPLORATION ASSISTANCE AGREEMENT
WITH THE MINISTRY OF NATURAL RESOURCES

SECTION A - INTRODUCTION

1. General

1.1 This report describes the exploration work carried out from April 27th to November 3rd, 1972 in "Dorothy Prospect" over the area covered by claims listed in the Exploration Assistance Agreement, Contract No. RL-10, dated May 15th, 1972, with The Ministry of Natural Resources.

1.2 The work qualifying for assistance under the above agreement is described in detail and is documented by maps and borehole logs.

In order to present this work in an appropriate overall context, a brief resume of the past exploration effort undertaken by Caravelle Mines Limited over this block of claims is given in the following section.

2. Position, Area, Access.

2.1 Dorothy Prospect, property of Caravelle Mines Limited, is situated between Dixie Lake and Pakwash Lake, mostly south of Dixie Creek, about 15 miles in a south-easterly direction from Red Lake. This property is in the District of Kenora (Patricia Portion), Red Lake Mining Division (Ontario).

2.2 Highway 105 passes 5 miles to the north-east of the property at its closest point. However, due to terrain and in order to utilize some "winter" roads, the access is not in a straight line. Some special access roads had to be cut, particularly in order to bring in the drilling equipment (BBS 1).

SECTION B - WORK ON THE PROPERTY CARRIED OUT PRIOR TO THE EXPLORATION ASSISTANCE AGREEMENT

1. Regional Area Selection

1.1 The selection of the area has been done on the basis of:

- (i) Interpretation of aeromagnetic maps published by the Geological Survey of Canada (1" = 4 miles Aeromagnetic Compilation Sheet No. 5; 1" = 1 mile Maps 850G, 851G, 852G, 860G, 861G and 862G.
- (ii) Study of existing available regional documentation, including:
 - Preliminary Geological Maps O.D.M., P.355, P.366 and P.379
 - Assessment files and other reports in Resident Geologist Office, Red Lake

1.2 Area has been finally selected after a brief ground reconnaissance. Amount of outcrops was limited due to heavy overburden cover. This was a "virgin" area as regards geological knowledge of it.

2. Combined Airborne Survey

2.1 The combined magnetic and electromagnetic survey was flown over the property in April, 1969 by Questor Surveys Limited using a Super-Canso aircraft equipped

with Proton Precession magnetometer and Input Mk. V electromagnetic system. Flying was done at 400 feet nominal altitude and 1/8 mile line spacing.

- 2.2 Results of the airborne survey were presented in the form of magnetic contour map, classified E/M anomalies superimposed on photomosaic, and written report, all submitted by Questor Surveys Limited.

3. Interpretation of Airborne Survey Results

- 3.1 Results of the independent interpretation of this airborne survey were presented in a report dated December, 1969 and submitted by Dr. W. Domzalski, Consulting Geophysicist.
- 3.2 The interpretation, based on magnetic and E/M results, also included results of photogeological interpretation and other data (para. 1.1) and was presented in terms of: structure, lithology and groups of E/M anomalies selected for ground investigation.

4. Joint Venture with Newmont Mining Corporation

- 4.1 At that time an agreement was concluded with Newmont Mining Corporation of Canada for joint participation in further work and possible subsequent development of the property.
- 4.2 As a result of Newmont Agreement, that company carried out geophysical ground work (magnetic and E/M) between December 1969 and March 1970. This work covered most, but not all, of the airborne survey selected zones of interest.
- 4.3 Subsequently, Newmont drilled a total of close to 3,500 feet, distributed among nine diamond drill holes (January-April, 1970). All drill holes intersected sulphide mineralization, although no assays of economic interest were obtained and Newmont decided to terminate the agreement.

5. Mid-Stage Evaluation of Results

- 5.1 All data obtained so far were restudied, particularly in view of the ground geophysics and drilling results. It was concluded (Notes on Ground Geophysical Survey and Drilling Results and Recommendations for Further Work: Dr. W. Domzalski, September 1970) that the property has not been evaluated to such an extent that a decision to abandon it could be justified. Existence of sulphide mineralization, good character of other conductors, which were not checked by Newmont, and paucity of geological data which could encourage or discourage further exploration were factors considered.
- 5.2 Due, however, to generally poor conditions for raising exploration funds and other commitments of Caravelle Mines Limited, no immediate action was taken as regards the continuation of the exploration work on the property.

With the conclusion, however, of the signing of the Exploration Assistance Agreement, further intensive activity began towards the end of April, 1972.

SECTION C - WORK ON THE PROPERTY CARRIED OUT UNDER THE EXPLORATION ASSISTANCE AGREEMENT

PART I

1. Access and Road Cutting

- 1.1 During the current phase of the investigation, several targets were selected for

geophysical surveys and drilling. These occur in a widely scattered area in this property, from Pakwash Lake in the southeast to the Dixie Lake area in the west. There is no good access road or trail to any part of the property.

Considerable time was spent in transportation of survey and drilling equipment, since access to the different locations had to be made by freshly cut roads and trails. This resulted in spending less time for exploration activities and thereby restricting the number of anomalies examined than originally intended.

PAKWASH GRID

- 1.2 Access to this area is through Pakwash Lake and later by a 1000 foot long trail cut at the beginning of the investigation.

1.3 Dixie Grid

This location is reached by boat via Dixie Creek, and later by a 1000 foot long trail.

1.4 Grid F

Access to this grid is by boat or a canoe along Dixie Creek and by a 800 foot long trail.

1.5 Grid D

This area lies south of the Dixie Creek, midway between Dixie Lake and Rice Lake. The grid was reached from the north, using partly the existing lumber roads and by cutting new roads. Two miles of road had to be cut to reach the drill sites of B-1 and B-2. To cross the Dixie Creek with the drilling equipment, a 36 foot long and 8 foot wide wooden bridge was constructed between the two rapids in the Dixie Creek. The bridge is strong enough to withstand loads of up to 4 tons.

1.6 Grid C

The area selected for drilling lies about $\frac{1}{2}$ mile southeast of Dixie Lake. The access is by boat only through the Dixie Lake, and then by a $1\frac{1}{2}$ mile long trail.

1.7 Grid K

Access to this grid is by boat or canoe through the Dixie Creek.

2. Geological Mapping

Geological mapping in this prospect was restricted to the vicinity of the drilling areas. Outcrops are scarce in the area mapped, and, generally, much of this prospect is under heavy overburden. The geological information gathered from mapping and that obtained from drilling is presented in a compiled map on the scale of 1" = $\frac{1}{4}$ mile.

- 2.1 The major area of this prospect appears to be underlined by meta volcanic rocks, with bands of tuffs and sediments. These are intruded by meta diorites and granitic rocks.

2.2 Meta Volcanic Rocks

These are represented by rocks ranging in composition from rhyolite to basalt, but the most common rock types encountered in drill holes and in outcrops are of andesitic to basaltic in composition.

Outcrops of basic volcanics are seen mostly in the northern part of this prospect. These rocks are massive, fine grained and greenish in colour. Disseminated pyrrhotite is seen in most of the outcrops.

Outcrops of andesite are rare, even though it is the most common volcanic rock encountered in the drill holes. The rock is pale green in colour, fine grained and is altered.

Outcrops of rhyolites are seen only on the northern shore of Oko Lake. It appears to be local and is reported in drill holes W-4, C-1 and F-1, where it occurs along with the tuffs. The rock is massive, greyish-blue in colour, with some porphyritic sections.

2.3 Tuffs and Meta Sediments

These rocks occur interlayered, and the tuffs appear to be waterlaid along with the sediments.

Dacite and andesite tuffs are the most common rock types encountered in this area. The dacite tuff is usually a light grey coloured, fine grained, banded rock. It occurs along with pale greenish, banded andesite tuffs. These rocks occur in considerable thickness close to the eastern end of the property. Drill hole W-2 in the Dixie Grid encountered mostly this rock type. Rhyolite tuffs are not very common. Their occurrence over considerable widths is reported in drill holes C-1, F-1 and W-4.

Meta sediments are represented by biotite rich, quartz, feldspar, gneisses, and biotite-amphibole-garnet gneisses. Probably these are the metamorphic derivatives of greywacke. Outcrops of this rock are seen south of Rice Lake and close to the Dixie Grid. In addition, metasediments, like fine grained argillite, graphite schist and iron formation, are encountered in several drill holes. Outcrops of banded iron formation along with graphite schists are seen in the Belgold area and in Grid D.

2.4 Intrusives

Meta diorite is the most common intrusive rock in this area. This rock forms a low hill in the Belgold area and is encountered in several drill holes. The rock is medium to coarse grained, comprising feldspars, amphiboles, biotite and minor amounts of quartz.

Outcrops of granitic rocks, mostly granodiorites, are seen only in areas north of Dixie Lake. Small dikes of granite and aplite are reported in a few drill holes.

2.5 Dikes

Outcrops of diabase dike are seen in the Belgold zone. It is seen in drill hole B-1, but it is not mentioned in other drill holes.

PART II - Discussion of Geophysical and Drilling Results

1. Grid Pakwash

1.1 Location and Airborne Anomaly

Airborne anomalies 118 S/A (four channels) and 119 N/A (six channels with magnetic correlation) are situated about 2000 feet from the western shore of Pakwash Lake.

Grid lines were cut in a WNW-ESE direction to carry out the geophysical surveys.

1.2 Geophysical Surveys

(a) Magnetometer survey using Scintrex MF.1 magnetometer was carried out along 7000 feet of traverse. Line spacing was 400 feet, with stations every 50 feet.

(b) Electromagnetic survey, using SE-200 (1250 cps.), was carried out over 7000 feet of traverse on lines 400 feet apart. Station spacing was every 50 feet.

(c) VEM electromagnetic survey (large vertical loop, 480 and 1860 cps.) was carried out in the same grid, along 7000 feet of traverse at 100 feet station spacing.

1.3 Geophysical Results

(a) The result of the magnetometer survey is shown on Fig. PK-1. Trends are in an approximate north-south direction. A magnetic anomaly of 200 to 300 gammas above the background is centered on Line 8N (between 600 and 1000 feet west of base line). The high trend terminates across Line 12N. This supports the conclusion reached from the E/M results that there may be faulting in that zone.

(b) Fig. PK-2 shows the plot of SE 200 E/M results (broadside method). The anomaly on Line 8N is the best defined in this survey, while that on 12N is somewhat distorted.

(c) Figs. PK-3 and 4 show the results obtained with the VEM survey. The fixed transmitter (vertical Loop) was positioned on different locations on several lines. The results show a conductor, possibly faulted, and in a shear zone between lines 4N and 14N. The anomaly is strong on Lines 8N and 12N.

1.4 Drilling (Bore hole W-1)

It was decided to check this anomaly with a drill hole. Drill hole W-1 is located on Line 10N at 870 feet west of base line. This hole had a direction of 276° and an inclination of 60° . This hole reached a depth of 193 feet. The results are presented as the drill hole log and generalized section. (In all instances, the core is stored at the respective drill sites.)

The hole encountered generally amphibolites (mafic meta volcanics) with a section of meta sediments towards the lower part of the hole. Streaks, disseminations and veins of pyrite were encountered throughout, with only some specs of chalcopyrite.

2. Grid Dixie

2.1 Location and Airborne Anomaly

A group of four airborne anomalies, situated on the eastern part of the prospect close to the Dixie Creek and between the two lakes, were investigated. Airborne anomalies 108 S/A (five channels), 108 S/B (four channels), 109 N/A (four channels) and 107 N/A (four channels) constitute this group.

Grid lines were cut in a north-south direction to carry out the survey.

2.2 Geophysical Surveys

(a) Magnetometer survey (MF 1 magnetometer) consisted of 5700 feet of traverse with line spacing of 400 feet and with stations at 50 foot intervals.

