6059

ROBIN

92J/15E

ASSESSMENT REPORT ON GRAY ROCK PROPERTY

ROBIN 1-6, ROY 1-4 MINERAL CLAIMS

LILLOOET, M.D.

LAT. 50° 48' 15"N LONG. 122° 41' 55"W

PHYSICAL WORK

GEOPHYSICAL SURVEYS - E.M. & MAGNETOMETER

GEOCHEMICAL SURVEYS

PERIOD: Aug. 14-15, 1976, & Aug. 24-Sept. 7, 1976

OPERATOR: WESFROB MINES LIMITED

N.T.S. 92-J-15 E

Vancouver, B.C.

October, 1976

B. Manchuk

I.L. Elliott

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APPENDICES

MAPS

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GRAY ROCK PROPERTY

INTRODUCTION

The Gray Rock property consists of 10 located mineral claims, ROBIN 1-6 incl. and ROY 1-4 incl. The present assessment report covers physical, geochemical and geophysical work carried out during August 14, 15, 1976 and August 24 to September 7, 1976.

Physical work was done under contract by Presunka Geophysics Limited from August 24 to September 1, 1976, and the geochemical work was conducted by Wesfrob Mines Limited, from August 31, 1976 to September 7, 1976.

B. Manchuk, as project geologist, supervised the programme from August 31 to September 7, 1976; J.J. McDougall and I.L. Elliott provided senior supervision on the property.

Appendix "A" itemises work distribution and costs.

LOCATION AND ACCESS (Fig. 1)

The Gray Rock property is located at Lat.50° 48' 15"N, Long. 122° 41' 55"W south of Carpenter Lake near the headwaters of Truax Creek. The N.T.S. reference is 92-J-15E.

The property is easily reached by an 18 mi. access road from the town of Goldbridge, B.C. The first half of this road is maintained to a '4-wheel drive' standard.

To date considerable diversified investigation has been conducted on the property. This includes surface mapping, the driving of two adits to the known veins and drifting along them, plus further underground definition drilling.

Fig. 2, an amplification of W.R. Bacon's map (B.C.D.M. 1954 Fig. 7), shows the salient geological elements of the property, and serves as a base map for this presentation. The present author assumes any responsibility for errors in re-drafting this map.

Most of the 1976 work was done on ROBIN 1-4 claims (Fig. 2). The index map shows these claims in relation to the larger group.

RELIEF

The area is extremely rugged with elevations on the property ranging from 6,000 ft. (camp) to 8,500 ft. The No.1 and No.2 veins shown on Fig. 2 occur at an elevation of 7,000 ft. Access to these veins is via the east draw as the west is more or less permanently covered with snow which makes climbing risky. In many parts of the

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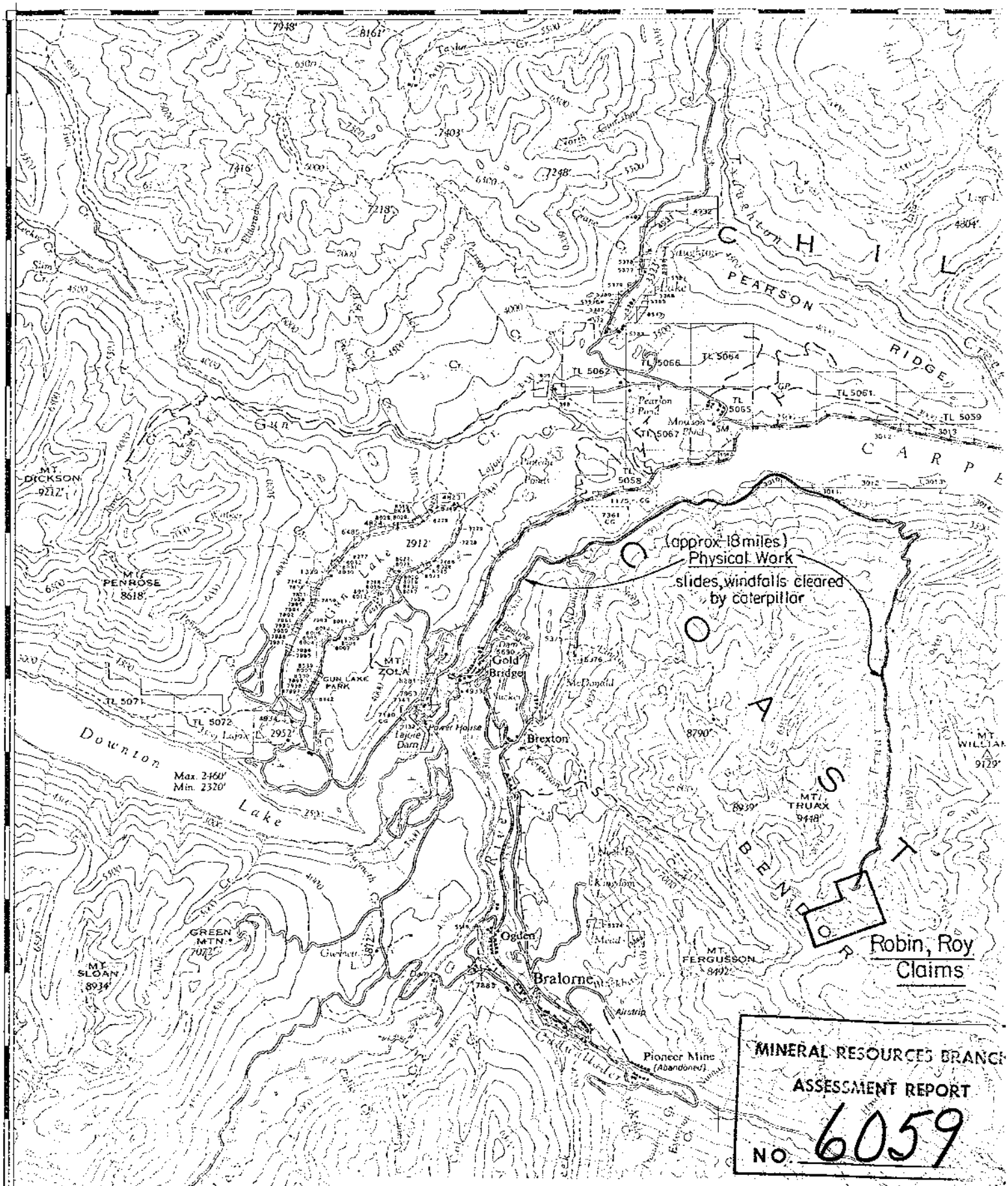

