GEOLOGICAL REVIEW and GEOPHYSICAL REPORT

on

QCM 1, 3, 4 and 5 CLAIMS
OMINECA MINING DIVISION, B.C.

NOVEMBER, 1989

for

GOLDEN RULE RESOURCES LTD.
Calgary, Alberta

by

Michael Fox, B.Sc., P.Geol.

GEOLOGICAL REVIEW

and

GEOPHYSICAL REPORT

QCM 1, 3, 4, and 5 CLAIMS

LAT 55 deg. 41'N, LONG. 124 deg. 35'W

N.T.S. 93-N-10

OMINECA MINING DIVISION

BRITISH COLUMBIA

for

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CERTIFICATE

I, the undersigned, of the City of Calgary in the Province of Alberta, do hereby certify that:

1. I am a Consulting Geologist with an office at 120 Hawkwood Hill N.W., Calgary, Alberta;

2. I am a graduate of the University of British Columbia with a B.Sc. in Geology (1974), and I have been practising my profession since that date;

3. I have worked in the field of mineral exploration since 1965;

4. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and

5. I personally worked on the claims and supervised exploration work carried out there and described in this report.

Respectfully submitted,

PROFESSIONAL GEOLOGIST ALBERTA
MICHAEL ST. C...

Michael Fox, P.Geol.

November, 1989

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SUMMARY

During the months of July and August, 1989, approximately 27.7 line kilometers of cut and chained grid lines were established and geophysically surveyed utilizing an EDA OMNI IV Magnetometer and base station system. The tightly controlled survey outlined a number of interesting, but subtle trends in an area of little magnetic relief. The survey area is centred on an extensive zone of low grade gold mineralization outlined by drilling in 1983. The results of this drilling were reviewed, and a number of outcrops on the property were examined in order to assist in interpretation of the ground magnetic survey results.

1. INTRODUCTION

Location and Access

The Manson Creek/Germansen Landing area is located in north-central British Columbia (Figure 1). The area is accessible either by gravel road from Fort St. James (226 km to the south), or via logging roads from MacKenzie (160 km to the southeast). A network of little used roads and trails provides local access on the claims. Fuel, groceries, and lodging are available in the villages of Manson Creek and Germansen Landing.

Property and Ownership

Currently, Golden Rule Resources Ltd. holds a total of four (4) modified grid claims comprising sixty-eight (68) units in the Manson Creek/Germansen Landing area. The status of the claims is summarized in Table 1 and a sketch map of the claims is outlined in Figure 2.

Physiography and Glaciation

The claims lie within the Omineca Mountain subdivision of the Interior Plateau. Topographic relief varies from 925 to 1,500 meters ASL on the property. The mountains in the area are characteristically rounded with gentle slopes and heavily wooded flanks, interrupted by the occasional rugged ridge crest. The topography was modified by eastward and southeastward moving ice sheets during Pleistocene glaciation. Limited glacial erosion has modified the uplands, and glacial deposition has infilled the lowland with both till and glacio-fluvial deposits ranging up to 40 m in thickness. Deglaciation and post-glacial erosion have incised Germansen River through both drift and Tertiary gravels to bedrock in the area.

TABLE 1

List of Mineral Claims
Omineca Mining Division, British Columbia

Claim Name	No. of Units	Record No.	In Good Standing Till
QCM 1	20	3435	1989 Dec. 4
QCM 3	20	3437	1989 Dec. 4
QCM 4	20	3438	1989 Dec. 4
QCM 5	8	3439	1989 Dec. 4
4 Claims	68 units		

