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Cominco Exploration Pty. Ltd.

Report for Tasmanian Mines Dept.

Title Six Monthly Report EL 22/73
St. Dizier, Tasmania

Author D.C. Simpson Date 16.6 74

Ref 74/3.

C2898/7/73

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Subject: Progress Report, Exploration Licence 2/73, ST. DIZIER
and Programme for coming 6 month period
Period: 6 months ending June 16, 1974, and programme for 6 months to Dec 16 1974
Date: June 14 1974
By: D.C. Simpson

1. SUMMARY

A summer exploration programme has been completed on EL 22/73 at St. Dizier, comprising geological mapping, geochemistry, geophysics, HMB drilling and a minor amount of trenching, based on a regional grid and on a detail grid over the known cassiterite mineralisation at St. Dizier.

One geologist was based in Zeehan in charge of the programme on this licence, and associated work on EL 47/71 at Queen Hill. An assistant geologist was called in as required. Supporting staff consisted of 3 summer vacation students for the period December to March, and after that time, a technician and two field assistants from March until the beginning of June. A CEPL geophysicist supervises the various geophysical programmes at St. Dizier.

2. WORK PROGRAMME

a) Geological Mapping

Regional mapping around the granite contact/margin did not reveal any further occurrences of limey rocks which appear to be the host of the St. Dizier sulphide cassiterite mineralisation.

Geological mapping of the local grid was completed. Boundaries mapped by Placer and Minops were confirmed, but because of poor outcrop of the host rock sequence, little detail could be added in this zone.

Plotting, correlation and interpretation of all data is being carried out as a basis for the winter exploration programme.

b) Relogging of Drill Core

Relogging and plotting of Minops and Placer drill core took place, and is included in the evaluation and interpretation of the summer programme.

c) Geophysics

An SP survey was completed on 19 cross lines using a station spacing at 12.5 metres intervals. The strong SP anomaly indicated by Minops to the south of the Laffer leases was extended and delineated, and is now interpreted as two anomalies, one elongate with a NW trend, the other irregular (see Plate St.D.7).

A previously undetected anomaly (-700 mv max) was located at 20050E, 19950N, in the vicinity of high auger Sn values located by Placer.

These large SP anomalies are now believed to be due to the presence of very finely divided graphite in a shale-quartzite sequence. One hole, SD-2, drilled under the first mentioned SP anomaly, detected only trace amounts of sulphide, ie less than 2%.

Other lower level anomalies detected on the grid are yet to be tested by trenching.

A magnetic survey, using a M700 fluxgate magnetometer, was conducted over the area shown on Plate St.D8.

The magnetic contour plan shows a lenticular anomaly extending approximately east-west across the survey grid, with a pronounced inflection in the trend at the centre of the grid. The anomaly may be described in three segments:

- i) the western portion of the trend, where the anomaly is quite sharp and narrow, is indicative of a small magnetite content at shallow depth;
- ii) the central portion of the trend where the anomaly is broad and of such intensity as to be only due to outcropping magnetite; and
- iii) the eastern portion is a much broader anomaly with greater depth to the top of the source.

The continuity of the anomaly can be assumed to represent the skarn material mapped in the area, with superimposed contour closures due to string concentrations of magnetite.

Cassiterite mineralisation coincides with the central strongly magnetic zone, and also occurs in the deep lead overlying the western magnetic trend.

The interpreted magnetite content of the eastern anomaly has not been intersected by drill hole M2 due to the anticipated 60 metres depth to the top of the source. Dip reversals in the western area can be inferred from the magnetic data. Quantitative interpretation of the magnetic data has been undertaken with interesting results, and further analysis is in progress as time permits.

A gradient IP survey carried out by Siegel Associates, located several chargeability anomalies 3-4 times background, which suggest sub-parallel trends to the host rock. Anomalies appear to approximate known Sn-bearing sulphides close to the granite. The high chargeability and low sensitivity anomalies at 20000E and 20000N suggest that this sulphide body has continuity towards the east.

d) Geochemistry

A Proline auger was used to collect geochemical samples, and was found to be a satisfactory sampling tool in this type of country. Hand augering was used in areas inaccessible to the Proline.

