REPORT

ON THE

RB 4 MINERAL CLAIM

NICOLA MINING DIVISION

FOR

CELESTE RESOURCES LTD

MAP SHEET 921/2E

CO-ORDINATES: 50°04' N, 120° 36' W

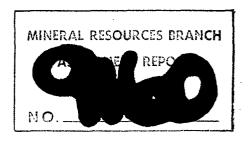


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SUMMARY

The RB 4 mineral claim held by Celeste Resources Ltd and located about 15 km southeast of Merritt, B.C. is mainly underlain by rocks of the lower Cretaceous Kingsvale Group. Nicola Group rocks are mapped in the northeast sector of the claim and Jurassic Cretaceous chert pebble and cobble conglomerate occur in the southeast corner. Intrusive plugs and stocks occur in proximity to the claim. Rocks mapped by G. Richmond, B.Sc. in November, 1980 on a traverse through the property include volcanic flows, tuffs and breccias and chert-breccia or conglomerate.

A VLF-EM ground survey was conducted over the property by Columbia Geophysical Services Ltd during November - December 1980. Due to magnetic storm conditions magnetics were not carried out. The survey has outlined a series of northerly trending anomalies which are mapping andesitic flows, tuffs, and siltstones, contact zones and shear zones.

No target areas are defined as further geological and geophysical detail is required.

Veinlets of disseminated copper mineralization were noted in andesitic volcanics in the eastern section of the RB 5 claim adjoining the property to the north and a zone containing

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pyrite, chalcopyrite and malachite is reported to occur on the CR l claim to the south.

Additional magnetic and geologic data is required to further assess the property.

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INTRODUCTION

A VLF-EM survey was conducted over the RB 4 mineral claim by Columbia Geophysical Services Ltd during November - December 1980.

Information in this report was obtained from various government and private reports covering the area, and from the VLF-EM data obtained from Columbia Geophysical Services and from a geological reconnaissance conducted over the claim by G. Richmond B.Sc. during November 1980.

PROPERTY

The property consists of one located mineral claim comprised of 20 units. Particulars are as follows:

Claim Name	Record No.	Expiry	Date
RB 4	8 79	May,	1981

Any legal aspects to the property are beyond the scope of this report.

LOCATION AND ACCESS

The claim is located about 15 kilometers southeast of

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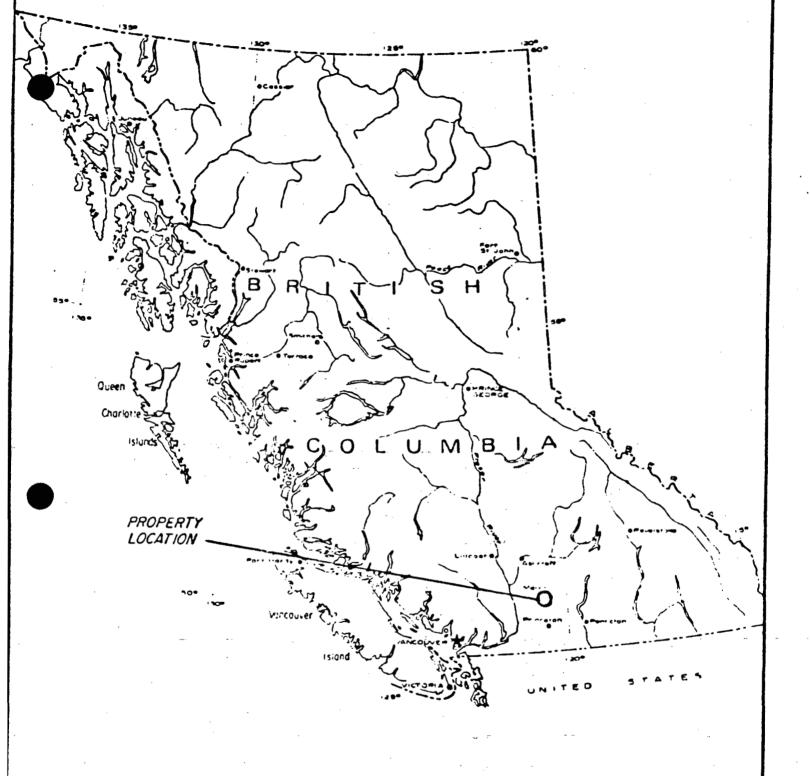
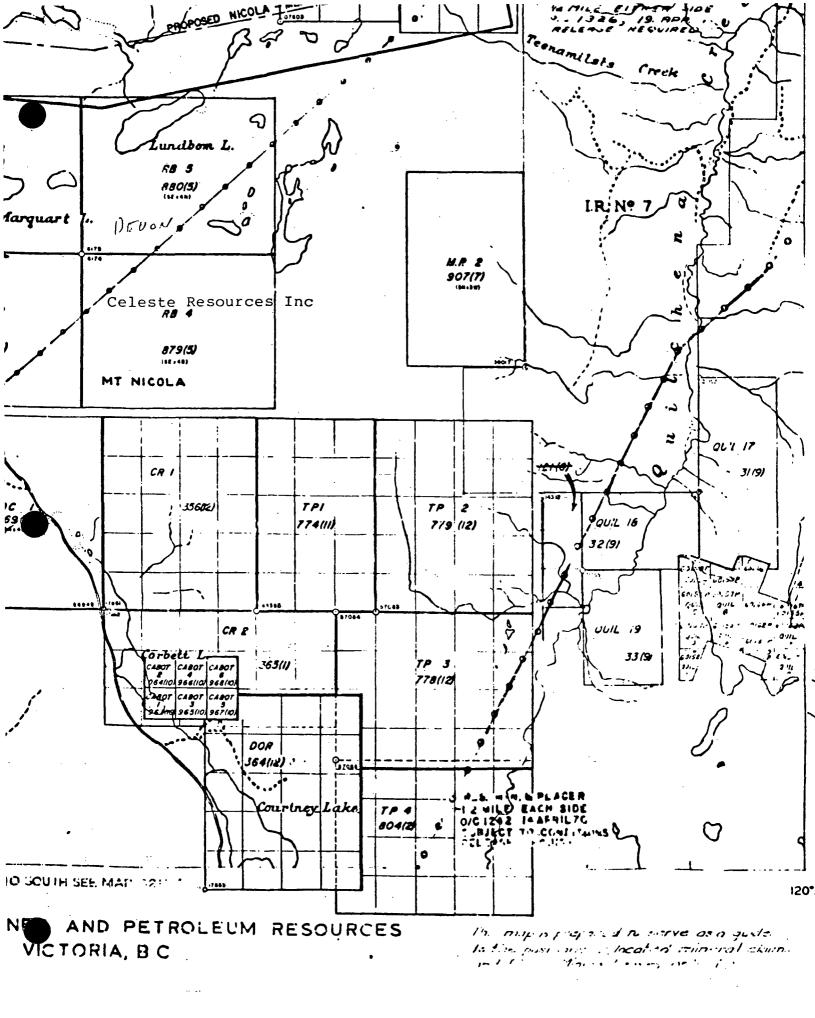