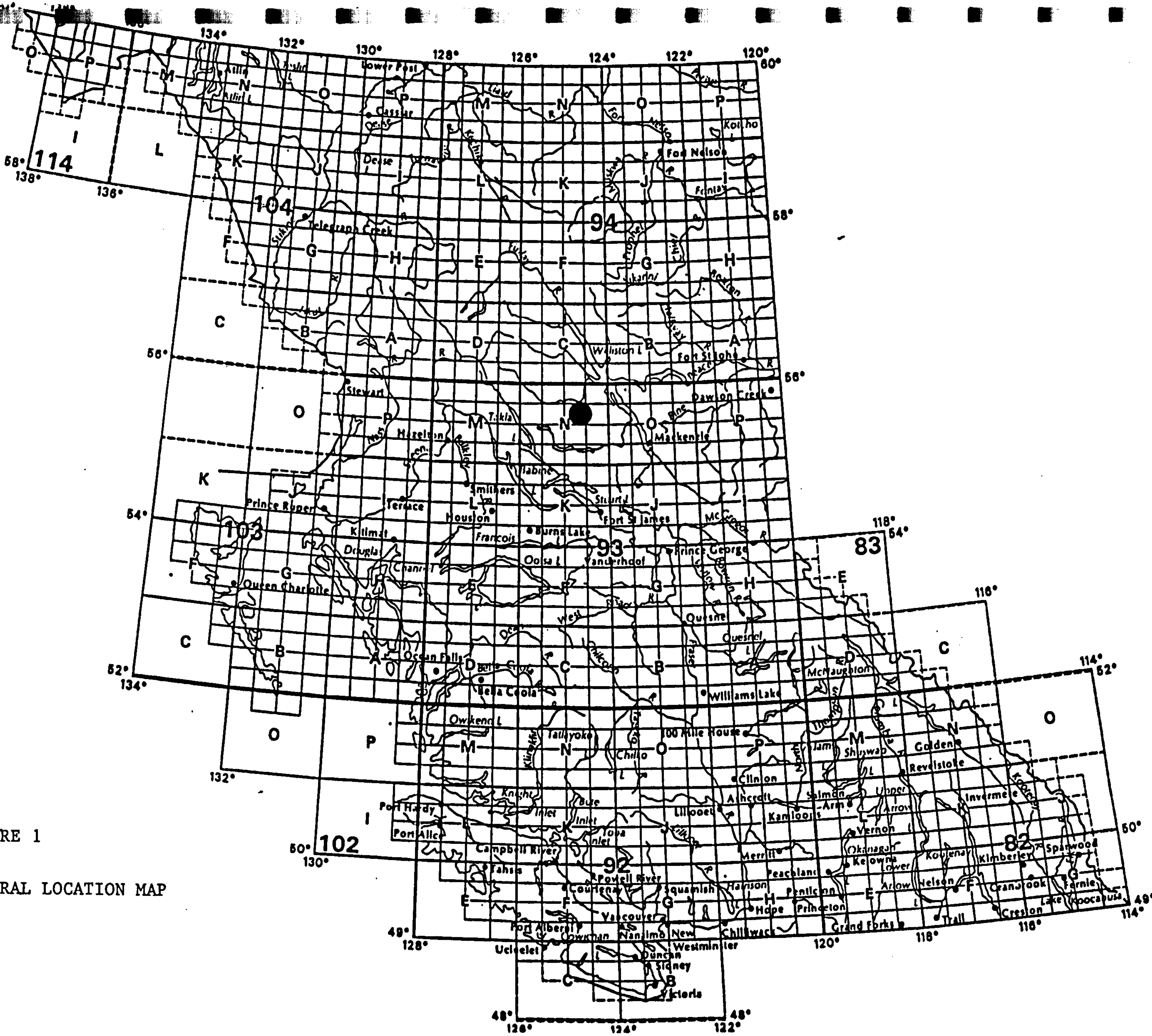


FIGURE 1

GENERAL LOCATION MAP

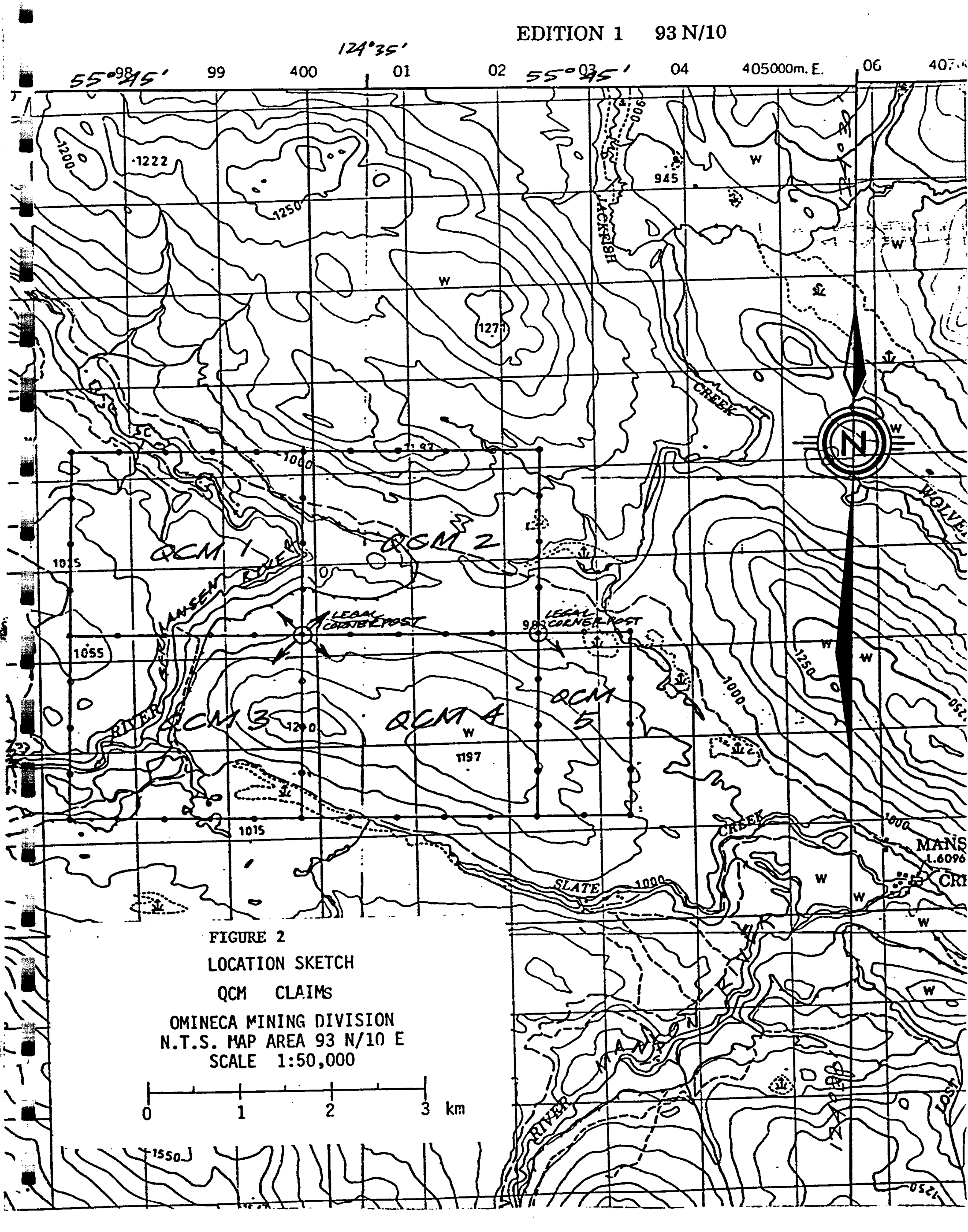


FIGURE 2
LOCATION SKETCH
QCM CLAIMS
OMINECA MINING DIVISION
N.T.S. MAP AREA 93 N/10 E
SCALE 1:50,000
0 1 2 3 km

2. GEOLOGY

Regional Geology

The Germansen River gold-producing belt occurs within an assemblage of ultramafic rocks (dunite, peridotite, and serpentinized equivalents); mafic to intermediate volcanics metamorphosed to greenstones; and metamorphosed fine-grained clastic and chemical sediments (including argillite, slate, chert, and limestone). The sedimentary rocks indicate a deep marine depositional environment, and whole-rock analyses of the volcanic rocks suggest compositions similar to those of oceanic basalts.

This assemblage of rocks is compositionally similar to the Cache Creek Group rocks with which they were initially correlated when the area was first mapped regionally. Fundamental differences in age and stratigraphy have been elucidated by more recent work, and this assemblage is now referred to as the Nina Creek Group.

In the Germansen River area, Nina Creek Group rocks are cut by major faults that strike transversely and subparallel to the belt and the steeply dipping rocks within it. From place to place, these "faults are marked by zones of intense carbonate alteration, sometimes several hundred meters in width. Alteration zone assemblages include ankerite, chlorite, calcite, quartz, pyrite, and mariposite. Major zones of carbonate alteration assemblages transect the Manson Creek property. In several areas in the belt, the alteration zones exhibit an apparent concordant relationship with the enclosing sedimentary, ultramafic, and volcanic rocks.

Property Geology

Geological mapping of the property was carried out previously over a grid on the property using 1:5000 scale topographic bases. Bedrock exposures are scarce; outcrops occur mainly along stream drainages or along ridge crests. Although average overburden depths are probably not great, a relatively thin evenly distributed mantle of glacial material effectively conceals bedrock in topographically subdued areas of the claims. Brief descriptions of mappable units are included below (no relative ages are implied by the order of descriptions), to provide some geological background for the section of this report dealing with interpretation of the ground magnetic survey results.

Sedimentary Rocks

Sedimentary rock units in the Manson Creek area consist of carbonaceous to calcareous fissile shale or shaly limestone and argillaceous siltstone of Pennsylvanian to Permian age. Where unmetamorphosed, these units are well laminated and slightly pyritic. These rocks grade laterally into argillite and siliceous chloritic schists containing variable amounts of carbonaceous material (graphite?) and sericite.

Volcanic and Volcaniclastic Rocks

