825763
104B/15W

1990 GEOLOGICAL EXPLORATION

ON THE

GULF INTERNATIONAL MINERALS LTD.

McLYMONT PROPERTY

ISKUT RIVER AREA, N.W. BRITISH COLUMBIA
LIARD MINING DIVISION
N.T.S. 104B/15W

LATITUDE: 56 DEGREES 49' N
LONGITUDE: 130 DEGREES 55' W

BY

VICTOR A. JARAMILLO, M.SC.A.

JANUARY 14, 1991

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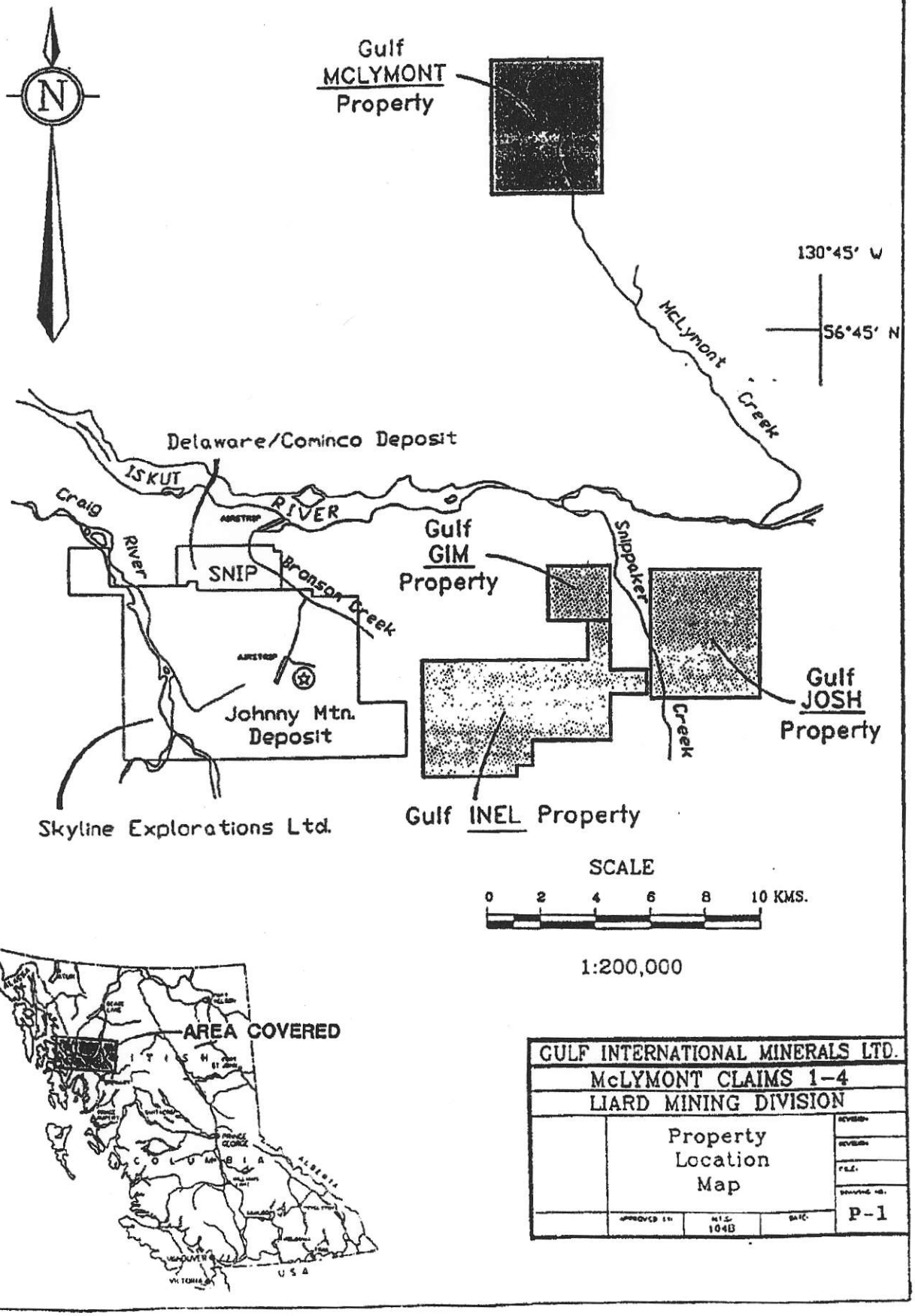
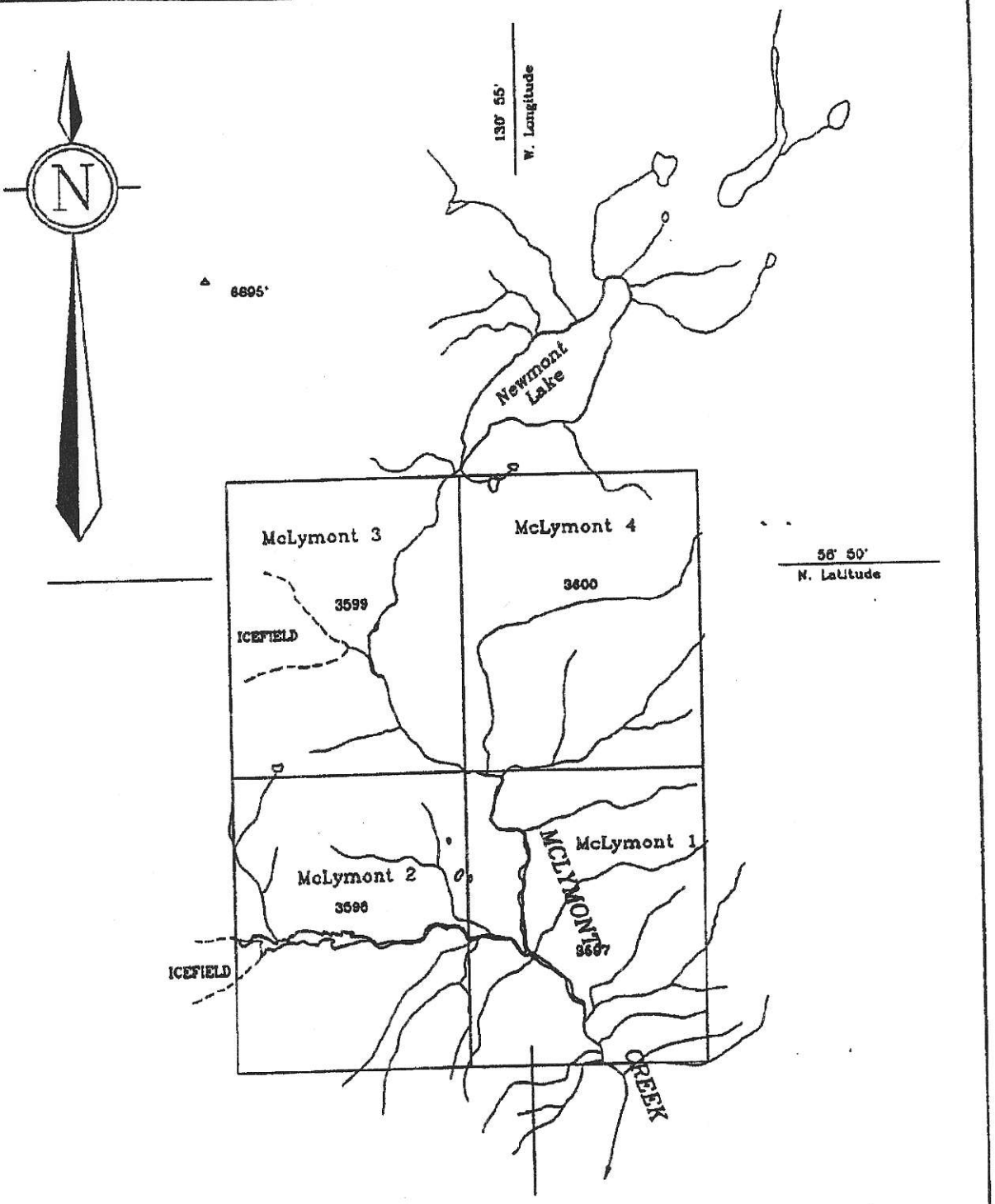


GULF INTERNATIONAL MINERALS LTD.		
McLYMONT CLAIMS 1-4		
LIARD MINING DIVISION		
	Property Location Map	P-1
	NTS 104B	



SCALE

0 1000 2000 3000 METRES

1:50,000

GULF INTERNATIONAL MINERALS LTD.				
MCLYMONT CLAIMS 1-4				
LIARD MINING DIVISION				
	Claim Map			REVISION / REVISION / TITLE / DRAWING NO. P-2
DRAWN BY	APPROVED BY	N.T.S. 104 B/16	DATE	

3.0 EXPLORATION HISTORY

Earliest reported work done in the general area was in 1907 by Iskut Mining Company on Johnny Mountain where drifting, trenching and stripping exposed galena-sphalerite and gold-silver mineralized veins. More recent work was carried out on Johnny Mountain by Hudson Bay Mining and Smelting, Cominco and Texas Gulf, culminating in the discovery of Skyline Explorations Ltd.'s, Johnny Mountain Gold Mine and Delaware/Cominco's Snip Deposit.