(b) Electromagnetic survey using SE 200 covered 3300 feet of traverse at 50 foot station spacing.

(c) Electromagnetic VEM survey covered 5700 feet of traverse with station spacing of 100 feet in the same grid.

2.3 Geophysical Results

(a) The results of the magnetometer survey (MF 1 magnetometer) are shown in Fig. DX-1. There are two anomalies in the area covered by the survey; in the southwest, about 1200 gammas, and in the northeast, about 800 gammas above the background. The anomaly on the southwest terminates on Line 0/0, and on the east the high values terminate on Line 4E. The break in the trend suggests the presence of fault in this area.

(b) Fig. DX-2 shows the plot of SE 200 E/M survey. The anomaly is not well defined in this survey. Presence of the anomaly is indicated on Lines 0/0, 4E and 4W.

(c) Fig. DX-3 and 4 show the results of VEM survey. The transmitting loop was positioned on Line 400E at 0/0 and at 100N on Line 400W. The results show a weak anomaly with a rough E-W trend over a length of 2400 feet. The anomaly is stronger on Line 400E.

2.4 Drilling (Bore hole W-2)

The anomaly was checked with the bore^{hole} W-2 (inclination 60° and bearing due south), located on Line 400E at 190'N. The hole reached a depth of 226'. The results are presented in the form of drill hole log with a generalized section.

The rock type met with in this hole was predominantly dacite and andesite tuffs. Generally fine streaks, specs and blebs of pyrrhotite were encountered throughout, without any economic sulphides.

3. Grid F

3.1 Location and Airborne Anomaly

The single, isolated, six channel airborne anomaly 94 S/A is situated close to the Dixie Creek in Grid F, originally cut by Newmont Mining Corporation.

3.2 Geophysical Surveys

(a) Presence of the anomaly on the ground follow-up is indicated in the results obtained by earlier E/M survey (McPhar VHEM horizontal loop) carried out by Newmont Mining Corporation on lines 4400E and 4800E at 500S and 700S, respectively.

(b) Electromagnetic survey using SE 200 covered 3400 feet of traverse at station spacing of 100 feet on lines spaced 400 feet apart in Grid F.

(c) Electromagnetic VEM survey covered 3100 feet of traverse with a station spacing of 100 feet in the same grid.

3.3 Geophysical Results

(a) Fig. F-1 shows the results of the E/M survey carried out with SE 200 unit. An anomaly over a length 1400 feet long is traced. The anomaly is well defined on Line 4000E.

(b) Fig. F-2 shows the results obtained in VEM survey. The transmitter was positioned on several locations in different lines. The survey results show an anomaly over 1400 feet long with a variable trend. The anomaly is well defined on line 4000E, and somewhat weaker on Lines 4400E and 4800E.

3.4 Drilling (Bore hole W-3)

It was decided to test this anomaly with a drill hole. The hole, W-3, is located 4000'E at 95'S and was drilled at an inclination of 60° towards due south, reaching a depth of 183 feet. The results are presented as the drill hole log and generalized section.

The hole encountered mostly meta diorites and meta sediments. In three sections along the hole, between 43'9" and 58'3", 150'5" and 155'3", and 157'9" and 170'7", graphite bearing argillites were encountered. These sections are mineralized with veins and streaks of pyrrhotite. No sulphides of economic importance were noted within this hole.

4. Grid D and Belgold Area

4.1 Location and Airborne Anomalies

A group of several airborne anomalies occur about $\frac{1}{2}$ mile south of Dixie Creek and midway between Dixie Lake and Rice Lake. Anomalies 81 N/E, 82 S/B, 83 N/D, 160 N/A and 161 N/A constitute one group occurring in the southern part of Grid D. All these airborne anomalies are in six channels and with magnetic correlation, except anomaly 82 S/B. About 1000 feet further to the north of this group, three airborne anomalies, 81 N/F (three channels), 82 S/A (four channels) and 83 N/F (three channels), occur close to each other. These two groups occur within the limits of the Grid D.

Earlier, Newmont Mining surveyed this grid, using VHEM (horizontal loop). The results showed an anomaly with a $N40^{\circ}E$ trend occurring intermittently between Lines 400E and 1600E. This anomaly corresponds to the southern group of airborne anomalies mentioned earlier. Newmont's survey failed to show the presence of the northern group of airborne anomalies. It was felt that the earlier survey was inadequate, since it failed to reveal all the airborne anomalies. Hence, it was decided to resurvey the area using vertical loop electromagnetic equipment.

A new grid, with E/W lines, using the old O/O line of the Grid D as the base line, was cut. The grid was extended to the north to cover the Belgold area.

4.2 Geophysical Surveys

(a) Magnetometer survey (MF-1 magnetometer) consisted of a total of 51,000 feet of traverse, both in Grid D and Belgold area. The measurements were made at 50 foot stations on lines 200 feet apart.

(b) Electromagnetic survey using SE 200 (broad side method) on the old Grid D with N/S lines, covered 22,400 feet of traverse at 100 foot stations spacing on lines 400 feet apart.

(c) Electromagnetic VEM survey covered a total of 36,000 feet of traverse in the Grid D (E/W lines) and in the Belgold area. The measurements were made at 100 foot intervals on lines 200 feet apart.

4.3 Geophysical Results

(a) Fig. D-1 shows the results of the magnetometer survey. The map shows a belt of tightly folded rocks with one major shear zone on the southeastern side of the grid.

In the Belgold area, the folded rocks show an anomaly of 3000 gammas above the background. The Belgold Mines trenches and showings are in an anomaly zone centered on Line 600N between 600 and 700 feet east of the base line.

In the southeastern part, generally to the entire length of the anomaly zone, the values are between 2000 and 6000 gammas above the background. On Line 400S at 1700'E, a peak value of 40,000 gammas was obtained. A later reconnaissance survey showed outcrops of iron formation in this area. The rocks in this anomaly zone are thrown into a series of drag folds, due to shear. The break in the continuity of the high trend between Lines O/O and 400'E suggests the presence of a fault.

(b) Fig. D-2 shows the E/M profiles obtained with SE 200 electromagnetic survey, using the old grid lines. The results are somewhat similar to the VHEM horizontal loop survey carried out earlier by Newmont. The strongest crossover is obtained on Line 400E at 2060'S.

A small crossover, suggesting the presence of another conductor, is indicated on Line 400E at 500'S, corresponding to the northern group of airborne anomalies.

(c) Figs. D-3 and D-4 show the results obtained with VEM survey covering both the Belgoid area and Grid D (E/W lines).

In Grid D, the survey showed a continuous anomaly, between Lines 2600S at 0/0 and 0/0 at 2000E with a rough $N40^{\circ}E$ trend. The anomaly is fairly strong in all the lines, except on Lines 2600S and 0/0. Another parallel anomaly, about 1000 feet northwest of this anomaly, was revealed by this survey. This anomaly is rather weak and is seen between Lines 0/0 at 800S and 800E at 0/0 (baseline) over a length of 1000 feet.

Further survey, with the transmitter located at several different stations on various lines, failed to reveal any other anomalies in this grid. It is obvious that all the five airborne anomalies in the southern group lie in the same $N40^{\circ}E$ trend as revealed by the present survey, and the other parallel anomaly occurring in the northwestern quarter of the grid corresponds to the northern group of three airborne anomalies. The E/M survey over the Belgoid Mines area failed to show any conductivity.

4.4 Drilling (Bore holes B-1, B-2 and B-2A)

Newmont Mining Corporation of Canada drilled hole K-1 to check the southern anomaly in Grid D on Line 400E at 1770'S with negative results. Since the present E/M survey revealed that the conductor is continuous and that all the five airborne anomalies in the southern group correspond to this conductor, it was decided not to check this conductor again with another drill hole.

Even though the other parallel conductor was rather weak, it was decided to check that with a drill hole.

(a) Bore hole B-2 was located at 280'S and 280'E. The hole was drilled with an inclination of 60° towards southeast. While drilling, overburden in excess of 125' was encountered. Repeated efforts to drive the casing down failed in the first attempt, which resulted in the loss of 30 feet of casing.

(b) A second attempt, bore hole B-2A, in drilling was made by steepening the dip of the hole to 65° from the same setup. This attempt was also unsuccessful and resulted in the loss of 5 feet of casing and a 2 foot core barrel.

Due to the lack of time and to very cold temperatures experienced during the nights (the drill had a 3000 foot long water line), further attempts to drill this conductor were abandoned for the time being.

(c) Bore hole B-1 was located near the old Belgoid Zone A where substantial values in gold were reported (Ref: R. Thomson, Resident geologist, Kenora, "Note on Property of Belgoid Mines and Vicinity, 27.9.1947). In spite of the fact that no conductor was outlined in this area by the electromagnetic survey, it was decided to check the iron formation and associated rocks where the gold was supposed to occur.

Hole B-1 was located at 730'N-530'E and drilled at an inclination of 50° along a bearing of 103° . The hole reached a depth of 581 feet. The results are presented as the drill hole log and generalized section.

The hole encountered mostly metadiorite and basalts. Several sedimentary sections, including the iron formation, which showed disseminated pyrite and pyrrhotite, were assayed for gold, but only very low gold values were encountered in those sections.

5. Grid K

5.1 Location and Airborne Anomaly

Airborne anomalies 81 N/A, 82 S/E, 83 N/A, 149 S/F, 151 N/A, 152 N/A and B, and 153 S/F and G occur in a swampy section close to the southern boundary of the property. This area is about 2 miles east of Oko Lake.

These airborne anomalies are weak, and the input response is confined to a maximum of the first 3 channels only.

A grid with lines at N30'W-S30'E direction was cut to carry out the geophysical surveys.

5.2 Geophysical Surveys

Magnetometer survey (MF-1 magnetometer) covered 10,000 feet of traverse with line spacings of 400 feet and 200 feet and station spacing of 50 feet.

Electromagnetic survey using VEM covered 12,300 feet of traverse on the same grid. Measurements were made at 100 foot intervals.

5.3 Geophysical Results

Fig. K-1 shows the results of the magnetometer survey. There is one magnetic anomaly about 2000 gammas above the background, centered on line 1200'E at 200'S. Generally, the area is between 800 and 1000 gammas. There is a break in the trend of the 1000 gammas contour on line 0/0, suggesting the presence of a fault.

Fig. K-2 shows the E/M profiles obtained with the VEM survey. A very weak conductor is traced between lines 800'W and 400'E. The conductor is well defined only on line 800'W.

The poor ground results and indefinite nature of recorded conductivity variation influenced the decision against drilling.

6. Grid C

6.1 Location and Airborne Anomalies

Airborne anomalies 68 N/D (6 channels) and 143 S/A (5 channels) are situated about 1000 feet northeast of Oko Lake and about 700 feet northwest from the creek flowing from Oko Lake on line 2000'E.

6.2 Geophysical Survey and Previous Drilling

Geophysical survey over this grid was carried out previously by Newmont Mining Corporation (see Part B). The conductor was picked up intermittently between lines 1200'E and 3600'E. The strong crossover occurs on line 2000'E.

Conductors further to the south were checked before by drilling two holes C1 and C2. Both bore holes encountered sulphide mineralization, and C1 intersected mineralized felsic fragmental volcanics, which were not, however, encountered in C2, situated further to the northeast. Bore hole C1 was in the middle of a long conductor striking northeast, while C2 was in another conductor to the north of the northeastern end of the former and sub parallel to it.

A third conductor, further to the north of the base line in Grid C, was not checked by drilling. This conductor has a limited strike length, good characteristics, and is situated in an area structurally favourable (as inferred from airborne surveys and photogeology). Also, a few hundred feet to the west, an outcrop of rhyolite was located. It was decided consequently to check this conductor by drilling.