A number of mafic to intermediate volcanic rock units and volcaniclastic rocks overlie the sedimentary rock units in the Manson Creek area. The volcanic rocks consist of both basaltic and andesitic flows of late Paleozoic age.

The basaltic flows are green to greenish-grey, massive to locally pillowed rocks. Primary volcanic features such as hyaloclastite, flow-top features, and vesicles are well preserved. The basaltic rocks are characterized by mafic phenocrysts, probably originally pyroxenes now replaced by tremolite, chlorite, sericite, quartz, and carbonate. These basaltic rocks have been metamorphosed to greenschist facies.

The andesitic flows are similarly metamorphosed, producing a greenish-grey to grey weakly to strongly schistose rock. The flows are distinguished by twinned andesine phenocrysts in a fine grained groundmass of plagioclase microlites.

Volcanic rocks in the area are overlain by a package of clastic rocks derived from erosion of a volcanic pile. These epiclastic rocks range from fine grained siltstone and shale to sandstone and conglomerate with the volcanic sandstones being the most abundant lithology. The package has an overall fining-upward trend.

Sedimentary structures, such as crude banding of sandstone and siltstone layers and graded bedding, are present. These indicate general southwesterly dips of the unit. Thin interbeds of siltstone commonly show soft sediment deformation structures such as slumps, flames, rip-ups, and disrupted bedding, as well as graded bedding.

Ultramafic Rocks

This map unit includes dunite, peridote, and serpentinized and steatized equivalents. Magnetite occurs as an accessory mineral in the dunite, and in some outcrops constitutes 2% to 3% of the rock. For the most part, outcrops are too sporadic to delineate the extent of the various ultramafic rock types, and they have arbitrarily been mapped as a single unit.

Ultramafic rocks in the area occur as discontinuous lenses tectonically emplaced along or near major faults which cut the volcano-sedimentary sequences. Although intensely hydrothermally altered, remnant primary minerals (such as olivine and brown aluminum rich chromian spinal) and tectonic fabrics suggest that ultramafic rocks in the area are, in part at least, of upper mantle derivation. Weakly carbonatized varieties are generally dark green, magnetite rich serpentinite or serpentinized peridotite which may contain subordinate talc and carbonate. Highly carbonatized varieties are rusty-brown rocks composed of magnetite, ankerite, quartz, and subordinate and variable amounts of emerald-green mica (mariposite). Highly carbonatized ultramafics are generally weakly magnetic, hematite-bearing, and may contain pyrite. No ultramafic rocks or their altered equivalents are known to outcrop within the survey area described in this report.