During the early 1960's, Newmont Mining Corp. of Canada Ltd. began working in the Iskut area north-northwest of Newmont Lake and off the McLymont claims. Geological mapping, geophysics and diamond drilling revealed the presence of several copper-bearing skarn zones that occur at the contact of limestone interbeds and a diorite intrusive.

In 1980, Du Pont Canada Explorations Ltd. staked the Warrior claims (in what is now the McLymont Property) situated south of Newmont Lake on the basis of a regional stream sediment survey. In 1981, mapping, extensive geochemistry and geophysics were conducted around these areas.

In 1983, Skyline Explorations Ltd. and Placer Development Ltd. optioned the Warrior claims from Du Pont. Efforts were directed at sampling and extending several narrow quartz-pyrite-chalcopyrite veins with values ranging from 0.1-3.0 oz. Au/ton. The claims were allowed to lapse in 1986, at which time Gulf staked the McLymont claims.

In 1986, Gulf drilled three short diamond drill holes (301 ft.) near the center of the claim group which intersected gold values in a quartz-ankerite vein within part of an extensive quartz-rich granite pluton.

In 1987, exploration work on the property concentrated on the central parts of the claim group involving geochemical surveys, geological mapping, trenching and diamond drilling which involved considerable road building and site preparation. Later in the season this exploration approach was extended to the northeast and northwest areas.

Work completed in 1987 included 3.7 km of road, excavation of drill pad sites, 31 trenches, 16.3 km of cut line, 11,160 ft. of diamond drilling, 726 soil samples, 55 stream samples, 85 rock samples, regional geological mapping and about 5 line km of reconnaissance magnetic and VLF-EM surveys.

As a result of this intense exploration program the Northwest Zone was discovered. In total 14 holes were drilled near the Camp Zone and 25 holes on the northwest area with good to excellent results.

In 1988, work included the construction of a new all weather camp. Drilling was concentrated on the Northwest Zone with 28 holes totalling 13,077 ft. An additional total of 2,366 ft. in 9 holes was completed near the Camp Zone.

In 1989, 62 holes were drilled (20,484 ft.) at intervals of 20 m to 30 m to obtain more detailed information on the Northwest Zone mineralization. Assay results confirmed the previous years work and indicated that the mineralization includes a number of gold bearing vein-like and replacement bodies trending north north-easterly over a length of about 985 ft. and dipping easterly over depths from surface to about 650 ft. Also, during this season a detailed magnetometer/VLF-EM-survey totalling 8 line km was completed over the northwest area which outlined the main mineralization and suggested the presence of several similar

features. Some of the magnetic anomalies were test drilled and showed thick magnetite mineralization. Several pyrite-chalcopyrite veins were located near the McLymont Creek Fault zone during detailed geological mapping. Assay results gave anomalous gold values for surface samples.

During 1990, 33 holes drilled on the Northwest Zone, totalling 13,233 ft. were completed. Other work included, excavation and preparation of drill pad sites, detailed geological mapping, trenching, soil sampling, about 5 km of line cutting, a UTEM and magnetometer/VLF-EM geophysical surveys and a relogging campaign of 82 drill holes from the Northwest Zone. The above work complemented with previous year's work has produced a new understanding of the geology and associated mineralization in the Northwest Zone. It appears we are dealing with a gold-rich retrograde skarn of good potential and with possiblities of similar mineralization in other parts of the property.

A summary of the drilling completed to date is shown in the table below:

Drilling Statistics

Drill Area	No.of Holes	Designation	Total Feet
Northwest Zone	148	87-15 to 39 88-10 to 37 89-1 to 40 89-41 to 52 89-54 to 60 89-64, 65, 68 90-1 to 33	54,548
Camp Zone,	20	86-1 to 3 87-4 to 11 88-1 to 9	4,394
Other	12	87-12 to 14 87-40 to 42 89-53 89-61, 62,63,66,67	4,062
TOTAL	180		63,004

4.0 REGIONAL GEOLOGY

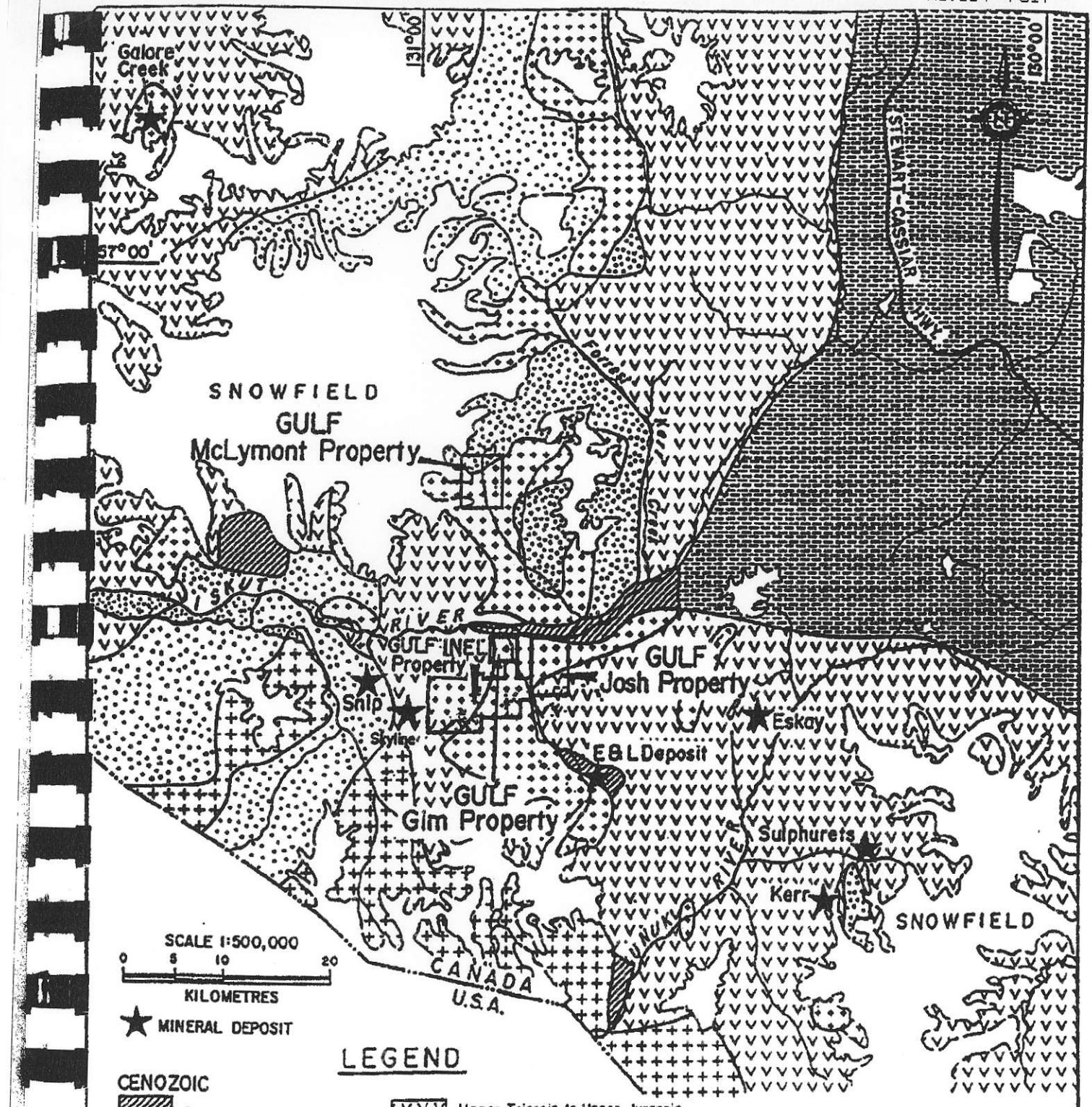
The first major geological study of the region was presented by Kerr (1948). Recent work includes 1:50,000 scale geological mapping by Logan et al, (1990a), Anderson (1989) etc. Refer to Figure G-0 for Regional Geology.