FIG I.

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LOCATION MAP

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Merritt, B.C. The Merritt - Princeton Highway No. 5 passes within 2 kilometers west of the property with secondary roads providing access to most of the property.

TOPOGRAPHY AND TIMBER

The topography is one of gently rolling hills and upland pasture. Elevations range from 1200 meters to 1400 meters. Stands of coniderous trees are scattered throughout the area.

WATER AND POWER

Sufficient water should be available from ponds and streams for all phases of exploration.

A power line passes through the northwest corner of the claim group from the southwest to the northeast.

CLIMATE

Winters are cold with moderate snowfall whereas the summer months are warm to hot with light precipitation.

SUPPBIES

Most supplies would be available from Merritt or Kamloops B.C.

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TRANSPORTATION

Rail service is located in Merritt and good daily truck transportation is available in the area.

HISTORY

There is no known history of work on the property with the exception of a survey grid placed by Columbia Geophysical Services Ltd., in June, 1980, and reconnaissance geological mapping by G. Richmond B.Sc. employed by W.G. Timmins Exploration & Development Ltd., in November 1980.

A deposit of copper mineralization is reported to occur on the CR l claim immediately to the south.

GENERAL GEOLOGY

A northerly trending band of Triassic Nicola rocks ranging from twelve to thirty-five kilometers wide stretches from near the U.S. border in the south to beyond Kamloops Lake in the north. Within the Nicola group, which is comprised of volcanic flows, conglomerates, argillites, tuffs, breccias and limestones, are more recent formations of sedimentary rocks as well as stocks and plugs of Jurrassic Coast and Copper Mountain intrusives. The Nicola Group is host to numerous copper occurrences.

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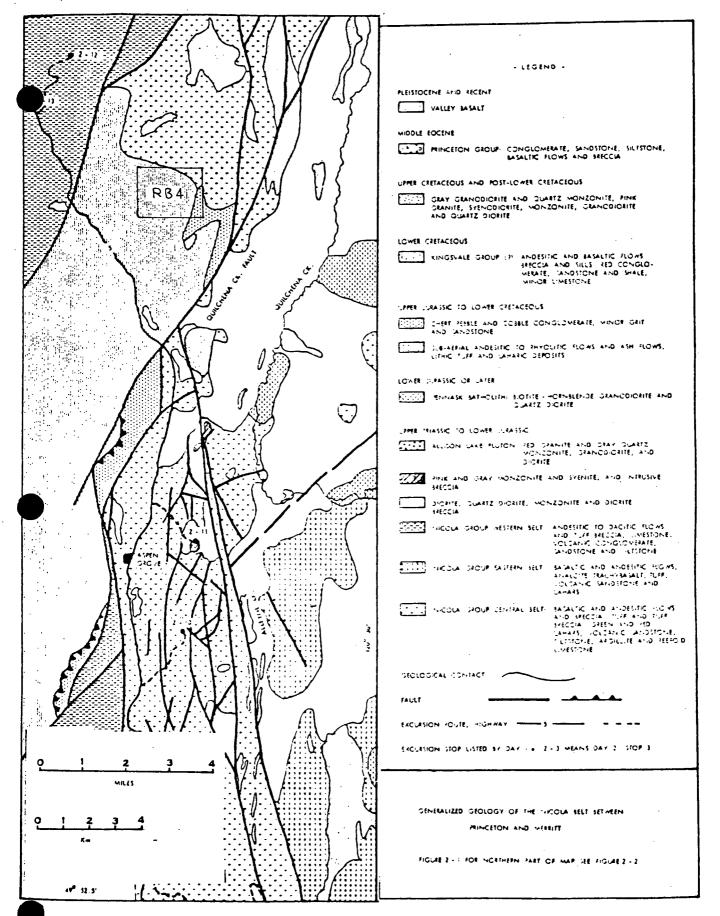
The RB 4 claim is at the northern end of the Aspen Grove Copper Camp where numerous copper showings have been located since the early 1900's.