Carbonate Alteration Zone

Carbonate alteration zones mapped in the area consist of assemblages of quartz, ankerite, mariposite, and pyrite in varying percentages. Some zones are bright green in colour and contain up to 20% mariposite. In other areas, mariposite and/or pyrite is absent, and quartz and ankeritic carbonate constitute variable percentages of the rock. Everywhere that they were observed, the alteration zones constitute a highly distinctive, easily mappable unit. Due to the sporadic distribution of bedrock exposures, however, these zones could not be successfully subdivided on the basis of mineralogical and textural variations across or along strike.

Structure

The sedimentary rocks in the Germansen River area exhibit a regional strike varying from 100 to 120 deg. azimuth. Dips are more variable, ranging from 45 deg. to vertical. Magnetic patterns and outcrop distribution of ultramafic and mafic igneous rocks imply a regional concordance with the sediments. A number of northerly trending faults have also been inferred from magnetic patterns and apparent offsets of the mapped units. The carbonate veins in the shales and argillites parallel the inferred strike direction of these faults. The existence of tight isoclinal folding is considered highly probable.

Detailed geological mapping of the QCM claims has identified the following structural parameters;

1) Bedding: 095 to 125 deg./30 to 60 deg. S.

2) Veins: "Main set": NE - ENE/subvertical to steep south (cut bedding and schistosity).

3) Schistosity: 115 to 140 deg./steep south.

4) Other Veins: poorly defined quartz vein sets: 90 to 100 deg./steep south and 160 to 170 deg./steep east.

3. ECONOMIC GEOLOGY

Placer gold was discovered on Germansen River in 1870 and on Manson River and its tributaries the following year. Since then, production has been almost continuous from Germansen River (some 24,138 ounces of gold had been produced up to 1949). In the early decades of this century, a number of companies invested considerable sums of money on ditches, roads, and flumes in attempts to conduct large scale placer mining. These efforts met with varying degrees of success. In 1929, the Consolidated Mining and Smelting Co. of Canada Ltd. (Cominco) acquired a number of leases along Slate Creek (a tributary of Manson River) and carried out testing and placer mining until 1943. Total recorded production from Slate Creek is 4,776 ounces of gold. The alluvial deposits along Manson River and several other tributary streams were also worked intermittently. Total recorded production from these streams is 8,039 ounces of placer gold. Several small placer operations currently exist along Germansen River and Manson River.

Intensive prospecting of the Manson Creek gold belt eventually led to the discovery of a number of lode gold/silver occurrences. Quartz veins, stringers, and stockworks occur at many locations along the Manson "fault" zone and subsidiary related structures. Some zones are mineralized with free gold and sulphides, and contain values in gold, silver, lead, and zinc. Random samples from massive carbonate alteration zones along the Manson fault have assayed from a trace to 0.01 oz/ton Au; 0.03 to 0.60 oz/ton Ag. The various vein occurrences may be classified into; 1) deposits containing tetrahedrite; 2) deposits containing sphalerite and galena; and 3) deposits containing galena and pyrite. Tetrahedrite type deposits contain tetrahedrite, chalcopyrite, pyrite, malachite, azurite, and free gold; the major known occurrences of this type include the Farrell, Fairview, and Flag prospects; the latter deposit occurs on the QCM claims and is described below.

Flag

This prosect is located on the QCM claims and straddles Germansen River approximately 2 km upstream from a point where the river changes course from a northeasterly to a northwesterly direction.

Auriferous quartz veins occur at the faulted contact of a tightly folded quartz-carbonate alteration zones or formation and schistose black, fine grained clastic sediments. The veins strike N35 deg. E, and exhibit flat dips to the northwest, forming a stockwork of "ladder" veins within the zone of strongest deformation. The veins are 2" to 5′ in width and have been exposed along a length of 35′. A pit on the property exposes a stockwork of veins some 35′ X 100′ in dimension from which a selected sample assayed up to 0.19 oz/ton Au and 37.1 oz/ton Ag. The veins consist of up to 2% tetrahedrite by volume.

Golden Rule Resources Exploration

Golden Rule Resources Ltd. acquired its initial property position in the Manson Creek area in 1980. Exploration carried out in that year included reconnaissance geological mapping, limited prospecting, geochemical sampling, and geophysical surveys. A reconnaissance grid was established to control soil geochemical sampling, and magnetometer and VLF-EM data acquisition. In addition, previously known occurrences were relocated and sampled.

Anaconda Exploration

Anaconda Canada Exploration Ltd. optioned the Manson Creek property from Golden Rule Resources Ltd. in 1982. Anaconda carried out programs of geological mapping, detailed soil and rock geochemical sampling, ground magnetic and VLF-EM surveying, and trenching. This work detailed extensive quartz-carbonate-pyrite+-sericite+-albite+-mariposite alteration zones developed in flows and epiclastic volcanic rocks at the QCM claims. Gold-in-rock analyses ranged up to 4,200 ppb Au.

During 1983, Anaconda carried out three separate drill programs at the QCM claims. Three target areas were investigated, with most of the drilling concentrated in an area of high gold-in-rock values in a quartz-carbonate alteration zone hosted by epiclastic volcanic rocks. Drilling was done primarily by percussion drilling methods, with lesser amounts of reverse circulation and diamond drilling carried out subsequent to the percussion drilling program.