Location Map – Gray Rock Property

1:125,000 92J/15

Figure – 1

property climbing equipment is necessary. The steep topography has resulted in building up of extensive thick talus piles as shown on the map.

GENERAL GEOLOGY

Bacon (1954) states -

"The showings are quartz veins in metamorphosed sediments in an embayment of the Bendor batholith. The batholithic rock is a uniformly medium-grained granodiorite consisting of 60 per cent plagioclase (An_{30}), 17 per cent quartz, 15 per cent biotite partly altered to chlorite, and 7 per cent hornblende.

The metasediments are mainly dark grey to greenish grey greywackes consisting of varying proportions of hornblende, biotite, chlorite, quartz and plagioclase feldspar of intermediuate composition".

From the present author's investigation the mineralization, which consists chiefly of galena and stibnite, occurs as lenses within the quartz veins. From previous investigations, groups of lenses occur as shoots within the larger quartz vein structure which dips 35^{o}-50^{o} to the south. The adits shown on the map were driven to intersect the mineralized veins and exploration drifts were then driven along the veins. The nature and tenor of the ore at depth was found to be consistent with the surface showings.

The equal area plot of Fig. 2 shows the poles to 81 joints measured by the author in the field. Two areas of maximum concentration occur; 045/40S and 010/80W. The 045^{o} joint system is pervasive, with

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spacing commonly being of the order 1'-2'. The x's shown on the plot represent the poles to the quartz veins which host the mineralization. The slight divergence from the 045 maximum suggests possible, slight crosscutting relationships between joints and mineralization.

SCOPE AND METHOD OF PRESENT INVESTIGATION

Physical Work

Figure 1 shows the section of road brought up to 4-wheel drive standards by contractor Mr. S. Savage of Goldbridge, B.C. during the dates of August 14-15, 1976. The work consisted of bulldozer clearing of small slides and slashing windfall from the road. Appendix "A" itemises these costs.

Physical and Geological Setting

The Gray Rock property dates back to 1931 when a number of claims were staked to cover silver, antimony, lead and zinc mineralization in quartz veins intruded into a sequence of volcano-metasediments near a granitic contact, (see Fig. 2). Considerable work has been done by various investigators since then. Separate descriptions of the property can be found in the 1936 B.C. Report of Mines pages F.43-47, the 1949 Annual Report of B.C. Minister of Mines pp.107-111, and the 1954 B.C. Report of Minister of Mines pp.104-107A.

The object of the present study was, if possible, to extend by geophysics "B" and geochemistry "C" the favourable structures of the known showings under talus covered areas, and to test talus areas below the main showings for possible repetitions of the structures.

Astronomic north was established by standard solar techniques from the triangulation stations 1 and 2 shown on Fig. 2. The grid base lines were then tied on to the triangulation base line 1-2. Cross lines at 200 ft. intervals were then established along the base lines. In this manner 3,800 ft. of base line and 13,400 ft. of cross line was established.

B. Mlynchuk

"B"

GEOPHYSICAL SURVEY

METHODS OF SURVEY

a) Ronka E.M. 16 - Principle of Operation

The VLF-radio stations designed for communications with submarines have vertical antennae which create a concentric horizontal magnetic field around them when energized. When these magnetic fields encounter conductive bodies in the ground (through which they readily penetrate), a secondary field radiates from the latter. The Ronka E.M. 16 equipment, which is simply a sensitive Very Low Frequency receiver, measures the vertical components of these secondary fields.

The receiver has two receiving coils, one horizontal, and one vertical. The signal picked up by one of the coils (vertical axis) is first minimized by tilting the coil through a measured angle which is calibrated in percentages. The remaining signal in this coil is then balanced out by a measured percentage of a signal from the other coil, which is oriented at right angles to the first coil. This coil is normally kept parallel to the primary field.

Thus, if the secondary signals are small compared to the primary horizontal field, the mechanical tilt-angle is an accurate measure of the vertical real component, and the compensation $\Pi/2$ signal from the horizontal coil is a measure of the quadrature vertical signal.

The selection of the proper transmitter station is accomplished by use of a plug-in unit in the receiver. The magnetic field lines from the station are always at right angles to the direction to the station. Therefore, a station should be selected which gives the field approximately at right angles to the main strike of the conductor or geological structure of the area presently being worked on. After the proper station has been selected, the survey lines are selected, if possible, at right angles to the direction of the station and hence, parallel to the magnetic field from the station.