Samples were assayed for Sn, As, Bi and Ag by emission spectrograph. Ag, As and Bi values are all low, and considered insignificant.

Bedrock geochemistry confirmed high background Sn values in the granites found by Placer and Minops (eg: line 19900E - 20000E and south of the base line shows values 50ppm - 500 ppm Sn close to the granite contact near known mineralisation.)

Bedrock geochemical values of up to 10,000 ppm Sn were obtained at several localities and these are prime targets for trenching during the winter.

Results indicate a broad zone of high tin values (100-300 ppm Sn) within the andalusite shales and granites, with values falling to 30 ppm Sn in quartzites to the north. Predictable values of 5000-10000 ppm Sn were obtained in the vicinity of the main mineralised body. Geochemical results indicate mineralisation extends due west from the main body rather than WNW as suggested by the known position of the serpentinite/skarn horizon.

Results just to hand show high Cu and Zn values (Cu to 1100 ppm and Zn to 19000 ppm) in heavily weathered shales from a trench located at 20100E 19900N. The significance of these results has not yet been evaluated.

e) Drilling (HMB rig)

A drilling programme using an HMB rig was designed to extend geological knowledge of the known mineralisation.

SD-1, sited over the No.2 body, (near Laffer's hut) intersected tourmalinised quartzite, and granite, both containing minor pyrite and arsenopyrite. Minor pyrrhotite was intersected between 42.7 m and 48.8 m. Sericitised and kaolinised tourmaline granite was intersected between 18.3 and 25.9 metres, with both contacts heavily sheared. Assays are expected to confirm low tin values.

SD-2 was completed at 38.4 metres in andalusite shales, with visible 1-2% pyrite in joints and fractures and minor disseminated pyrite. The hole was designed to test a large order (-500 mv) SP anomaly. As mentioned under "Geophysics" the anomaly is now considered to be due to the presence of graphite.

SD-3 was designed to test the magnetic anomaly under the St. Dizier deep lead. It was stopped by drilling difficulties in granite sand at 17.1 metres.

SD-4 was collared in a second attempt to test the deep lead. The hole terminated at 29.3 metres in shale due to drilling difficulties.

SD-5 was designed to test the easterly extent of the pyritic cassiterite at 20010E 19975N. No significant mineralisation was intersected. Drilling difficulties terminated the hole at 31.7 metres.

No further HMB drilling was carried out or is planned in the coming programme.

f) Trenching

A trenching programme was planned, but only one trench excavated due to access problems.

The one trench on line 20100E over a geochemical anomaly revealed little mineralisation. Pyritic nodules occur in weathered, slightly pyritic shales close to the granite contact further north in the same trench. Assay results from trench samples are mentioned hereunder.

A costean was dug across the pyritic cassiterite body at 20010E 19975N revealing mineralisation over an area approximately 15 metres x 20 metres. Samples from this costean were assayed for Cu and Sn by XRF. The bulk of the copper values are about 0.15% Cu with tin values ranging from 0.13% to 1.52% Sn with the most common values of 1.4% Sn.

3. EXPENDITURE

Geology	\$	2,318
Survey		7,001
Geophysics		4,702
Geochemistry		7,709
Drilling		6,357
Tenure		755
Option payments, legal		4,846
	\$	<u>41,688</u>
		=====

Submitted: *D.C. Simpson* for.
 D.C. Simpson
 Geologist

cc: Amdex Mining Ltd.

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ST. DIZIER

EL 22/73

WORK PROGRAMME FOR COMING SIX MONTHS

This programme is not complete as it partly depends on the evaluation of the summer programme which is in progress.

1. Contract Drilling

Two holes are initially proposed, one to test the strong IP anomaly at 20000E 20000N; the second to test the magnetic anomaly centred at 20550E 20025N. Drilling is expected to commence early in July. Supervision is included in the budget of

\$12,000

2. Regional Geophysical Surveys

These are being discussed at present. Proposed surveys include IP and magnetics over the regional grid.

\$10,000

3. Trenching

Trenching is planned to test geochemical anomalies. Supervision is included.

\$ 2,000

4. Sampling and Assaying

Sampling and assaying of drill core from the summer programme is planned for completion during July.