GEOLOGY OF THE PROPERTY

As mapped by Cockfield, (1947) the area of the RB 4 mineral claim is underlain by volcanic rocks of the Upper Triassic Nicola Group, and by Miocene or earlier sediments of the Coldwater Beds. More recent mapping by Preto (1975), published in Preto and Northcote (1977), indicates that the RB 4 claim is underlain for the most part by rocks of the lower Cretaceous Kingsvale Group. In the northeast section of the claim, rocks of the central belt of the Nicola Group are mapped, and the southeast corner contains an area mapped as upper Jurassic to lower Cretaceous chert pebble and cobble conglomerate. This conglomerate probably reflects a period of uplift and erosion accompanying or following the emplacement of the lower Jurassic or later Pennask Batholith a few kilometers to the east.

A traverse of the property was made on November 6, 1980, by Mr. G. Richmond B.Sc. of W.G. Timmins Exploration and Development Ltd., following a route easterly through the property, then south, then returning to the west. Rocks mapped on this traverse included a number of volcanic flows, tuffs, and breccias, and most notably, in the southeastern part

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Adapted from Preto and Northcote, 1977

of the claim, a prominent cliff-forming chert-breccia or conglowerate, containing a number of clasts of reefoid limestone. This unit is very likely the upper Jurassic lower Cretaceous referred to above. The interpretation of the results of this traverse are generally consistent with the mapping of the district published in Preto and Northcote, (1977). No sulfide mineralization was noted in the course of the traverse. Strikes in the property are generally northerly trending, as is the shearing, which is probably related to the nearby (2km) Quilchena Creek fault, and these fractures are reflected by the pronounced north-south lineation in the VLF-EM results.

GEOPHYSICAL SURVEY PROCEDURE VLF-EM SURVEY

During the months of November - December 1980, a ground VLF Electro-Magnetic survey was conducted over the grid on the RB 4 claim (20 units). The grid lines are spaced at 100 meters and the EM survey was conducted at 200 meter line spacing with 20 meter stations. Three baselines are positioned in a north-south direction with the cross lines running east-west. The survey was carried out by a two man crew of Columbia Geophyscial Services Ltd., Burnaby B.C. using a Sabre Model 27 VLF-EM receiver tuned to 18.6 KHZ Transmitter located at Arlington, Wash. U.S.A. This transmitting station was selected due to its orientation in line with the property lithology and strong field strength.

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The field strength and dip angle was measured at each survey station and recorded in the field. A Fraser filter method was applied to the dip angle data at 20 meters, 40 meters and 60 meters to indicate depth, and the results plotted on map scale 1:5000 and contoured at +5 degree intervals, as only the positive anomalies have significance in outlining EM conductors. The survey totalled 25 line km of readings and 50 line km of grid.

MAGNETOMETER SURVEY

A magnetometer survey was not carried out over the claim due to the magnetic storm activity.

ANALYSED SURVEY DATA

The EM data was first plotted in graph from:

- (a) Dip angle data to show (cross over) conductors.
- (b) Filtered data at 20 meter intervals to show near surface conductors.
- (c) Filtered data at 40 meter intervals to show conductors at depth.
- (d) Filtered data at 60 meter intervals for greater depth.

The VLF-EM survey has outlined a series of parallel north - south trending anomalies most easily observed on the 40 meter Fraser filter map.

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From comparision with the geologic sketch map prepared by G. Richmond B.Sc., the EM anomalies are mapping andesitic flows, tuffs and siltstones, contact zones, and shear zones.

No definite target areas are apparent from the survey without the advantage of additional magnetic and geological detail.

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CONCLUSIONS AND RECOMMENDATIONS

The RB 4 mineral claim held by Celeste Resources Ltd and located about 15 km southeast of Merritt, B.C. is mainly underlain by rocks of the lower Cretaceous Kingsvale Group. Nicola Group rocks are mapped in the northeast sector of the claim and Jurassic Cretaceous chert pebble and cobble conglomerate occur in the southeast corner. Intrusive plugs and stocks occur in proximity to the claim. Rocks mapped by G. Richmond, B.Sc. in November, 1980 on a traverse through the property include volcanic flows, tuffs and breccias and chert-breccia or conglomerate.

