

GEOPHYSICAL REPORT

ON

AIRBORNE MAGNETIC AND VLF-EM SURVEYS

OVER THE

RICO CLAIM GROUP

FOLEY CREEK, FOLEY PEAK AREA

NEW WESTMINSTER MINING DIVISION, BRITISH COLUMBIA

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PROPERTY: : On Foley Peak, 28 km east of  
Chilliwack  
: 49° 10' North latitude  
121° 33' West longitude  
: NTS - 92H/4E

WRITTEN FOR : McNELLEN RESOURCES INC.  
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DATED : May 30, 1988



GEOTRONICS SURVEYS LTD.  
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### SUMMARY

Airborne magnetic and VLF-EM surveys were carried out over the Foley Peak Property owned by McNellen Resources Inc. of Toronto, Ontario on February 28, 1988. The center of the property is located 28 km east of the city of Chilliwack. Access is by helicopter to Foley Peak, located within the property boundaries, or by logging road. The terrain consists of moderate to steep slopes forested with coniferous trees at the lower levels.

The purposes of the magnetic survey were to locate skarn-hosted mineral zones such as occur on the property, and to map lithologic contact between the intrusives and the sediments. The purpose of the VLF-EM survey was to map shear, fault, and fracture zones, some of which may host mineralization.

The property encloses the boundary between the Upper Cretaceous Chilliwack Group of sediments and metasediments and Jurassic granitic and dioritic intrusives. Copper mineralization is known to exist within a garnetite skarn, with some gold and silver as well. The sulphides are known to be weakly to strongly magnetized.

The airborne surveys over the Foley Peak were flown at about a 50-metre terrain clearance on contour-dependent flight lines with an elevation interval of approximately 80 metres. The instruments used were a Sabre Electronics proton precession magnetometer and a Sabre Electronics VLF-EM receiver. The magnetic data were picked from the strip charts, plotted and hand-contoured. The contours were drawn on a survey plan on which the VLF-EM anomalies were plotted as well.

### CONCLUSIONS

1. The magnetic survey has indicated that the contact between the granites and granodiorites to the north and east, and the Chilliwack sediments to the south and west, is significantly different from that as mapped by the G.S.C.
2. Parts of anomalous zone A as well as anomalous zones C and D may be caused by pyrrhotite within massive sulphide zones.
3. The VLF-EM survey has revealed several conductors striking generally in a north to northeast direction. Conductors 'a' and 'b' occur across a magnetic zone of small distinct magnetic highs (part of zone A) and thus could possibly reflect sulphide mineralization containing pyrrhotite perhaps associated with shear zones.
4. Most of the remaining VLF-EM conductors occur along the magnetic-mapped contact suggesting the causative sources are shear, fault, and/or fracture zones associated with the contact. They may possibly be mineralized as well.

### RECOMMENDATIONS

The property could be geologically mapped and prospected more thoroughly, especially around the magnetic peaks within zone A, magnetic anomalies C and D, as well as the VLF-EM conductors.

If the terrain permits, these magnetic highs should also be mapped by a ground magnetic survey. The location of airborne magnetic highs, especially in terrain as rough as on this property, is not that accurate.

If the areas of interest are covered by overburden, then soil geochemistry should be considered, as long as the overburden is not too deep.

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**INTRODUCTION AND GENERAL REMARKS**

This report discusses the survey procedure, compilation of data and the interpretation of low-level airborne magnetic and VLF-EM surveys carried out over the Rico claim group within the Mount Foley area on February 28, 1988. The surveys were carried out by Lloyd Brewer, instrument operator and project manager, and John Kime, navigator, both of whom are of Columbia Airborne Geophysical Services (1984) Ltd., with Bob Holt of Cariboo-Chilcotin Helicopters Ltd. as pilot. A total of 299.4 line km of airborne surveys were flown over the Foley Peak property.

The primary purpose of the magnetic survey was to locate skarn-hosted mineral zones such as occur on the property - associated sulphides are known to be magnetized, and thus magnetic anomalies could prove of interest. The secondary purpose was to map the lithologic contact between the intrusives and sediments as a magnetic low. The main purpose of the VLF-EM survey was to map shear, fault, and fracture zones as conductors.