Transmitting Station	Location	Frequency
VLF Station M.P.M.	Hawaii	23.4 k.c.
VLF Station M.P.G.	Seattle, Wash.	18.6 k.c.

b) Scintrex MF_1 Magnetometer

This is a fluxgate magnetometer with I.C. circuitry and temperature compensation of less than one gamma/^{o}C. over the range -40^{o}C to +40^{o}C. It has a full terrestrial range of 0-100,000 gammas and an orientation independent internal sensor and an accuracy of ±0.5%. Base stations were established along the base line for diurnal control and readings were taken at 25' intervals along the cross lines.

c) Horizontal Loop Ronka EM-17

The horizontal loop is an electromagnetic unit, the dominant elements of which are two coils, one transmitting and one receiving, connected by a

reference cable. The most common coil configuration is coplanar in which case the coils are maximum coupled. Transmitter-receiver spreads can be 100, 200, 300 and 400 feet, and generally the greater the spread, the greater the depth of penetration. The coils are usually moved in-line tandem down the line. The frequency of operation of the system is 1600 Hz and the quantities measured are an in-phase (real) and a quadrature (imaginary) component. Measurement at the receiver is most conveniently made in terms of the ratios of the quadrature and in-phase voltage induced in the receiver relative to like quantities induced in a small reference coil. The reference voltage and receiver voltage are compared electronically in the equivalent of a bridge circuit. The comparison is made with the cable connecting transmitter and receiver. When taking a reading, the in-phase and quadrature potentiometers in the bridge are adjusted so that a visual 'null' is obtained on the dials. The potentiometer dials are calibrated to read in percentage of normal field which is defined as the field at the receiver when no conductors are present. Electrical conductors are generally signalled by a negative deviation from the normal field.

REPORT ON

GEOPHYSICAL SURVEY OF GRAY ROCK

IN THE GOLDBRIDGE AREA, B.C.

SEPTEMBER, 1976

INTRODUCTION

An EM-16, partial EM-17, and magnetometer survey utilizing methods described on pages 6 to 8 was carried out by Presunka Geophysical Surveys in late August of 1976 to test for:

a) possible extensions of the known mineralization and,

b) to test for structural repetitions of the known mineralization in a talus covered area.

A Ronka EM-17 (Horizontal Loop) was used to further qualify the EM-16 anomalies.

Two separate grids (upper and lower) consisting of a total of 3.5 line miles was established by chain and transit over the Gray Rock property.

As shown on the accompanying maps, Fig. 3,4,5,6,7,8,9, the upper grid lies on the side of a very steep dipping north slope, the western portion of which extends across known mineralized veins. The purpose was to establish, if possible, a geophysical signature for the veins. The base line of this grid has an azimuth of 080° and extends for a length of 1000' from L.4E to L.14E. Cross lines were run at 200' intervals along the base line mostly to the north to cover the proposed extension of the veins. In this way, some 2700' of line was geophysically surveyed electromagnetically and magnetically with a Ronka EM-16 Ser. No. 2 and M.F.I. Fluxgate, Ser. No. 905454.

Base stations were established along the base line for diurnal control, and readings were taken at 25' intervals along the cross lines. The corrected magnetometer readings were plotted and contoured on a scale of one inch to two hundred feet (Fig. 3). The EM-16 survey utilized two V.L.F. stations 18.6 MHz and 23.4 MHz. .V.L.F. readings as well as topographic slope directions were taken every 50 feet along the lines. The V.L.F. results were plotted on the same scale as the magnetic results, with each V.L.F. station being profiled and contoured. (Fig. 4,5,6,7)

Both V.L.F. stations have high in-phase results due to the conductivity of the host rock. The magnetic range was from -30 to just over 1000 gammas.

UPPER GRID

Magnetometer Survey (Fig. 3)

The magnetometer was adjusted to read 500 gammas for background. The magnetic trend is more or less in an E.W. direction, similar to that of one vein exposed on line 4E some 25 ft. north. At L-10E, the magnetic trend swings in a southerly direction. The narrow vein exposed on L-10E at 325 ft. north strikes in a N.E. direction coinciding with a magnetic low.

E.M.-16 - Survey (Fig. 4,5,6,7)

Using the V.L.F., ST.18.6 delineated a N.W. trend of conductors (Fig.4,5) while the V.L.F. station 23.4 showed a N.E. trend (Fig. 6,7). This is the

result of the slope effect of the conductive rock type. A weak secondary conductor was picked up by V.L.F. St. 23.4 on L-12E at 440 ft. north (Fig. 6), indicating a narrow shear. The EM.16 did not respond over the known veins as hoped, partly because stibnite, the major constituent, appeared a poor conductor.

LOWER GRID

A split base line in an extensively talused area was established with azimuth 090° (Fig. 3-9 incl.). The 0+00N base line extends from 8E to 28E. The second base line was offset 700 ft. to the north, and extends from 8E to 0. The total length of the base lines is 2800 ft. Cross lines were run at 200' intervals along the base line and in this was approximately 12,800 ft. of line was established.

Magnetometer Survey Inst. M.F. 1 Fluxgate
Ser. No. 905454 - Operator P. Presunka (Fig. 3)

The most significant magnetic feature is the nearly N.S. magnetic trend located between Lines 18E and 22E. This is very likely due to a wide basic dyke. The magnetic high in the S.W. corner of the grid is likely due to a basic rock striking in a north-west direction. A slight rise in magnetic values from L-24 to 28E is probably due to topography..

Electromagnetic Survey - Inst. Ronka EM.16
Ser. No. 2 - Operator S. Presunka V.L.F. ST.18.6 (Fig. 4,5)

Two plans on a scale of one inch to two hundred feet were made for V.L.F. ST.18.6, one was profiled (Fig. 4), and the other contoured (Fig.5).

The E.M. trend on the eastern portion is to the N.E. while on the western portion is to the N.W. The EM.16 responded favourably on this

lower grid, delineating 3 conductors numbered 1, 2, 3 on maps (Fig. 4,5).

