

2016

REPORT
ON THE
REGA MINERAL GROUP
1 - 27
OMINECA M.D.
for
MAGNETRON MINING LTD. (np1)

A. Geophysical Survey

B. Polished Sections Report

GOVERNMENT AGENT
RECEIVED
OCT 28 1969

SMITHERS, B. C.

GEOPHYSICAL SURVEY

The following is a report based on field work
done in the period,

August 28 to October 18, 1968

by

Charles A. Ager, B.A.Sc.
29th April, 1969

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2016 MAP.....

GEOPHYSICAL EXPLORATION

THE GEOPHYSICAL METHODS SERVE TO DETECT DISCONTINUITIES OR CHANGES IN CHARACTER OF CONCEALED GEOLOGICAL FORMATIONS, AND TO OUTLINE MINERAL BODIES OF CERTAIN CHARACTERISTICS CAPABLE OF PRODUCING AN ANOMALY. (A GEOPHYSICAL ANOMALY MAY BE DEFINED AS A GROUP OF OBSERVED PHYSICAL VALUES OF EITHER HIGHER OR LOWER INTENSITY THAN THOSE OF THE SURROUNDING AREA.) THERE IS NO FIXED TECHNIQUE WHICH IS QUANTITATIVE ENOUGH SUCH THAT IT WILL INDICATE THE PRECISE NATURE AND AMOUNT OF A GIVEN METAL OR MINERAL WHICH MAY BE PRESENT.

GEOPHYSICS AIDS IN THE DISCOVERY OF FAVOURABLE MINERAL FORMATIONS. TO PROVE THE COMMERCIAL VALUE OF THESE FINDS, A COMPREHENSIVE DRILLING PROGRAM IS ESSENTIAL.

DATA

AN AREA WAS CHOSEN ON REGA CLAIM #2, IN THE 1968 FIELD SEASON AND TESTED WITH:

- (Schedule 1) A. SABRE MKII, MAGNETOMETER,
- (Schedule 2) B. ELECTROMAGNETIC HORIZONTAL-VERTICAL LOOP SYSTEM; AND THE RESULTS OF THESE TESTS WERE CORRELATED WITH SULPHIDE MASSES AND GRAIN CONTACT, IN :
- (Schedule 3) C. REPORT ON POLISHED SECTIONS, A. J. SINCLAIR, P. ED

ANALYSIS

PYRRHOTITE APPEARS TO BE THE SINGLE SULPHIDE WITH CONTINUOUS GRAIN CONTACT AND THUS THE ONLY MINERAL ABLE TO REACT TO ELECTROMAGNETIC INDUCTIONS. ANOMALOUS RESULTS FROM SULPHIDES ARE PROBABLY ATTRIBUTED TO THIS MINERAL.

RECOMMENDATION: LARGE SCALE USE OF MAGNETOMETER

- (1) TO DELINEATE PYRRHOTITE AND THUS THE ASSOCIATED MINERALS,
- (2) TO AID IN THE MAPPING OF GEOLOGICAL STRUCTURES,
- (3) IN CONJUNCTION WITH KNOWN DRILLING TARGETS AND THE PROPERTY AREA.