The area lies within the Stikine lithostructural terrane which represents a mid-Paleozoic to Mesozoic island-arc sequence of volcanic and sedimentary rocks. The Paleozoic rocks range from Devonian to Permian in age and form part of the Stikine assemblage, while the Mesozoic includes both the Upper Triassic Stuhini Group and the Jurassic Hazelton Group. These supracrustal rocks are intruded by early Jurassic to Cretaceous and Tertiary plutons (Logan et al, 1990b).

The region is cut by two sets of major faults. The most abundant are narrow, north-striking linear faults; one of these, the Forrest Kerr fault, has influenced the lower course of the Forrest Kerr Creek. The other set forms complex, north-northeast to northeast trending fault zones. The faults bounding the Newmont graben belong to this set; the graben is 1 to 2 kilometres wide and contains downdropped Jurassic and Triassic sediments, tuffs and some intrusions that are juxtaposed against Paleozoic rocks to the east and west (Ray et al, 1990).

5.0 PROPERTY GEOLOGY

The general property area has been covered as part of a regional reconnaissance scale mapping program undertaken by the British Columbia Geological Survey (Logan et al, 1990a). The McLymont property is structurally located at the southern end of the Newmont Lake Syncline and Newmont Lake Graben near the termination of these



LEGEND

CENOZOIC

- Recent basalt flows
- Early Tertiary felsic intrusives, primarily quartz monzonite

MESOZOIC

- Cretaceous and Tertiary intrusives, felsic to intermediate
- Middle to Upper Jurassic Bowser Lake Group clastic sediments
- Upper Triassic to Upper Jurassic volcanics and sediments, Hazelton and Stuhini Groups

PALEOZOIC

- Permian and older clastic, limestone and volcanic rocks and metamorphic equivalents; includes metamorphic rocks of unknown age.

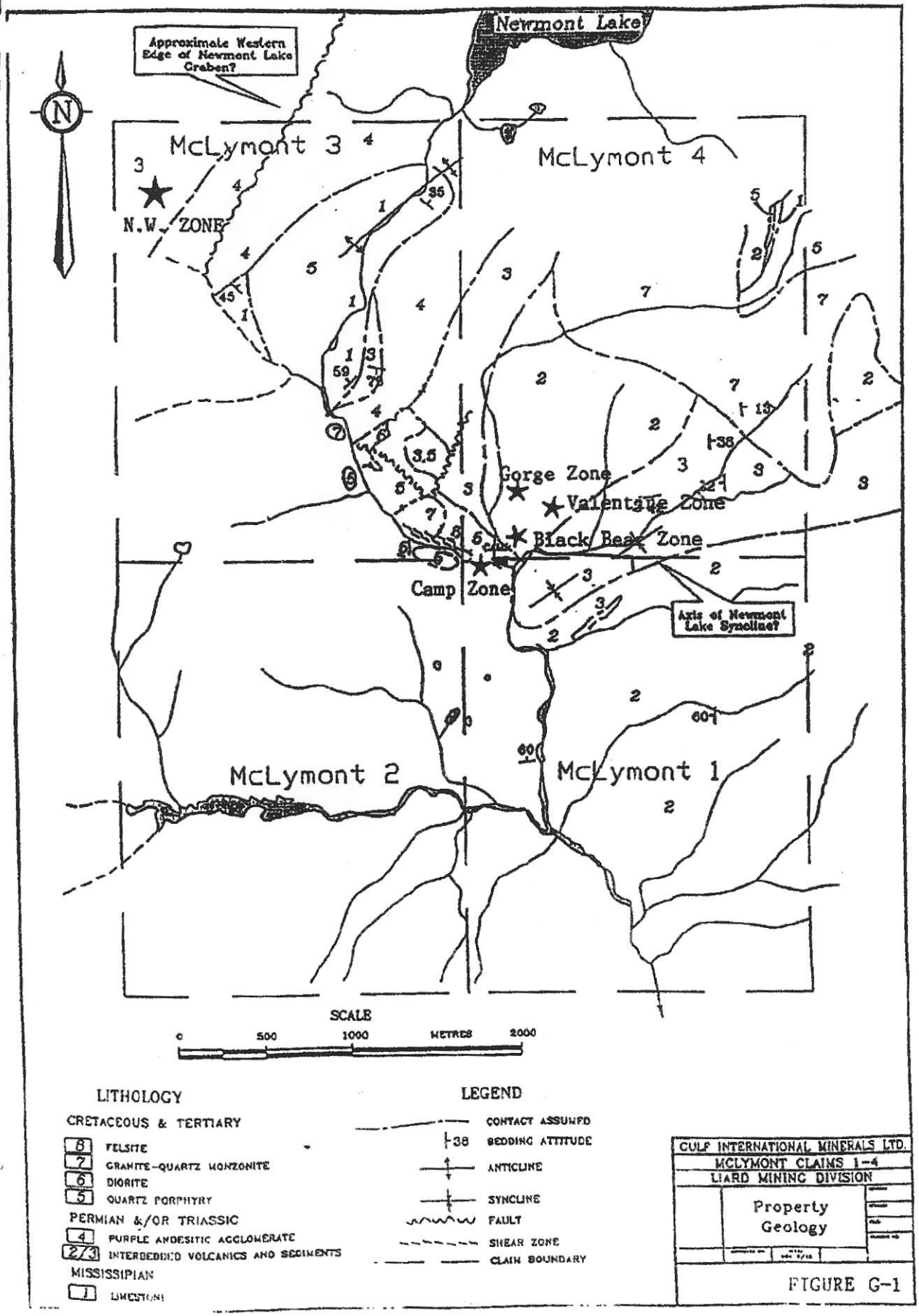
Geology interpreted from G.S.C. Map 11-1971, Telegraph Creek; Equity Preservation Corp., Stewart-Sulphurets-Iskut Map 1978; and from Pamicon Development Ltd. field maps

GULF INTERNATIONAL MINERALS LTD.

SIMPLIFIED REGIONAL GEOLOGY

LIARD MINING DIVISION, B.C.

Drawn	N.T.S. 103, 104	Date	FIG. G-0


Newmont Lake
Approximate Western Edge of Newmont Lake Graben?
N
McLymont 3
McLymont 4
McLymont 2
McLymont 1
N.W. ZONE
Gorge Zone
Valentine Zone
Black Bear Zone
Camp Zone
Axis of Newmont Lake Syncline?
SCALE
0 500 1000 METRES 2000
LITHOLOGY
CRETACEOUS & TERTIARY
8 FELSITE
7 GRANITE-QUARTZ MONZONITE
6 DIORITE
5 QUARTZ PORPHYRY
PERMIAN &/OR TRIASSIC
4 PURPLE ANDESITIC AGGLOMERATE
2/3 INTERBEDDED VOLCANICS AND SEDIMENTS
MISSISSIPIAN
1 LIMESTONE
LEGEND
CONTACT ASSUMED
38 BEDDING ATTITUDE
ANTICLINE
SYNCLINE
FAULT
SHEAR ZONE
CLAIM BOUNDARY
GULF INTERNATIONAL MINERALS LTD.
MCLYMONT CLAIMS 1-4
LIARD MINING DIVISION
Property Geology
FIGURE G-1

structures against a three-phase composite Jurassic intrusive (Figure G-1).