6.3 Drilling (Bore hole W-4)

The drill hole is located at 1990'E and 2282'N in Grid C. The hole was drilled at an inclination of 60° and with a bearing of 326°. The hole reached a depth of 172 feet. The results are presented as the drill hole log and generalized section.

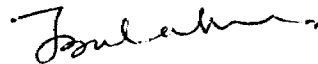
The hole encountered metasediments interbanded with tuffs. In addition, andesites and a thin band of rhyolite were noted, but mineralization was confined to metasediments and tuffs. The conductor is mostly due to massive pyrrhotite veins occurring in graphite rich zones. No sulphides of economic importance were encountered in this hole.

PART III

1. Conclusions

- 1.1 Subsequent to completing additional geophysical survey and drilling of five holes in the most favourable areas, a review of the obtained results was made, which lead to the following conclusions:
- 1.2 All the holes drilled, except B-1, are on good conductors. It was found that the conductivity is predominantly due to pyrrhotite and graphite, with minor amounts of pyrite, occurring in metasediments and tuffs. In none of the holes drilled were any appreciable amounts of economic sulphides encountered.
- 1.3 Drill hole B-1 was drilled to check the reported occurrence of good gold values in the Belgold Zone A, but the assay results were very low: 0.05 oz. per ton.
- 1.4 The geological environment consists predominantly of intermediate to basic volcanics with metasediments and tuffs. Some acid volcanics are observed and encountered in drill holes in the western section of the property, but they appear to be local, and no major zones of economic mineralization were found to be associated with it.
- 1.5 There are still quite a few good airborne anomalies left unexplored in this property. However, since the best anomalies tested so far by drilling yielded only negative results, it is rather difficult to recommend and justify additional geophysical surveys and drilling in this prospect.

Respectfully submitted,



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APPENDIX 2

General Relevant Information

Instruments Used for Geophysical Survey

1. MF-1, Fluxgate Magnetometer - Scintrex Limited
2. SE-200, Electromagnetic Unit, Frequency 1250 c.p.s. - Scintrex Limited
3. VEM - Vertical Loop with Fixed Transmitter, Frequencies 480 c.p.s. and 1800 c.p.s. - Crone Geophysics Limited

APPENDIX 3

List of Claims

KRL 64408	KRL 64418	KRL 68287	KRL 68293	KRL 68303	KRL 68308	KRL 68372
64409	68273	68288	68294	68304	68309	68373
64415	68274	68289	68295	68305	68310	68374
64416	68275	68290	68296	68306	68370	68375
64417	68276	68291	68297	68307	68371	68381
KRL 68382	KRL 68388	KRL 68395	KRL 68400	KRL 68409	KRL 71914	KRL 71922
68383	68389	68396	68401	68410	71915	71923
68384	68390	68397	68406	68411	71919	71925
68385	68393	68398	68407	68412	71920	72327
68387	68394	68399	68408	68413	71921	72329
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72334	72341	72375	72380	72385	72390	72395
KRL 72396	KRL 72401	KRL 72417	KRL 72584	KRL 72600	KRL 72606	KRL 73546
72397	72406	72418	72590	72602	73542	306187
72398	72407	72419	72597	72603	73543	306188
72399	72409	72582	72598	72604	73544	306189
72400	72410	72583	72599	72605	73545	306190
KRI. 306478						
328641						
328642						
343091						

APPENDIX 4

CHEMICAL RESEARCH AND ANALYSIS
CONTACT LABORATORIES

TECHNICAL SERVICE LABORATORIES
DIVISION OF BURGESS TECHNICAL ENTERPRISES LTD.
255 KING ST. W., TORONTO 512, ONT. CANADA
TELEPHONE: 362 4248 - AREA 512
CABLE ADDRESS: TESCERV TORONTO

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Mr. C.J. Madey
c/o Caravell Mines Ltd.
307A - 160 Bay St.
Toronto, Ontario

REPORT NO.
M-3062

SAMPLE(S) OF Drill Core - B-1 (REL. GOLD AREA)

Interval	Sample #	Gold (Au) oz/ton	Copper (Cu) %	Zinc (Zn) %	DEPTH
47'9" - 50'0"	59028	< 0.005	-	-	47'9" - 50'0"
52'9" - 55'9"	59029	< 0.005	-	-	54'9" - 55'9"
132'3" - 137'6"	59030	< 0.01	0.052	trace < 0.1	132'3" - 137'6"
137'6" - 140'6"	59031	< 0.005	-	-	137'6" - 140'6"
140'6" - 142'0"	59032	< 0.005	-	-	140'6" - 142'0"

< = less than

Paula
Nov 72

Samples, Pulps and Rejects discarded after two months
Aug 23/72

DATE _____

SIGNED _____

AREA OF
"Key Plan"
DIXIE LAKE

DISTRICT OF
KENORA
PATRICIA PORTION

RED LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C.S.)
- LEASES (L)
- LOCATED LAND (Loc)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED (C)

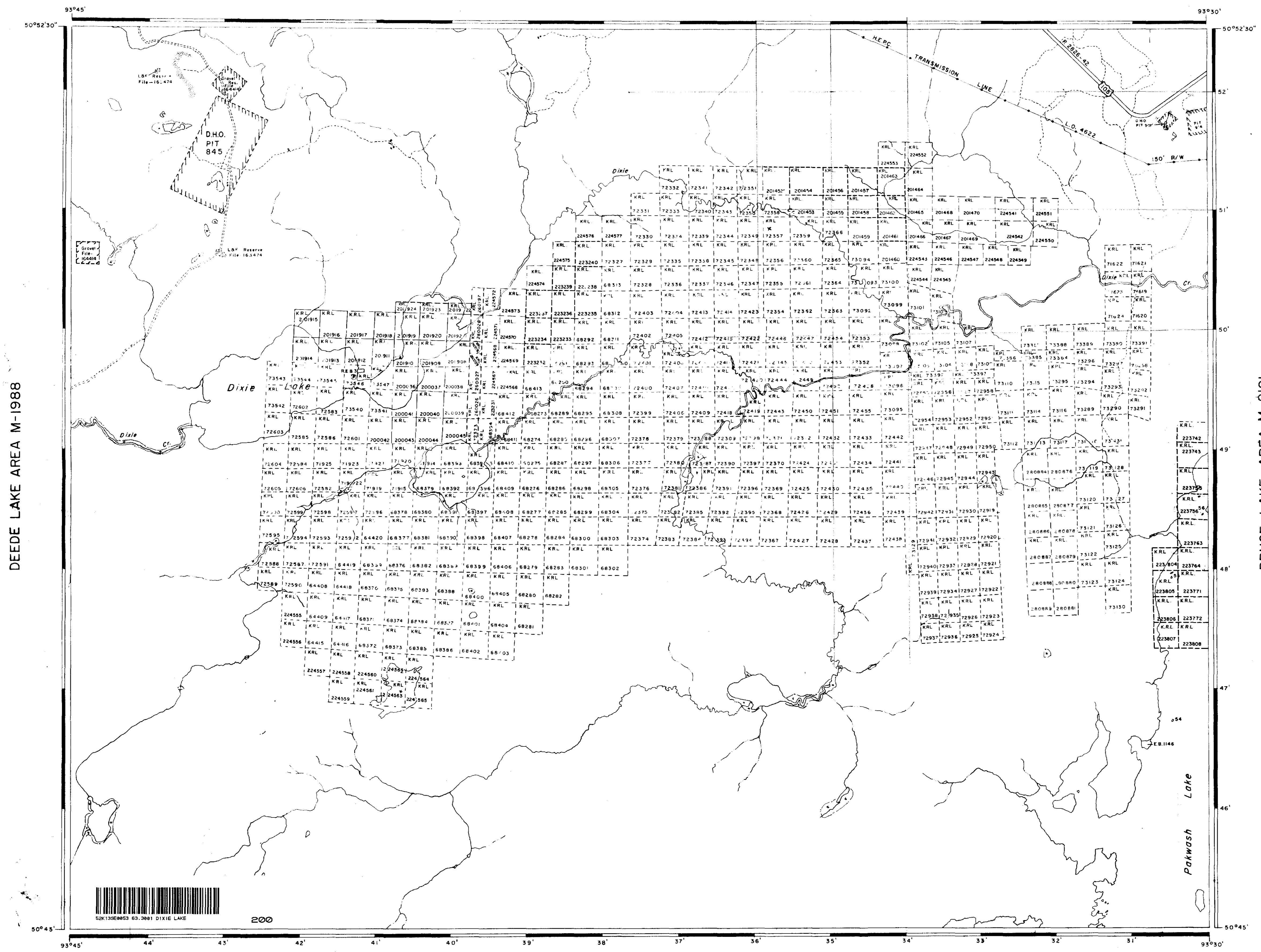
NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

Water Power Lease Agreement No.43 H.E.P.C. Manitou Falls Development (File-61556) reserving flooding rights for H.E.P.C. to contour elevation 1140' on Pakwash Lake File- 69307

PLAN NO. M-3112

DEPARTMENT OF MINES
- ONTARIO -



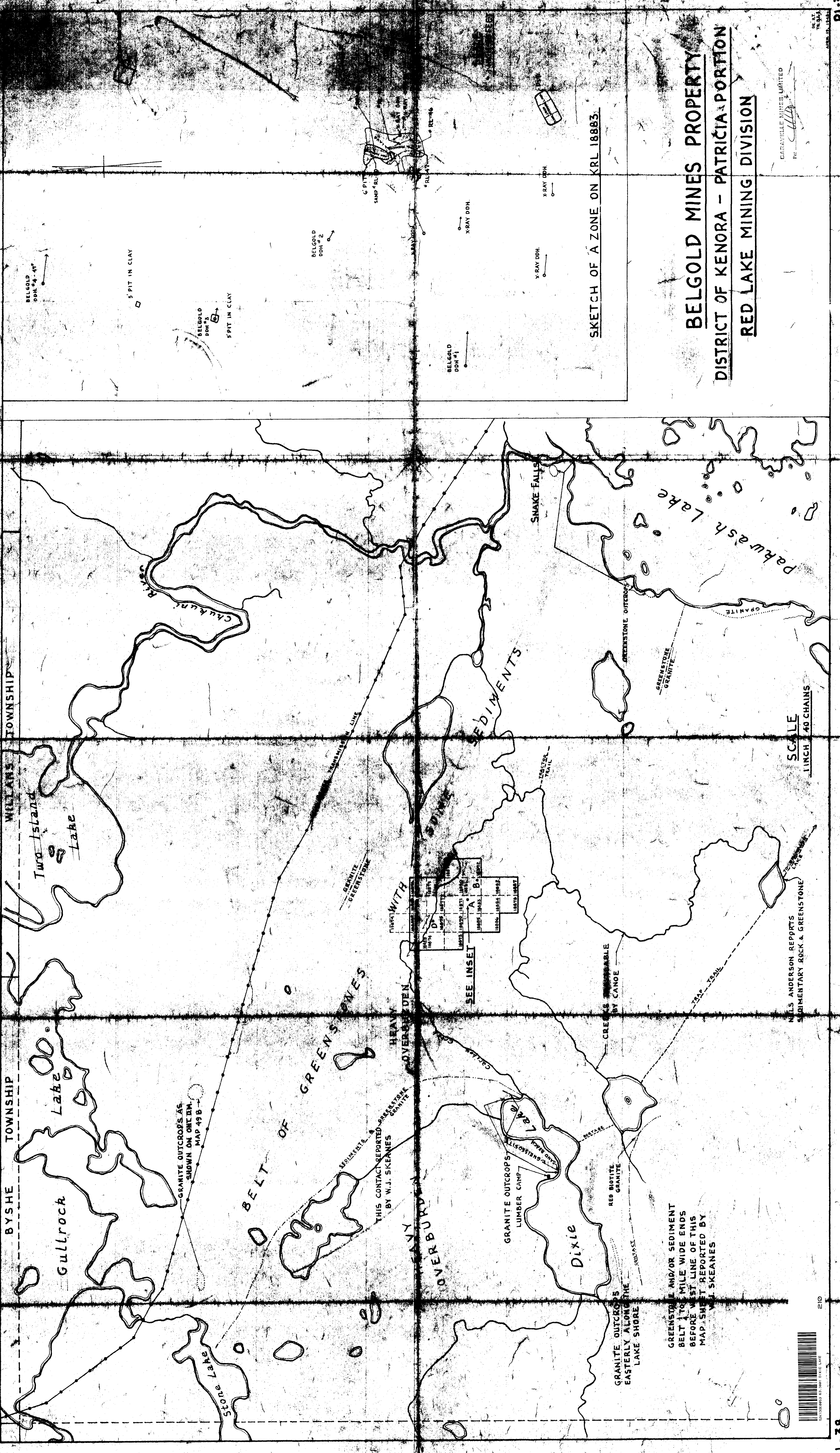
DEEDE LAKE AREA M-1988

BRUCE LAKE AREA M-2191



200

CABIN BAY AREA M-3113



SKETCH OF A ZONE ON KRL 18883.