Percussion Drilling Program

In total, thirty-two (32) percussion drill holes were drilled in the three target areas; 24 of the holes (totalling 2,043 m) were drilled in the "epiclastic-hosted" quartz-carbonate alteration zone outcropping along a ridge crest on the QCM 4 claim.

Widespread gold enrichment within the quartz-carbonate alteration zone was confirmed by the drilling, with some of the best values occurring in percussion drill holes 14, 18, 22, and 23. Nearly all of the drill holes returned geochemically anomalous gold values.

A comparative analysis of gold values obtained from percussion drill hole 83-14 and diamond drill hole DDH-2, both drilled from the same site, shows only poor agreement, with gold values from the percussion drill hole being significantly higher than values from the diamond drill hole. The reasons for this discrepancy are not understood although it is conceivable that selective enrichment of heavy minerals may have occurred in the percussion drill hole cuttings as a consequence of down hole dispersion or contamination of the heavy minerals (auriferous pyrite). Additional study would be required to properly compare how representative and reproducible the analyses are from the different drilling methods.

The wider sample interval used in the percussion drill hole could be expected to have a smoothing effect on the profiled data, but better recoveries in the diamond drill hole, slightly different orientations and collar positions of the two holes, discontinuities in mineralized zones, and uncertainties in the statistics of geochemical analyses could all be contributing factors to the discrepancies of the two sets of geochemical analyses. Without further studies, in particular, comparison of the actual heavy minerals content of corresponding sample intervals, it cannot be concluded that down hole dispersion and concentration of heavy minerals is occurring during percussion drilling.

Reverse Circulation Drilling Program

Four (4) reverse circulation drill holes totalling 414 m were drilled to investigate the major "epiclastic hosted" quartz-carbonate alteration zone outcropping along the ridge crest at the QCM 4 claim. These drill holes were not sited to further test areas of highly anomalous gold values. A slightly larger chip size permitted more accurate lithological control, but, as with the percussion drilling, no useful structural data was obtained.

Selected significant reverse circulation drill hole intersections are listed below:

	Length	Intersection	Au (oz/ton)
RD-83-1	2.0 m	3.0 - 5.0 m	0.085
(overburden 0-7.5 m)	1.0 m	3.0 - 4.0 m	0.136
	1.0 m	7.5 - 8.5 m	0.044
	1.1 m	85.7 - 86.8 m	0.055

	Length	Intersection	Au (oz/ton)
RD-83-2	1.0 m	4.0 - 5.0 m	0.046
(overburden 0-7.5 m)	1.0 m	7.5 - 8.5 m	0.031
	3.0 m	9.5 - 12.5 m	0.071
	1.0 m	90.8 - 91.8 m	0.034
RD-83-3	1.0 m	20.7 - 21.7 m	0.044
(overburden 0-6.5 m)	1.0 m	69.5 - 70.5 m	0.060

Diamond Drilling Program

Three holes of NQ diameter diamond drilling were completed, totalling 421.8 m.

Detailed logging of the diamond drill core indicated that several generations of quartz veining are present, and that gold content shows a general, but not always consistent relationship with the number or density of quartz stringers or veins and/or pyrite content. Elevated gold values also occur in sections of the core where the "epiclastic hosted" quartz-carbonate alteration zone does not contain an appreciable density of quartz-pyrite stringers or veins. This suggests that there is primary gold enrichment in an early generation of pervasive "epiclastic-hosted" or bedded quartz-carbonate and secondary gold enrichment in a later or "overprinted" stockwork of quartz-pyrite stringers and veins which exhibit haloes of silicification, pyritization and recrystallization developed in the earlier quartz-carbonate host rock. Some selected diamond drill hole intersections are listed below:

Hole	Section	Length	Au (oz/ton)
DDH-1	14.0 - 15.0 m	1.0 m	0.033
	23.0 - 24.0 m	1.0 m	0.032
	31.0 - 33.0 m	2.0 m	0.037
	45.0 - 46.0 m	1.0 m	0.247
	52.36 - 52.6 m	0.24 m	0.040
	83.0 - 85.0 m	2.0 m	0.077
	89.0 - 90.0 m	1.0 m	0.035
DDH-2	16.0 - 17.0 m	1.0 m	0.051
	21.0 - 24.0 m	3.0 m	0.049
Incl.	22.0 - 23.0 m	1.0 m	0.088
	47.0 - 48.0 m	1.0 m	0.043

Hole	Section	Length	Au (oz/ton)
DDH-3	18.0 - 19.0 m	1.0 m	0.034
	43.0 - 44.0 m	1.0 m	0.037
	46.0 - 47.0 m	1.0 m	0.041
	48.0 - 49.0 m	1.0 m	0.039
	57.0 - 58.0 m	1.0 m	0.040
	65.0 - 67.0 m	2.0 m	0.055
	68.0 - 69.0 m	1.0 m	0.046
	95.0 - 96.0 m	1.0 m	0.041
	113.0 - 114.0 m	1.0 m	0.031
	147.0 - 148.0 m	1.0 m	0.065
	149.0 - 150.0 m	1.0 m	0.037
	170.0 - 171.0 m	1.0 m	0.032
	172.0 - 173.0 m	1.0 m	0.090
	188.0 - 189.0 m	1.0 m	0.036

