ASSESSMENT REPORT

1991

DIAMOND DRILL, GEOLOGICAL, GEOCHEMICAL AND ENVIRONMENTAL BASE LINE STUDY PROGRAM

on the

RED MOUNTAIN PROPERTY

SKEENA MINING DIVISION

LOCATED

8 KM NORTHWEST OF MT. ANDREAS VOGT
BRITISH COLUMBIA

CENTRED ON

LATITUDE: 55 57′ NORTH
LONGITUDE: 129 42′ WEST

NTS 103P/13

OWNER

LAC MINERALS LTD.

OPERATOR

LAC MINERALS LTD.

REPORT BY

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DATE: 30/06/92

SUMMARY

1991 EXPLORATION PROGRAM AND ENVIRONMENTAL BASE LINE STUDY ON THE RED MOUNTAIN PROPERTY

The eleven claim, 4800 hectare property is located on the eastern flank of the Coast Mountains, approximately eight kilometres northwest of Mt. Andreas Vogt, near Stewart, B.C. The property is situated in Stikinia Terrane and is underlain by volcanic and sedimentary rocks of the Lower Jurassic Hazelton Group. These rocks have been intruded by a coeval hypabyssal intermediate pluton of Lower Jurassic age.

A geological, geochemical and diamond drill exploration program on the Red Mountain property was conducted by LAC Minerals Ltd. geologists between July 3rd to September 14th, 1991. Baseline environmental studies were initiated in September of 1990 and are ongoing. The Red Mountain exploration program in 1991 consisted of 2,628 metres of diamond drilling in 11 holes, a structural study, and a limited whole rock geochemical study on the Marc Zone. Geological mapping at various scales (1:2,500, 1:500, 1:100) and geochemical sampling was conducted on additional Red Mountain showings.

The 1991 exploration program yielded encouraging results, and further work is warranted. A detailed whole rock geochemical program over the Marc and Rio Blanco Zones should be conducted. Relogging of all diamond drill core and a re-interpretation of the Marc Zone mineralization is recommended. Further drilling at the Marc Zone has an excellent potential to extend the presently outlined mineral inventory into an economic deposit.

TABLE OF CONTENTS

LIST OF FIGURES

TABLE OF CONTENTS (cont.)