No. 1, a N.W. striking conductor, is a two-station anomaly which makes it the better of the three conductors. This E.M. anomaly starts on line 14E at 6N and trends in a N.W. direction crossing L-6E at 100 ft. north. A weak magnetic trend follows this conductive zone. This conductor is likely due to sulphides.

Conductor No. 2, approximately 1500' long, extends from 100 S or L20E and trends N.W. to cross L8E at 550N. Correlation with any magnetic trend would be tenuous at best. The significance of this conductor could be dependent on investigation of Conductor No. 1.

Conductor No. 3, initially located on Line 20E some 50 ft. south, strikes in a N.W. direction and continues as a secondary conductor to L-8E at 550 ft. north. It crosses the magnetic high between Lines 20 and 22E south of the base line. Depth to this conductor is estimated at about 175 ft. Conductor No. 3 is likely an eastern extension of No. 1. The estimated depth to the conductor on L.20E at 550 N is about 200 feet.

EM.16 V.L.F. ST.23.4, Hawaii (Fig. 6,7)

The No. 1 and No. 2 conductors shown on the N.W. portion of the grid have been determined using two V.L.F. stations.

No. 1 conductor starts on Line 14E at 6+25N and strikes in a W.-N.W. direction to cross line 8E at 0+50N. This conductor also shows weak horizontal loop response.

No. 2 starts on L.12E at 2+75N, strikes in a N.W. direction and crosses L.8E at 5+25N and the base line at 5+00E. The conductor is likely due to a shear containing minor sulphide.

Horizontal Loop Survey. Inst. Ronka EM.17
Ser. No. 0017 - Operators: P. Presunks and
S. Presunka (Fig. 8, 9)

The horizontal loop survey was used to further qualify the EM.16 anomalies. Two and three hundred foot cable separations were used.

The horizontal loop responded weakly over the EM.16 conductors. The response over the No. 1 conductor was weak but considering the type of mineralization in this area, any response with the horizontal loop could be considered favourable. The most interesting EM.16 conducter (No. 1), located on L.14E at 6+00N responded to the horizontal loop, and could be considered a likely drill target. A diamond drill hole spotted on L.14E at 5+00N and drilled at 45° should intercept the conductor. Should drill results be encouraging, then a second hole could be spotted on the base line at 8+00E and drilled to the north to further delineate this conductor.

CONCLUSIONS

Magnetometer correlation with the known mineralization is tenuous at best. The EM-16 does not produce a recognizable geophysical signature indicating the lack of magnetic constituents in the former case, and lack of conductive materials in the second case.

On the lower grid, a number of EM-16 anomalies were produced, the best being No.1 conductor (Fig. 4). This conductor is possibly due to sulphides and represents a weak but possible drill target.

The Horizontal loop provided weak confirmation of the EM-16 anomalies.

In view of the weak geophysical correlation produced with the magnetometer and EM surveys, indicating lack of appreciable magnetic and conductive constituents with the known mineralization, no further surveys of this type are recommended.

S. Presunka

B. Manchuk

Vancouver, B.C.
October 29 1976

"C"

GEOCHEMICAL SURVEY

SURVEY PROCEDURE AND EQUIPMENT USED

Soil and drainage sediment sampling was carried out by S. Zastavnikovich. Sediments were collected from the active channels of the water courses. Soil samples were taken by grub hoe from the "B" horizon where this was present, mainly in the tree covered lower slope areas. On the steep talus covered slopes samples were taken of the stony soil between talus boulders. Both soil and sediment samples were stored in standard waterproof glued Kraft paper envelopes.

SAMPLE ANALYSIS

Both types of sample were analysed using standard geochemical methods by Bondar-Clegg Laboratories of Vancouver. The minus eighty mesh fraction of the air dried samples was analysed for Pb, Ag, As and Sb. A selected number of samples were also analysed for Au.

Lead and silver were determined by atomic absorption techniques following a hot acid attack and the results were instrumentally corrected for matrix interference effects. Arsenic was determined colorimetrically using the standard silver diethyldithiocarbonate method. Antimony was determined by an X-ray fluorescent method and gold was determined by atomic absorption following aqua regia dissolution of the product of fire assaying.

DATA COMPILATION AND PRESENTATION

The sample locations are presented on Fig. 10. Concentration values (in p.p.m.) for the elements Pb, Ag, As and Sb in the soil and sediment samples are presented on Geochemical Map (Fig. 11). Values for gold (in p.p.b.) are also shown on the same map. These analytical results are also shown on Tables A and B.

There are insufficient samples to justify any statistical categorisation hence anomalous levels were derived by visual inspection. Contours, likewise, are difficult to justify but an attempt has been made in order to show the general spatial association of the elements.

Threshold contours were selected as follows: for Pb, 30 ppm; for Ag, 0.6 ppm; for As, 120 ppm; for Sb, 10 ppm.

INTERPRETATION

The known mineralisation is poorly reflected by the drainage samples probably because of rapid dilution by barren rock.

Anomalous Ag, As and Sb values occur in the talus immediately below the old adit. (Base line between L10E and L18E). These values can be attributed to low grade mineralised rock removed during development of the adit and dumped below the portal. More anomalous values for all four elements occur in the vicinity of line 7N between line 4E and 12E in an area where E.M. geophysical survey located two presumed conductors. In this area, lead values tend to be separated from the main Ag, As and Sb values by a creek valley.

Widespread occurrence of arsenic values were indicated by a traverse between base line at 22E and line 7N at 28E.

Anomalous gold values occur with the other metals in the scree below the adit and on line 7N.

RECOMMENDATIONS

The only new area of interest indicated by the geochemical survey is in the vicinity of line 7N between line 4E and line 12E. (Fig. 11)

The cost of further investigation of this area is likely to be prohibitively expensive in view of the thickness of talus cover. No further geochemical work is warranted.