Field mapping on the property by Gulf personnel consists of both reconnaissance and detailed mapping of the northwest, central and northeast areas. A generalized property geology map is shown in Figure G-1 and an outcrop geology map of the northwest zone in Figure G-4.

The oldest identifiable lithologies on the McLymont property are located in the northwest area and consist of a Mississippian clastic marine succession that is several hundred meters thick. The upper sections comprise fresh, green massive andesitic ash and lapilli tuffs with thin units of marble. Lower down, where mineralization occurs, is a sequence of bedded tuffs, thin-bedded tufffacous siltstones, occasional units of massive ash and crystal tuff, and some horizons of white to grey marble, some of which contain remnant crinoids. The lowest part of the sequence, which is seen in drill core, includes lapilli and ash tuff, with minor tuff breccia and tuffaceous siltstone. Excellent grading in the tuffaceous siltstones indicate the Mississippian package hosting the mineralization is upright. Poorly defined bedding attitudes measured on surface suggest that the area of drilling lies close to a northerly striking and plunging fold; the weetern limb of this fold dips 35 degrees to 75 degrees northwest while the eastern limb apparently dips steeply southeast (Ray et al, 1990).

Strata in the northwest area are separated from the central area by a quartz-rich porphyritic granite intrusive. Rocks in the central area also show induration and hornfelsing related to the intrusive. These litholgies are predominantly finely banded, altered, clastic sediments marked by fine colour banding. Most of this sequence is variably pyritic and has weathered to produce

irregular gossans, especially proximal to faults. These strata, apparently, are overlain to the north by thinly bedded, purplish mixed volcaniclastic/sediment which in turn are overlain by a lens of Mississippian crinoidal marble (Grove, 1987).

Due to cover density, mapping in the northeast area has been concentrated along small, creek-bed exposures. The strata appear to be extensions of the central area, but are represented by a greater proportion of dark siltstone and graphitic partings, and are generally less-well indurated. These rocks have been cut by narrow dykes of quartz-rich granite and generally exhibit hematitic alteration. To the east and northeast, the granite dominates and encloses scattered pendants of pyritic siltstone.

The coarse-grained, quartz-rich granite which underlies much of the McLymont claim group, as well as areas beyond is generally massive, lacks mafic minerals, contains 30% to 40% quartz and has a high K feldspar content. Magnetite occasionally is present as a minor constituent. The granite has intruded the local country rock on both a batholithic scale and as narrow dykes along pervasive northeasterly trending faults. The age of the intrusive likely belongs to the extensive group of Middle Jurassic syenitic plutons which extend from Granduc north to the Iskut River at Mount Johnny (Grove, 1986).

In the central area where numerous quartz-pyrite veins have been drill tested, the core shows that in general the quartz-rich granite has been further enriched in K feldspar along the veins. Outwards from the vein this pink alteration zone is bordered by a darker biotitic zone which then grades rapidly into the normal leucocratic intrusive.

The Northwest Zone lies immediately west of the McLymont fault (Figure G-1). The dip direction of the fault is unknown; consequently it is uncertain whether it represents a normal or high-angle reverse fault. Airphoto interpretation indicates that the rocks on both sides of the McLymont fault are cut by northerly trending fractures that probably represent second-order splay structures off the main fault. Several sets of faults are recognized on surface above the northwest zone. An early, north-striking, steeply east-dipping set is probably related to these second order structures; slickensides on this set plunge steeply east. This set is cut by younger, east-trending faults with slickensides indicating subhorizontal dextral movement (Ray et al, 1990).

Strata along McLymont Creek are generally steep, either due to faulting (Grove, 1987) or tight folding in the nose of the Newmont Lake Syncline. Overall faulting of various ages has affected most of the rock units with northwest and northeast structures dominant. These same directions appear to exert a primary control on the localization of gold mineralization in the quartz-rich granite.

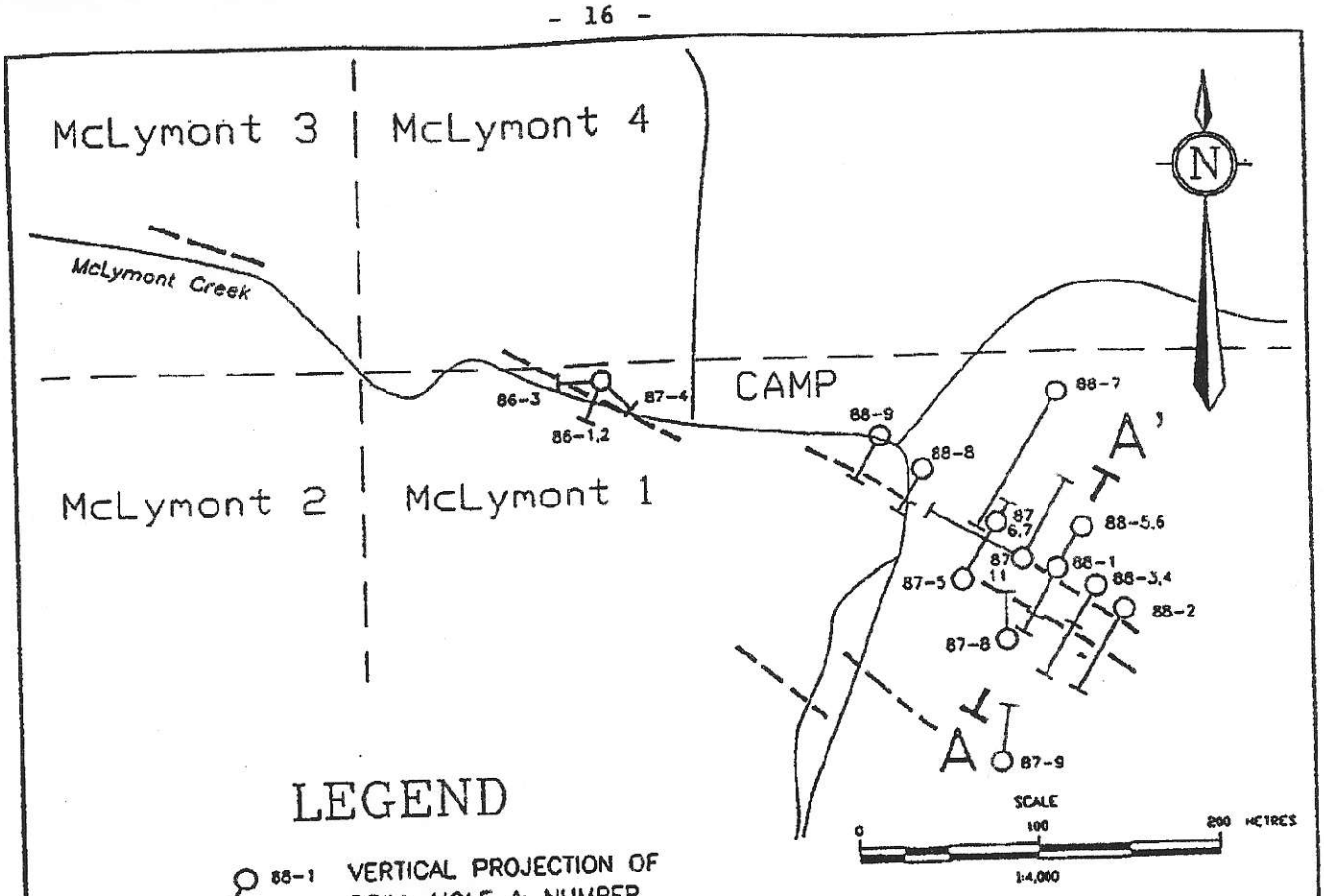
In addition to the auriferous quartz-pyrite veins, the granite has been cut by hundreds of en echelon ankerite vein swarms. These are generally northwesterly and northeasterly oriented and can be traced through the granite into the overlying country rock sediments.