LIST OF TABLES

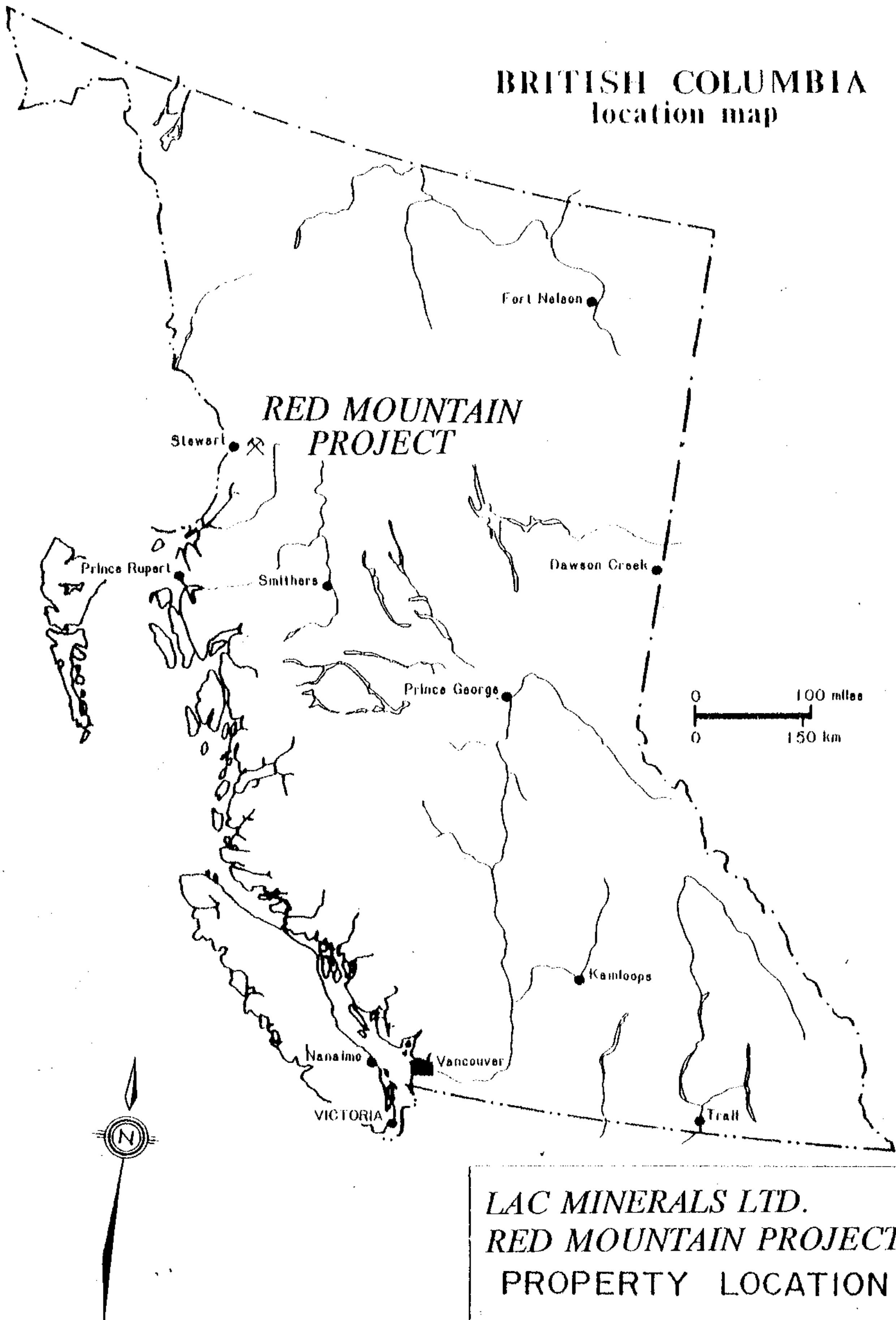
LIST OF APPENDICES

1.0 INTRODUCTION

The Red Mountain property is located within the eastern flank of the Coast Mountains, approximately fifteen kilometres northeast of Stewart, British Columbia (Figure 92-01). The nearest paved road, Highway # 37A, is sixteen kilometres to the northwest. Access to the property is gained by helicopter from the port town of Stewart. Extensions and upgrading of an existing logging road running south from Highway # 37A up the Bitter Creek Valley could provide future road access.

The Red Mountain property, centred on latitude 55 57'North and longitude 129 42' West, covers rugged mountainous terrain with elevations ranging from 655 to 2150 metres above sea level. The slopes are mostly steep to precipitous, making the use of technical mountaineering techniques necessary. Occurrences of snow and debris avalanches are common, both in the Bitter Creek Valley and Red Mountain cirque.

Western hemlock is the dominant tree, while Sitka spruce, amabilis fir and black cotton wood are common subdominants. Common shrubs along valley bottoms include mountain alder, willows, red-osier dogwood, red elderberry, raspberry, devils club, mountain maple and thimbleberry. Mountain alder is a widespread species on avalanche slopes and recently deglaciated terrain. The subalpine mountain hemlock zone occurs from about 900 to 1350 metre levels. Alpine



LAC MINERALS LTD.
RED MOUNTAIN PROJECT
PROPERTY LOCATION

DATE: *JUNE 1992*	*FIGURE: 92-01*
SCALE: 1 : 750,000	

vegetation occurs intermittently between 1350 and 1600 metre levels, giving way to bare rock at higher elevations. Avalanche paths are commonly overgrown by an impassable cover of slide alder. Wildlife consists of mountain goats, grizzly and black bears, wolverines, wolves, marmots, martens and ptarmigans. The area has a coastal climate regime. Snowfall is heavy due to high elevations, northern latitude and proximity to the ocean. In the Stewart area mean annual snowfall ranges from 520 centimetres at sea level and 1500 centimetres at 460 metres elevation (Bear Pass), and up to 2250 centimetres at an elevation of 915 metres (Tide Lake Flats).