BELGOLD MINES PROPERTY
DISTRICT OF KENORA - PATRICIA PORTION
RED LAKE MINING DIVISION

GARAVILLE MINES LIMITED
 RE: *[Signature]*

GRANITE OUTCROPS AS SHOWN ON QML D.M. MAP 49B

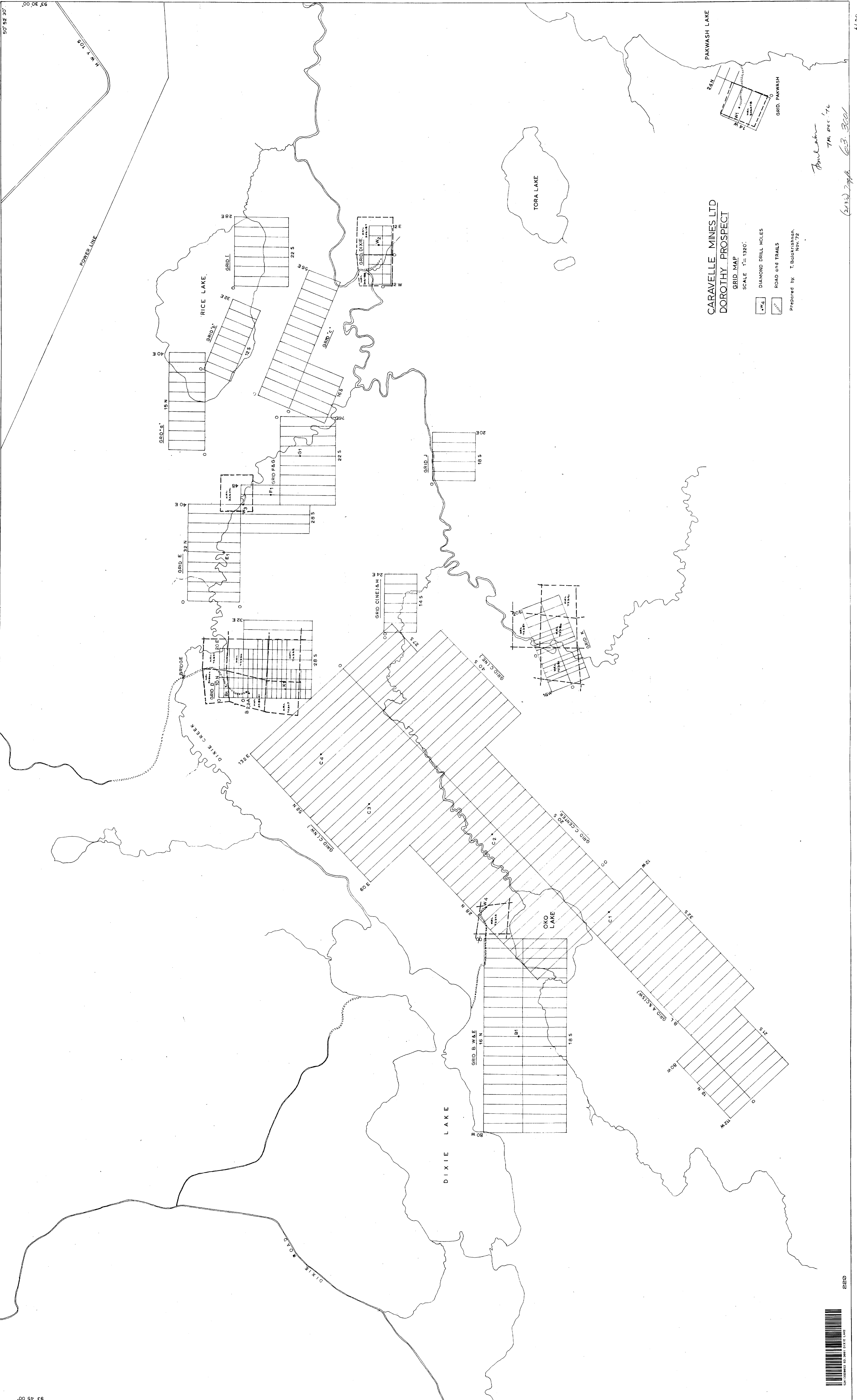
THIS CONTACT REPORTED BY W.J. SKEANES
 HEAVY COVERED DEN WITH
 GRANITE GREENSTONE

GREENSTONE AND/OR SEDIMENT BELT TO MILE WIDE ENDS BEFORE WEST LINE OF THIS MAP SHEET REPORTED BY W.J. SKEANES

NELS ANDERSON REPORTS SEDIMENTARY ROCK & GREENSTONE



50138803 83 3801 DITE LAGE



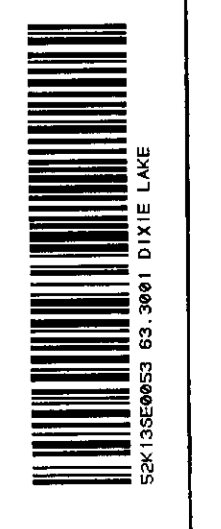
**CARVELLE MINES LTD
DOROTHY PROSPECT**

GRID MAP
SCALE 1" = 1320'

- DIAMOND DRILL HOLES
- ROAD and TRAILS











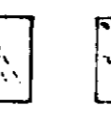
Prepared by: T. Bunkershen
Nov. 72

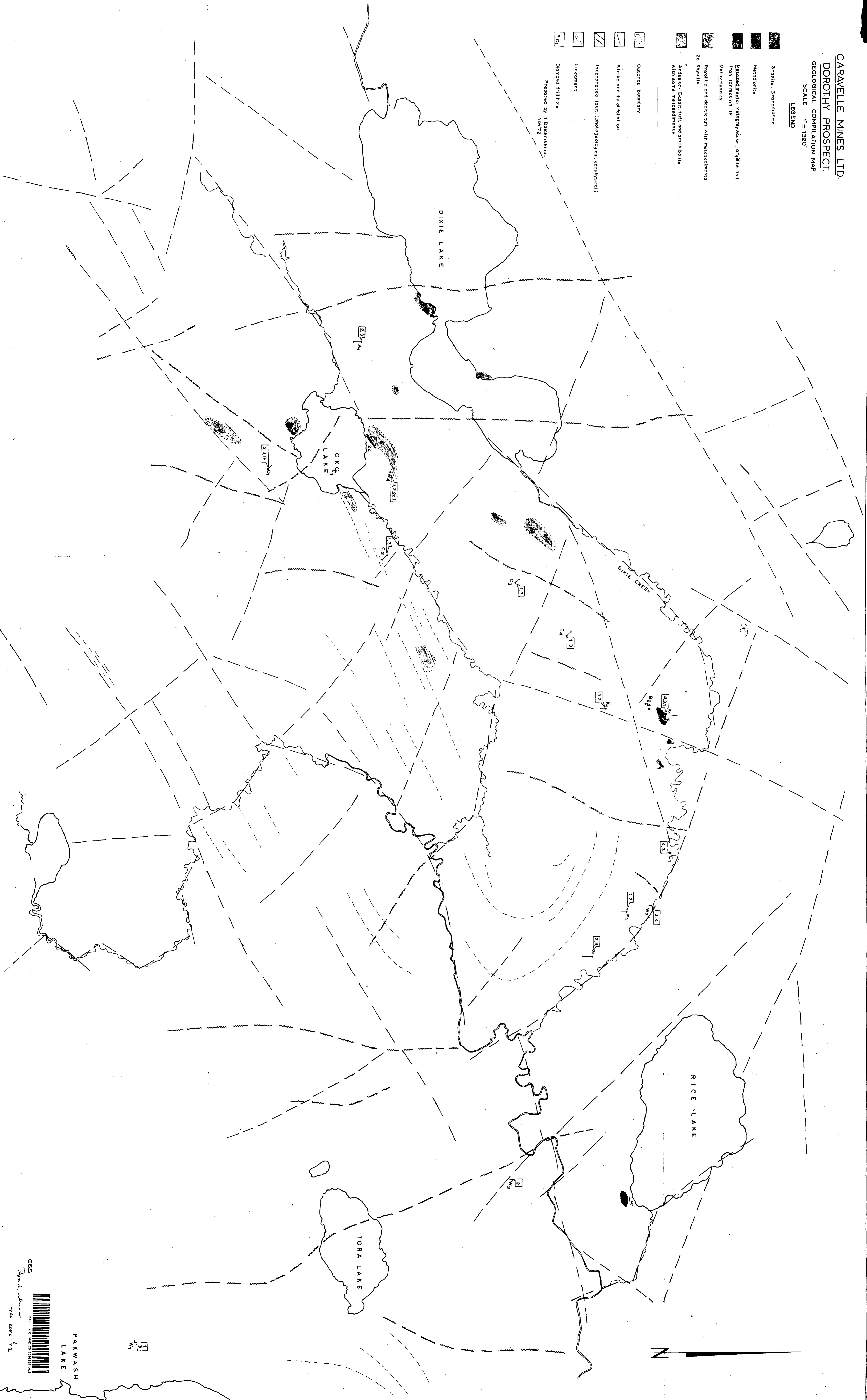
Paulson
7th Dec '72
(2132) 2944 G.B. 300




CARAVELLE MINES LTD.
DOROTHY PROSPECT
GEOLOGICAL COMPILATION MAP
SCALE 1" = 1920'

LEGEND

-  Granite, Grandolite
 -  Metadiorite
 -  Metasediments: Metagraywacke, argillite and Iron formation - IF
 -  Metasandstone
 -  Rhyolite and dacite tuff with metasediments and Rhynolite
 -  Andesite, Basalt, tuff, and amphibolite with some metasediments
 -  Outcrop boundary
 -  Strike and dip of foliation
 -  Interpreted fault, (Photogeological, Geophysical)
 -  Lineament
 -  Diamond drill hole
- Prepared by T. Baderishnam
Nov 72