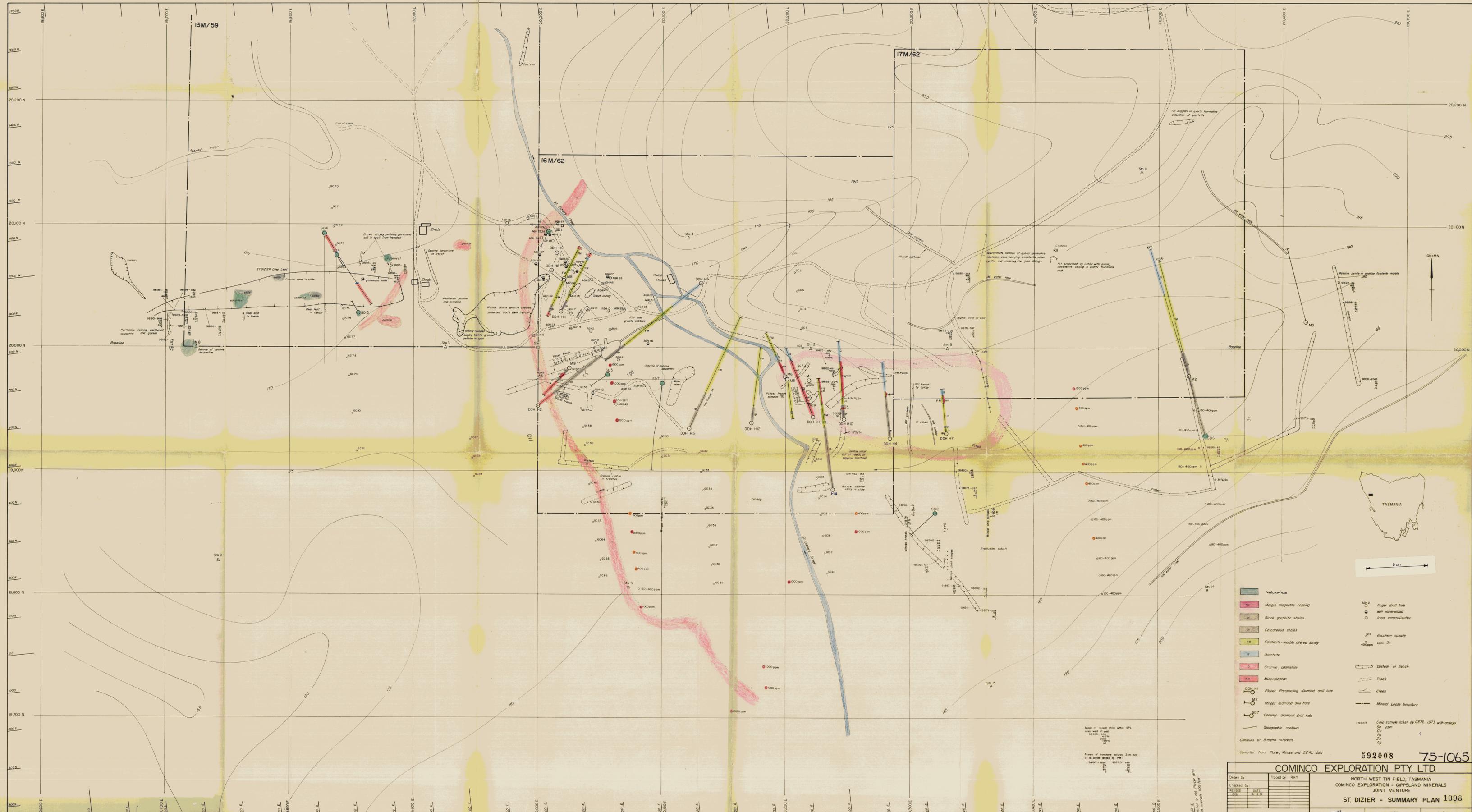
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