4. GEOPHYSICS

Ground Magnetic Survey - Parameters and Instrumentation

Ground magnetic surveying was carried out over an area 1.3 km by 1.7 km along 27.7 line km of cut grid lines. Cross lines were nominally spaced 100 m apart with stations established at 20 m intervals and readings taken at 10 m intervals. The base line was surveyed and cross lines turned off utilizing a transit. The field survey magnetometer was an EDA Omni IV equipped with a small mini-processor memory for storing survey readings and corresponding grid locations. Magnetic control was provided by an EDA Omni IV base station magnetometer. At the end of each survey day, data was dumped from the field magnetometer into the base station magnetometer. Readings were corrected automatically by comparing readings and "sampling" times on the internal field magnetometer clock with interpolated readings on the base station magnetometer at corresponding times (synchronized internal clock). Corrected readings and accompanying profiles were output on a small portable printer. Both the field magnetometer and the base station magnetometer read to an accuracy of 0.1 nanotesla. Overall, survey accuracy is considered to be better than +/- 1 nanotesla.

Interpretation

Maximum magnetic relief throughout the survey area is only about 180 nanoteslas, excluding one possibly spurious reading taken close to some abandoned drill hole casing, and average magnetic relief is only about 40 nanoteslas. Despite the tightly controlled survey and the accuracy of the instrumentation, the low magnetic relief does not permit reliable discrimination of magnetic response related to lithological or structural features and magnetic "noise" or variations in the magnetic field intensity due to varying overburden thicknesses or depth to source.

In very general terms, magnetic response is greater than 50 nanoteslas above magnetic datum in that portions of the survey area lying east of a northerly trending line crossing the grid lines diagonally from L3+00W/2+00S on the south to L18+00W/5+00N on the north. The extreme west corner of the grid area (L-15, 16, 17, and 18, from 1+00N to 6+00S) is characterized by relatively low values, averaging about 25 nanoteslas above datum. Total field values, corrected for diurnal field variations have been contoured at 40, 45, 50, and 60 nanoteslas above datum, arbitrarily set at 58,400 nanoteslas (Map 1). Contoured values form a pattern of long sinuous "highs" and "lows" with steep gradients along the contacts, suggesting a pattern of magnetic variation correlatable with the response of individual beds or geological units lying at shallow depths. The magnetic grain trends slightly north of east, subparallel to the direction of glaciation; thus it is equally probable that the observed magnetic response is partly due to variations in overburden. Thickness, at least in areas of drumlinoid terrain along the northerly corner of the survey area.

A number of exposures of black, carbonaceous, fine grained, clastic sediments (referred to by other workers variously as graphitic schists, graphitic phyllites, argillites, siliceous chlorite-graphite-sericite schist, and pelagic sediments) occurs along a small northwesterly trending ravine in the vicinity of L18N-5+00N, L17W-5+00N, L16W-5+00N, and L15W-5+00N. Coinciding with the surface trace of these exposures is a subtle magnetic "low" characterized by total field values averaging about 20 nanoteslas above magnetic datum. At L15W-5+00N, the magnetic "low" swings to the southwest and reverses direction, forming a partial oval pattern, strongly suggestive of folding of the underlying lithologies. At L18W-8+00N extensive exposures of a quartz-carbonate (ankerite) +/- sericite +/- sulphide (pyrite) assemblage occur along a low ridge and coincide with a relatively pronounced magnetic "high" ranging from 50 nanoteslas to 109 nanoteslas above magnetic datum. Flanking this zone on the southwest is a narrow linear magnetic "low" averaging about 25 nanoteslas above magnetic datum, suggesting a weak dipole effect, or perhaps more likely, another horizon of black, carbonaceous, fine grained clastic sediments. Exposures of the quartz-carbonate assemblage indicate that the formation extends from at least 8+00N on L18W to as far as 9+50W. The rock is extremely resistant and forms a low lying bedrock ridge, in contrast to the soft, easily weathered black carbonaceous shales. At L18W-8+40N, a small narrow, easterly trending ravine has been cut into the quartz-carbonate formation and coincident with this topographic feature is a narrow magnetic "low". To the east, the ravine opens up into a broader 150 m wide topographic depression which coincides very closely with a wider continuation of the magnetic low identified at L18W-8+40N. This wider magnetic low is interrupted by a narrow (30 m wide) easterly trending magnetic high 50 to 70 nanoteslas above magnetic datum, which transects the middle of the topographic depression and must therefore be related to a bedrock feature.

Thus, although the above observations indicate that the subtle total field magnetic trends described above may be related in part to topography, the topography itself may reflect differing bedrock units ie./ resistant quartz-carbonate assemblages forming low ridges, and recessive carbonaceous shales underlying the ravines or other topographic depressions.

To complicate interpretation even more, the above suggested relationship between subtle magnetic highs and outcropping or subcropping zones of the quartz-carbonate formation, does not hold true in other portions of the grid area. In the vicinity of base line 00 at L8W, L9W, L10W, L11W, and L12W, diamond drill holes, rotary reverse circulation drill holes, and percussion drill holes all intersected thinly to massively bedded horizons of the quartz-carbonate (ankerite) - sericite assemblage. Fair lithological descriptions are available for the three diamond drill holes and indicate that the quartz-carbonate assemblage intersected is lithologically similar to the quartz-carbonate formation underlying the weak magnetic highs described above. However, in the vicinity of the drill holes, a broad 120 m wide magnetic low, averaging about 30 to 35 nanoteslas above magnetic datum, coincides with the drill indicated subcrop trace of the quartz-carbonate assemblage. Overburden in this area is approximately 6 to 8 m thick, comparable to overburden thicknesses in the vicinity of the weak magnetic highs, so variations in overburden thickness would not account for the differing magnetic response of the two areas underlain by quartz-carbonate assemblages. Since these appear to be multiple horizons of the quartz-carbonate assemblages, slight differences in pyrrhotite or magnetite content (if present) might account for the varying magnetic signatures, or it could be due to other factors not considered here.