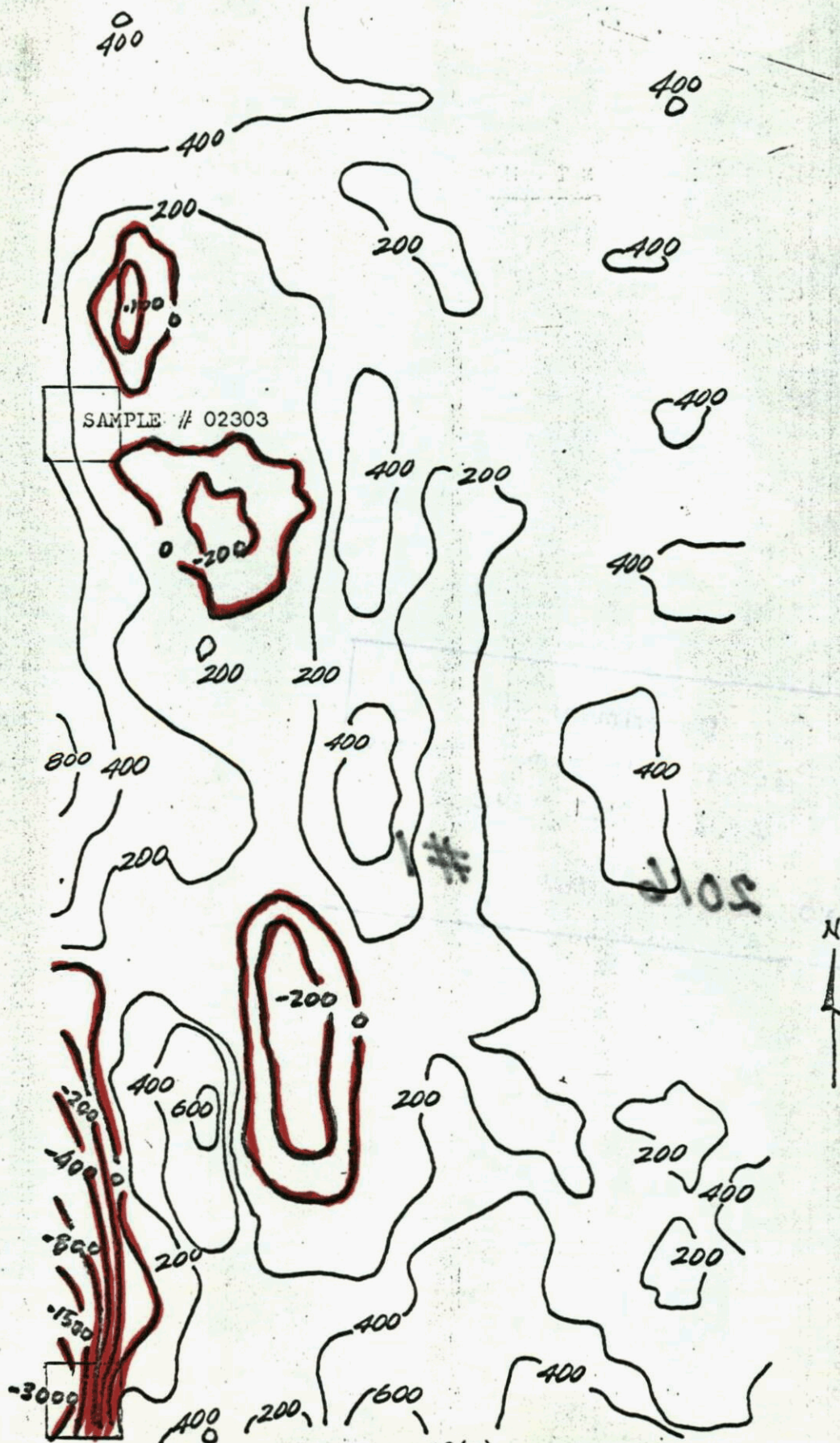
Schedule 1

MAGNETOMETER SURVEY

THEORY THE MAGNETOMETER MEASURES THE STRENGTH OF THE VERTICAL COMPONENT OF THE EARTH'S MAGNETIC FIELD. ANY CHANGES IN THIS FIELD, CAUSED BY VARIATIONS IN THE MAGNETIC PROPERTIES OF LOCAL ROCK, CAN BE DIRECTLY MEASURED WITH THE MAGNETOMETER. ORE THAT OCCURS IN CLOSE ASSOCIATION WITH THE MAGNETIC MATERIAL IS ALSO AMENABLE TO DIRECT DISCOVERY