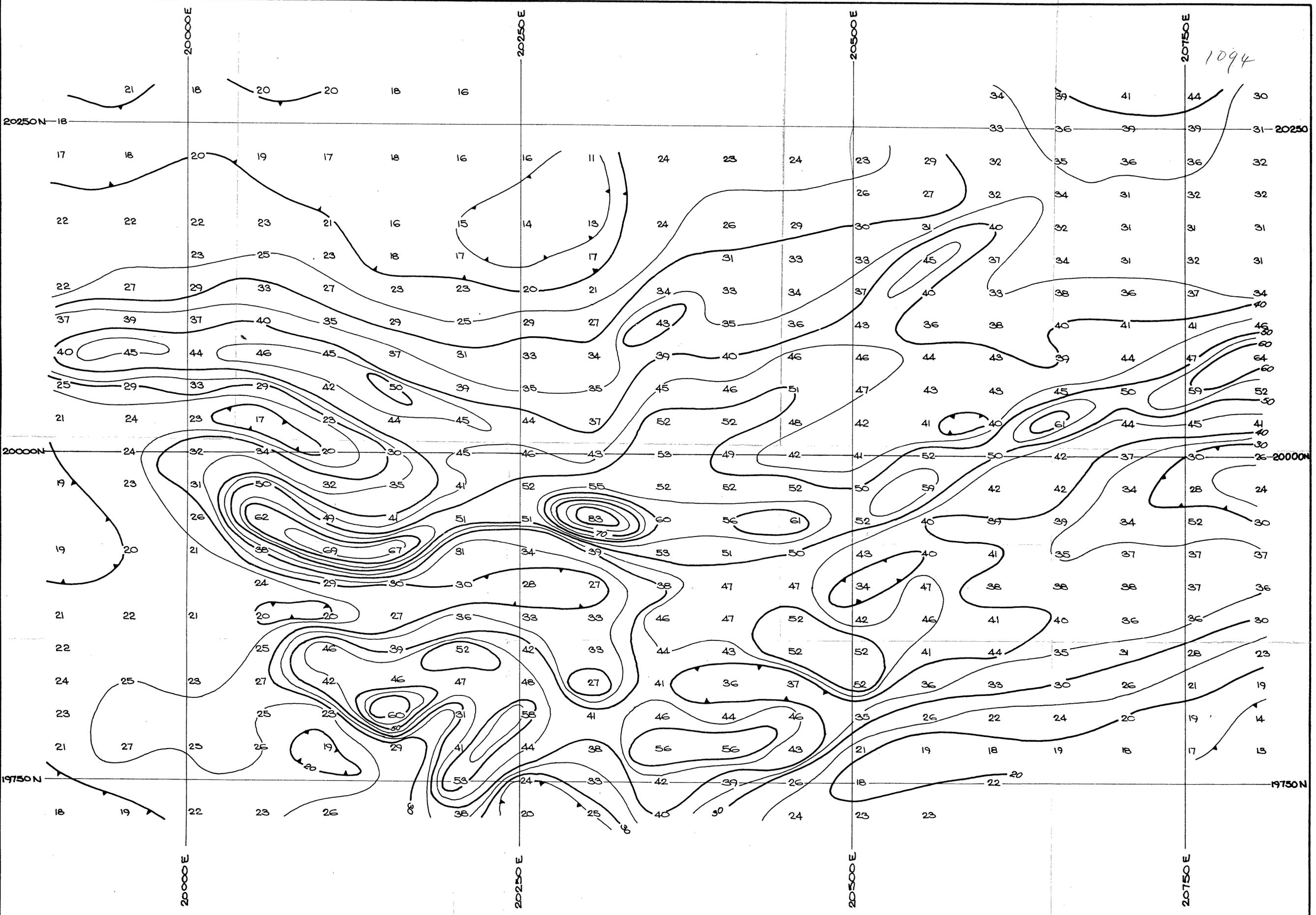
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ATTACHMENTS