PAKWASH
LAKE



7th Dec '72

10/28/72
G.B. 3001

CARAVELLE MINES LIMITED.
DOROTHY PROSPECT

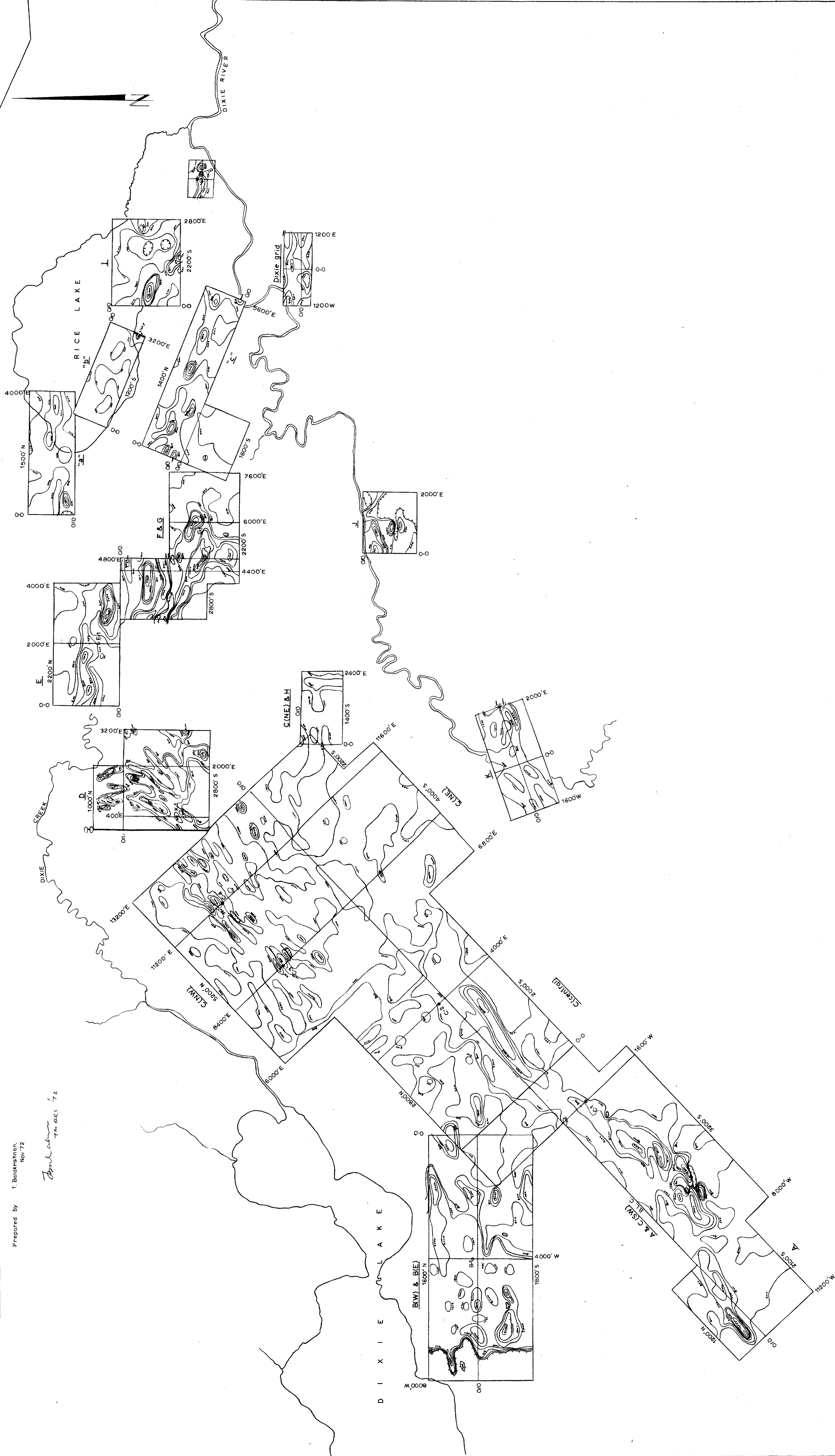
DIXIE LAKE AREA RED LAKE MINING DIVISION
MAGNETIC CONTOUR MAP

GRIDS: a,b,c,A,B,C,D,E,F,G,H,I,J and K



Prepared by T. Balakrishnan,
Nov. 72

Thompson
7th Dec. '72



SEN 10/28/72 03 3001 DIXIE LAKE

CARAVELLE MINES LTD
 DOROTHY PROSPECT
 PAKWASH GRID.
 SCALE 1" = 200'
 Prepared by T. Balakrishnan,
 Nov '72.

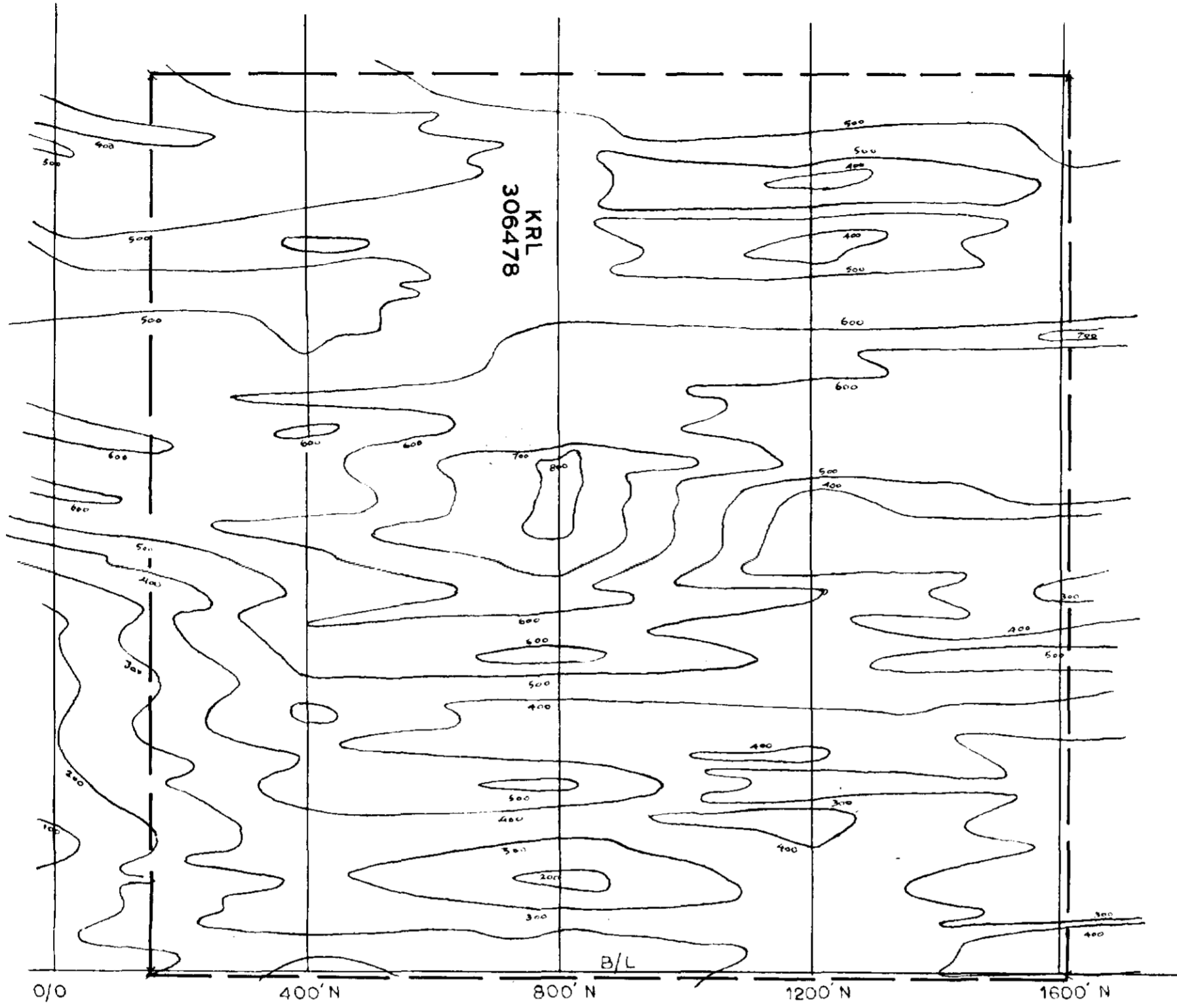


Fig PK 1
 MAGNETIC CONTOURS

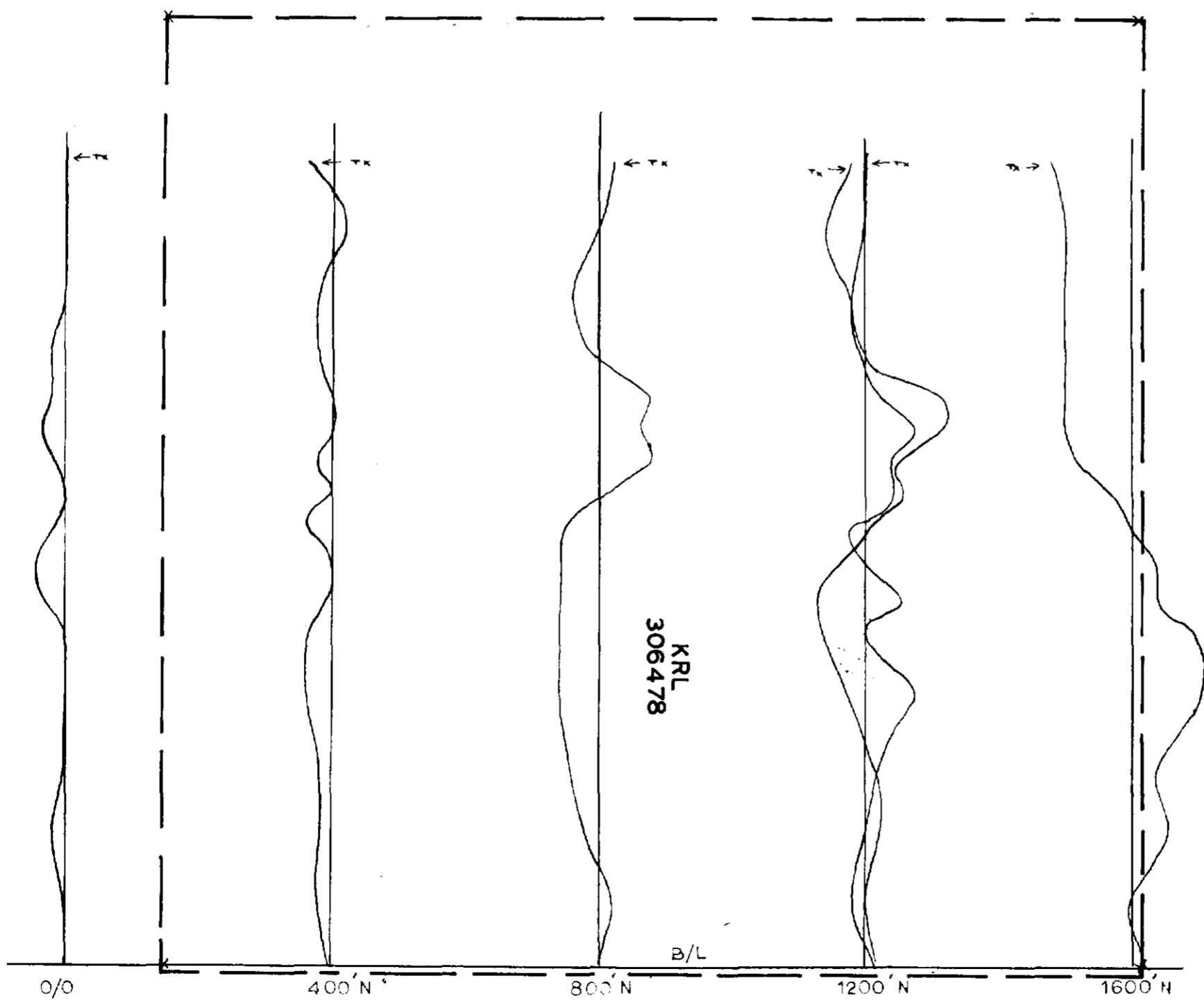
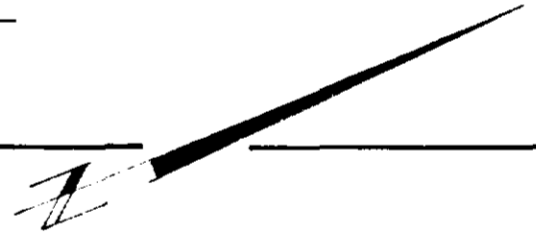


Fig PK 2
 SE-200 E.M. SURVEY.
 Frequency, 1250 Cps
 1" = 20'

T. Balakrishnan
 7th Dec 72



CARAVELLE MINES LTD.