LOCAL MAGNETOMETER SURVEY

(EQUIPOTENTIAL LINES IN "GAMMAS")

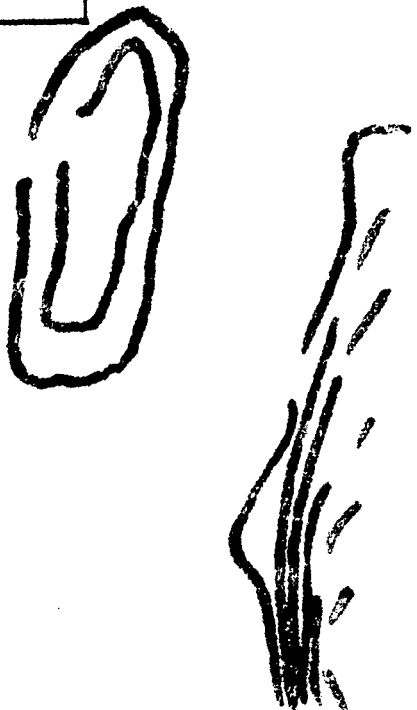


SAMPLE # 02304

13(a)

FIGURE A

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **2016** MAP **#1**



BY MAGNETIC MEANS.

APPLICATION: SABRE MK II MAGNETOMETER
 20 GAMMAS SENSITIVITY
 0 - 100, 000 GAMMA RANGE
 NON-DIRECTIONAL; SELF LEVELING

OBSERVATIONS: AN ANOMALY WAS FOUND DURING THE LOCALIZED SURVEY WITH RESIDUAL VALUES RANGING FROM +1, 000 GAMMAS TO -3, 380 GAMMAS. A MAP SHOWING THE VARIATION IN STRENGTH OF THE MAGNETIC ANOMALY WAS PLOTTED. (RE: FIGURE A, PAGE 13(a)) EACH LINE JOINS ZONES OF EQUAL MAGNITUDE. MOST INTERVALS REPRESENT IN FIELD COMPONENTS OF 200 GAMMAS. NORMAL GROUND STRENGTH IS TAKEN AS THE ZERO, AND READINGS ABOVE ZERO (POSITIVE) ARE RECORDED AS BLACK LINES AND AREAS ZERO AND BELOW (NEGATIVE) ARE MARKED IN RED.

 THE GREATEST STRENGTH OF THE ANOMALY IS IN THE SOUTH-WEST CORNER AND BEYOND ITS BOUNDARIES. LESSER NEGATIVE ANOMALIES OCCUR IN THE WESTERN HALF OF THE SURVEY. NOTE RELATIONSHIP OF SAMPLES #02303 AND #02304 TO THE NEGATIVE ANOMALIES. (SEE FIGURE A).

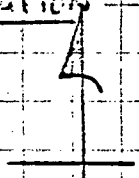
CONCLUSIONS: THERE APPEARS TO BE A RELATIONSHIP BETWEEN THE HIGH MAGNETIC VARIATION AND THE SULPHIDE MINERALIZATION PRESENT. THIS MAY INDICATE THE PRESENCE OF A MASSIVE SULPHIDE BODY.

SABRE MK II MAGNETOMETER SURVEY

19	50	40	44	42	30	32	34	30	30	34
18	54	58	52	46	42	40	38	36	40	38
17	44	28	28	30	15	24	24	24	30	30
16	44	-12	6	25	35	10	28	40	40	52
15	40	-18	20	2	28	22	30	32	32	32
14	34	16	16	10	52	24	38	24	44	34
13	48	0	-30	-10	52	18	20	26	34	34
12	48	28	28 -18	0	55	6	36	38	44	44
11	48	10	20	16	30	15	30	30	30	30
10	24	24	20	6	42	15	30	50	38	28
9	80	34	40	15	48	10	30	40	38	40
8	36	0	20	0	35	16	28	40	40	35
7	0	15	15	-46	15	0	15	35	35	35
6	-26	28	58	-36	5	20	22	36	38	30
5	-48	20	22	-30	5	25	15	22	12	25
4	-50	20	55	0	2	34	24	22	22	34
3	-126	-10	28	20	20	34	48	16	16	34
2	-338	4	38	35	30	34	40	44	28	40
1	-285	100	40	0	82	52	34	28	42	42