6.0 MINERALIZATION

Two economically encouraging auriferous zones designated as the Camp Zone and the Northwest Zone have been identified on the McLymont property. Also, recently in 1990, three new zones known as the Black Bear, Gorge and Valentine zones have been identified. All three zones show north trending magnetic anomalies, some base metal disseminations and pyritic silica capped areas which may be indications of Northwest Zone type mineralization.

6.1 CAMP ZONE

The Camp Zone is located in the central part of the property and is exposed along the bank of McLymont Creek (Figure G-1). Auriferous quartz-pyrite-chalcopyrite veins have been localized along northwest trending fractures in a quartz-rich porphyritic granite. The veins are lenticular, between 0.6 ft. and 1.0 ft. wide, dip steeply to the north at 80 degrees and exhibit a silicified pyritic alteration halo up to 13 ft. wide which is intermittently traceable along strike for about 1,640 ft. Chip samples of the vein material return encouraging gold values ranging from 0.255 oz. Au/ton over 2.0 ft. to 1.69 oz. Au/ton over 1.0 ft. (Kikauka 1986). Drilling by Gulf in 1986-1988 confirmed the nature and extent of the Camp Zone mineralization being reported by Kikauka as gold-bearing quartz-pyrite-chalcopyrite veins occuring along a shear zone that follows the contact of a fine-grained, green-grey felsite and a leucocratic quartz porphyry (Figure G-2). A summary of the significant drill intersections averaging 0.288 oz. Au/ton over an average core length of 3.3 ft. are presented in Table A-1.

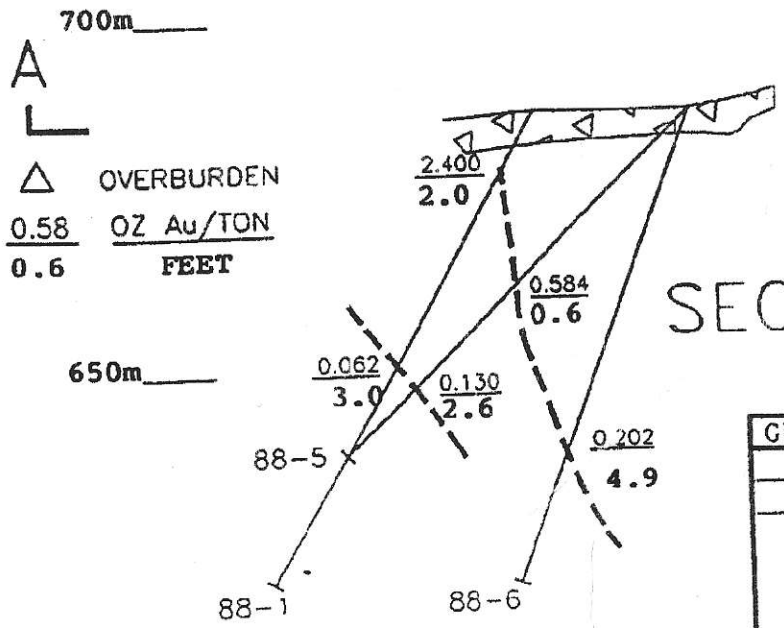


LEGEND

88-1 VERTICAL PROJECTION OF DRILL HOLE & NUMBER

VEIN

PLAN



SECTION A–A'

GULF INTERNATIONAL MINERALS LTD.		
MCLYMONT CLAIMS 1-4		
LIARD MINING DIVISION		
Camp Zone Surface Drill Plan And Cross Section		G-2
	104 B/15	FEB 27, 1990

TABLE A-1

CAMP ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS

Drill Hole	Interval (Feet)	Length (Feet)	Gold (oz/ton)
86-1	52.2 - 57.1	4.9	0.118
86-2	74.1 - 79.0	4.9	0.252
86-3	84.0 - 88.9	4.9	0.095
87-5	135.8 - 140.1	4.3	0.195
87-6	137.8 - 143.7	5.9	0.205
87-7	207.0 - 209.9	2.9	0.198
87-8	165.0 - 169.9	4.9	0.040
87-10	191.6 - 214.9	23.3*	0.528
88-1	35.1 - 37.1	2.0	2.400
	140.4 - 143.3	2.9	0.062
88-5	120.4 - 121.1	0.7	0.584
	187.7 - 190.3	2.6	0.130
88-6	168.0 - 172.9	4.9	0.202
88-7	310.7 - 312.0	1.3	0.344

*Drilled parallel to strike of veins.