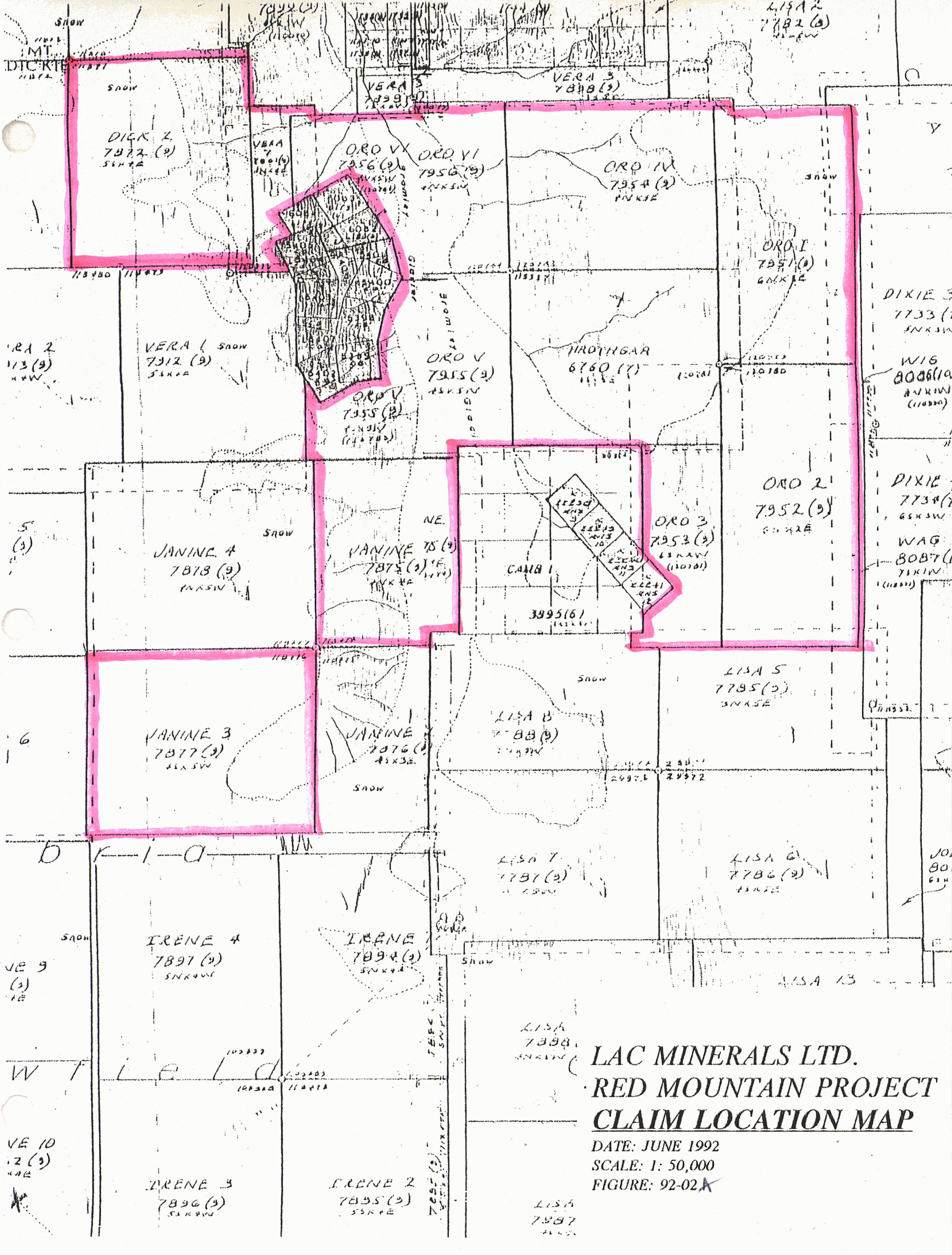
1.1 PROPERTY STATUS

The LAC Minerals Ltd. 100%-owned Red Mountain property is located within the Skeena Mining Division of British Columbia. The property covers 192 mineral units within eleven contiguous claims. Figures 92-02 (in pocket) and 92-02A show the location and disposition of the claims, respectively. Relevant claim information is summarized in Table 1.

TABLE 1

PROPERTY STATUS SUMMARY

CLAIM NAME	RECORD NO.	UNITS/HECTARES	RECORD DATE
ORO 1	7951	18/450	16/09/89
ORO 2	7952	18/450	16/09/89
ORO 3	7953	12/300	16/09/89
ORO 4	7954	20/500	23/09/89
ORO 5	7955	20/500	23/09/89
ORO 6	7956	20/500	23/09/89
HROTHGAR	6760	20/500	11/07/88
JANINE 1	7875	16/400	08/09/89
JANINE 3	7877	20/500	08/09/89
DICK 2	7872	20/500	09/09/89
VERA 7	7901	8/200	16/09/89
TOTAL		192 UNITS/ 4800 HA	



LAC MINERALS LTD.
RED MOUNTAIN PROJECT
CLAIM LOCATION MAP

DATE: JUNE 1992
SCALE: 1: 50,000
FIGURE: 92-02A

1.2 EXPLORATION HISTORY

Following limited gold exploration in the late 19th century and the early part of this century, the property was evaluated for molybdenum occurrences in the 1960's and the 1970's. A molybdenum and native gold showing was discovered in 1965 on the south side of Red Mountain (Erin Stock showing, McAdam Point). Additional small molybdenum prospects were located during subsequent exploration programs in the central cirque of Red Mountain.