<u>PLATE NO.</u>	<u>TITLE</u>	<u>SCALE</u>
St.D. 1a	St. Dizier - Summary Plan	1:1000 ²⁵⁰⁰
St.D. 9	St. Dizier. Local Grid Bedrock Geochem Results Tin p.p.m.	1:2500
St.D. 5	St. Dizier Prospect Contours of Chargeability for Gradient Array	1:1000
St.D. 6	St. Dizier Prospect. Contours of Apparent resist- ivity for Gradient Array	1:1000
St.D. 7	St. Dizier Prospect. Self Potential Contours	1:1000
St.D. 8	St. Dizier Prospect Δ Z Magnetic Contours	1:1000

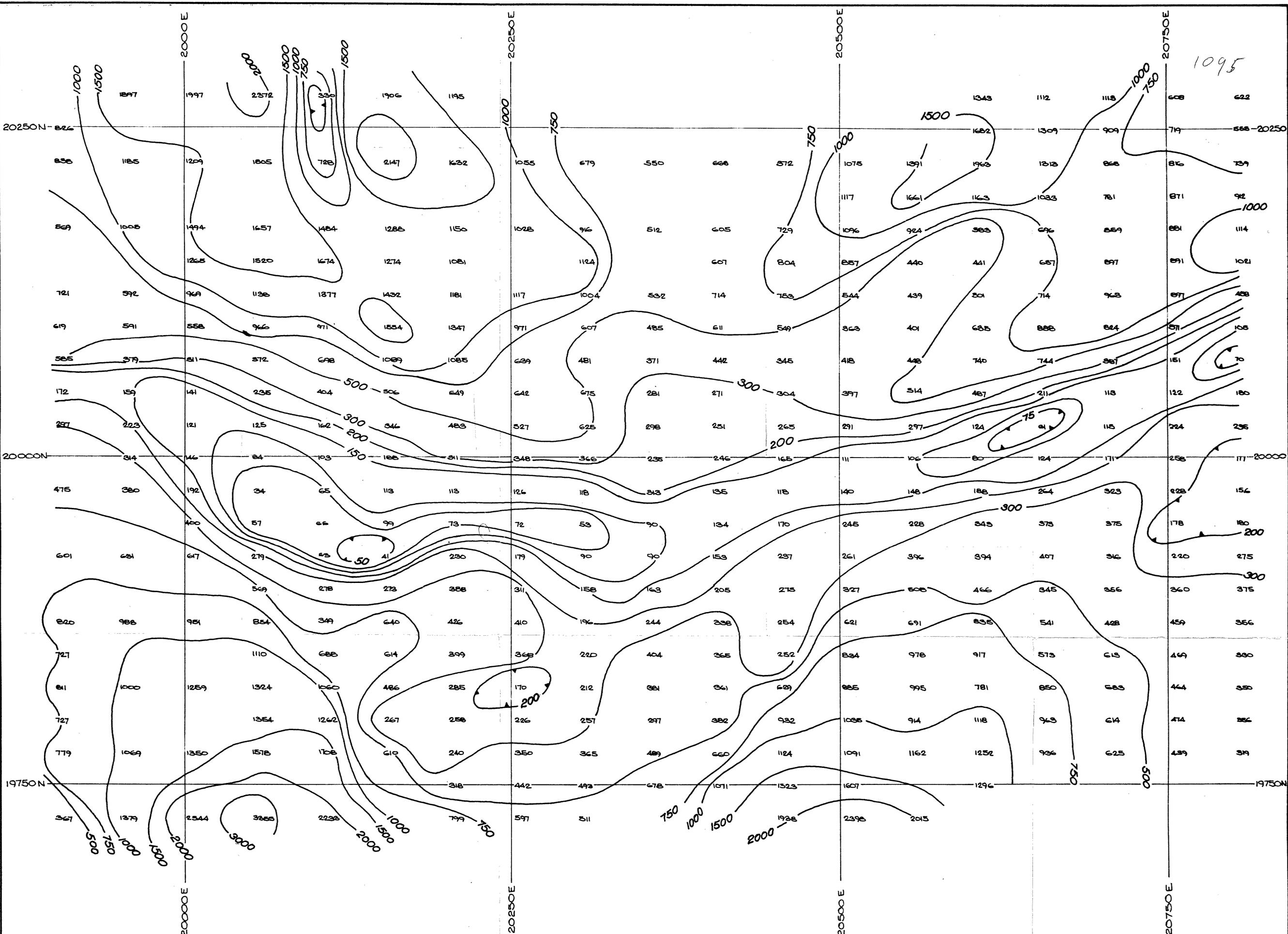


- Volcanics
- Margin magnetite capping
- Block graphitic shales
- Calcareous shales