→ BASE = 55000 GALLIAS
 → READINGS RECORDED ARE RELATIVE TO THIS BASE, PLUS ARE 10¹¹ TIMES WHAT IN REALITY THEY ARE (E.G.) 52 SHOULD BE INTERPRETED AS 520 ABOVE 55,000.
 → READINGS AT 10FT INTERVALS.

ORIENTATION

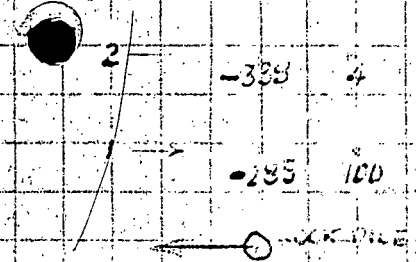


16° WEST of TRUE NORTH

REGA CENTER LINE IS 200 FT WEST (LEFT) of AND RUNS PARALLEL TO ORIENTATION ARROW & IN THE SAME DIRECTION.

ROY'S PIT IS 10FT SOUTH OF 'ROCK PILE'.

SEPT, 1968



THEORY: THE USE OF THE ELECTROMAGNETIC INDUCTION METHODS FOR THE DETECTION OF SUB-SURFACE CONDUCTORS, INCLUDING BASE METAL SULPHIDE ORE BODIES, IS WELL ESTABLISHED AND ACCEPTED. THE FUNDAMENTAL PRINCIPLE ON WHICH ALL THESE METHODS ARE BASED IS AS FOLLOWS:

"WHEN A CONDUCTOR IS PLACED IN AN AUDIO FREQUENCY ALTERNATING MAGNETIC FIELD, EDDY CURRENTS ARE CAUSED TO FLOW WITHIN IT. THESE EDDY CURRENTS SET UP A SECONDARY FIELD WHICH DISTORTS THE ORIGINAL FIELD. ALL ELECTROMAGNETIC METHODS DETECT THE PRESENCE OF A SUB-SURFACE CONDUCTOR BY MEASURING THE DISTORTION OF THE TRANSMITTED FIELD."

CHIEF AMONG SUB-SURFACE CONDUCTORS ARE METALLIC SULPHIDE BODIES AND GRAPHITE ZONES. THE FORMER INCLUDE THE MAJORITY OF COPPER, LEAD, ZINC AND NICKEL ORE BODIES. OTHER CONDUCTORS, GENERALLY OF LESSER STRENGTH, INCLUDE ELECTROLYTE FILLED SHEARS AND FAULTS, MASSIVE MAGNETITE, SERPENTINE AND CERTAIN TYPES OF OVERBURDEN.

APPLICATION: SE-600 ELECTROMAGNETIC HORIZONTAL-VERTICAL LOOP SYSTEM

FREQUENCY: 1600 HERTZ

COIL SPACING: 300 FEET

READINGS: PERCENT, IN AND OUT OF PHASE

MEAN COIL DIAMETERS: 19 INCHES (APPROX)

TRANSMITTER OUTPUT: 150 AMPERE TURNS



OBSERVATIONS: A DISTINCTIVE ELECTROMAGNETIC ANOMALY WAS FOUND ON THE REGA #1 AND REGA #2 MINERAL CLAIMS. READINGS WERE RECORDED AND PLOTTED, (RE: DIAGRAM I). THE ANOMALY ZONE, AS SHOWN BETWEEN POINTS "A" AND "B", INDICATES THE PRESENCE OF A SUB-SURFACE CONDUCTOR.