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Veinlets of disseminated copper mineralization were noted in andesitic volcanics in the eastern section of the RB 5 claim adjoining the property to the north and a zone containing

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Additional magnetic and geologic data is required to further assess the property.

Respectfully submitted,

W.G. Timmins P. Geol.

W.G. Timmins Exp & Dev Ltd

T. Rolston.

Columbia Geophysical Services Ltd

May 8, 1981.

Columbia geophysical supplies Itd.

7050 HALLIGAN STREET, BURNABY, B.C. V5E 1R6

Phone: (604) 526-1732 or (604) 687-6671

CERTIFICATE OF QUALIFICATIONS

I, Tom Rolston, of 7050 Halligan Street, Burnaby, B.C. have actively been engaged in my profession since 1953 and state as follows:

- 1. Il years with the R.C.A.F. as Instrument and Electronic Technician with crew supervisory capacity in various electronic and instrumentation systems.
- Two years with Kerr-Addison Mines Ltd. as Electronic Technician servicing, repairing and maintaining various type of geophysical instruments, with two seasons as Field Supervisor and Geophysical Instrument Operator in mining exploration, including airborne and ground geophysical surveys, geochemical surveys, geophysical and geochemical drafting and mapping.
- 3. 10 years with Geotronics Surveys Ltd. as Field Supervisor of geophysical and geochemical surveys and Instrument Operator of various geophysical instruments such as airborne and ground systems magnetometer, electromagnetic, gravity meter, self-potential meter, scintillometer and induced polarization.
- 4. The past 15 years contracting geophysical survey in close association with mining engineers for various mining companies.
- 5. President and Manager of Columbia Geophysical Services Ltd.

DATED at Burnaby, British Columbia this. I day of JAW 198/.

Fom Rolston, Geophysical Operator and Project

Tom Rolston, Geophysical Operator and Project Geophysicist For: Columbia Geophysical Services Ltd.

CERTIFICATE

- I, WILLIAM G. TIMMINS maintaining offices at 502-900- 6th Avenue S.W. Calgary Alberta do hereby certify that:
- 1. I am a geologist having been practising my profession for seventeen years.
- 2. I am a graduate of the Provincial Institute of Mining, Harleybury, Ontario, and have attended Michigan Technological University, Houghton, Michigan.
- 3. I am a member in good standing of the Association of Professional Engineers of British Columbia, and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
- 4. I have no interest direct or indirect in the property or securities of Celeste Resources Ltd., nor do I expect to receive any such interest.
- 5. This report is based on private and government reports, a geological reconnaissance conducted by G. Richmond of W.G. Timmins Exploration and Development Ltd in November 1980, and an analysis of VLF-EM data from a survey conducted by Columbia Geophysical Services Ltd during November December, 1980.

Dated at Calgary, Alberta the 8th day of May, 1981.

W.G. Timmins P. Geol. Consulting Geologist.

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-W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

REFERENCES

- Cockfield, W.E. Geology and Mineral Deposits of Nicola Map Area, British Columbia. Geological Survey of Canada Memoir 249, 1961.
- Sookochoff. L. Geological Report on the D'or Property for Cornwall Petroleum and Resources Ltd., November 30, 1978.
- Tough. T.R., P. Eng., Geological Report on the TP 1
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- Preto. V.A. and Northcote. K.E. Geological Association of Canada, Society of Economic Geologists, Joint Annual Meeting, Field Trip No. 5 Nicola Volcanics Plutons and Mineral Deposits, April 27 May 1, 1977.
- Sookochoff L.P. Eng Geological Report on the Nicola Property for Brigade Resources Ltd, April 28th, 1980.
- Timmins w.G. P. Geol. Geophysical Report on the RB 2 claim,
 Nicola Mining Division, British Columbia, for
 Brigade Resources Ltd. February 22, 1981.

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Tough. T.R. P. Eng. - Geological Report on the CR No. 2 claim, Nicola Mining Division, British Columbia for Cameron Resources Ltd., October 10, 1978.

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APPENDIX I

INSTRUMENTATION & THEORY

Magnetic Survey

The magnetic data was detected, using a nuclear free precession proton magnetometer manufactured by Sabre Electronic Instruments Ltd. of Burnaby B.C. This measures the total count of the earth's magnetic field intensity with a sensitivity of one gamma. The data is recorded on a 12 cm analog strip chart.

Only two commonly occurring minerals are strongly magnetic; magnetite and pyrrhotite. Hence magnetic surveys are used to detect the presence of these minerals in varying concentration. Magnetic data are also useful as a reconnaissance tool for mapping geologic lithology and structure, since different rock types have different background amounts of magnetite or mafic minerals.