- Forsterite-marble altered locally
- Quartzite
- Granite, adamellite
- Mineralization
- Placer prospecting diamond drill hole
- Mins diamond drill hole
- Cominco diamond drill hole
- Auger drill hole
- well mineralized
- trace mineralization
- GCM
- Geochron sample
- 400ppm
- 800ppm
- 1600ppm
- 3200ppm
- 6400ppm
- 12800ppm
- 25600ppm
- 51200ppm
- 102400ppm
- 204800ppm
- 409600ppm
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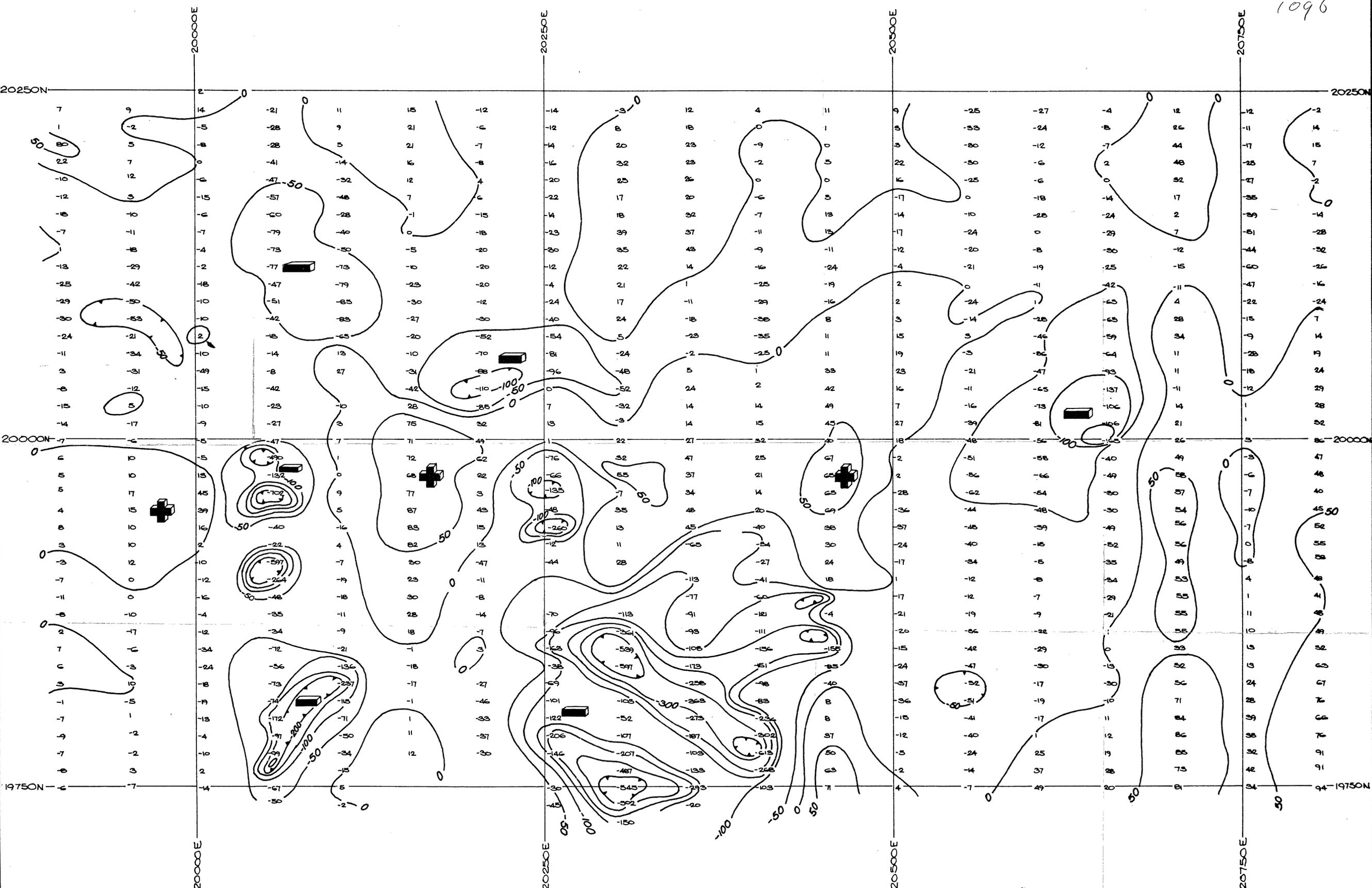
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Contour interval logarithmic