PROPERTY AND OWNERSHIP

The property consists of six mineral claims containing 100 units, ten crown granted claims and three reverted crown granted claims as shown in map 2 and as described below:

Metric

<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Rico 1	20	3141	April 22, 1989
Rico 2	8	3142	April 22, 1990
Rico 3	16	3143	April 22, 1990
Rico 4	16	3144	April 22, 1989
Rico 5	20	3145	April 22, 1989
Rico 6	20	3146	April 22, 1989
	100		

Reverted Crown Grants

<u>Name</u>	<u>Lot No.</u>	<u>Record No.</u>	<u>Expiry Date</u>
White	1097	3129	March 30, 1991
PI fraction	988	3130	March 30, 1991
Phee fraction	1002	3131	March 30, 1991

Crown Grants

<u>Name</u>	<u>Lot No.</u>
Lucky Four #1	990
Lucky Four #2	999
Lucky Four #3	1001
Lucky Four #4	989
Lucky Four #5	1033
Lucky Four #6	1034
Epsilon fraction	991
Gamma fraction	998
Delta fraction	1000
Sperry	1098

The expiry dates shown for the Rico and reverted crown granted claims take into account the surveys under discussion as being accepted for assessment credits.

All claims are owned by McNellen Resources Inc. of Toronto, Ontario.

#### LOCATION AND ACCESS

The center of the property is found 28 km east of the city of Chilliwack, B.C. Foley Peak is located within the claim boundaries.

The geographical coordinates for the center are 49° 10' north latitude and 121° 33' west longitude.

Access is best by helicopter but it can also be gained by four-wheel drive vehicle. One travels approximately ten km up Foley Creek from its junction with Chilliwack River and then climbs by foot up the valley and mountain slopes.

#### PHYSIOGRAPHY

The property is located at the west edge of the Cascade Mountains within the Skagit Range only 18 km north of the Canada/US border. The terrain varies from gentle along the valley bottoms to steep and precipitous on the valley sides, with many cliffs.

Elevations vary from 575 metres a.s.l. on Foley Creek on the southwestern corner of the property, to 2,308 metres a.s.l. at Foley Peak on the southeast central edge of the property to give a relief of 1,738 metres.

Foley Creek drains southerly through the eastern half of the property. Two small icefields occur on the northwestern part of the property, one of which is the Foley glacier. The property is mainly drained by many tributaries of Foley Creek, as well as some northerly-flowing creeks draining into Wahleach Lake, 5.5 km to the north-northwest of Foley Peak.

The forest cover consists of a lightly to moderately dense cover of coniferous trees.

### HISTORY

The following is quoted from Lorimer's report of September 13, 1982:

"This is an old property that was first discovered in 1915. During the next few years an access trail was built, a camp was erected and some diamond drilling was done. Early reports also mention two adits, one under the glacier and one at the east showing several hundred feet lower than the main showings.

"In later years several engineers made examinations and reported favourably on the prospects, but little seems to have been done. The relative inaccessibility was an obvious hindrance to exploration before the advent of helicopters.

"Underground exploration was undertaken in 1950 and 1951 by Rico Copper Mines Limited, a new company that had acquired the original six Lucky Four grants and adjoining claims as well. In these two years about 340 feet of drifting and cross-cutting were done in an adit about 230 feet below the main outcrops.

Four thousand feet of surface diamond drilling and 440 feet of underground drilling were completed.

"Underground work was resumed in 1953 when the adit was advanced 80 feet. The following year it was extended another 200 feet for a total of 620 feet. In this year and in 1955, about 10,000 feet of holes were drilled from the adit. In 1956, surface prospecting and geologic mapping were carried out over accessible parts of the whole claims area.

"After several years of inaction, limited exploration was resumed in 1961 when an electromagnetic survey of the contact to the east of the main showings was made. In the following years some surface excavating and about 40 feet of underground work were completed.

"Diamond drilling was resumed in 1966 when nine surface holes totalling 1,330 feet were drilled to test the contact area southeast of the main showings. In the following year two holes were drilled into the most promising of the anomalies located by the 1961 electromagnetic survey.

"A few years later, Big Hope Resources Ltd. (N.P.L.) erected a camp building (the old one was destroyed by fire several years ago) and excavated about 35 tons of selected material from the main showing. It was flown out by helicopter and left at a loading point on one of the old logging roads near Wahleach Lake.

"By 1971 much information had been accumulated but it was distributed over a large number of maps and reports by various engineers and geologists. There was a lack of co-ordination and, in many cases, the information was incomplete or contradic-

tory. It was therefore decided to compile a new and comprehensive report and set of maps with emphasis on the area of the main showings and underground workings.