DOROTHY PROSPECT.

PAKWASH GRID.

V E M SURVEY.

480.C.P.S.
1800.C.P.S.

1 = 20'

SCALE:

1 = 200'

Prepared by T. Balakrishnan.

Nov. '72

T. Balakrishnan
T.M. Dec '72

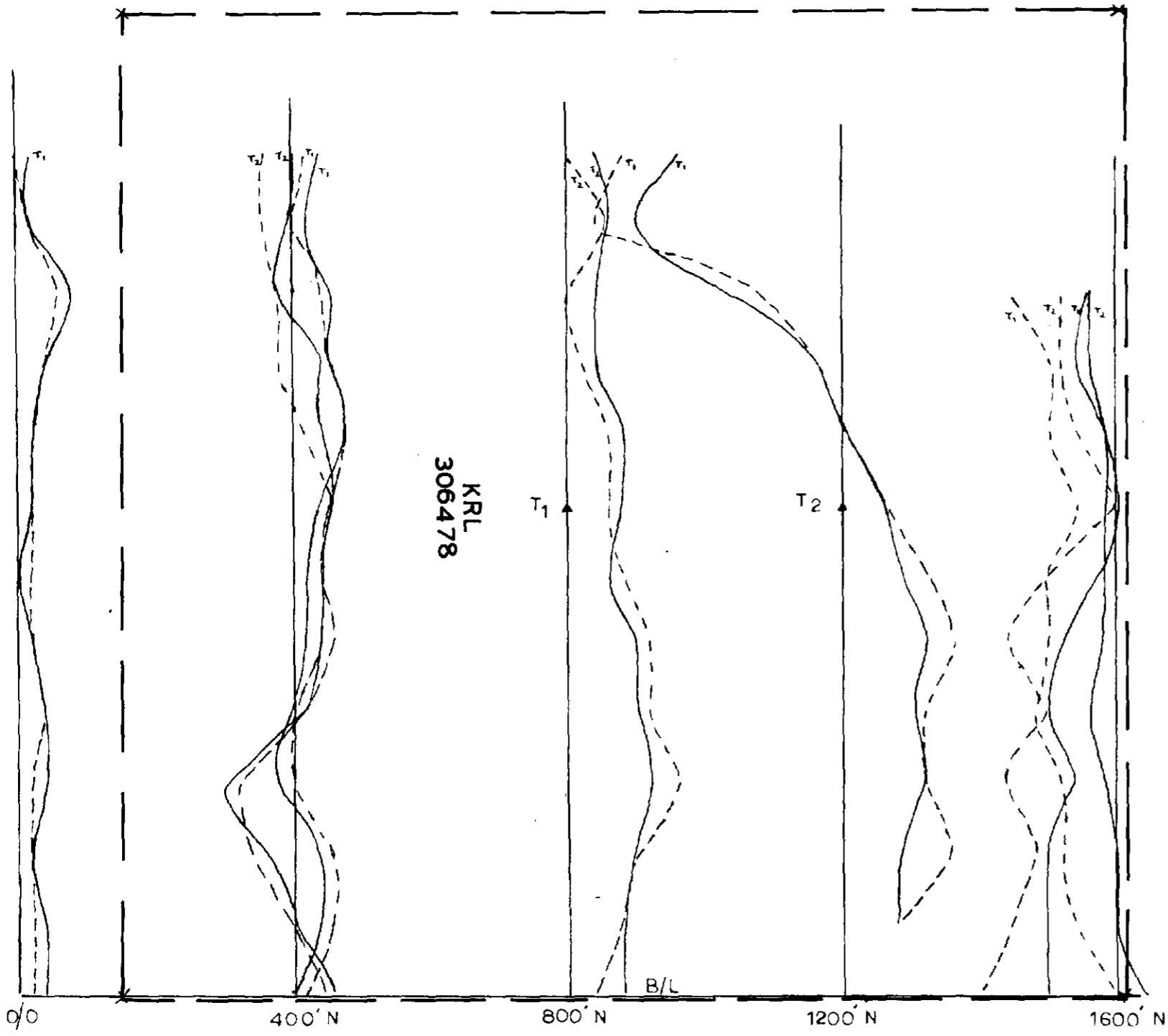


Fig PK 3

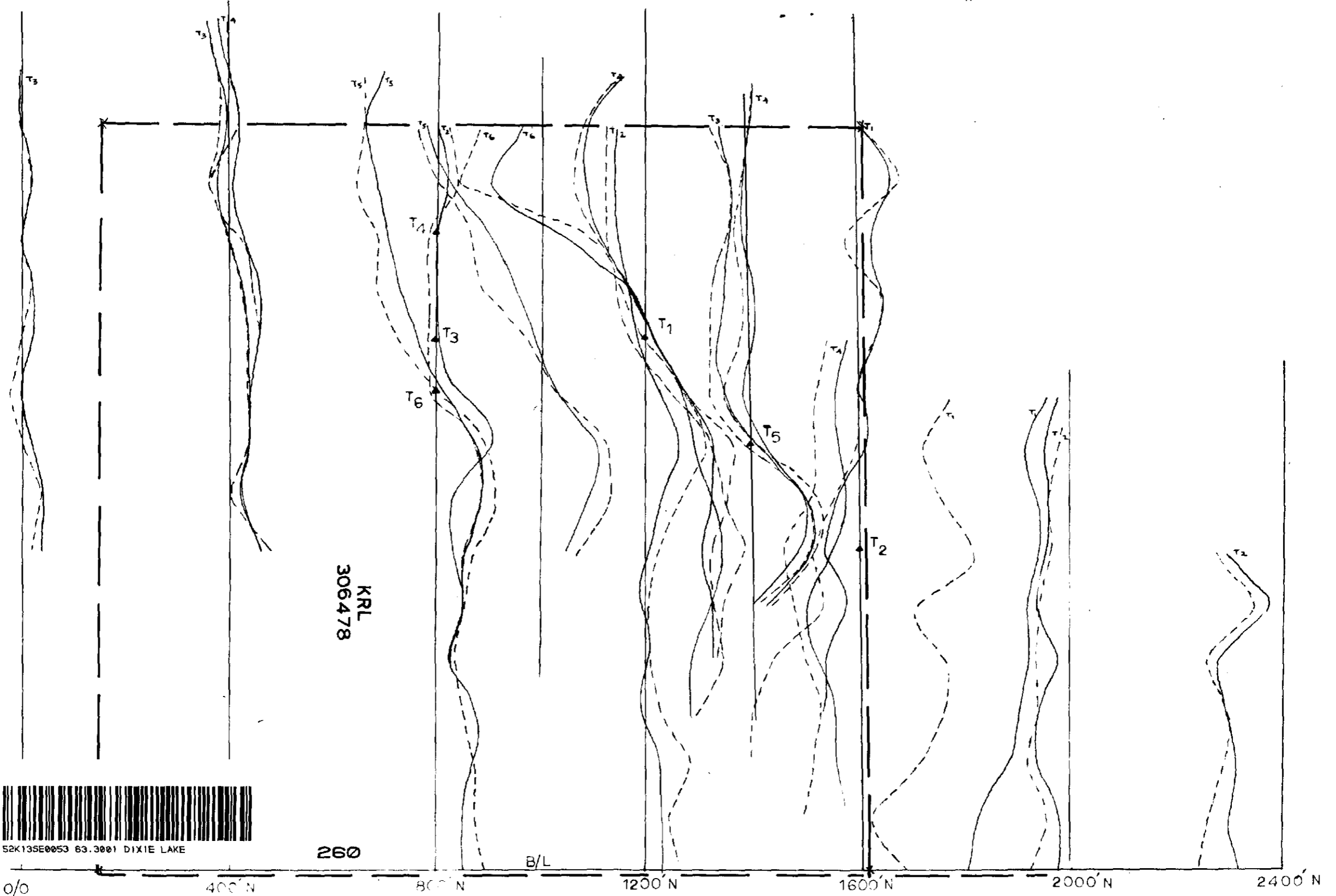
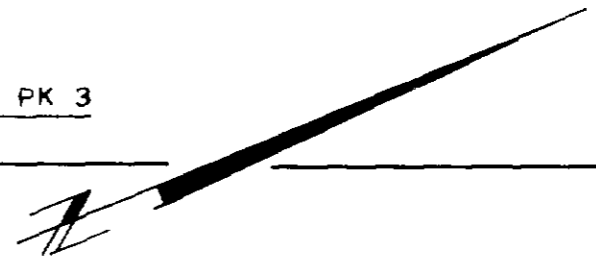


Fig PK 4



52K135E0053 63.3001 DIXIE LAKE

260

63.3001

CARAVELLE MINES LTD

DOROTHY PROSPECT

GRID DIXIE

V E M SURVEY

— 480 C.P.S.

- - - 1800 C.P.S.

1" = 20'

SCALE

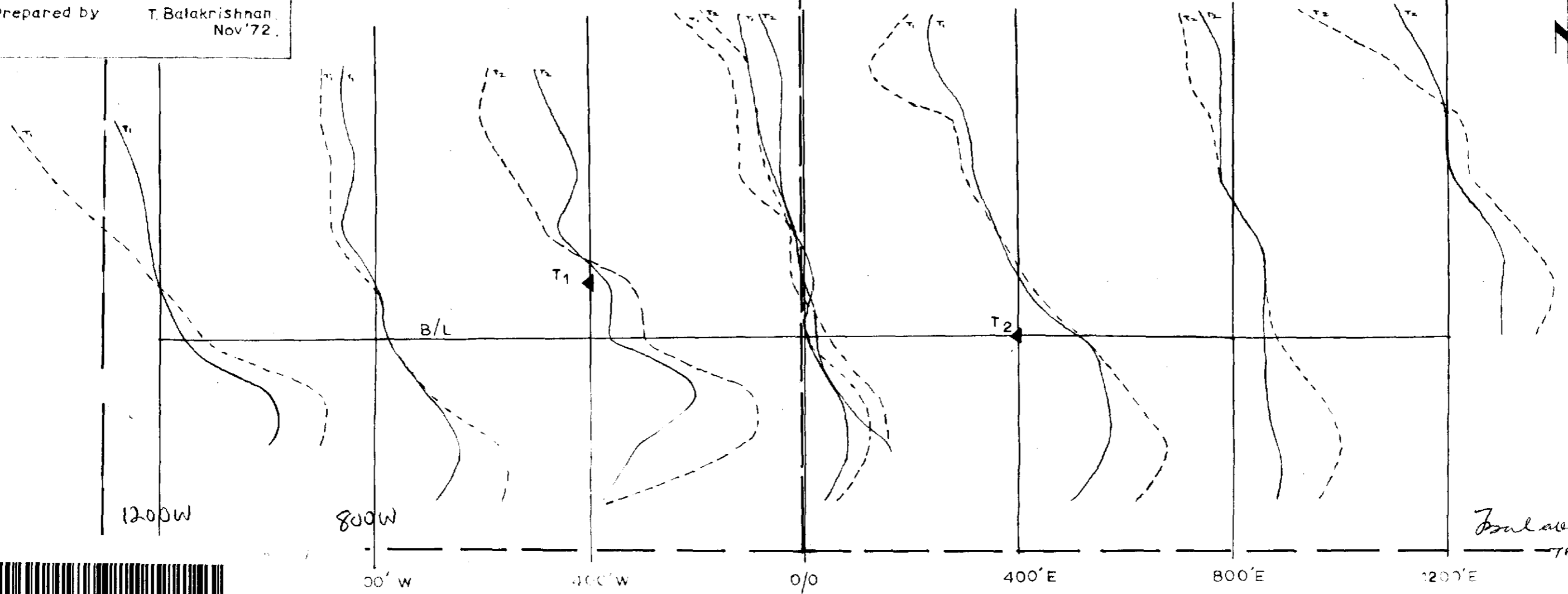
1" = 200'

Prepared by T. Balakrishnan, Nov '72.