B. Manchuk
B. Manchuk

I.L. Elliott
I.L. Elliott

Vancouver, B.C.
October 29, 1976

Geochemical Lab Report

TABLE A

Extraction Pb,Ag; Hot Aqua Regia As; Perchloric Acid; Colorimetric
Me Pb,Ag; Atomic Absorption Sb; X.R.F

Report No. 26 - 974

From Falconbridge Nickel Mines

Fraction Used

Date September 22 19 76

SAMPLE NO.	Pb ppm	Ag* ppm	As ppm	Sb ppm
37631 D	46	0.2	35	< 1
37632	40	0.2	52	< 1
37633	36	0.2	35	< 1
37634	32	0.8	400	102
37635	13	0.2	420	69
37661 D	12	0.7	850	4
37662	18	0.2	110	< 1
37663	14	0.2	380	< 1
37664	16	0.3	340	1
37665	11	0.2	400	2
37666	9	0.2	220	3
37667	21	0.3	180	5
37668	13	0.2	260	6
37669	13	0.2	270	3
37670	10	0.2	230	7
37671	22	0.2	180	1
37672	23	0.2	70	1
37673	6	0.2	58	< 1
37674	7	0.2	180	5
37675	6	0.3	280	8
37676	5	0.2	270	95
37677	14	1.0	520	108
37678	8	0.4	600	110
37679	7	0.5	540	185
37680	6	0.5	600	203
37681	6	0.6	800	218
37682	6	0.5	800	250
37683	17	0.3	770	168
37684	13	0.6	560	20
37685	12	0.2	150	2
37686	12	0.2	160	6
37687	16	0.2	190	2
37688	15	0.8	640	35
37689	16	0.3	560	43
37690	14	0.4	540	50

SAMPLE NO.	Pb ppm	Ag* ppm	As ppm	Sb ppm
37691	5	0.7	450	33
37692	11	0.2	460	35
37693	32	0.6	800	47
37694	6	0.4	540	48
37695	7	0.2	190	14
37696	14	0.2	230	1
37697	13	0.2	80	5
37698	28	0.2	90	5
37699	13	0.2	230	27
37700	42	0.2	50	1
37701	51	0.2	55	11
37702	52	0.2	110	6
37703	32	0.2	32	1
37704	26	0.2	360	40
37705	40	0.6	670	58
37706	14	0.6	150	15
37707	8	0.2	35	< 1
37708	17	0.2	130	4
37709	12	0.2	90	< 1
37710	14	0.2	85	1
37711	31	1.1	760	52
37712	6	0.2	70	3
37713	8	0.2	62	4
37714	12	0.2	85	< 1
37715	12	0.2	90	1
37716	19	0.2	230	43
37717	15	0.2	82	1
37718	15	0.2	230	< 1
37719	8	0.2	220	< 1
37720	8	0.2	190	< 1
37721	13	0.2	200	33
37644	19	0.2	53	< 1
37645	22	0.2	130	< 1
*background				

Ron L Elliott

TABLE B

BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

Geochemical Lab Report

OCT 5 1976

Extraction Fire Assay & Hot Aqua Regia

Method Atomic Absorption

Fraction Used

Report No. 26 - 1096

From Falconbridge Nickel Mines

Date October 1 19 76

SAMPLE NO.	Au ppb
37634 D	20
37676	30
37677	35
37678	95
37679	50
37680	120
37681	95
37682	100
37683	60
37691	60
37692	60
37693	80
37694	95
37705	75
37711	65

SAMPLE NO.	Au. ppb
37646	5
37647	5
37648	5
37649	5
37650	20
37651	< 5
37652	< 20*
37656	20

* detection limit on a small Sample

Jon L Edwards

APPENDICES

APPENDIX "A"

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of Chronologically carried out Geophysical and Geochemical surveys both using prepared base line survey and cross lines on Mineral Claims ROBIN 1-4 being part of a Grouping including ROBIN 1-6 and ROY 1-4

I, DAVID H. BROWN

of 700-1112 WEST PENDER STREET, VANCOUVER, B.C. V5E 2S1

in the Province of British Columbia, do solemnly declare that the following expenses were incurred in carrying out the surveys abovementioned.

	Road Reclamat.	Geophys. Survey	Geochem. Survey	TOTAL
Aug.24-Sept.1				
R. Esson 9 days @ 49.35	-	222.00	222.15	444.15
K.Christensen 9 days @ 39.74	-	178.83	178.83	357.66
Aug.31-Sept.7				
B. Manchuk 8 days @ 58.92	-	235.68	235.68	471.36
S. Zastavnikovich 8 days @ 49.35	-	-	394.80	394.80
Aug.25-Sept.1				
S. Presunka, P.Presunka Contract		1,800.00		1,800.00
Aug.12,13,31, Sept.1				
J.J. McDougall 4 days @ 100.00	100.00	150.00	150.00	400.00
Aug.24-Sept.7				
Field supplies and transportation		441.36	441.36	882.72
Aug.14, 15				
Road clearing and repairs. S. Savage contract (50% of $1100)	550.00	-	-	550.00
Drafting and Report writing - S. Presunka contract		300.00	-	300.00
Sept.8-Oct.23				
B. Manchuk 3 days @ 58.92		88.38	88.38	176.76
S. Zastavnikovich 3 days @ 49.35		-	148.05	148.05
R. Esson 5 days @ 49.35		123.37	123.38	246.75
D.H. Brown 2 days @ 90.00		90.00	90.00	180.00
Printing		80.00	60.00	140.00
Assaying - 60 samples @ 7.95 for Pb., Ag., As., Sb.			477.00	477.00
assaying - 15 samples @ 3.50 for Au.			52.50	52.50
	650.00	3,709.62	2,662.13	7,021.75

APPENDIX "B"

FALCONBRIDGE NICKEL MINES LIMITED
1112 West Pender Street, Vancouver 1, B.C., Canada
Telex 04-53245
Telephone (604) 682-6242

October 29, 1976

The Chief Gold Commissioner,
Dept. of Mines & Petroleum Resources,
Parliament Buildings,
Victoria, B.C.
V8V 1X4

Attention : Dr. J.A. Garnett

Dear Sir,

This is to certify that the work done on the ROBIN 1-6, ROY 1-4, M.C.'s presented in this report was done under my direction.