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY



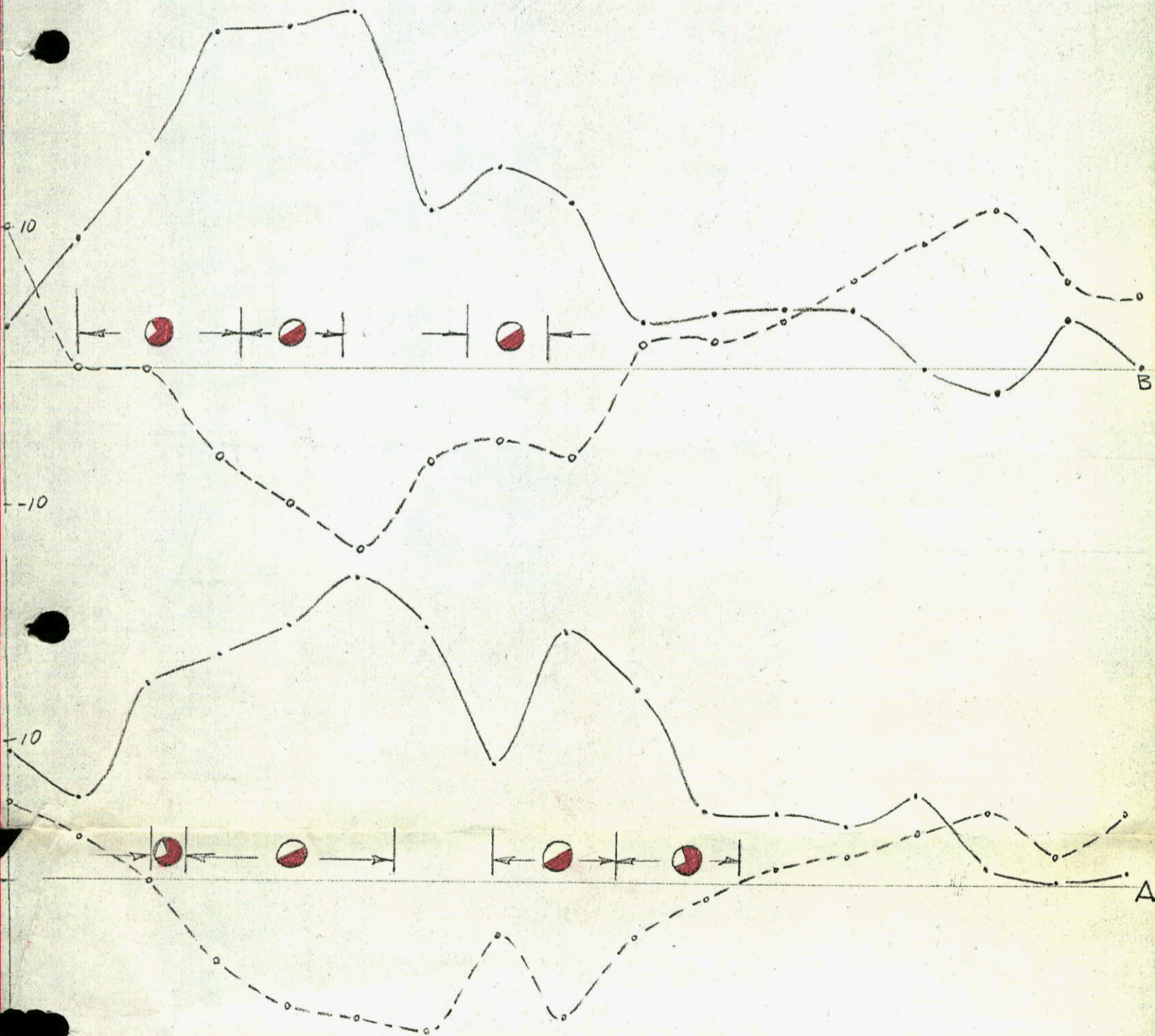
SE 600 HOR. LOOP E.M.