Figs D_x 3 and 4.

KRL 306188

KRL 306187



T. Balakrishnan
T1, T2



52K13SE0053 63.3001 DIXIE LAKE

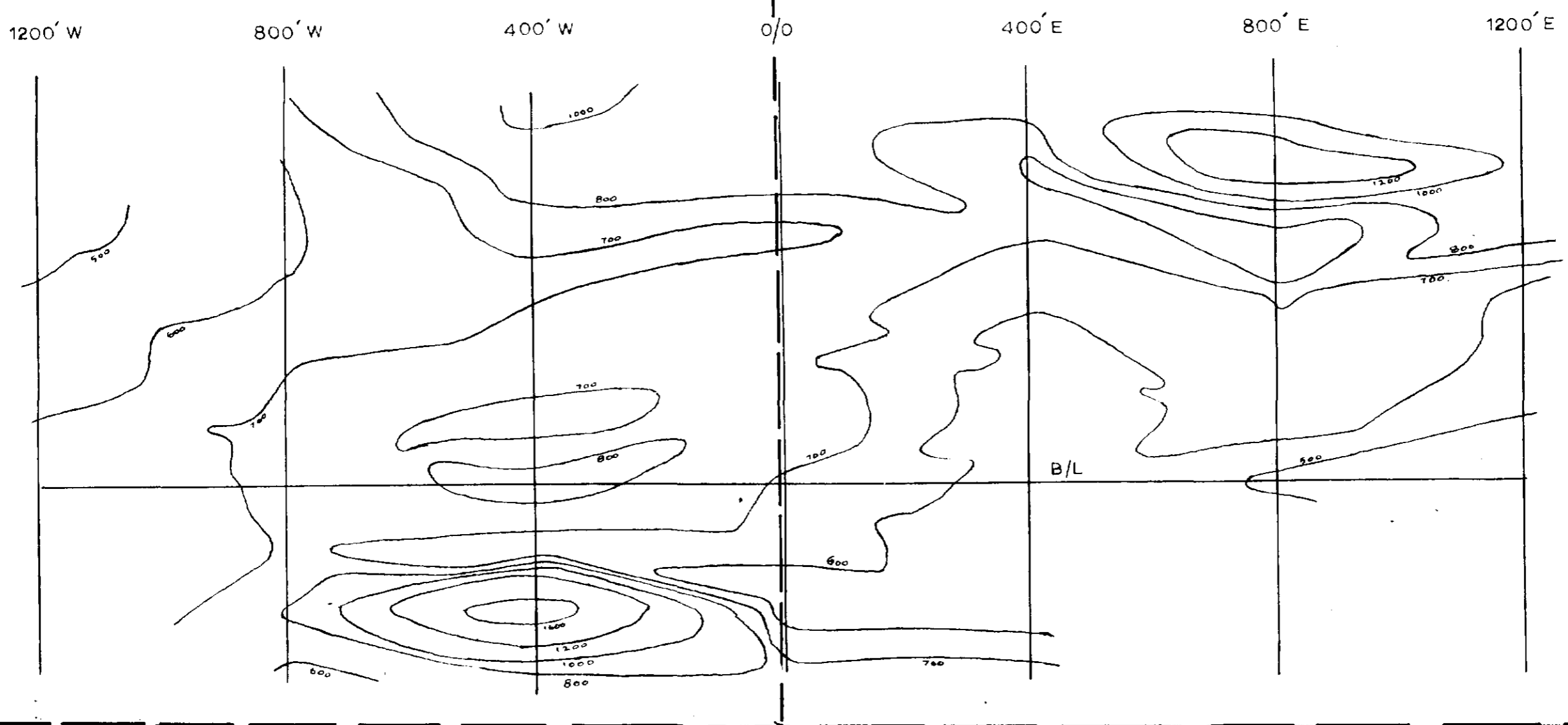
CARAVELLE MINES LTD
 DOROTHY PROSPECT
 GRID DIXIE
 SCALE 1" = 200'
 Prepared by T. Balakrishnan,
 Nov. 72

KRL
306187

KRL
306188

Fig Dx 1

MAGNETIC CONTOURS



KRL
306188

KRL
306187

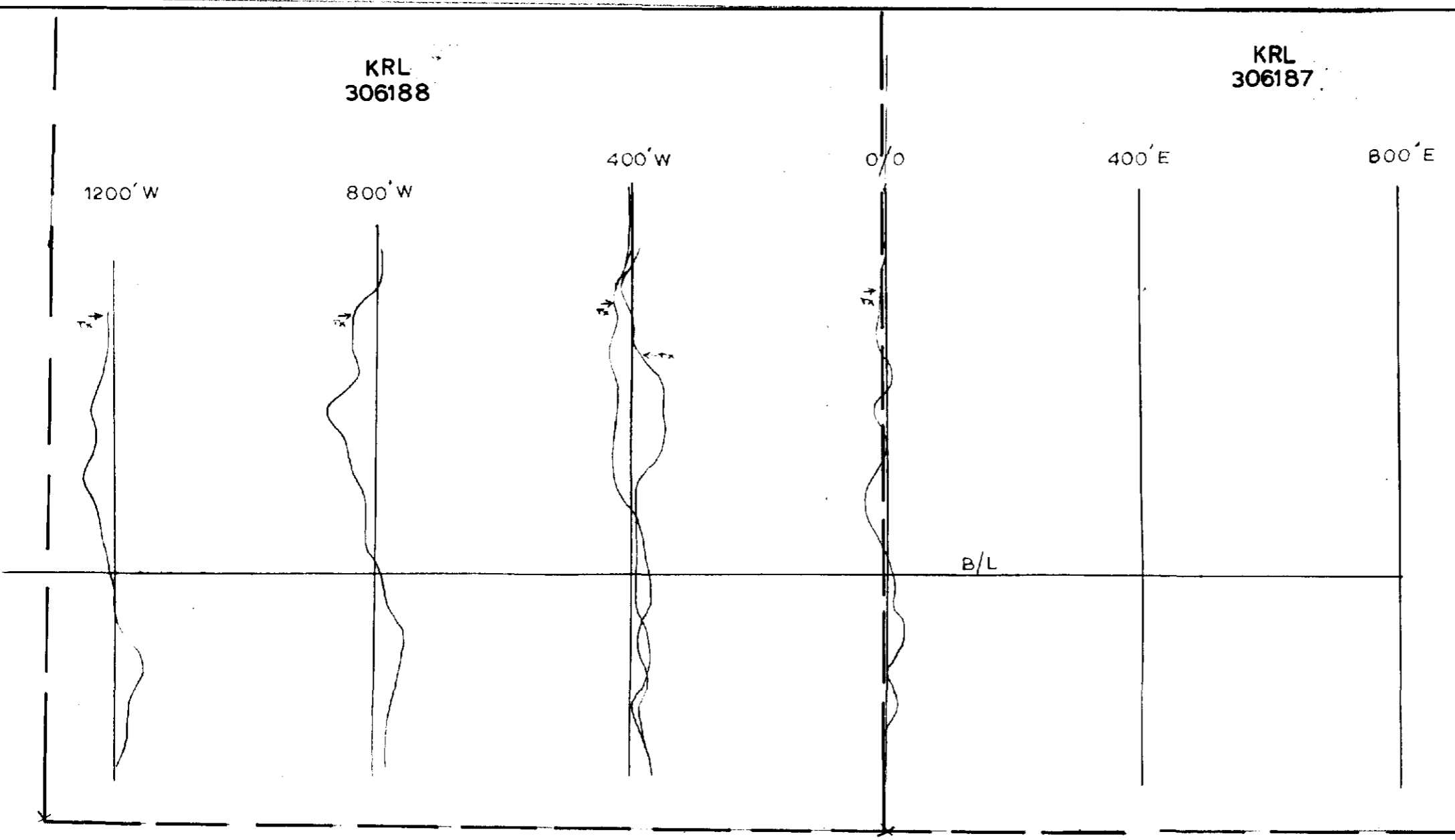


Fig Dx 2
 SE-200 EM. SURVEY
 Frequency 1250 CPS
 1" = 20'