Significant gold values were obtained in 1973 from Lost Mountain (R.H.S. claims), a nunatuk immediately south of Red Mountain and separated from the latter by the northern branch of Bromley Glacier. Gold here was associated with pyrite, galena and sphalerite, occurring in strike persistent narrow quartz veins within a sequence of black argillites.

Red Mountain remained unexplored for gold as it was mainly regarded as a setting favourable for porphyry molybdenum style mineralization. The reactivation of gold exploration in the area during the mid to late 1980's has focused on the Iskut and Sulphurets gold camps, and the surroundings of the historic Silbak-Premier mine. All of these areas are situated in geological environments similar to that of Red Mountain. The following summarizes exploration activities in the Red Mountain area:

1898	Exploration for placer gold in the Bitter Creek area
1900	Gold exploration in the upper reaches of Bitter Creek
1965	Discovery of molybdenite mineralization and visible gold at McAdam Point (Erin Showing: MI103P/220). Rock sampling, geological mapping, hand trenching, diamond drilling (one 70 m AX hole).
1967	Northgate Exploration Ltd.: geological mapping, geochemistry (263 samples analyzed for copper, molybdenum and zinc) and diamond drilling (613 m in 5 holes)
1976	Jack claims staked by J. Howard (central and southern portion of Red Mountain), which were subsequently optioned to Zenore Resources Ltd.
1977/78	Zenore Resources Ltd.: logging and re-sampling of the 1967 drill core for molybdenum. Geological mapping, rock geochemistry (analyzed for copper, molybdenum and gold). Petrographic study.
1978/80	Falconbridge Nickel Mines Ltd.: reconnaissance program for porphyry copper-molybdenum targets in the Stewart area.
1988/89	Staking of the Red Mountain Property by Wotan Resources
1989	Red Mountain property optioned to Bond Gold Canada Inc. (now LAC Minerals Ltd.). Discovery and drill testing of the Marc Zone (3,623 metres in 21 holes) and Brad Zone (1,107 metres in 6 holes) gold-silver mineralization. Geological mapping, trenching, rock geochemistry and 5,220 km airborne geophysical survey.
1990	Continued evaluation of Red Mountain by LAC Minerals. Diamond drilling (13,350 m on Marc Zone and geophysical targets), ground geophysics, geological mapping, and rock geochemistry. Baseline environmental study initiated.
1991	Continued evaluation of Red Mountain by LAC Minerals (this report). Diamond drilling of the Marc Zone (2,628 in 11 holes), geological mapping and rock geochemistry. Continuation of environmental base-line studies.

2.0 REGIONAL GEOLOGY AND MINERALIZATION

GEOLOGY

The Red Mountain property is situated within a broad, north-northwest trending volcano-plutonic belt composed of Upper Triassic Stuhini Group and Upper Triassic to Lower - Middle Jurassic Hazelton Group. This belt has been termed the "Stewart Complex" by Grove (1986) and forms part of the Stikinia Terrane. The Stikinia Terrane together with the Cache Creek and Quesnel Terranes constitute the Intermontane Superterrane which is believed to have accreted to North America in Middle Jurassic time (Monger et al, 1982). To the west, the Stewart Complex is bordered by the Coast Plutonic Complex. Sedimentary rocks of the Middle to Upper Jurassic Bowser Lake Group overlay the complex to the east.

The Jurassic stratigraphy was established by Grove (1986) during regional mapping between 1964 and 1968. Formational subdivisions have been and are in the process of being modified and refined as a result of recent work being undertaken in the Stewart, Sulphurets, and Iskut areas by the Geological Survey Branch of the BCMEMPR (Alldrick, 1984, 1985, 1989), the Geological Survey of Canada (Anderson, 1989; Anderson and Thorkelson, 1990) and the Mineral Deposits Research Unit at the University of British Columbia. A sedimentological, stratigraphic, and structural synthesis is slowly emerging for this area.