VLF-Electromagnetic Survey

A VLF-EM receiver manufactured by Sabre Electronic Instruments Ltd. of Burnaby BC. was used for the VLF-EM survey. The transmitter used was NLK Arlington (Seattle) Washington, U.S.A. transmitting at 18.6 KHz. This station transmission was used due to its orientation in line with the geological structure on this property and very good signal strength. Measurement taken on this survey was variation in the horizontal component of the signal field strength. Because of its EM frequency,

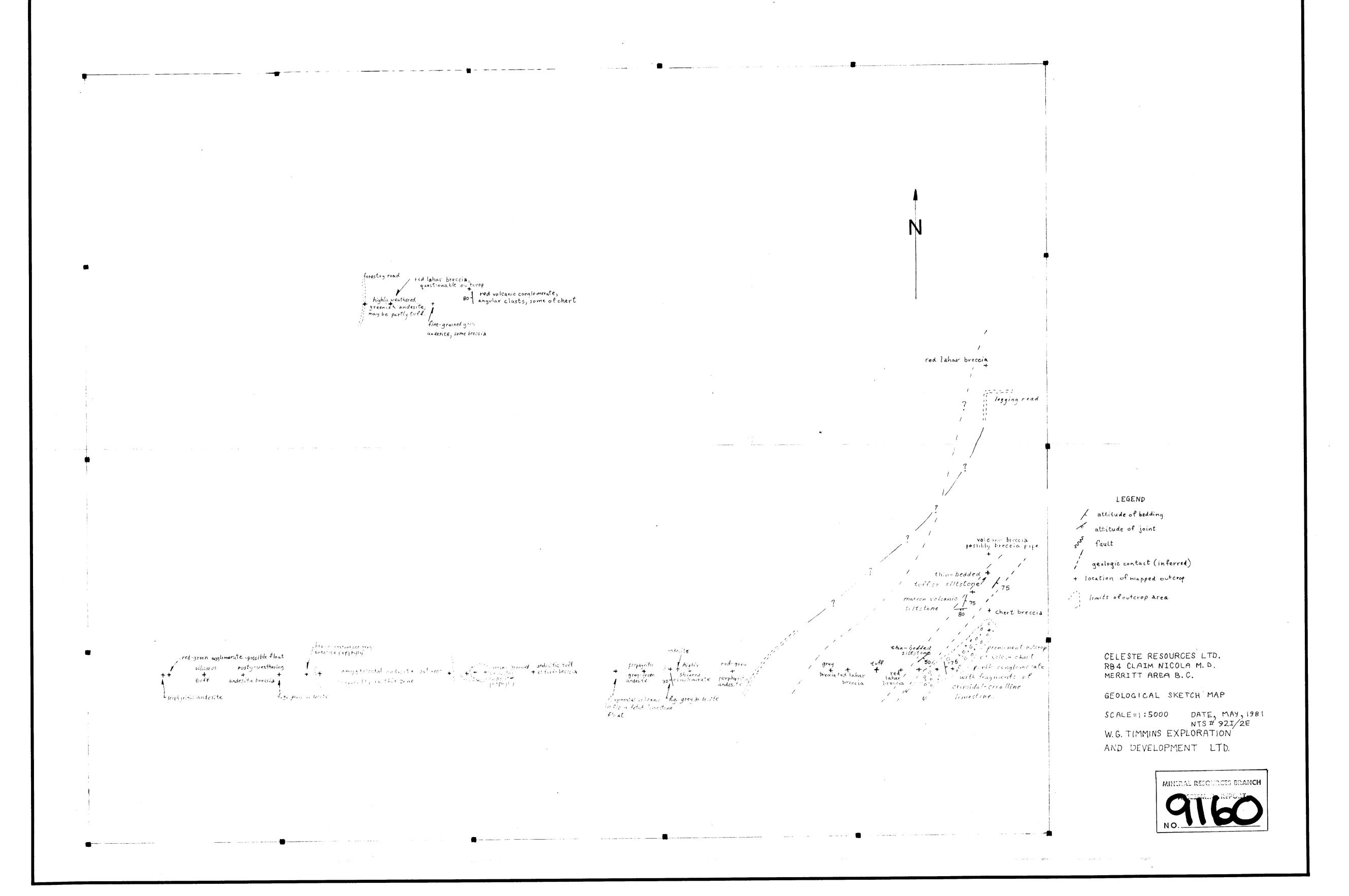
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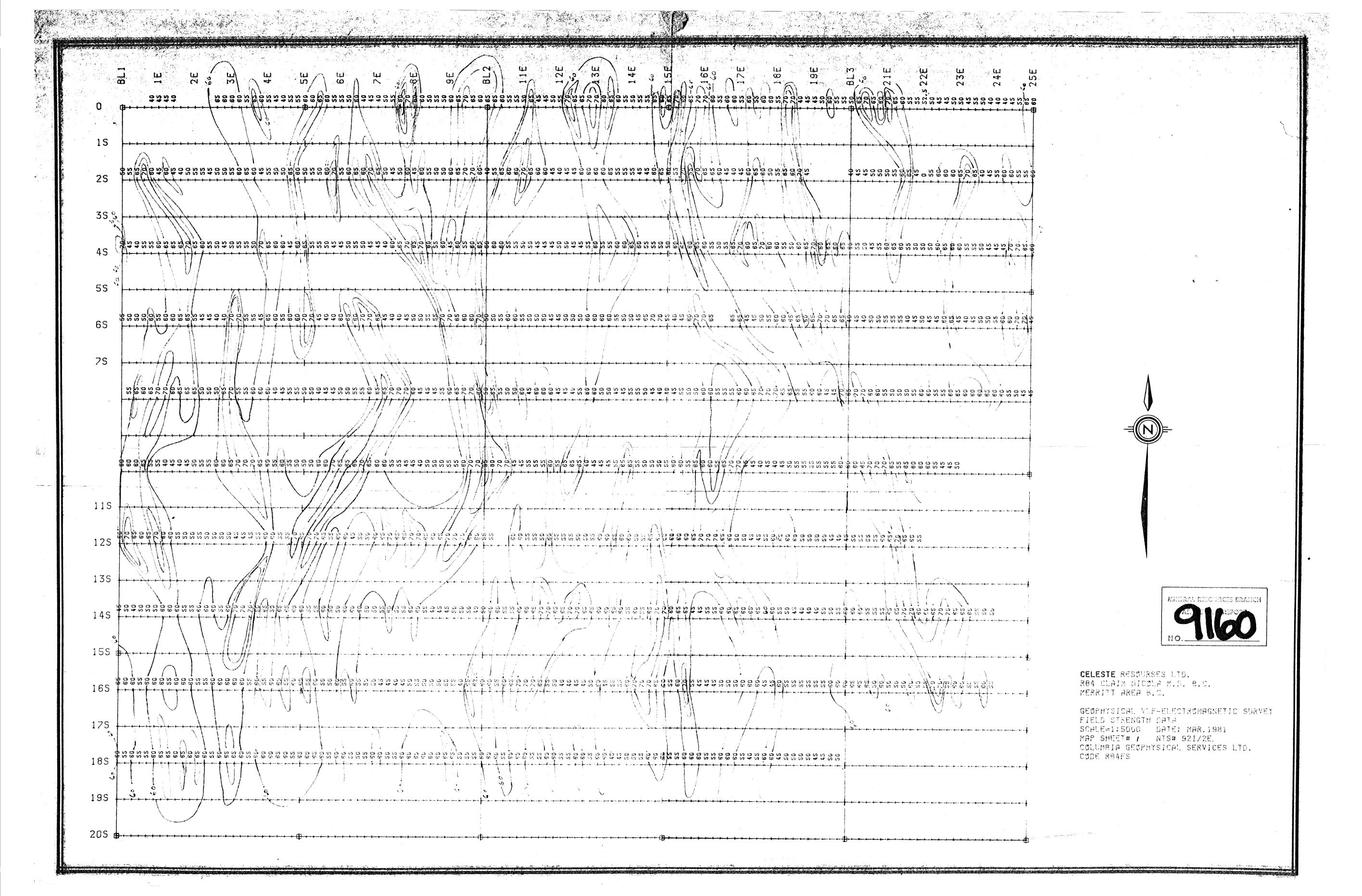
the VLF-EM can pick up conductors caused by electrolyte-filled fault or shear zones and porous horizons, graphite, carbon-aceous sediments, lithological contacts as well as sulphide bodies.