Surrounding the magnetic low in the vicinity of the drill holes along baseline 00 is an elongated, horseshoe shaped magnetic high, open (?) to the northwest, ranging from 50 to 150 nanoteslas above magnetic datum, and averaging about 70 nanoteslas above datum (Map 2). The magnetic pattern is suggestive of a large amplitude, isoclinal fold, with closure to the southeast. Percussion drill holes PDH-83-15 and 83-20 both appear to have intersected the "west lobe" of this magnetic high, and diamond drill hole DDH-83-3 may have intersected the high, but the high may not extend as far as DDH-83-3, since it's along trend continuation into the vicinity of DDH-83-3 is based upon a single high reading at L11W-0+50S which may be spurious due to the proximity of that station to some abandoned drill casing. In any case, lithological descriptions of formations intersected by DDH-83-3 do not provide any clue as to the geologic cause of the magnetic high; lithological logs for PDH-83-15 are too generalized to be useful and no logs exist at all for PDH-83-20.

PDH-83-14, located along the steep magnetic gradient on the northeast side of the west lobe of the magnetic high, intersected a zone of 10% to 15% sulphides and returned the highest average gold values of any of the percussion drill holes, averaging greater than 1000 ppb Au over the first 68 m of the drill hole. The sulphides contained in the hole were apparently all pyrite, but drill hole DDH-83-2, collared a few meters to the northeast of PDH-83-14, and drilled in the same direction and at the same angle, did not intersect any similar pyrite rich zone, and did not duplicate the geochemically high gold values found in PDH-83-14. DDH-83-3, also drilled in the same direction and at the same angle as DDH-83-2 and PDH-83-14, did not intersect any correlatable pyrite rich zone carrying high gold values. The most logical explanation seems to be that PDH-83-14 followed the down dip extension of a late stage, pyritic, gold-bearing fracture zone, with a dip close to that of the drill hole. DDH-83-2, collared a few meters to the northeast may not have intersected this zone at all, and DDH-83-3 may have drilled "under" the zone, assuming that the zone strikes approximately at right angles to the plane of the drill section.

A relationship between pyrite rich zones and high gold values can also be observed in drill holes PDH-83-20 and PDH-83-22, where pyrite rich silicified zones outcrop at the collars of the drill holes and correlate with gold enriched zones intersected in the first few meters of PDH-83-20 (high gold values have been confirmed by surface sampling). PDH-83-22 is positioned at a zone of weaker magnetic intensity along the trend of the magnetic high. PDH-83-15 was drilled vertically and may not have intersected the formation or zone of mineralization causing the magnetic high.

5. CONCLUSIONS

Ground magnetic survey results suggest that subtle variations in the intensity of the total magnetic field may be produced by a series of individual beds or geologic units lying at shallow depths, or, in some cases, may be related to variations in topography. Limited geologic data in turn suggests that some of the the variations in topography may be controlled by the competency of underlying formations.

In the vicinity of the area drilled by Anaconda in 1983, silicified and variably pyritized outcrops show a strong spatial relationship to a horseshoe-shaped magnetic high that surrounds the drilled area. Diamond drill logs do not provide any clues as to the geologic cause of the magnetic response, but it is possibly caused by the weak paramagnetism of the pyrite concentrated in the silicified zone. The geometry of the magnetic anomaly is strongly suggestive of folding, and it may be that the siliceous, pyritic zone is a lens or subunit within the larger bedded (?) quartz-carbonate assemblage. Insofar as the gold content in drill holes and in outcrop appears to be related to concentrations of sulphides, the considerably broader and somewhat stronger part of the horseshoe-shaped magnetic high, located to the southeast of PDH-83-20, constitutes an interesting exploration target.