"It soon became evident that a reliable survey was required since only the work done in 1950 and 1951 appeared to have been surveyed by transit. A wood-floored tent camp was established in August, 1971, and a transit survey carried out over an eight-day period. The survey included underground workings, all identifiable diamond drill holes, surface exposures and topographic features in the area of the main showings (Map 3). The results agreed closely with those obtained by D.C. McKechnie wherever checks could be made; so the positions of holes that could not be located but had been plotted by Mr. McKechnie were accepted as correct. An error of about three degrees was found in the second half of the adit and several of the underground holes were wrongly plotted. Discrepancies were also found in surface contouring.

"The results to this stage indicated gaps in the information concerning the area between the zones known as A and B and in the area to the southeast. It was decided to drill a few holes from surface to provide at least some of the missing information.

"In mid-September the camp was re-established and a drill flown in. After drilling two holes totalling 275 feet and getting a third hole down to 60 feet, a blizzard struck. Continuing bad weather and the lack of a camp and facilities for winter operations forced abandonment of the programme in the second week of October.

"As far as is known, no work has been done on the property since 1971."

## GEOLOGY

The following is also quoted from Lorimer's 1982 report; and is confined to the vicinity of the main showings.

"The outcrops occur in altered sedimentary rocks of Carboniferous age along a contact with Mesozoic granodiorites. The contact has a general northwest-southeast strike and, at the showings, has a steep dip to the northeast.

"The sedimentary rocks consist mainly of argillites and greywacke. The stratification in general parallels the granodiorite but locally there has been intensive minor folding, crushing and brecciation. Both exist separately and as argillaceous greywackes, and both have limy and siliceous phases. In colour they range from light to dark. Quartz, calcite and tourmaline veins, and fine-grained granitic dykes are common features. In one location there is a zone of large, well-formed quartz crystals exposed on the surface.

"Of particular interest, since it is usually the host for the copper mineralization, is a garnetite skarn zone. It is somewhat irregular in outline but has a general northwesterly strike and an average dip of about 60 degrees to the northeast. It widens with depth, being about 30 feet wide near the surface and about 90 feet wide at the adit level. Near the borders it is generally interbedded with greywacke or argillite, and throughout the mass there occur veins of quartz, calcite and tourmaline. Actinolite is another common constituent.

"Structurally the zone has been cut by two faults that have affected the attitude of the garnetite skarn zone. The most important one strike roughly parallel to the contact but

dips to the southwest at approximately 65 degrees. The overhanging cliff on which the original showings were found is undoubtedly the hanging-wall of this fault. The maximum displacement appears to be near Section B-B (Map 4) where it is about 80 feet, the hanging-wall block moving downwards relative to the footwall block. Towards the north this displacement decreases until it virtually disappears at Section E-E about 90 feet north. Whether this effect is due to rotational movement or a series of transverse faults causing block faulting has not been determined. The second fault has not been seen by the writer but its location is shown on an old company map. Whether it is an interpretation or was actually seen when there was less snow is unknown. Such a fault would account for there being little or no displacement of the garnetite zone at Section A-A. For the present its existence should be accepted and for this reason it is shown on the accompanying plans.

"The metals of economic interest are silver and copper. Although a few notable gold values were obtained, the majority were 'trace' or 0.01 ounces per ton. Molybdenite occurs occasionally in minor amounts. The principal copper mineral is chalcopyrite. Bornite is occasionally seen. The copper minerals are generally in the garnetite but in at least two holes, Nos. U20 and U22, high silver and copper values were obtained in the greywacke. The chalcopyrite occurs as disseminations and as fracture and cavity fillings. In the latter it is usually associated with pyrrhotite and, to a lesser extent, pyrite and arsenopyrite. These sulphide masses vary from weakly to strongly magnetic. The silver mineral has not been identified as far as is known.

"In the majority of cases the richer sulphide zones favour the borders of the garnetite. They appear to be structurally

controlled, probably occupying bedding faults and fissures that had their genesis in the original stratification. Some writers have suggested that the deposits are a number of rich 'plums' but the many drill intersections would indicate at least a moderate degree of continuity. The impression of scattered deposits may have arisen from the displacement due to faulting.

"The drilling to date indicates that the higher-grade sulphide zones have a downward rake to the southeast. (Vertical projection, Map 5). This rake is apparent in the zones on both sides of the longitudinal fault. Little is known of this area since only two holes were drilled near it."