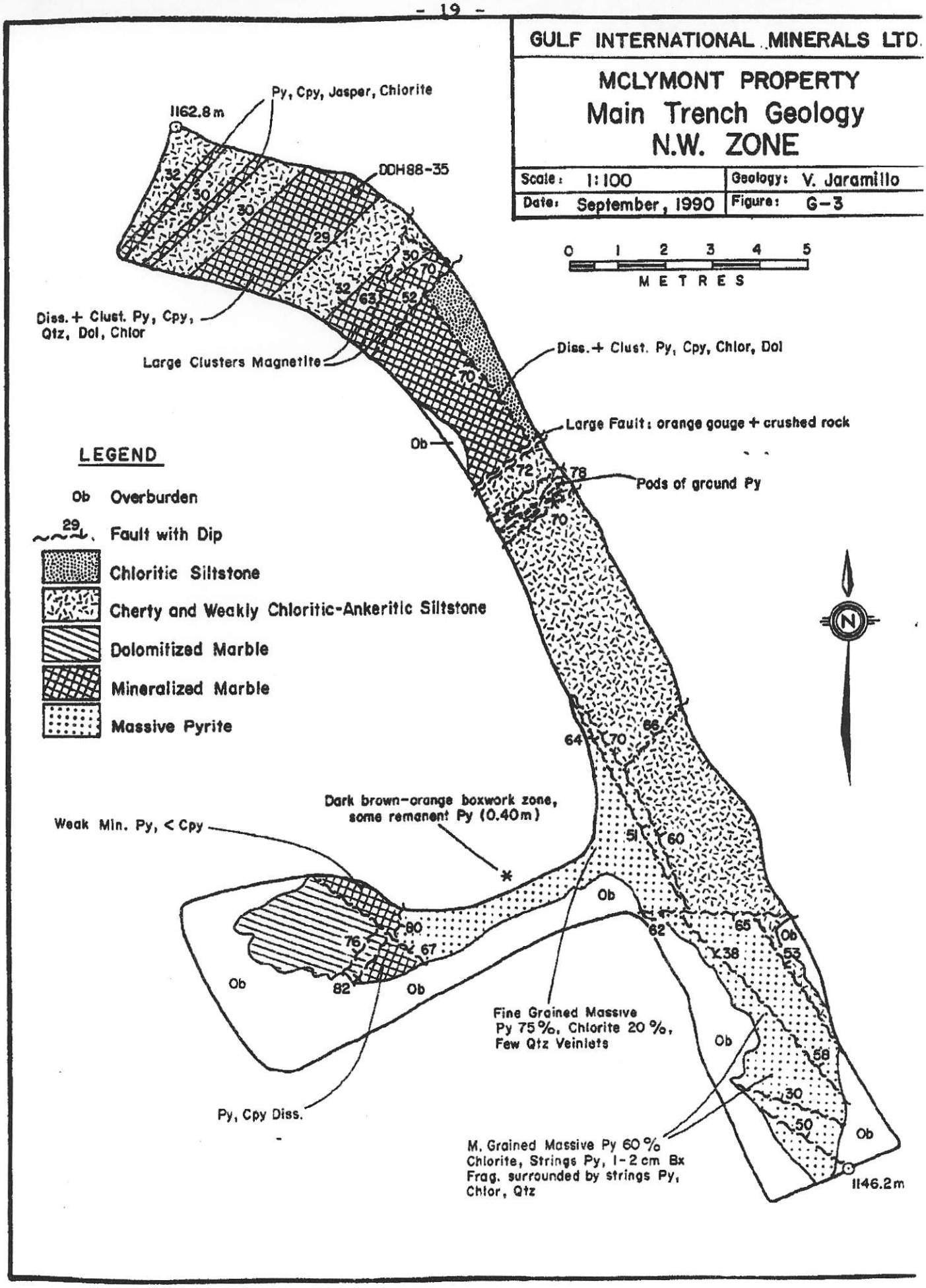
6.2 NORTHWEST ZONE

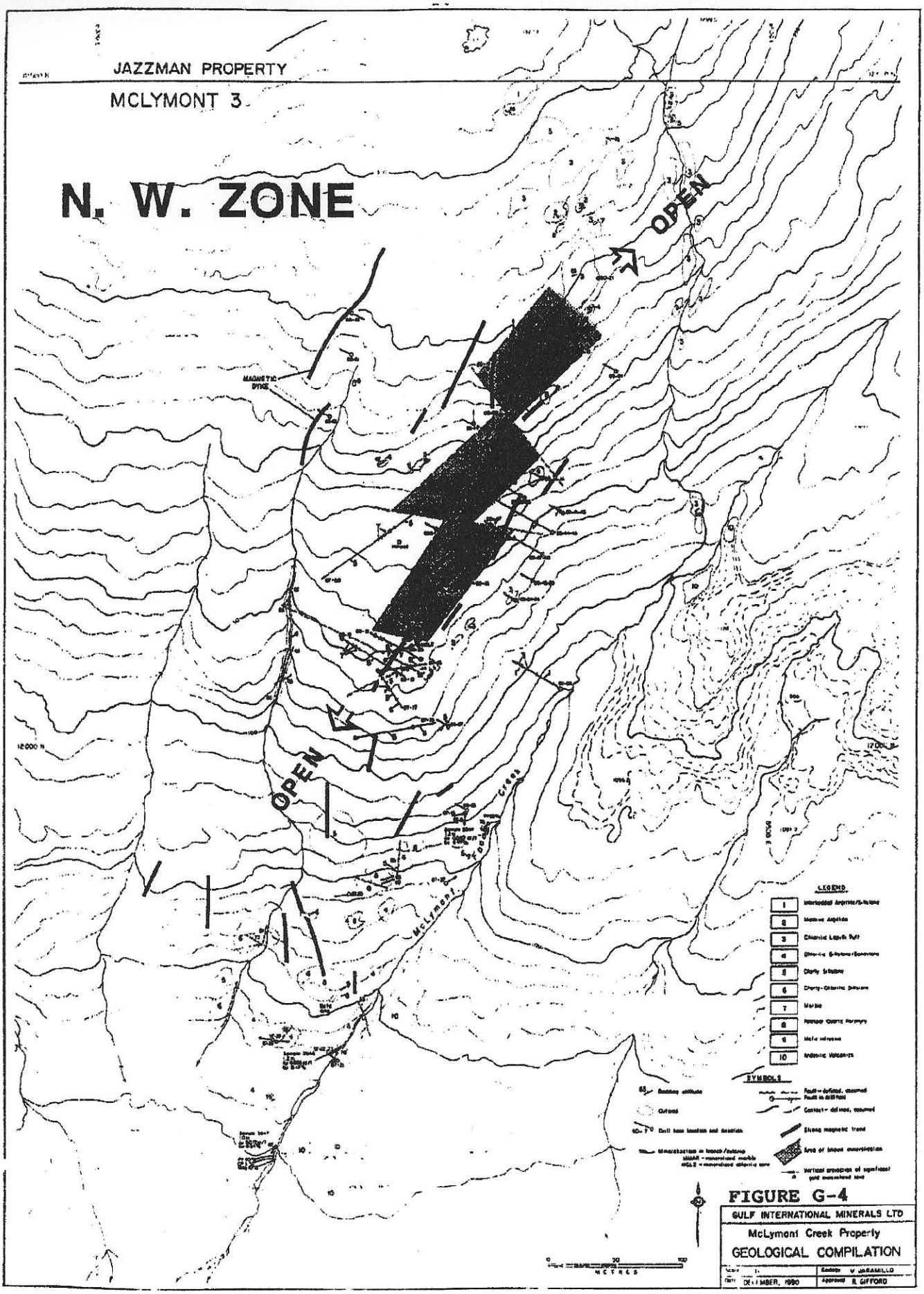
The Northwest Zone is located 2.6 km northwest of the Camp Zone (Figure G-1). Drill results from 1987 to 1990 have helped define a north-northeasterly striking mineralized zone. The zone strikes approximately 030 degrees and dips steeply to the east. Table A-2 lists the significant gold intersections.

The zone is spatially associated with, and controlled by a fault, whose motion is yet undetermined. This fault known as the McLymont fault trends approximately 035 degrees.

This zone is shown in Figure G-4 where the mineralized structure appears to have been broken by easterly trending faults into three separate en echelon blocks. These easterly trending faults show a left-lateral type displacement. Figure G-3 shows the main trench geology where minor faulting has displaced some of the mineralized structures. Also, two styles of mineralization are observed. One is mainly associated with marble beds and in the lower part of the trench the other style is mainly pyrite associated with chlorite and a few breccia fragments. This lower mineralized section may be part of a feeder and/or fissure zone.

The N.W. Zone deposit plunges north and has been traced by drilling for over 985 ft. in a north-northeast direction (Figure G-4), and remains unexplored to the north and south. It occurs both in steep, generally narrow, possibly fracture-controlled zones, and in gently dipping thicker zones that appear to have replaced units of coarse, crinoidal marble and lesser amount of calcareous siltstone and tuff. In one southern section, several steeply dipping mineralized zones pass upwards into an extensive, sulphide-rich "mushroom zone"; it is uncertain whether this represents a mineralized fold-structure or is the result of mineralization controlled by the intersection of steep fractures and a


GULF INTERNATIONAL MINERALS LTD.
MCLYMONT PROPERTY
Main Trench Geology
N.W. ZONE
Scale: 1:100
Geology: V. Jaramillo
Date: September, 1990
Figure: G-3
0 1 2 3 4 5
METRES
1162.8 m
Py, Cpy, Jasper, Chlorite
DDH88-35
Diss.+ Clust. Py, Cpy, Qtz, Dol, Chlor
Large Clusters Magnetite
Diss.+ Clust. Py, Cpy, Chlor, Dol
Large Fault: orange gouge + crushed rock
Pods of ground Py
LEGEND
Ob Overburden
Fault with Dip
Chloritic Siltstone
Cherty and Weakly Chloritic-Ankeritic Siltstone
Dolomitized Marble
Mineralized Marble
Massive Pyrite
Dark brown-orange boxwork zone, some remanent Py (0.40m)
Weak Min. Py, < Cpy
Fine Grained Massive Py 75%, Chlorite 20%, Few Qtz Veinlets
Py, Cpy Diss.
M. Grained Massive Py 60% Chlorite, Strings Py, 1-2 cm Bx Frag. surrounded by strings Py, Chlor, Qtz
1146.2m
N


JAZZMAN PROPERTY
MCLYMONT 3
N. W. ZONE
OPEN
OPEN
MAGNETIC DYKE
McLymont Creek
LEGEND
SYMBOLS
FIGURE G-4
GULF INTERNATIONAL MINERALS LTD
McLymont Creek Property
GEOLOGICAL COMPILATION
DECEMBER, 1990
V. JARAMILLO
R. GIFFORD

subhorizontal carbonate unit. The latter case seems to be more probable since the higher gold grades tend to plot linearly on a horizontal plane (Figure 5), and also, cross section analyses show that higher gold grades tend to plot within or close to a vertical trend. The above suggests the mineralization is associated with a NE trending fissure zone.

At the northern end of the deposit, the ore zones are steeply-dipping. Gold grades are sometimes very high. For example, drill hole 87-29, located north of the mushroom zone, cut a 6.3 ft. section with 8.09 oz/ton gold, 5.58 oz/ton silver and 2.13% copper. Mineralization consists principally of pyrite and magnetite, with subordinate chalcopyrite and trace galena, sphalerite and gold, in a carbonate-quartz-chlorite gangue. Other minerals present include hematite, sericite, jasper, garnet, rutile, sphene, covellite, tetrahedrite, barite and gypsum; graphite is sporadically present, particularly along fault zones.