Mr. S. Zastavnikovich is a prospector and geochemical technician of long standing in the employ of Falconbridge and Wesfrob companies, and has been trained by me in geochemical field techniques.

Mr. Esson is a trained surveyor and draftsman of high qualifications.

Mr. S. Presunka is a fully qualified geophysical operator with over 18 years experience in this capacity.

Mr. B. Manchuk B.Sc., M.Sc., is a 1971 geology graduate of the University of Manitoba who has been with the Falconbridge organization since graduation.

Mr. D.H. Brown is a graduate in Engineering Geology of the University of British Columbia, and a member of the Associations of Professional Engineers of the Provinces of British Columbia and Ontario.

I am an honours geology graduate (1959) of the University of Manchester and hold a Ph.D. in Applied Geochemistry from the University of London (1962). I am a member of the Association of Professional Engineers of British Columbia.

Yours very truly
FALCONBRIDGE NICKEL MINES LTD.,

Ivor L. Elliott P.Eng.

I.L. Elliott, P.Eng.
Chief Geochemist.

Encls (2)

APPENDIX "C"

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF MINES
AND PETROLEUM RESOURCES

FORM B (*Section 51*) MINERAL ACT

SUB-MINING RECORDER
RECEIVED
OCT 13 1976
M.R. #110864 $ 350.00
VANCOUVER, B. C.

Affidavit on Application to Record Work

I, D.H. BROWN (Name) 682-624/2 Agent for GRAY ROCK MINES LIMITED

700-1112 WEST PENDER ST., (Address) VANCOUVER, B.C. V6E 2S1

Free Miner's Certificate No. 143456

Date issued December 30, 1975

1070 - WEST 33RD AVE., (Name) VANCOUVER, (Address) B.C.

Free Miner's Certificate No. 152209

Date issued June 3, 1976

MAKE OATH AND SAY:

2. I have done, or caused to be done, work on the ROBIN 1, 2, 3 and 4 Mineral Claim(s)

Record No.(s) 25731, 25732, 25733, 25734

Situate at TRUAX CREEK in the LILLOOET Mining Division,

to the value of at least $7,000.00 dollars. Work was done from the 24th day

of August 1976, to the 7th day of September, 1976.
Drafting and report writing extended to October 12, 1976.

3. The following is a detailed statement of such work done in the 12 months in which such work is required to be done.

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, BELOW)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by regulations)	COST
Clearing and repairing ten (10) miles of mine road to 4-wheel drive vehicle standards (Clearing fallen trees from road and repairing washed-out road sections).	1,100.00
Road reconnaissance prior to clearing and repair	100.00
Application has been made to B.C. Dept. of Mines and Petroleum Resources for 50% rebate on cost	
TOTAL	1,200.00

I wish to apply $ 600.00 of this work to the claims listed below.

(State number of years to be applied to each claim and its month of record)

1 year each to ROBIN 1, 2, 3 3 x 200 = $600.00

Record Nos. 25731, 32, 33.

(For B, C, and D sections please turn over)

B. DRILLING

(Details as per report submitted)

COST

I wish to apply $.....of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

C. PROSPECTING

(Details as per report submitted)

COST

I wish to apply $.....of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

D. GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL (Includes line cutting)

(State type of work)

	COST
1) Surveying and cutting of base line(s) and running flagged cross lines by pace and compass	
2) Geochem. survey - 60 samples taken on 100 ft. centres	$2,661.00
3) Geophysical survey - 13,000 ft. magnetometer) 15,000 ft. EM.16) 3,000 ft. EM.17)	3,760.50
Assessment report to follow in 3 weeks 2/11/76 TOTAL	$ 6,421.50

For

I wish to apply $ 6,400.00 of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

3 years each to ROBIN 1, 2, 3, 6; ROY 1-4

Record Nos. 25731, 25732, 25733, 25736, 28725-28728

4 years each to ROBIN 4, 5

Record Nos. 25734, 25735

NOTE—Dollar value of work done under A, B, C, or D sections, totalling $200, may be applied as one year's work.

Who paid for the above-described work?

Name WESFROB MINES LIMITED

Address 700-1112 WEST PENDER STREET,
VANCOUVER, B.C. V6E 2S1

If you intend to claim a refund of cash in lieu under the provisions of the *Mineral Act*, you must make application on this affidavit under A, B, C, or D sections as applicable.

4. That I have not and will not use the work declared herein in any way for the purposes of obtaining tax exemption on a Crown-granted mineral claim under the terms of the *Taxation Act*.

SWORN and subscribed to at VANCOUVER, B.C.
this 13th day of OCTOBER
19 76, before me—
*
SUB - MINING RECORDER

L. W. Brown

* This affidavit may be taken by a person empowered to take affidavits by the *Evidence Act* of British Columbia.