#### INSTRUMENTATION AND THEORY

##### A. Magnetic Survey

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

The magnetic patterns obtained from a regional airborne survey are directly related to the distribution of magnetite in the survey area. However, the geology cannot be deduced from isomagnetic maps by simply assuming that all magnetic highs are underlain by gabbro or ultramafic rocks, and that all magnetic lows are caused by limestone or chert. The problem with such a simplistic approach is that magnetite is not uniformly distributed in any type of rock. Other problems arise from the fact that most geologic terrains have rocks of high susceptibility

superimposed on less 'magnetic' rocks, and vice versa. Cultural features such as powerlines, pipelines and railways also complicate matters. So many variables can be involved that it may be impossible to make a strictly accurate analysis of the geology of an area from magnetic data alone. It is preferable to use other information such as geological, photogeological and electromagnetic in combination with magnetic data to obtain a more accurate geological analysis.

#### B. VLF-EM Survey

A two-frequency omni-directional receiver unit, manufactured by Sabre Electronic Instruments Ltd., of Burnaby, B.C., was used for the VLF-EM survey. The transmitters used are NLK Arlington (Seattle), Washington, operating on 24.8 KHz, and Annapolis, Maryland, transmitting at 21.4 KHz. These signals are used due to their ideal orientation with respect to easterly and north-westerly geological structures, and their good signal strengths.

The VLF (Very Low Frequency) method uses powerful radio transmitters set up in various parts of the world for military communications. These powerful transmitters can induce electric currents in conductive bodies thousands of kilometres away from the radio source. The induced currents set up secondary magnetic fields which can be detected at surface through deviations in the normal VLF field. The VLF method is inexpensive and can be a useful initial tool for mapping structure and prospecting. Successful use of the VLF requires that the strike of the conductor be in the direction of the transmitting station so that the lines of magnetic field from the transmitter cut the conductor. Thus, conductors with northeasterly to southeasterly strikes should respond to Annapolis transmissions, while conductors with southwesterly to southeasterly strikes should respond

to Seattle transmissions. Some conductors will respond to both stations, giving coincident field strength peaks.

It is impossible to determine the quality of conductors with any reliability, using field strength data alone. The question of linearity is in doubt if the conductor does not appear to cross the adjacent flight lines. The relatively high frequency results in a multitude of anomalies from unwanted sources such as swamps, creeks and cultural debris. However, the same characteristic also results in the detection of poor conductors such as faults, shear zones, and rock contacts, making the VLF-EM a powerful mapping tool.

The interpretive technique requires information from magnetic surveys, air photo analyses, and ground traverses to aid in discrimination between important and unwanted anomalies. Even armed with this information the interpreter can easily be misled.

#### SURVEY PROCEDURE

A two-metre bird was fitted with a magnetometer coil and two omni-directional EM receivers and towed beneath the helicopter on a 10-metre cable. The terrain clearance for the bird was 50 metres.

The survey was contour-line flown with an approximate elevation spacing of 80 metres. Navigation was visual, using 1:50,000 scale maps blown up to 1:10,000.

The aircraft used to conduct this survey was a Bell 206B Jet Ranger helicopter operated by Cariboo-Chilcotin Helicopters Ltd.

Airspeed was a constant 60 knots/hr so that creek valleys and canyons were penetrated thoroughly. The slow airspeed provided safety, detailed coverage of boxed-in areas, and consistency of data retrieval, which is critical in rugged terrain, such as within this survey.

The number of line km flown on the property as shown on map 3 is 299.4.

The project supervisor, Mr. L. Brewer, has over 8 years of experience in conducting aerial magnetic and electromagnetic surveys from rotary-wing aircraft, under all types of terrain conditions.

#### DATA REDUCTION AND COMPILATION

The observed magnetic total field was recorded on analogue strip charts. These were played-back together with audio recordings containing fiducial markers, and the fiducial markers were transferred to the strip charts. The fiducial markers were identified with topographic features along the flight lines.

The magnetic data were taken from the strip charts and plotted at a scale of 1:10,000 (1 cm = 100 m) onto map 3. The data were then contoured at a 100-gamma interval over the entire property. The background is 56,500 gammas so that a 1,000-gamma contour reads 57,500 gammas.

The VLF-EM survey measured the field strength. The resulting anomalies were taken from the strip charts and plotted on the sheet with the magnetics. A distinction has been made on the map between weaker and stronger anomalies.

## DISCUSSION OF RESULTS

### A. Magnetics

The magnetic survey has shown the magnetic field over the property area to be highly variable. The background is about 200 to 500 gammas with highs commonly reaching 1,000 gammas and higher.

Anomalous zone C, probably due to the dipole effect, shows the greatest range with a high of 2,000 gammas and the associated low of less than 100 gammas.