@ 300' separation & 120' depth penetration

-  GREATER THAN 3:1 RATIO of IN:OUT PHASE
-  GREATER THAN 2:1 RATIO of IN:OUT PHASE

Good conductor \approx 2:1
massive conductor \approx 3:1

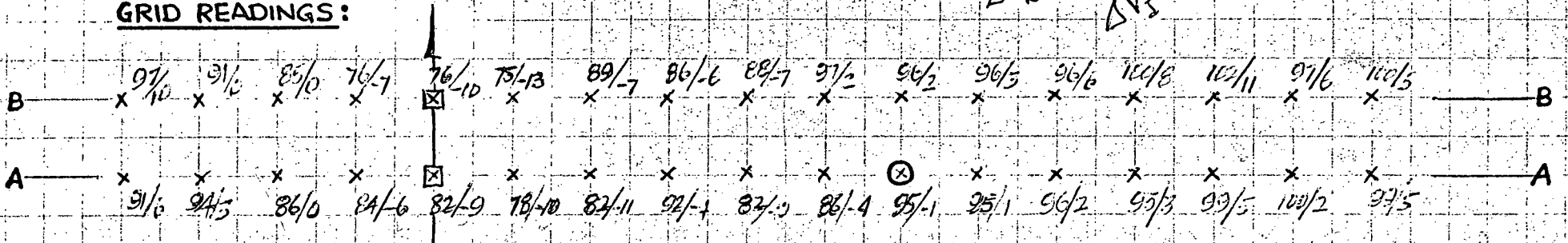
SCALE: 1" = 60'
- - - : in-phase
- - o - - : out-of-phase



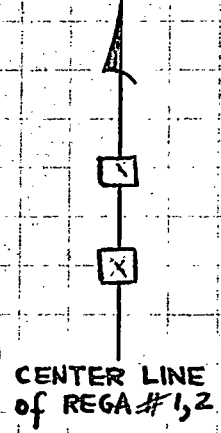
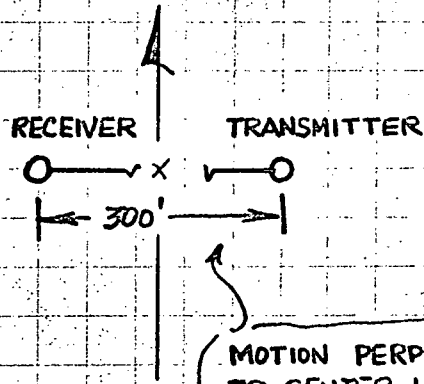
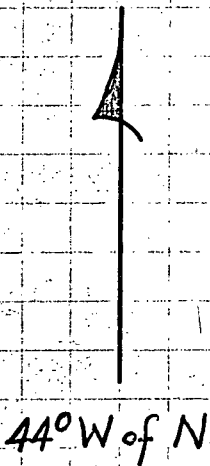
LOCALIZED SE-600 EM SURVEY

OCT. 17, 1968
REGA CLAIMS

GRID READINGS:

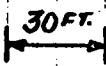


ORIENTATION:



* GRID LINE "A" IS 300 FT NORTHERLY OF INITIAL POST OF REGA #1,2.

x 300' COIL SEPARATION (READINGS RECORDED AT MID-POINT OF COIL SEPARATION)



2/4 x% IN PHASE; y% OUT OF PHASE

⊗ ROY'S PIT

Handwritten signature

R = REAL = In-Phase } components of
 J = IMAGINARY = Out-of-Phase } Secondary field.

Strong anomalies 40-80%

$$\tan \phi = \frac{J}{R}$$

negative anomalies associated more closely with conductive ores & rocks situated below them.

$\tan \phi < 0.1 \Rightarrow$ formations of very high conductivity.