The magnetite is irregularly distributed; it displays two habits: a rounded to nodular form which apparently replaces carbonate, and an acicular to bladed form that results in crystals up to 2 centimetres long. This magnetite appears to replace an early, pale green mineral, which is tentatively identified as tremolite-actinolite.

Small, isolated remmants of garnet, as well as pseudomorphs after garnet are observed throughout the deposit. Garnet is commonly fractured and retrograde altered to jasper, carbonate or chlorite. Most garnet replaces marble, where it originally formed either isolated, euhedral crystals or small masses. Microprobe analyses indicate the garnets are iron-rich and contain less than 5% manganese (Ray et al, 1990).

Pyrite also occurs in two habits, both of which carry gold. The commonest forms coarse, rounded subhedral crystals up to 1 centimetre in diameter; these may occur as single, isolated crystals within carbonate, or as large clusters and irregular masses. Some of this pyrite replaces either large carbonate crystals, remnant crinoid ossicles or garnet. The other pyrite is fine grained and massive, and locally carries very high gold values. It occurs as veins and masses that postdate the coarse crystalline pyrite.

Chalcopyrite is widespread throughout the mineralized zones. It occurs as overgrowths or veinlets that cut both the coarse and fine pyrite. Hematite forms isolated crystals and veinlets that cut both the magnetite and the coarse and fine pyrite.

Chlorite is sporadically distributed, but tends to show a spatial correlation with the magnetite-sulphide zones and can carry visible gold. It forms large, black to dark green, irregular and deformed masses as well as fine-grained clots. It appears to replace and pseudomorph quartz, carbonate, garnet and possibly pyroxene.

Quartz occurs in veins and as isolated, euhedral crystals. These quartz crystals reach 2 centimetres in length and commonly grow within carbonate.

Disseminations and small masses of sericite can make up to 20% of the rock. It appears to be a relatively late alteration mineral and largely replaces original feldspar.

The mineralized zones are also characterized by abundant white to cream to pale brown carbonate that includes calcite, dolomite, ankerite and siderite. Carbonate occurs both as a ground mass to the magnetite and sulphides, and as late crosscutting veins. Some of the late dolomitic and ankeritic veins contain stringers of

chalcopyrite.

Although some coarse visible gold is seen in chlorite and dolomite, polished-section studies suggest that most of the gold is very fine grained (< 15 micrometres). These minute grains of gold are seen in chlorite and as inclusions in both the coarse pyrite crystals and the younger, fine grained pyrite (Ray et al, 1990).

The mineralized zones and the adjacent white marble can contain small amounts of red, podiform jasper that have replaced garnet.

The mineralized zones are surrounded by irregular envelopes of early silicification and later ankeritic-dolomitic alteration up to 25 metres wide. The silicified rocks vary from grey to pale green to pale brown in colour. Silica can crosscut bedding or may selectively replace certain beds in the tuffaceous siltstones, resulting in alternating layers of unaltered and silicified rock. Where complete silicification has occurred, extensive zones of massive chert-like rock are formed. Silicification was followed by the introduction of brown-coloured carbonate that includes siderite, ankerite and dolomite; this occurs either as massive overprinting or as fracture-related ferrocarbonate veins and breccias.

Mineral textures suggest the following broad paragenesis: 1. garnet, 2. jasper and chlorite (the chlorite possibly replaced early pyroxene), 3. magnetite, 4. coarse pyrite, 5. fine-grained pyrite, 6. quartz veining and silicification, 6. pervasive and vein-carbonate alteration.

There are at least two generations of chalcopyrite: the first is associated with, but postdates pyrite, while the second is found in late quartz-carbonate-barite veins. Sphalerite may postdate the early chalcopyrite. Specular hematite postdates both the magnetite

TABLE A-2

NORTHWEST ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS*

Drill Hole	Interval (Feet) From	To	Length (Feet)	Cu (%)	Ag (oz/ton)	Au (oz/ton)
87-15	18.4	27.6	9.2			0.420
87-25	342.8	361.9	19.1			0.570
	470.1	473.8	3.7			1.52
87-29	218.8	225.1	6.3	2.13	5.58	8.09
87-30	224.1	233.9	9.8	3.43	1.41	0.202
87-31	173.6	186.0	12.4			0.156
87-32	161.4	168.6	7.2		2.51	0.202
88-10	241.1	251.0	9.9			0.181
88-20	579.7	583.3	3.6	1.59		0.380
88-21	517.7	522.6	4.9			0.398
	610.2	611.9	1.7			1.155
88-24	218.8	222.8	4.0			0.383
88-25	160.1	165.0	4.9			0.342
	261.5	265.4	3.9			0.698
88-27	120.7	133.9	13.2			0.123
88-28	213.9	229.0	15.1			0.810
	260.5	276.6	16.1			0.645
	330.1	338.9	8.8	1.99		0.340
	353.0	363.2	10.2	1.02		0.268
88-29	160.4	165.7	5.3	1.27		0.530
	186.0	193.9	7.9	1.04	1.33	0.216

*Cu - > 1% Cu
Ag - > 1.0 oz Ag/ton

TABLE A-2
(Continued)

NORTHWEST ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS*

Drill Hole	Interval (Feet) From	To	Length (Feet)	Cu (%)	Ag (oz/ton)	Au (oz/ton)
88-31	99.4	109.3	9.9			0.620
88-32	312.3	315.6	3.3			1.420
	378.0	384.5	6.5			0.255
88-33	450.8	457.7	6.9	2.54	1.77	0.228
88-35	69.9	77.1	7.2		1.13	0.324
	128.9	135.8	6.9		1.80	3.551
88-36	453.7	469.5	15.8			0.135
	537.7	547.6	9.9			0.135
89-1	255.1	262.0	6.9	2.32		1.502
89-2	99.6	100.5	0.9		10.48	3.417
89-3	304.0	314.0	10.0			0.431
89-5	42.0	47.8	5.8			0.719
89-6	89.5	97.0	7.5			0.390
89-9	84.3	106.5	22.2			0.230
89-11	129.0	136.0	7.0			0.250
	217.9	244.7	26.8		1.41	0.625
89-16	210.5	222.0	11.5			0.348
89-17	124.0	126.8	2.8			0.700
	147.0	157.0	10.0			0.290
89-18	87.5	96.4	8.9			0.470

*Cu - > 1% Cu
Ag - > 1.0 oz Ag/ton

TABLE A-2
(Continued)

NORTHWEST ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS*

Drill Hole	Interval (Feet) From	To	Length (Feet)	Cu (%)	Ag (oz/ton)	Au (oz/ton)
89-19	219.0	223.0	4.0		2.11	0.954
89-20	126.0	128.7	2.7	2.12		0.785
89-22	16.0	25.0	9.0			0.549
89-23	39.0	46.3	7.3			0.247
	53.1	59.0	5.9			0.309
	72.1	90.0	17.9			0.401
89-25	65.7	74.0	8.3		5.62	0.231
	223.4	240.0	16.6			0.486
89-26	53.0	57.5	4.5			0.584
89-28	88.0	93.8	5.8			0.422
	174.9	177.8	2.9	3.60		0.447
89-29	26.0	32.3	6.3		1.09	0.970
89-30	127.3	134.5	7.2			0.181
89-51	52.2	53.5	1.3		4.11	8.079
89-59	156.2	179.8	23.6			0.192
89-64	477.0	489.8	12.8			0.309
90-1	195.0	201.0	6.0			0.454
	207.5	218.0	10.5			1.131
	287.0	291.0	4.0	1.0		0.469
90-2	164.5	167.0	2.5			1.167
	192.5	196.5	4.0			0.770
	252.0	268.0	16.0			0.638

*Cu - > 1% Cu
Ag - > 1.0 oz Ag/ton

TABLE A-2
(Continued)