It was expected that the magnetic survey would map the contact between the granites and granodiorites on the north and east sides of the property, and the Chilliwack group sediments on the south and west sides of the property, since granites and granodiorites are generally much more magnetic than sediments are. If the magnetic survey has in fact mapped the contact, then it is significantly different from that mapped by the G.S.C.

The GSC-mapped contact has been drawn on the survey plan and thus it can be seen that background values are mapped on both sides of the contact where it would be expected to occur with the sediments. By the same token, it can be seen that magnetic highs are mapped on both sides of the G.S.C. contact as well, where the highs would be expected to be mapped only with the intrusive granites and granodiorites. However, the highs do predominate on the intrusive side of the G.S.C. contact, and the lower background values do predominate on the sedimentary side. Furthermore, the creek valleys have a much lower magnetic field because of the thicker overburden and thus where the contact would occur in creek valleys, it would not be apparent.

The writers have drawn in a contact as suggested by the magnetics. As mentioned above, it is significantly different from that mapped by the G.S.C. also the writers have shown two possible contacts around anomaly C. The northern contact suggests that C occurs within a satellite intrusive. This could be true for other magnetic highs within the sediments as well.

The most obvious character of the contour map is a general correlation between the magnetic contours and the topographic contours. Most of the magnetic highs occur along topographic peaks and ridges. This topographic relation could reflect magnetite within the granitic intrusives bordering the Chilliwack group of sediments and metasediments. Granites, being more competent than sediments, would resist natural erosion better.

Magnetic lows often occur along creek valleys, and/or areas of low topography. The reasons for this are as follows:

1. Valleys almost always contain deeper overburden which means the detecting element is further from the bedrock causing the magnetic field.
2. If the survey is flown across the valley or gulley, then the detecting element is also further from the bedrock.
3. Gulleys and valleys are often caused by faults or shear zones which are often reflected by magnetic lows.

For ease of discussion, nine zones of magnetic highs have been labelled by the upper case letters, A to I, respectively.

Anomalous zone A occurs within the center of the survey area and is a wide extensive zone. Being 2,300 m long by up to 1,300 m wide. Thus the likely causative source is an intrusive rock-type containing magnetite. However, the main mineralization is

found with zone A and thus part of the causative source may be pyrrhotite within sulphide zones. Certainly the small fingerprint-type highs within this zone both at the south and east ends could be caused by such a source. The southern magnetic high is located close to the main mineralization.

Anomalous zone B occurs at the eastern edge of the property, along the western ridge of Goetz Peak and is also a wide extensive zone. This zone, generally a 900-gamma high, is over 2,000 metres long and reaches a high of 1,200 gammas. The zone lies to the east of the G.S.C.-contact within the intrusives, suggesting magnetite to be the causative source.

Anomalous zone C because it consists of several small distinct highs, has good potential for mineralization. This zone shows the strongest response on the property, 2,000 gammas, along the ridge to the east of Foley Peak. The adjacent magnetic low of only 100 gammas implies that this zone reflects a magnetic dipole which is usually caused by magnetite but could be caused by pyrrhotite if it is highly magnetic. In verbal discussions with Lorimer, he stated that there was reported mineralization in this area but implied the location was unknown.

Anomalous zone D occurs on the ridge to the north of Stewart Peak and is an anomalous zone consisting of several distinct fingerprint-type highs, as well, reaching intensities of 1,200 gammas. Its causative source could therefore be the same as anomalous zone C.

Anomalous zone E is a weaker zone, but because of its location, in the valley beside Foley Creek and about 1.5 km upstream of Foley Lake, it warrants some discussion. Generally, the valley bottom shows a stronger magnetic response than the adjacent

valley slopes (another magnetic high occurs upstream, near anomalous zone C). This is the opposite of what is normally the case, that is, valley bottoms have a lower magnetic intensity than the valley sides, for the reasons mentioned above. This would therefore suggest that anomaly E and the magnetic high to the north reflect a magnetic rock-type not likely Chilliwack Group sediments. The rock-type may be an intrusive or possibly a volcanic associated with the Chilliwack Group sediments.

Anomalies F, G, H, and I are localized magnetic highs occurring within the sediments and thus the causative sources may be intrusive outliers. However, economic mineralization should also be considered.

#### B. VLF-EM

The major cause of VLF-EM anomalies, as a rule, are geologic structure such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But in the writer's experience, where VLF-EM anomalies correlate with sulphide mineralization, the anomalies are usually reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying close to the same direction as the direction to the transmitter can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may

not be picked up at all if it is at too great an angle.