- Scale model interpretation

SE-600 EM Survey

Real: convert 100 \rightarrow 0, 90 \rightarrow -10, 110 \rightarrow 10
 Imag: leave the same

$\frac{R}{J}$	$\frac{-3}{10}$	$\frac{-9}{0}$	$\frac{-15}{0}$	$\frac{-24}{-7}$	$\frac{-24}{-10}$	$\frac{-25}{-13}$	$\frac{-11}{-7}$	$\frac{-14}{-6}$	$\frac{-12}{-7}$	$\frac{-3}{2}$
	$\frac{-7}{2}$	$\frac{-4}{3}$	$\frac{-4}{6}$	$\frac{0}{8}$	$\frac{2}{11}$	$\frac{-3}{6}$	$\frac{0}{5}$			

$\tan \phi =$

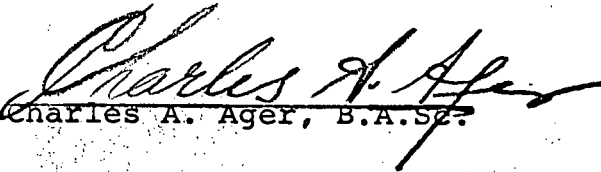
-3.3	0	0	.29	.42	.52	.64	.43	.58	-.67
-.5	-.75	-1.5	∞	5.5	-2.0	∞			

CERTIFICATE OF QUALIFICATIONS

I, Charles Arthur Ager, of the City of Vancouver,
Province of British Columbia, hereby certify:

1. That I reside at 1041 Wolfe Avenue, Vancouver,
British Columbia;
2. That I have had three years experience in electronics
in the United States Air Force;
3. That I am a graduate in Mathematics/Physics of
Sacramento State College, 1968;

Dated at Vancouver, British Columbia, this
29th day of April, 1969.


Charles A. Ager, B.A.Sc.

SULPHIDE MINERALIZATION ANALYSIS

(Samples #2303 & #2130)

Non-anomaly grain contact and conductivity

A.J. Sinclair, P. Eng.

REPORT FOR MAGNETRON MINING

ON

TWO POLISHED SECTIONS

SAMPLE 2303

The specimen consists of massive sulphides, mainly pyrrhotite, with appreciable amounts of sphalerite and galena. Galena is slightly gneissic indicating some deformation.

Pyrrhotite--massive, constitutes the bulk of the specimen. Consists of a mass of small anhedral grains less than 0.05 mm. in diameter. Pyrrhotite is the only sulphide present that forms continuous masses of grains in contact in the specimen.

Pyrite--rare, isolated, anhedral grains up to 0.3 mm. diameter. Most contain minute inclusions of gangue, particularly near the grain edges. Borders are irregular and indicate that pyrrhotite, sphalerite and galena have replaced pyrite. A few grains show relict cubic outlines.

Sphalerite--occurs as massive isolated patches that contain abundant small inclusions of pyrrhotite and less commonly chalcopyrite. Inclusions are mainly rounded and are erratically distributed throughout the sphalerite. Chalcopyrite inclusions are noticeably smaller than pyrrhotite inclusions. Some of the chalcopyrite inclusions are elongate and are aligned crystallographically within the sphalerite.

Chalcopyrite--occurs mainly as rare grains up to 0.01 mm. diameter, with very irregular shape, in contact with pyrrhotite. Observed to cross-cut sphalerite and galena. A lesser amount occurs as minute inclusions in sphalerite showing emulsion texture, although some of the inclusions are lath-shaped and are crystallographically controlled by the sphalerite.

Galena--Irregular coarse-grained patches and as small isolated,

irregular grains interstitial to sphalerite and pyrrhotite.

Marcasite--an alteration product of pyrrhotite where pyrrhotite is cut by late gangue-sphalerite veinlets. Present in only trace amounts.