The Hazelton Group represents an evolving (alkalic/calc-alkalic) island arc complex capped by a thick succession of turbidites (Bowser Lake Group). Grove (1986) subdivided the Hazelton Group into four litho-stratigraphic units (time intervals defined by Alldrick 1987): the Upper Triassic to Lower Jurassic (Norian to Pliensbachian) Unuk River Formation, the Middle Jurassic Betty Creek (Pliensbachian to Toarcian) and Salmon River (Toarcian to Bajocian) Formations, and the Middle to Upper Jurassic (Bathonian to Oxfordian- Kimmeridigian) Nass Formation. Alldrick assigned formational status (Mt.Dilworth Formation) to a Toarcian rhyolite unit (Monitor Rhyolite) overlying the Betty Creek Formation. Rocks of the Salmon River Formation are transitional between the mostly volcanic Hazelton Group and the wholly sedimentary Bowser Lake Group and are presently treated either as the uppermost formation of the former or the basal formation of the latter (Anderson and Thorkelson, 1990). The Nass Formation has now been assigned to the Bowser Lake Group.

The Unuk River Formation, a thick sequence of andesitic flows and tuffs with minor interbedded sedimentary rocks, hosts several major gold deposits in the Stewart area. The unit is unconformably overlain by heterogeneous maroon to green, epiclastic volcanic conglomerates, breccias, greywackes and finer grained clastic rocks of the Betty Creek Formation. Felsic tuffs and tuff breccias characterize the Mt.Dilworth Formation. The Mt. Dilworth Formation represents the climactic and penultimate volcanic event of the

Hazelton Group volcanism and forms an important regional marker horizon. The overlying Salmon River Formation has been subdivided in the Iskut area into an Upper Lower Jurassic and a Lower Middle Jurassic member (Anderson and Thorkelson 1990). The Upper member has been further subdivided into three north-trending facies belts: the eastern Troy Ridge facies (starved basin), the medial Eskay Creek facies (back-arc basin), and the western Snippaker Mountain facies (volcanic arc).

Sediments of the Bowser Lake Group rest conformably on the Hazelton Group rocks. They include shales, argillites, silt- and mudstones, greywackes and conglomerates. The contact between the Bowser Lake Group and the Hazelton Group passes between Strohn Creek in the north and White River in the south. The contact appears to be a thrust zone with Bowser Lake Group sediment "slices" occurring within, and overlying, the Hazelton Group pyroclastic rocks to the west.

Two main intrusive episodes occur in the Stewart area: a Lower Jurassic suite of dioritic to granodioritic porphyries (Texas Creek Suite) that is comagmatic with extrusive rocks of the Hazelton Group and an Upper Cretaceous to Early Tertiary intrusive complex (Coast Plutonic Complex and satellite intrusions). The Early Jurassic suite is characterized by the occurrence of coarse hornblende, orthoclase and plagioclase phenocrysts and, locally, potassium feldspar megacrysts.

The Eocene Hyder quartz-monzonite, comprising a main batholith, several smaller plugs, and a widespread dyke phase, represents the Coast Plutonic Complex.

Middle Cretaceous regional metamorphism (Alldrick et. al., 1987) is predominantly of the lower greenschist facies. This metamorphic event may be related to west-vergent compression and concomitant crustal thickening at the Intermontane - Insular superterrane boundary (Rubin et. al., 1990). Biotite hornfels zones are associated with a majority of the quartz monzonite and granodiorite stocks.

Recent structural studies by Evenchick (1991b) indicate that Bowser Basin strata are part of a regional Skeena fold and thrust belt. This tectonism developed between latest Jurassic and early Tertiary time and involved strata at least as young as Lower and Middle Jurassic Hazelton Group. This implies that the thrust faults of this belt have affected rocks of Stikinia, and may root in the Coast Plutonic Complex.

No significant deformation has been described for the interval between the deposition of the Hazelton and Bowser Lake Groups. Evenchick (1991b) concludes that folds in the Hazelton Group are likely to be the result of shortening during the formation of the Skeena fold belt.

MINERALIZATION

The Stewart Complex is the setting for the Stewart (Silbak-Premier, Big Missouri), Iskut (Snip, Johnny Mountain, Eskay Creek), Sulphurets, and Kitsault (Alice Arm) gold/silver mining camps. Mesothermal to epithermal, depth-persistent gold-silver veins form one of the most significant types of economic gold deposits. There is a spatial as well as temporal association of this gold mineralization with Lower Jurassic calc-alkaline intrusions and volcanic centres. These intrusions are often characterized by 1-2 cm-sized potassium feldspar megacrysts and correspond to the top of the Unuk River Formation.