BRITISH COLUMBIA MINING RECEIPT

Mining Division LILLOOET

Issued at Vancouver No 110864 E

Date 13 Oct, 1976

RECEIVED from Westfrob Mines Limited

the sum of Three Hundred & FIFTY Dollars,

in payment of ASSESSMENT WORK and RENTAL (35 yrs)
on 1 yr ea Robin 1, 2, 3 (Road work) &
3 yrs ea Robin 1, 2, 3, 6 & Roy 1-4
4 yrs ea Robin 4, 5
Geochem Geophys Line Cutting
Reports to follow
GRAY ROCK MINES LIMITED (D. H. Brown)

Signature

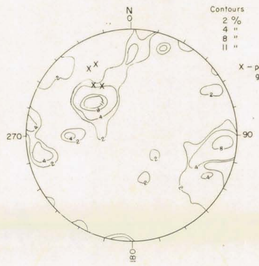
$350.00 Office Sub-Mining Recorder

Claim Map
1" = 1000'

MAP REF. NO.:
N.T.S.:

- Talus
- Metasediments: greywacke, tuff, minor flows, minor conglomerate.
- Granodiorite
- Granodiorite dyke
- Joints
- Survey Station

81 poles to joints



X – poles to stibnite, galena veins.

1cm = 24 meters

0 120m 240m

200 0 200 400 600

SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #1

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property – Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W – 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geology

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24-Sept 7/76	MAP REF. NO.: 172-76-2	FIG. NO.: 2
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92 J/15	

BCIL - 3393 D - F.N.

Claim Map
1" = 1000'

MAP REF. NO.:
N.T.S.:

Note – Instrument adjusted to read 500 gammas for background.

100 Magnetic contours – 100 gamma intervals

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #2

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property – Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W – 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Magnetometer Survey — Instrument – MF-1 Flux Gate, Ser. no – 905 454

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24 – Sept 7/76	MAP REF. NO.: 172-76-3	FIG. NO.: 3
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92 J/15	

MAP REF. NO.:
N.T.S.:

Claim Map
1" = 1000'

Conductor
Secondary Conductor
Inphase
Quadrature
} 1"=40%

1cm = 24 meters
0 120m 240m
200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #3

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument Ronka EM-16 Ser. no. 2 (VLF St. 18.6 Seattle U.S.A.)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug. 24-Sept 7/76	MAP REF. NO.: 172-76-4	FIG. NO.: 4
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92J/15	

BCIL - 33430 - P.N.

MAP REF. NO.:
N.T.S.:

Claim Map
1" = 1000'

Inphase Contours 5% intervals

RD — Reverse Cross-over

0 — Conductor

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument - Ronka EM-16 Ser. no.2 (V.L.F. St. 186 Seattle U.S.A.)

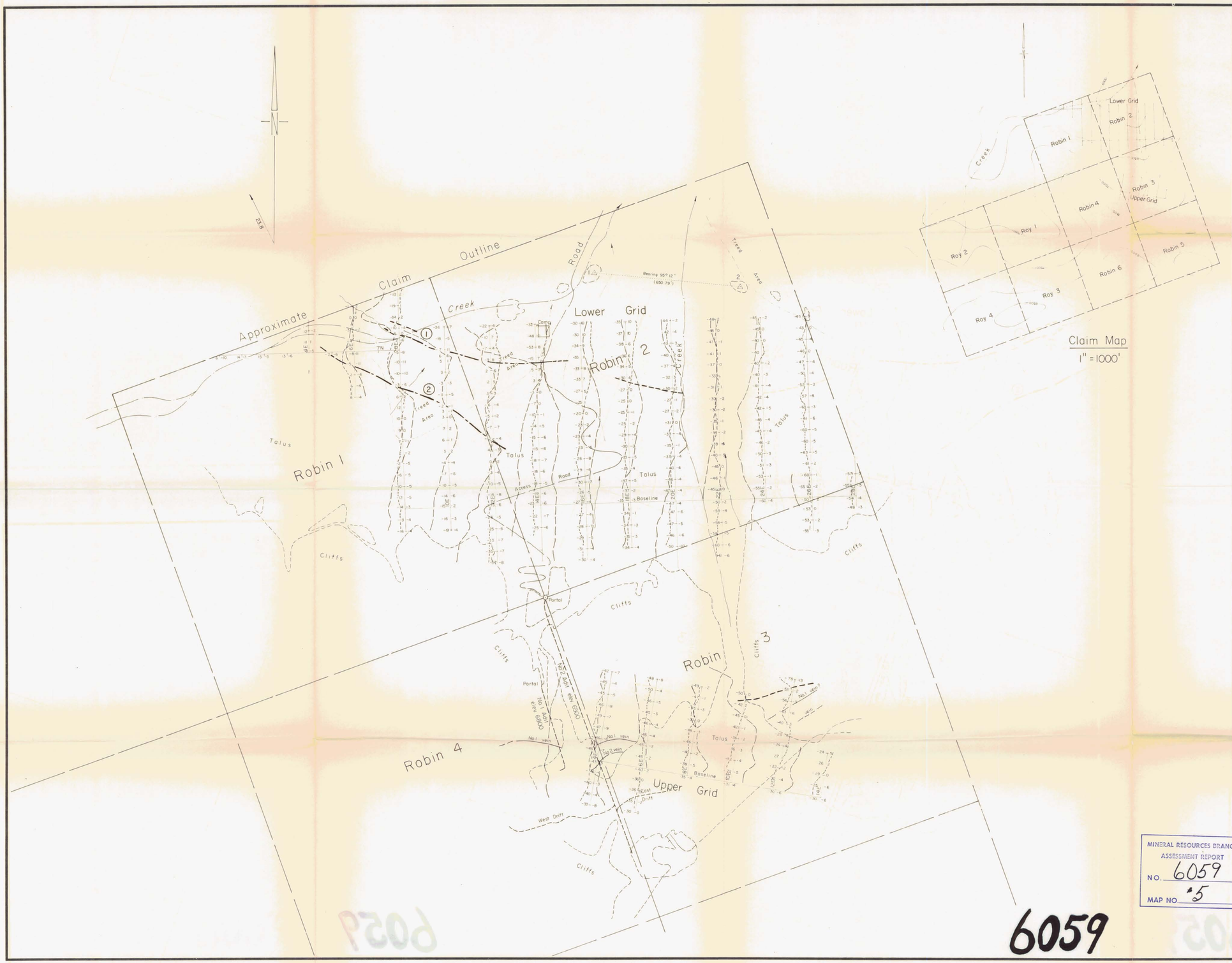
WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM,SZ,SP,RE,KC,PP,JJM