6. RECOMMENDATIONS

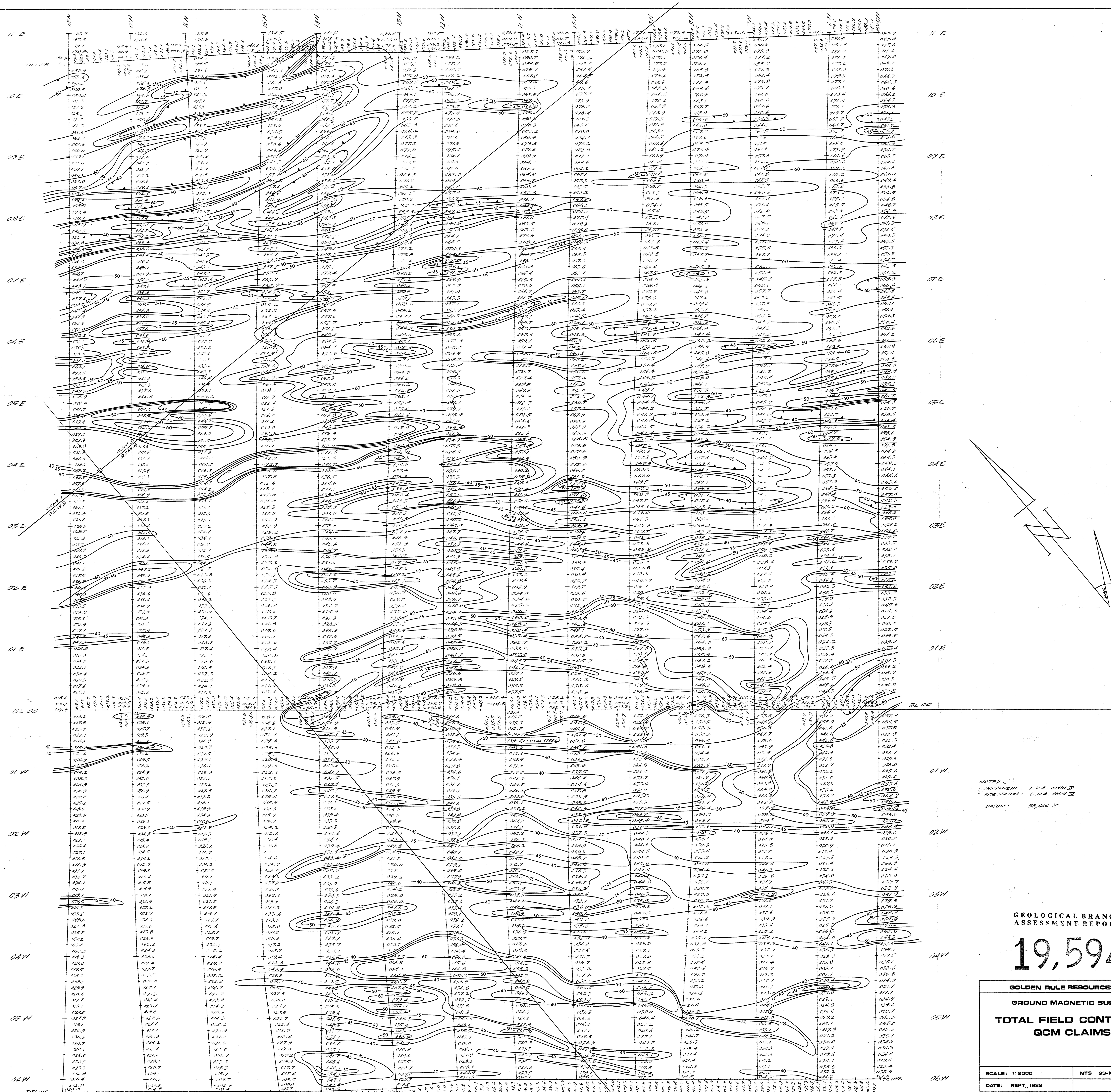
The present magnetic survey coverage should be extended to the southeast, to include an area of strong gold-in soils geochemical response, ranging up to 2850 ppb, which occurs within a broader 100 m wide gold-in-soils anomaly, averaging 150 to 200 ppb. Infill surveying should be done in the detailed grid area and its extension at 50 m line spacings. If pyrite and silica content are stratigraphically controlled, the mineralized horizon may be present, along trend, beyond the southeastern limits of the present magnetic coverage.

Although the survey area discussed in this report, including the area drilled by Anaconda, was previously covered by an IP survey, chargeability response was quite weak, despite the abundance of pyrite reported in various Anaconda drill holes, and seen in exposures in the vicinity of some of some of the drill holes. All geophysical survey data should be carefully reviewed, with the objective of determining an appropriate electrical survey technique that would compliment the magnetic survey and define specific geophysical drill targets.

7. STATEMENT OF COSTS

Geophysical Survey			
Line Cutting and chaining	(contract) }		
Magnetometer survey	(contract) }		$12,941.38
Equipment Rentals			
Field magnetometer & base station system		$2,400.00	
Transit		180.00	1,580.20

<u>Personnel</u>	
M.Fox, Professional service, Aug.11-25/89 Geophysical survey supervision Re-examination of key outcrops	1,125.00
<u>Travel Expenses</u>	
Hotel, meals, mileage charges	308.00
<u>Miscellaneous</u>	
Air freight	225.25
<u>Post-Field</u>	
Data compilation analysis, report preparation, drafting, secretarial, reproductions	1,825.00
TOTAL:	$19,004.83



NOTES :
INSTRUMENT : E.D.A. OMNI IV
BASE STATION : E.D.A. OMNI IV

DATUM : 58,400 γ

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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GOLDEN RULE RESOURCES LTD.

GROUND MAGNETIC SURVEY

TOTAL FIELD CONTOURS QCM CLAIMS

SCALE: 1:2000	NTS 93-N-10
DATE: SEPT., 1989	

NOTES

INSTRUMENT:	E.D.A. OMNI IV
BASE STATION:	E.D.A. OMNI IV
DATUM:	58,400 nanoteslas
CONTOUR INTERVALS:	58,445; 58450; 58,460 nanoteslas

GOLDEN RULE RESOURCES LTD.

QCM CLAIMS

GROUND MAGNETIC SURVEY
TOTAL FIELD CONTOURS

Date: DECEMBER 1989	N.T.S.: 93N/10
Revised:	
Scale: 1:1000	

GEOLOGICAL BRANCH
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