The general trend of the conductors on the property can be seen to be north-northeast. There are at least ten conductors labelled 'a' to 'j', respectively, and are all of weak to medium strength with only a few scattered strong responses. In general, the conductors occur within magnetic low areas, with the exception of medium-strength conductor 'a' crossing the magnetic high immediately east of Conway Peak. In general, the VLF survey did not produce much evidence of the contact zone, though many of the conductors occur in the area of the magnetic contact and thus could reflect structure such as shear or fracture zones within the vicinity of the contact.

Conductors 'a' and 'b' are the two most interesting conductors, being 1900 and 390 metres long, respectively. They occur across strong fingerprint-type magnetic highs, east of Conway Peak, and could thus reflect shear zones containing magnetic pyrrhotite associated with economic sulphides.

Conductors 'd', 'e' and 'f' in the north central part of the property, cut through the magnetic low zones, thereby suggesting the existence of non-magnetic structure such as shear zones. These conductors have lengths varying from 400 to 1,200 metres long and, seeing that in general they do not show much topographical correlation, they could represent a wide shear or fault system.

Conductors 'g' to 'j' are also weak to medium conductors varying in length from 500 to 1,600 metres. These show a general north-northeasterly strike direction similar to that noticed in conductors 'a' to 'f'. This consistent trend suggests that a fault/fracture system occurs in the area striking generally

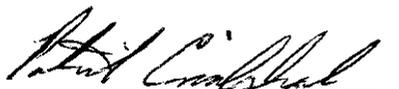
north-northeasterly. Also all occur immediately across the estimated position of the intrusive/sedimentary contact zone. It is possible that cross-fracturing attracted mineralizing fluids at those intersections.

Respectfully submitted,  
GEOTRONICS SURVEYS LTD.



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David G. Mark,  
Geophysicist



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Patrick Cruickshank,  
Geophysicist

May 30, 1988  
45/G422

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GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practising my profession for the past 20 years and have been active in the mining industry for the past 23 years.
3. That I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.
4. This report is compiled from data obtained from airborne magnetic and VLF-EM surveys carried out by Columbia Airborne Geophysical Services (1984) Ltd., under the supervision of L. Brewer on February 8, 1988.
5. I have no direct or indirect interest in the property mentioned within this report, nor in McNellen Resources Inc., nor do I expect to receive any interest as a result of writing this report.



David G. Mark  
Geophysicist

May 30, 1988  
45/G422

GEOPHYSICIST'S CERTIFICATE

I, M.A. PATRICK CRUICKSHANK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a consulting geophysicist of Geotronics Surveys Ltd., with offices located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1986) and hold a B.A.Sc. degree in Geophysics Engineering.
2. I have been practising my profession for one and a half year.
3. I am registered with the British Columbia Association of Professional Engineers as an Engineer-in-training, in geophysics.
4. This report is compiled from data obtained from airborne magnetic and VLF-EM surveys carried out by Columbia Airborne Geophysical Services (1984) Ltd., under the supervision of L. Brewer on February 28th, 1988.
5. I have no direct or indirect interest in the property mentioned within this report, nor in McNellen Resources Inc., nor do I expect to receive any interest as a result of writing this report.



Patrick Cruickshank  
Geophysicist

May 30, 1988  
45/G422

AFFIDAVIT OF COSTS

I, Lloyd Brewer, president of Columbia Airborne Geophysical Services (1984) Ltd., certify that the airborne magnetic and VLF-EM surveys were flown on February 28th, 1988, and that they were flown at a cost of \$45/km. The total number of km on the Rico survey was 299.4 and thus the cost was \$13,473.00