DATE OF WORK: Aug. 24-Sept.7/76	MAP REF. NO.: 172-76-5	FIG. NO.: 5
DRAWN BY: R.J.E.		
DATE: October 26/76	N.T.S. NO.: 92J/15	

6059

MAP REF. NO.:
N.T.S.:



Claim Map
1" = 1000'

Conductor
Secondary Conductor
Inphase
Quadrature
} 1"=40%

1cm = 24 meters
0 120m 240m
200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument Ronka EM-16 Ser. no. 2 (V.L.F St 23.8 Hawaii U.S.A.)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24-Sept 7/76 | MAP REF. NO.: 172-76-6 | FIG. NO.: 6

DRAWN BY: RJE | N.T.S. NO.: 92 J/15

DATE: October 26/76

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #5

6059

MAP REF. NO.:
N.T.S.:

Claim Map
1" = 1000'

Inphase Contours 5% intervals

RO — Reverse Cross-over

0 — Conductor

1cm = 24 meters

0 120m 240m

200 0 200 400 600

SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #6

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gr ıy Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument - Ronka EM-16 Ser. no 2 (VLF St 238 Hawaii U.S.A.)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24-Sept 7/76	MAP REF. NO.: 172-76-7	FIG. NO.: 7
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92 J/15	

MAP REF. NO.:
N.T.S.:

Claim Map
1" = 1000'

— — Conductor
- - - - - Very Weak Conductor

—— Inphase
..... Out of phase
} 1" = 10 %

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #7

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument Ronka EM-17 Ser. no 0017 (200' Cable Separation)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24-Sept 7/76	MAP REF. NO.: 172-76-8	FIG. NO.: 8
DRAWN BY: RJE	N.T.S. NO.: 92 J/15	
DATE: October 26/76		

MAP REF. NO.:
N.T.S.:

Approximate Claim Outline

Creek

Road

Lower Grid

Robin 2

Robin 1

Robin 3

Robin 4

Robin 5

Robin 6

Upper Grid

Roy 1

Roy 2

Roy 3

Roy 4

Claim Map
1" = 1000'

Bearing 95° 10' (650.79')

Camp

Trees

Area

Talus

Cliffs

Road Access

Portal

No 1 Adit elev 6860

No 2 Adit elev 6840

No 1 vein

No 2 vein

East Drift

West Drift

Baseline

4E 6E 7N 8E 10E 12E 14E 16E 18E 20E 22E 24E 26E 28E

— — Conductor

- - - - - Very Weak Conductor

——— Inphase
..... Out of phase
} 1" = 10 %

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18 mi. by road from Goldbridge B.C.

TYPE OF MAP: Geophysics - Electromagnetic Survey
Instrument Ronka EM-17 Ser. no. 0017 (300' Cable Separation)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug. 24-Sept. 7/76	MAP REF. NO.: 172-76-9	FIG. NO.: 9
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92J/15	

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #8

6059

BCL - 33630 - F.N.

Claim Map
1" = 1000'

MAP REF. NO.:
N.T.S.:

Silt Sample Site

Soil Sample Site

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #9

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY:
Gray Rock Property - Robin, Roy Claims

LOCATION:
50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP:
Sample Site Numbers

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug 24-Sept 7/76	MAP REF. NO.: 172-76-10	FIG. NO.: 10
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92J/15	

6059

MAP REF. NO.:
N.T.S.:

Lower Grid
Robin 2
Robin 1
Creek
Robin 3
Upper Grid
Robin 4
Roy 1
Roy 2
Robin 5
Roy 3
Robin 6
Roy 4

Claim Map
1" = 1000'

Silt and Soil Sample Values

Pb (ppm)	Ag (ppm)	As (ppm)	Sb (ppm)	Au (ppb)
6	0.5	800	250	(100)

Ø Silt Sample Site

□ Soil Sample Site

Anomalous Areas

——— >30 ppm Pb

·····> 0.6 ppm Ag

– – – – >120 ppm As

—·—·— >10 ppm Sb

1cm = 24 meters
0 120m 240m

200 0 200 400 600
SCALE: 1 INCH TO 200 FEET

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6059
MAP NO. #10

6059

FALCONBRIDGE NICKEL MINES LIMITED

PROPERTY: Gray Rock Property - Robin, Roy Claims

LOCATION: 50°48'N, 122°42'W - 18mi. by road from Goldbridge B.C.

TYPE OF MAP: Geochemical - Soil and Silt Samples (Lead, Silver, Arsenic, Antimony, Gold)

WORKING PLACE: Upper & Lower Grid Area

BASED ON: Fieldwork by BM, SZ, SP, RE, KC, PP, JJM

DATE OF WORK: Aug. 24-Sept. 7/76	MAP REF. NO.: 172-76-11	FIG. NO.: 11
DRAWN BY: RJE		
DATE: October 26/76	N.T.S. NO.: 92J/15	