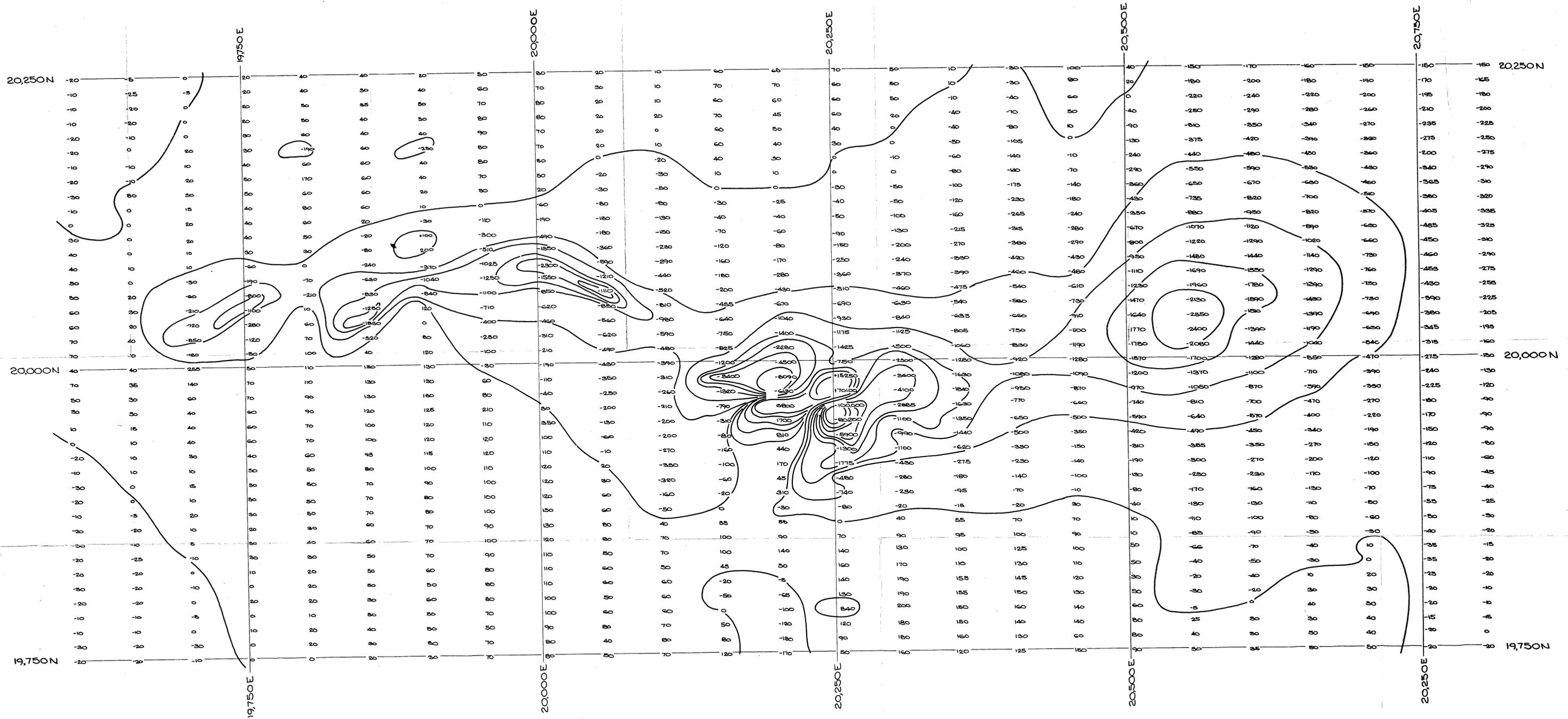
COMINCO EXPLORATION PTY. LTD.				74-1018
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Contour interval : 0
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 -300
 -500 mv

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Contour Interval: 500 gammas to 2000 γ thence logarithmic

Recorded with M700 fluxgate Magnetometer, i.e. negative values indicate an increase in magnetic intensity.

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