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Lloyd Brewer

May 30, 1988

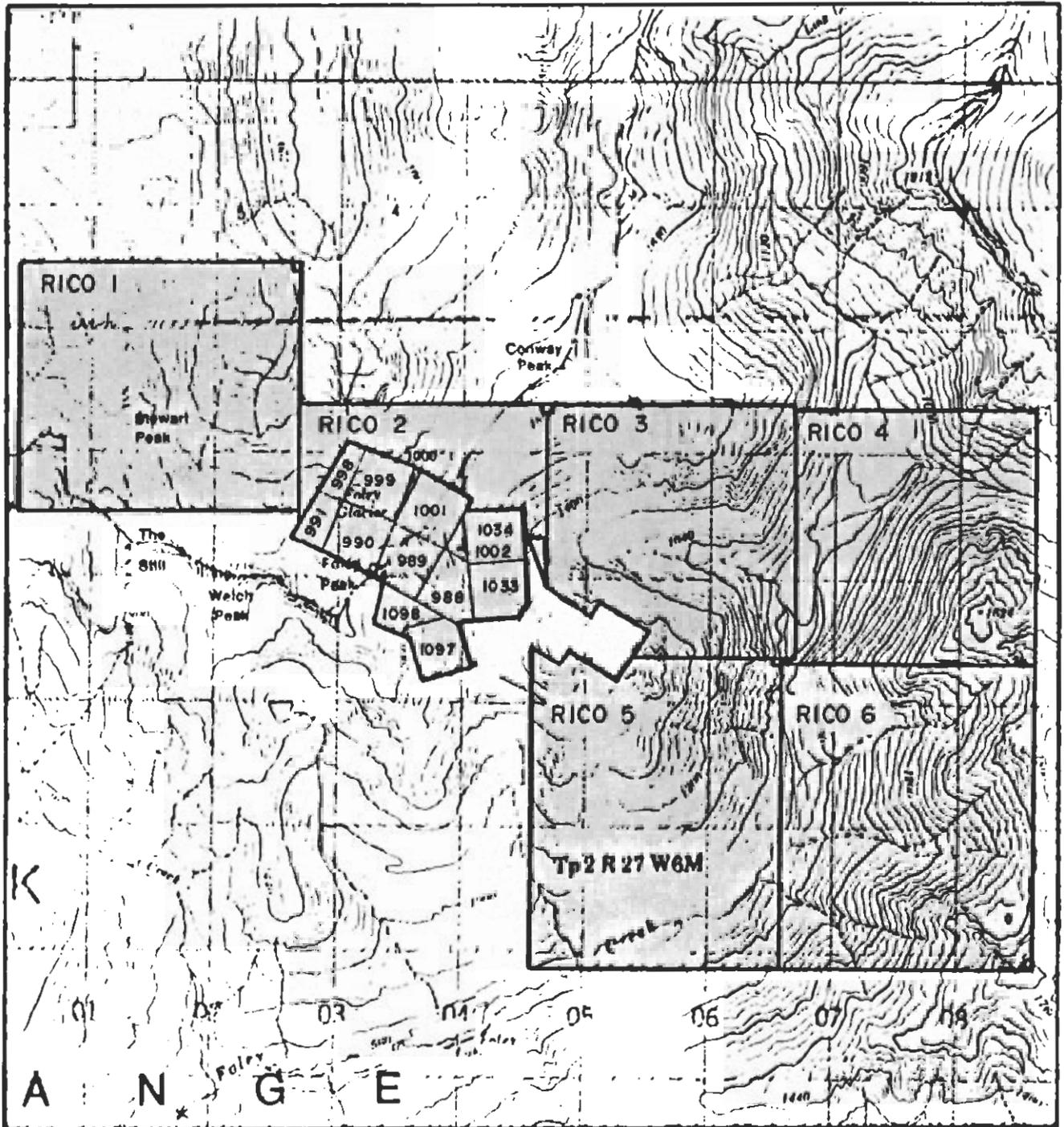
45/G422



**PROPERTY**

GEOTRONICS SURVEYS LTD.  
**McNELLEN RESOURCES, INC.**  
**RICO CLAIM GROUP**  
 MT. FOLEY AREA  
 New Westminster Mining Division, B.C.  
**LOCATION MAP**