The dominant texture is granular-massive shown by the two abundant sulphides pyrrhotite and sphalerite. Apart from a few large patches of galena this mineral is interstitial to other sulphides. Of these three abundant sulphides only pyrrhotite shows continuous grain contact connection throughout the specimen. Paragenesis indicated by textures is as follows: Pyrite (early)-pyrrhotite-sphalerite (with exsolution chalcopyrite and perhaps pyrrhotite)-galena-chalcopyrite-minor late sphalerite (with contemporaneous development of marcasite). Degree of overlap of times of deposition of adjacent minerals in the sequence is uncertain.

SAMPLE 2130

The specimen appears to be a somewhat brecciated sulphide mass consisting of angular fragments of sphalerite set in a felsic matrix. Size of fragments ranges from about $\frac{1}{2}$ " in maximum dimension to microscopic size.

Sphalerite--occurs as large isolated masses that consist of a compact mass of anhedral, granular grains. These masses are scattered irregularly throughout a non-metallic matrix. Small amounts of exsolution chalcopyrite occur as rounded and lath-shaped inclusions in many of the sphalerite grains.

Chalcopyrite--Only small amounts are present as minute rounded or lath-shaped inclusions in sphalerite. Occurs in only about one-third of the sphalerite grains. In some grains, rounded chalcopyrite inclusions are

up to 0.05 mm. in diameter.

Pyrrhotite--found only as a few small rounded inclusions in two grains of sphalerite.

Sulphide grains are not in continuous contact within this specimen. Individual masses of sulphides (almost entirely sphalerite) are separated by non-metallic gangue.

A. J. Sinclair
.....

A. J. Sinclair, P. Eng.
March 12, 1969

THE UNIVERSITY OF BRITISH COLUMBIA

VANCOUVER 8, CANADA

DEPARTMENT OF GEOPHYSICS

October 23, 1969.

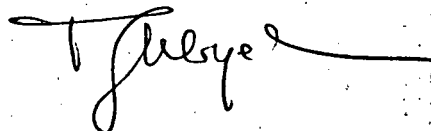
Mr. G.H. Beley,
Mining Recorder,
Box 340,
Smithers, B.C.

Dear Sir,

I am writing in regard to the Rega 1-27 Mineral Claims Geophysical Report of Magnetron Mining Ltd.

In my opinion the electromagnetic and ground magnetic surveys which were carried out on these claims by Mr. C. Ager were in accord with sound geophysical practice. There is an indication of a significant magnetic anomaly which appears to be related to mineralization. It is a pity that the magnetic survey could not have been completed, apparently due to severe weather conditions. I have recommended a further ground magnetic survey and an induced polarization survey. The company also intends to proceed with diamond drilling.

Yours sincerely,



Dr. T.J. Ulyrch
Associate Professor

TJU:ra

GOVERNMENT AGENT

RECEIVED

OCT 29 1969

SMITHERS, B. C.



MAGNETRON mining ltd. (n.p.l.)

2020 - 777 Hornby Street Vancouver 1, B.C. Phone 688-9114

October 25, 1969

Mr. G.H. Beley
Mining Recorder
Box 340
Smithers, B.C.

Dear Sir:

Enclosed is a copy of a letter sent to your office by our consultant on the qualification of the acceptance of our report on the Rega 1 - 27 Mineral Claims.

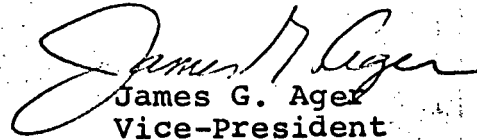
Work has been carried out on this Group for the following year, consisting of a completion of this test survey, as well as diamond drilling of the known anomaly area. (Sept. -Oct. 1969)

We hope that certification of our report by a competent Geophysicist, Doctor T.J. Ulyrch, will be of sufficient value to provide a means of valuing our report.

If there are any questions on this matter as pertaining to his personal report, please address them to his office directly, or, if you wish, to the Head Office in Vancouver.

Thank you.

Yours truly,


James G. Ager
Vice-President