T. Balakrishnan
 7th Dec. 72

KRL
343091

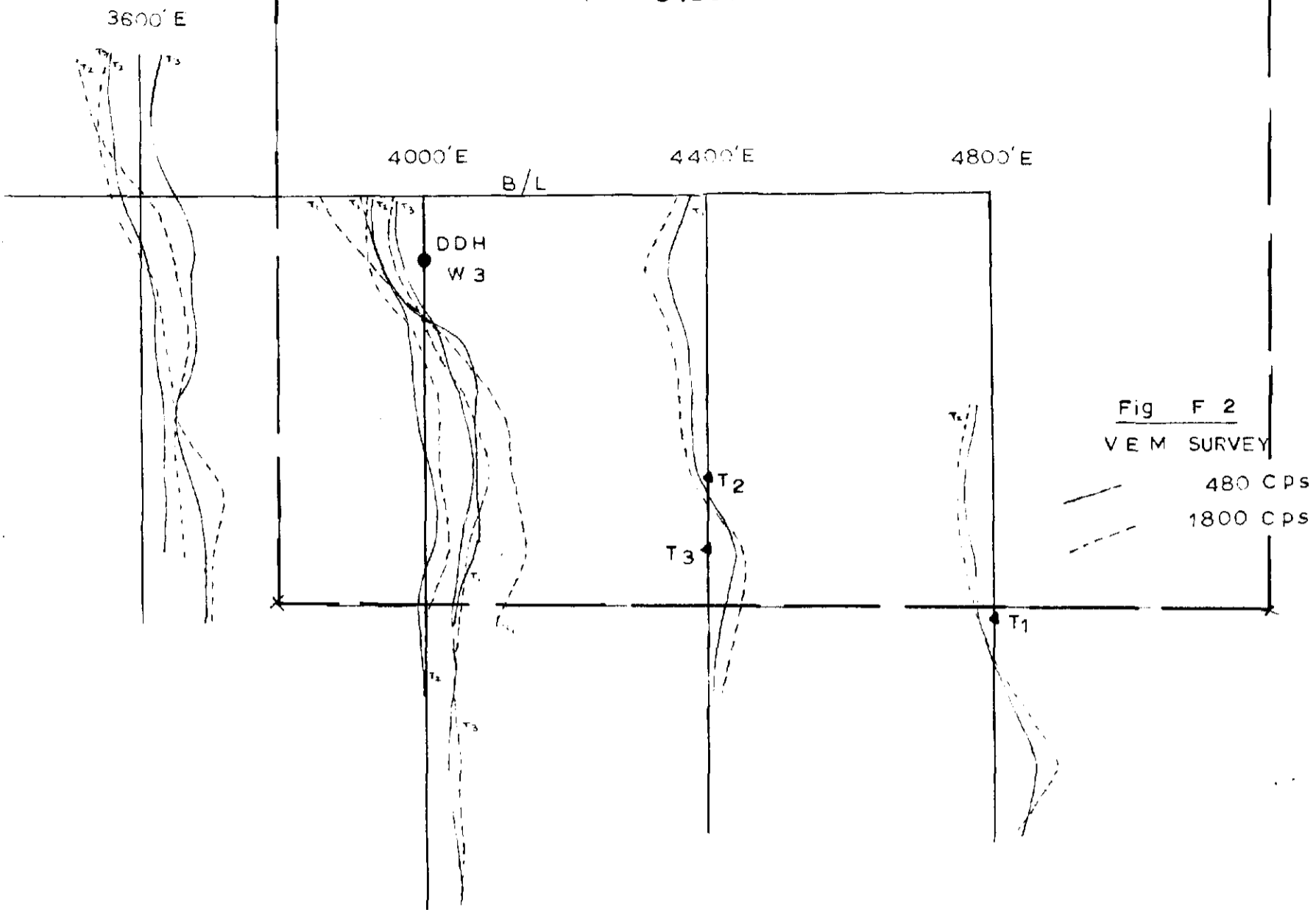


Fig F 2
V.E.M. SURVEY

480 CPS
1800 CPS

KRL
343091

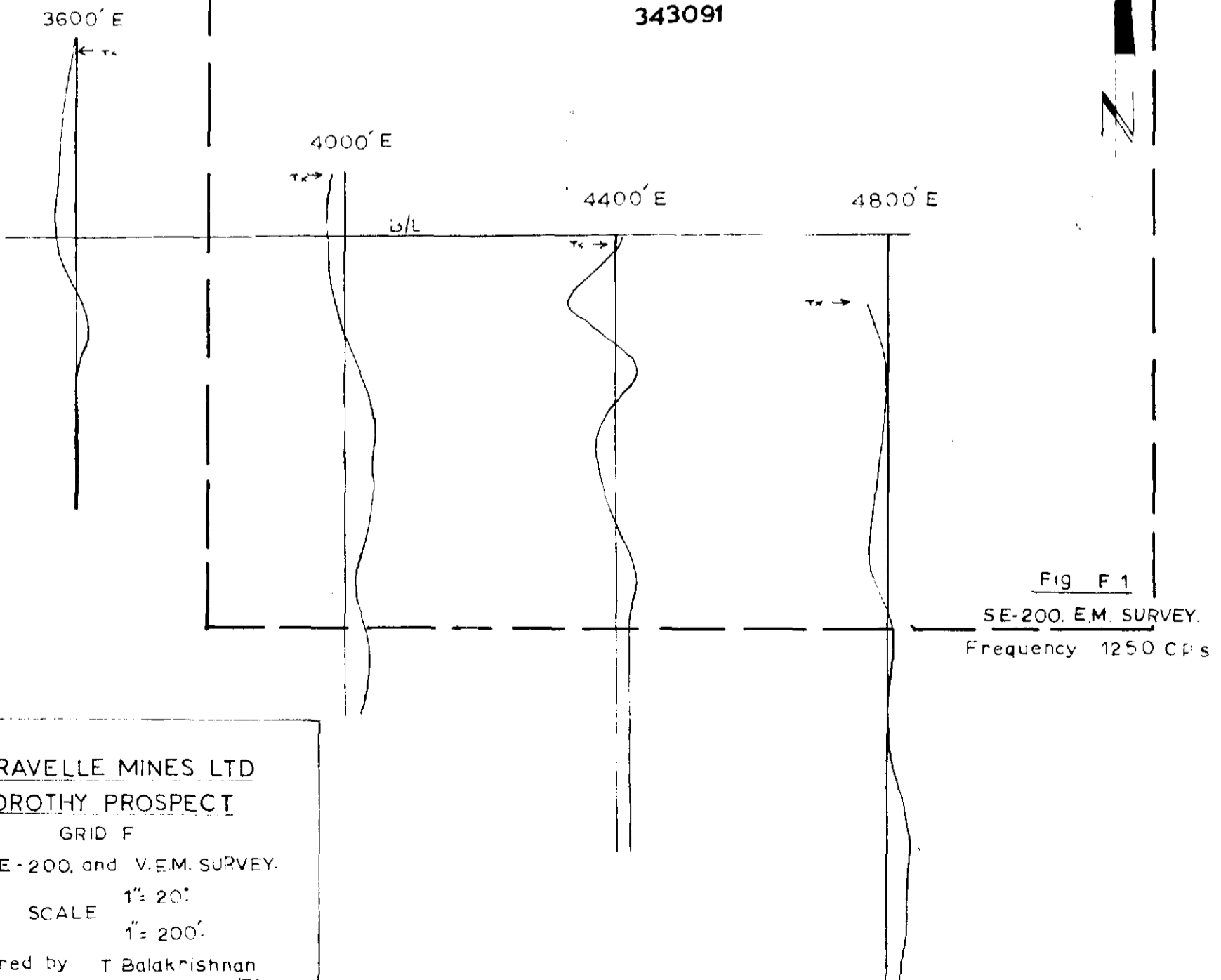


Fig F 1
SE-200. E.M. SURVEY.
Frequency 1250 CPS

CARAVELLE MINES LTD
DOROTHY PROSPECT
GRID F

SE-200, and V.E.M. SURVEY.

SCALE 1" = 20'
1" = 200'

Prepared by T. Balakrishnan
Nov. 72



52K13SE0053 63.3001 DIXIE LAKE

63,3001

*Final abn -
7th Dec 72*

63-3001

CARAVELLE MINES LTD
DOROTHY PROSPECT

GRID K
V E M SURVEY

480 CPS

1800 CPS

1" = 20'

1" = 200'

SCALE:

Prepared by

T. Balakrishnan
Nov. '72

KRL
72381

1200'W

800'W

400'W

1600'W

0/0

400'E

800'E

1200'E

1600'E

B/L

KRL
72386

KRL
72391

Fig K 2

Paul ...
7th Dec '72



52K135E0053 63.3001 DIXIE LAKE

63.3001

CARAVELLE MINES LTD

DOROTHY PROSPECT

GRID K

MAGNETIC CONTOURS

SCALE 1" = 200'

Prepared by T. Balakrishnan
Nov '72

KRL
72380

KRL
72387

2000' E

1600' E

1200' E

800' E

400' E

0/0

KRL
72381

800' W

400' W

1200' W

1600' W

B/L

KRL
72386

KRL
2382

KRL
72382

Fig K 1

KRL
72391

John A. ...
TH Dec '72



52K13SE0053 63.3001 DIXIE LAKE

KRL
328642

CARAVELLE MINES LTD
 DOROTHY PROSPECT
 BELGOLD and GRID - D
 AREAS
 V E M SURVEY
 ——— 480 C P S
 - - - 1800 C P S
 SCALE 1" = 20'
 1" = 200'
 Prepared by T. Balakrishnan.
 Nov. '72

KRL
72330

KRL
328641

KRL
72327

KRL
72329

1000' N
 800' N
 600' N
 400' N
 200' N
 0/0
 200' S
 400' S
 600' S
 800' S
 1000' S
 1200' S
 1400' S
 1600' S
 1800' S
 2000' S
 2200' S
 2400' S
 2600' S
 2800' S

1200' E

2400' E

Fig D 3

T. Balakrishnan
7th Dec '72



Fig D 2

KRL
72334

0/0 B/L 400' E 800' E 1200' E 1600' E 2000' E 2400' E 2800' E

KRL
328641

KRL
72330

KRL
72327

KRL
72335

KRL
72329

CARAVELLE MINES LTD
DOROTHY PROSPECT

GRID D
SE 200 EM SURVEY
Frequency, 1250.Cps

SCALE: 1" = 20'
1" = 200'

Prepared by T Balakrishnan.
Nov. 72.

T Balakrishnan
7th Dec '72



52K13SE0053 63.3001 DIXIE LAKE

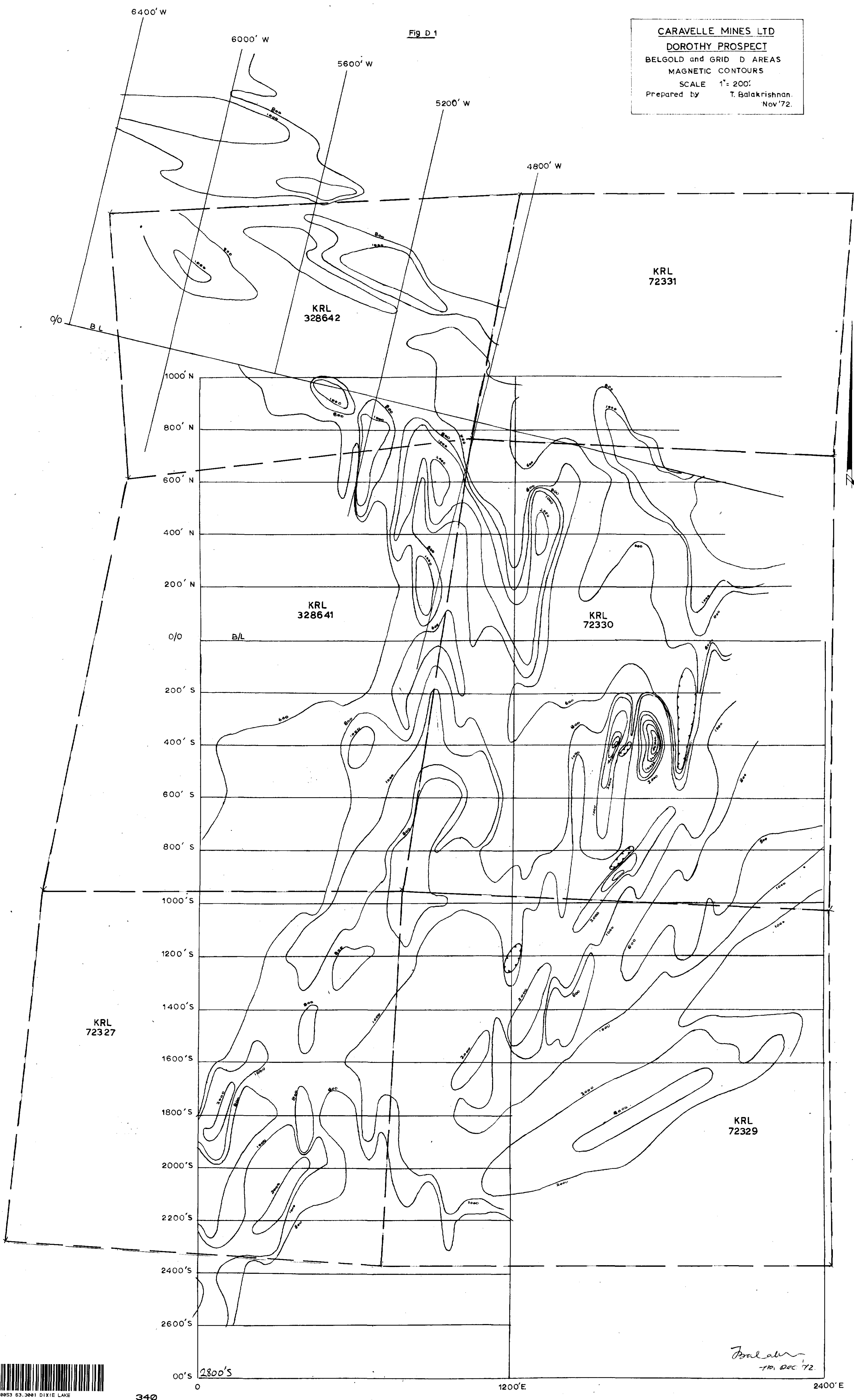
330

2800' S

63.3001

CARAVELLE MINES LTD
DOROTHY PROSPECT
 BELGOLD and GRID D AREAS
 MAGNETIC CONTOURS
 SCALE 1" = 200'
 Prepared by T. Balakrishnan
 Nov '72

Fig D 1



T. Balakrishnan
 110, DEC '72