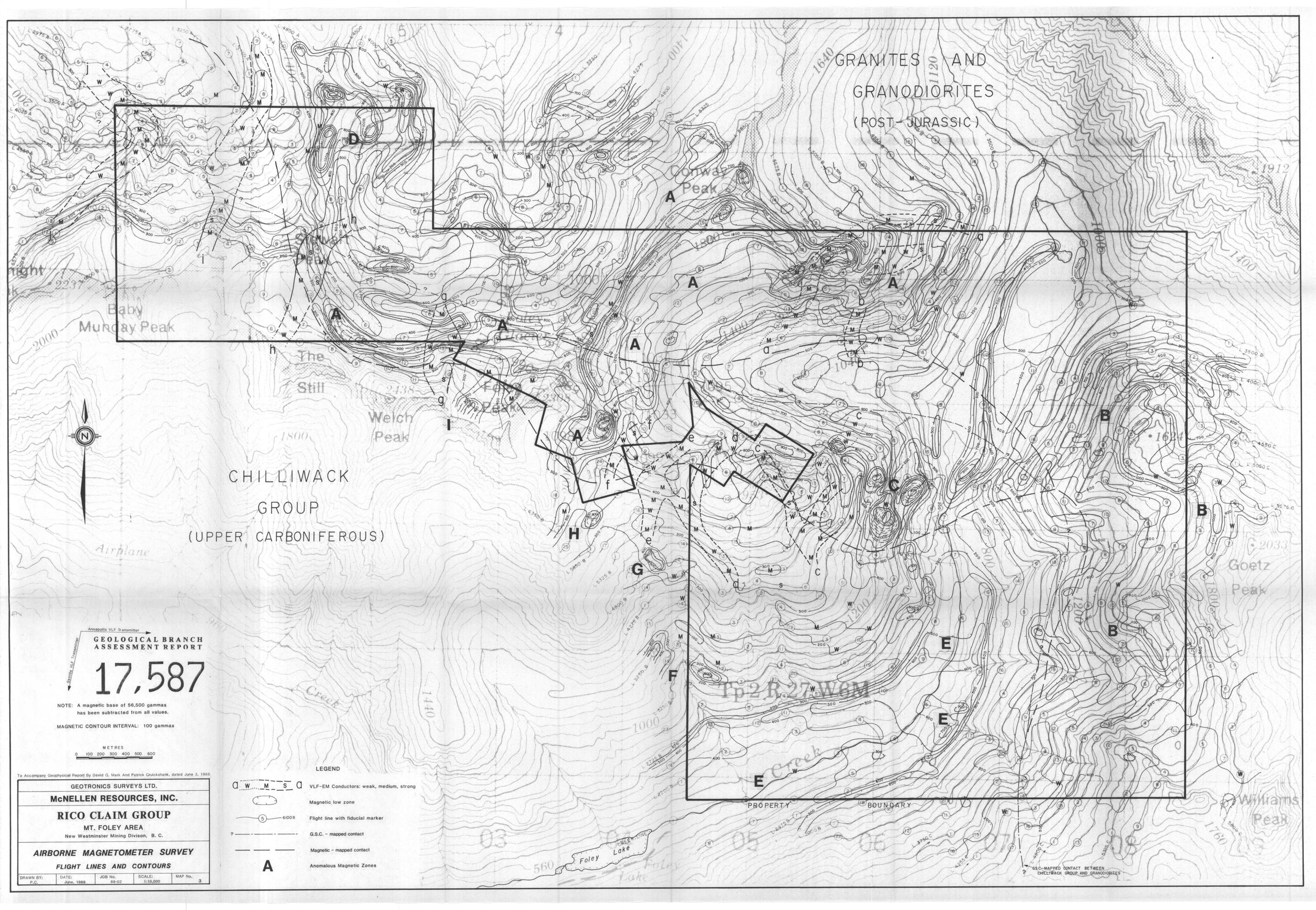
N.T.S. 92H/4E	DATE: June, 1988	JOB No. 88-02	SCALE: 1:8,000,000	MAP No. 1
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GEOTRONICS SURVEYS LTD.  
**McNELLEN RESOURCES, INC.**  
**RICO CLAIM GROUP**  
 MT. FOLEY AREA  
 New Westminster Mining Division, B.C.

**CLAIM LOCATION MAP**

N.T.S. 92H/4E	DATE: June, 1988	JOB No. 88-02	SCALE: 1:50,000	MAP No. 2
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GRANITES AND  
GRANODIORITES  
(POST-JURASSIC)

CHILLIWACK  
GROUP  
(UPPER CARBONIFEROUS)



Annapolis VLF Transmitter  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,587

NOTE: A magnetic base of 56,500 gammas  
has been subtracted from all values.  
MAGNETIC CONTOUR INTERVAL: 100 gammas



To Accompany Geophysical Report By David G. Mark And Patrick Cruckshank, dated June 3, 1988.

GEOTRONICS SURVEYS LTD.			
McNELLEN RESOURCES, INC.			
RICO CLAIM GROUP			
MT. FOLEY AREA			
New Westminister Mining Division, B. C.			
AIRBORNE MAGNETOMETER SURVEY			
FLIGHT LINES AND CONTOURS			
DRAWN BY: P.G.	DATE: June, 1988	JOB No. 88-02	SCALE: 1:10,000
MAP No. 3			

- LEGEND
- W — M — S — VLF-EM Conductors: weak, medium, strong
  - Magnetic low zone
  - 5 — 61008 Flight line with fiducial marker
  - G.S.C. — mapped contact
  - Magnetic — mapped contact
  - A Anomalous Magnetic Zones

GSC-MAPPED CONTACT BETWEEN  
CHILLIWACK GROUP AND GRANODIORITES