NORTHWEST ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS*

Drill Hole	Interval (Feet) From	To	Length (Feet)	Cu (%)	Ag (oz/ton)	Au (oz/ton)
90-5	289.0	292.0	3.0		1.91	0.94
90-6	319.5	326.3	6.8			0.14
90-7	309.0	314.0	5.0			0.24
90-9	307.0	312.0	5.0			0.21
90-10	213.0	217.0	4.0			0.17
90-12	41.0	48.5	7.5			0.19
90-13	222.9	227.0	4.1			0.14
90-14	57.0	58.8	1.8			0.66
90-15	508.4	515.7	7.3			0.12
90-16	273.0	277.5	4.5			0.51
	309.0	311.7	2.7			0.38
	343.4	346.5	3.1			0.45
90-17	363.0	364.7	1.7			0.363
	371.1	376.7	5.6	1.77		0.828
90-18	339.9	349.0	9.1			7.28
90-19	97.0	105.0	8.0			0.203
90-21	908.0	913.0	5.0			0.459
90-23	111.0	114.2	3.2			0.350

*Cu - > 1% Cu
Ag - > 1.0 oz Ag/ton

TABLE A-2
(Continued)

NORTHWEST ZONE

SUMMARY OF SIGNIFICANT DRILL INTERSECTIONS*

Drill Hole	Interval (Feet) From	To	Length (Feet)	Cu (%)	Ag (oz/ton)	Au (oz/ton)
90-26	107.0	116.0	9.0			0.715
90-27	46.0	53.0	7.0			0.425
90-30	79.0	96.5	17.5			0.341
90-31	29.0	35.5	6.5			1.289
	202.5	206.0	3.5			0.788
90-32	174.0	184.0	10.0			0.238
90-33	310.0	311.0	1.0			0.706

*Cu - > 1% Cu
Ag - > 1.0 oz Ag/ton

and pyrite. The relative age of the gold is uncertain although it appears to be associated with pyrite and chlorite, but not with chalcopyrite. Lead isotope studies indicate an early Jurassic or older age, for the mineralization in the Northwest zone (Ray et al, 1990).

6.3 THE BLACK BEAR ZONE

The Black Bear Zone is located about 150 metres north of the camp site (Figure G-1). It is an area that trends north for about 300 metres and is about 400 metres wide. On surface where it outcrops, it is characterized by a strongly silicified rock with fine disseminated pyrite. A magnetic survey in the area has identified a strong positive anomaly which trends north.

6.4 THE GORGE ZONE

This area is localized north of the Black Bear Zone (Figure G-1). Outcrop is strongly silicified and trends north for about 400 metres by 300 metres in width. Trenching has exposed silicified rock cut by a small mineralized breccia lens with a quartz-calcite matrix with small inclusions of chalcopyrite, pyrite and sphalerite. One soil geochemistry sample close to this trench gave 2,910 p.p.b gold. Also, a strong magnetic anomaly has been detected in this zone.

6.5 THE VALENTINE ZONE

This area is localized about 250 metres east of the Gorge Zone. It is a strong north trending negative magentic anomaly which is about 400 metres long by 35 metres wide. Geological mapping along nearby creeks has identified base metal inclusions in silicified rock (Figure G-1).

7.0 EXPLORATION POTENTIAL

Previous studies on the property have been reported by Grove (1987, 1989) who first identified the McLymont Northwest Zone as a skarn. Indeed, the silicate-sulphide assemblages in the Northwest Zone indicate it may represent a retrograde, gold rich skarn deposit. The importance of retrograde activity in developing an ore-grade skarn deposit has been described by Meinert (1986).

Mineralization in the Northwest Zone consists principally of pyrite and magnetite, with subordinate chalcopyrite, hematite and trace of galena, sphalerite and gold, in a carbonate-quartz-chlorite gangue. Economically encouraging mineralization is more consistent within the marble horizons than within the volcanosedimentary sequence. A total of 148 drill holes totalling 54,548 feet has tested the Northwest Zone mineralization along a strike length of about 985 feet and to a depth of about 650 feet. Refer to Table A-2 for a summary of significant drill intersections.

Precise controls of the ore zones are not yet fully understood. Mineralization is believed to be both lithologically and structurally controlled. From drill hole data interpretation in cross-section and surface geological mapping it appears the mineralized marble horizons are in an antiform which is plunging north, is block faulted and is fissure controlled.

A set of 20 cross-sections (Set B) and a longitudinal section are in file at the Vancouver office. Figure 5 shows the location of these sections on the NW Zone.

The Northwest Zone is open for exploration to the north, south and down dip (Figure G-4). On it's northern extension drill hole 90-21 intercepted 5 feet of 0.459 oz/ton gold just 92 feet north of the known 164 feet wide mineralized block. The southern extension

is also very promising since no drilling has been done southwest of hole 87-15 where a 9 feet quartz-pyrite-chalcopyrite structure was intercepted with 0.42 oz/ton gold. In the down dip direction the possibilities for extension are encouraging as can be seen from drill hole cross-sections. Also, in the southern section of the Northwest Zone four mineralized outcrops have been identified very close to the McLymont Creek Fault Zone. These mineralized structures which trend about 035 degrees are pyritic with minor chalcopyrite and magnetite. They have an average width of 3.3 feet with an average grade of 0.05 oz/ton gold and 0.5% copper (Figure G-4). It is very probable this mineralization may be associated with the McLymont Fault Zone.

The Camp Zone mineralization consists of gold-bearing quartz-pyrite-chalcopyrite veins localized along a northwest trending shear zone in a quartz-rich porphyritic granite, which have been tested by 20 short diamond drill holes along a strike length of about 150 metres. Grades range from 0.04 oz/ton gold over 5.0 feet to 2.40 oz/ton gold over 2.0 feet. At present these veins are limited due to their narrowness. Nonetheless, the presence of gold in this area suggests that further exploration is warranted.

The Black Bear and the Gorge Zones present very encouraging possibilities for similar mineralization to the Northwest Zone. They are extensive pyritic silica capped areas with base metal indications, as found in some trenches and along creeks. Also, a strong north trending positive magnetic anomaly is localized in these areas. It is probable that the gold quartz-pyrite-chalcopyrite veins in the vicinity of these zones may represent manifestations of a larger deep seated system which may be localized below this silicified cap rock. Toward the end of the 1990 field season, two drill sites were prepared in order to explore the two zones, but due to adverse weather conditions the

drilling had to be postponed for 1991.

The Valentine Zone has been located by a magnetic survey. Similar to the Black Bear and Gorge zones it is an elongated north trending magnetic belt. Nearby creeks expose silicified rock with small disseminations of pyrite and chalcopyrite.

Other areas that need to be explored lie south of the camp site, where previous geology maps show silicified zones along creeks with disseminations and veinlets of base metals.

8.0 RECOMMENDATIONS

The McLymont property exhibits grassroots and advanced exploration targets. To address this exploration diversity, it is recommended that a two phase exploration program be carried out.

Phase I will include 5,000 feet of diamond drilling in the Black Bear, Gorge and the Valentine Zones, with surface exploration in these areas and also south of the camp site. It will include prospecting, geological mapping and soil geochemical sampling. In particular, trenching is recommended in the Valentine Zone.

Phase II will include 7,000 feet of diamond drilling in the Northwest Zone in order to test it's north and south extensions. Also, at least two drill holes across the McLymont Fault Creek are recommended to test if the fault is mineralized.

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10.0 STATEMENT OF QUALIFICATIONS

I, VICTOR A. JARAMILLO OF VANCOUVER, BRITISH COLUMBIA, DO HEREBY CERTIFY THAT:

1. I am currently employed as Project Geologist with Gulf International Minerals Ltd. at Suite 200 - 675 W. Hastings Street, Vancouver, B.C. V6B 1N2

2. I am a graduate of Washington and Lee University, Virginia, U.S.A. (B.Sc. 1981), and McGill University, Montreal, Canada (M.Sc. Applied, 1983).

3. I have practiced my profession in mineral exploration and mining geology continuously since 1981.

4. I am a Fellow of the Geological Association of Canada.

SIGNED AND DATED THIS 14TH DAY OF JANUARY, 1991 AT VANCOUVER, BRITISH COLUMBIA.

V. Jaramillo

Victor A. Jaramillo
M.Sc.A, FGAC