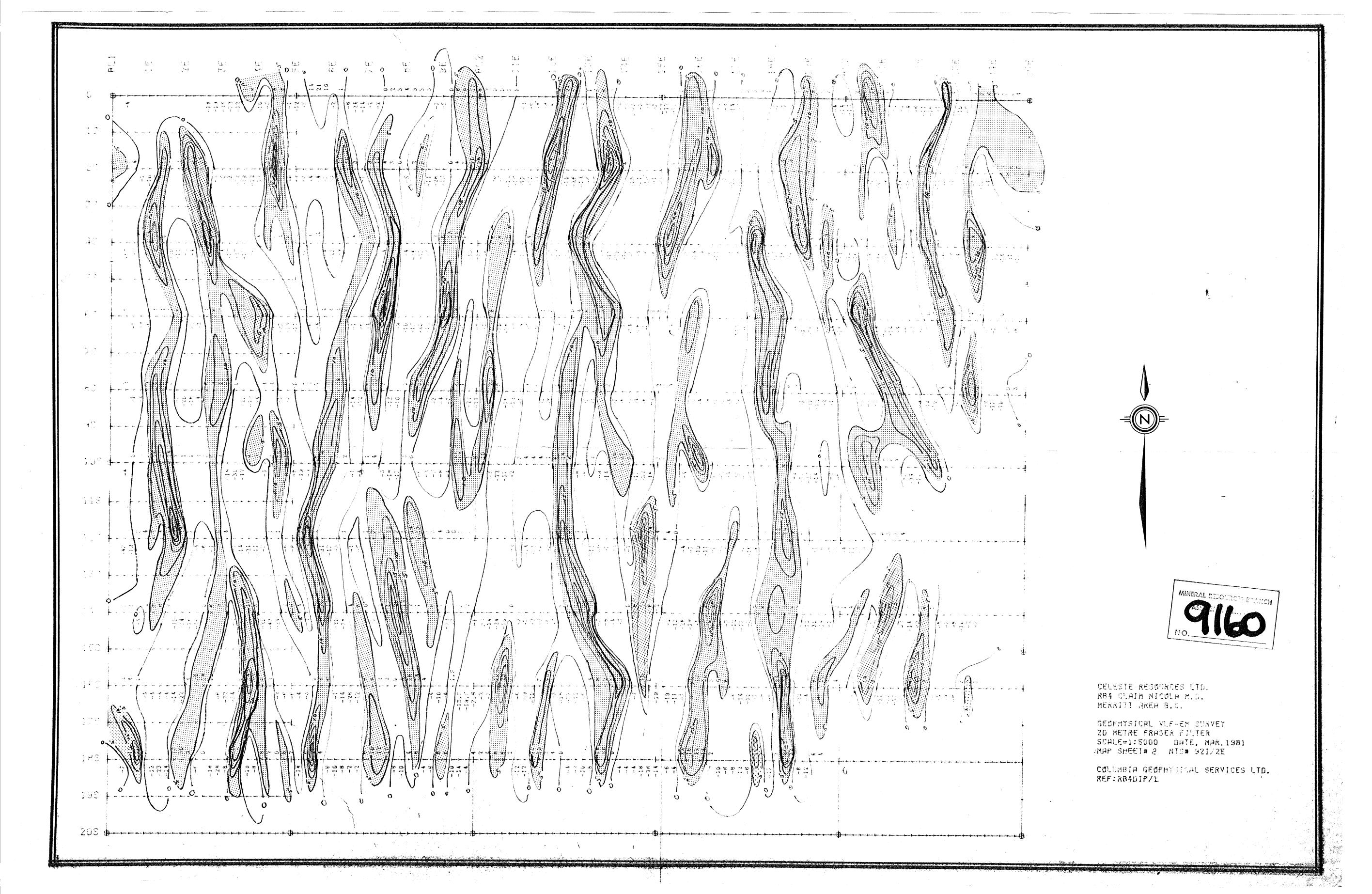
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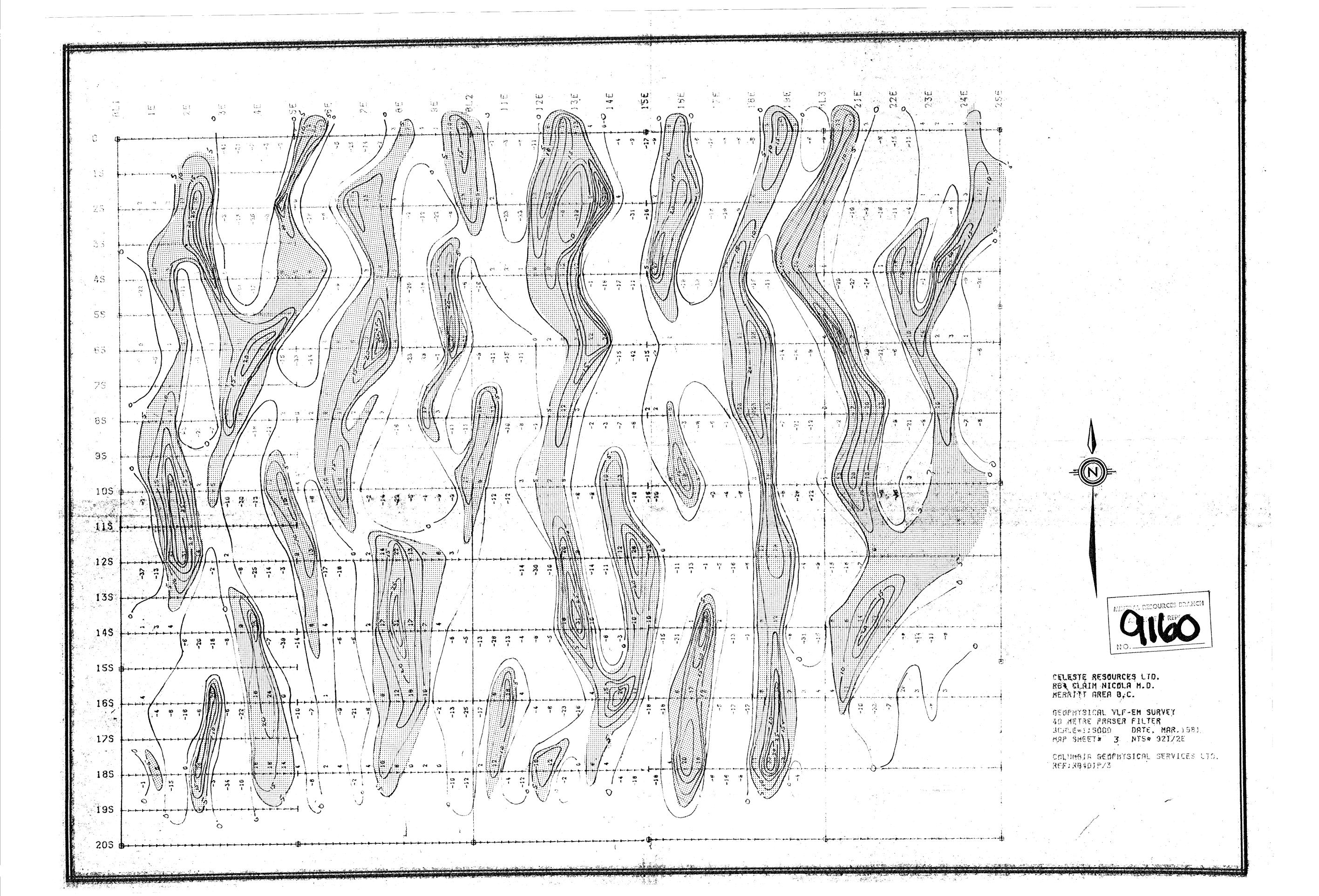
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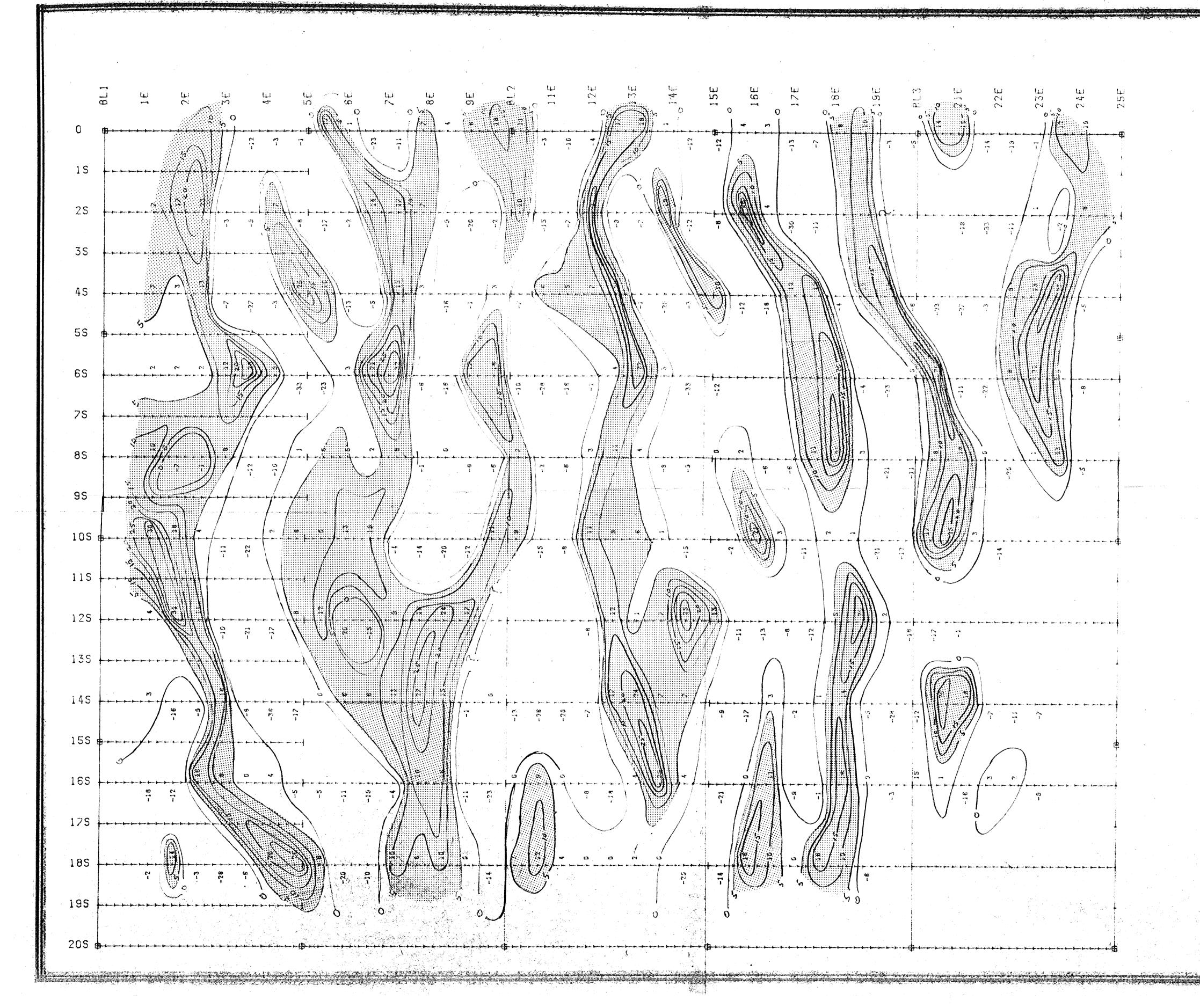
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL















CELESTE RESOURCES LTD.
RB4 CLAIM NICOLA M.D.
MERRITT AREA B.C.
VLF-EM SURVEY
60 METRE FRASER FILTER
SCALE=1:5000 DATE, MAR. 1981
MAP SHEET# 4 NTS# 921/2E

CCLUMBIA GEOPHYSICAL SERVICES LTD. REF: RB4D1P/3.