The most prominent example of this type of deposit is the historic Silbak-Premier gold-silver mine which has produced 56,600 kg gold and 1,281,400 kg silver between 1918 and 1976. Current open pit reserves are 5.9 million tonnes grading 2.16 g Au/t and 80.23 g Ag/t (Randall, 1988). The ore is hosted by Unuk River Formation andesites and comagmatic Texas Creek porphyritic dacite sills and dikes. The ore bodies comprise a series of en echelon lenses developed over a strike length of 1,800 metres and through a vertical range of 600 metres (Grove, 1986; McDonald, 1988). The mineralization is controlled by northwesterly and northeasterly trending structures and their intersections, but also occurs locally concordant with andesitic flows and breccias. Two main vein types occur: silica-rich, low-sulphide precious metal veins and sulphide-rich base metal veins. The precious metal veins are more prominent in the upper level of the deposit and contain polybasite, pyrargyrite, argentiferous tetrahedrite, native silver, electrum, and argentite. Pyrite, sphalerite, chalcopyrite and galena combined are generally less than 5%. The base metal veins crosscut the precious metal veins and increase in abundance with depth. They contain 25 to 45% combined pyrite, sphalerite, chalcopyrite and galena with minor amounts of pyrrhotite, argentiferous tetrahedrite, native silver, electrum and arsenopyrite. Quartz is the main gangue material, with lesser amounts of calcite, barite, and some adularia. Mineralization is associated with strong silicification, feldspathization, and pyritization. A temperature range of 250 to 260 degrees C has been determined for the deposition of the precious and base metals (McDonald, 1990).

The Eskay Creek gold deposits are underlain by Lower to Middle Jurassic volcanic and sedimentary rocks of the Hazelton Group. Mineralization occurs in two separate zones, the 21A zone and the 21B zone. The former shows epithermal deposit characteristics, while the latter shows volcanogenic massive sulphide characteristics. The 21A zone is a rhyolite-hosted, stockwork and disseminated sulphide suite containing stibnite +/- realgar +/- orpiment +/- tetrahedrite +/- cinnibar. Vertical geochemical and mineralogical zonation indicates increasing temperatures and base metal content with depth. The 21B zone is a stratabound massive sulphide hosted by a graphitic argillite unit which overlies a rhyolite unit. Gold mineralization occurs along with sphalerite, galena, tetrahedrite and Pb-sulfosalts. Probable reserves, using a 8.6 gram gold cut-off and a minimum 2 metre thickness, for the 21A and 21B zones have been published as 183,000 tonnes at 24.3 grams gold and 233.1 grams silver per ton, and 1,073,000 tonnes at 56.9 grams gold and 1,484.6 grams silver per ton, respectively (Blackwell, 1990).

Middle Eocene silver-lead-zinc veins are characterized by high silver to gold ratios and by spatial association with molybdenum and/or tungsten occurrences. They are structurally controlled and lie within north, northwest, and east-trending faults. This mineralization is less significant in economic terms.

Porphyry molybdenum deposits are associated with the Tertiary Alice Arm Intrusions, a belt of quartz-monzonite intrusions parallel to the eastern margin of the Coast Plutonic Complex. An example of this type of deposits is the B.C. Molybdenum Mine at Lime Creek.

3.0 RED MOUNTAIN PROPERTY GEOLOGY & MINERALIZATION (FIGURES 92-03, 92-04)

GEOLOGY

The only available published geological map that covers the Red Mountain area is the 1:100,000 Unuk River-Salmon Rive-Anyox map by Grove, 1986. According to Grove, 1986, the property area is underlain by Lower to Middle Jurassic rocks of the Hazelton Group (Unuk River and Salmon River Formations) which have been intruded by Middle Jurassic and Early Tertiary stocks and dykes. The younger intrusive sequence forms part of the Coast Plutonic Complex.

The portion of the property located east of Bromley Glacier is underlain by rocks of the Lower Jurassic Unuk Formation. This formation consists of clastic sediments, volcanic breccias, crystal and lithic tuffs and limestones. Rocks of the Upper Jurassic Salmon River Formation, a sequence of fine to coarse-grained clastic sediments, limestones, rhyolites and crystal and lithic tuffs are exposed west of Bromley Glacier (Oro V and VI claims). The Betty Creek and Mnt. Dilworth Formations, which stratigraphically underlie the Salmon River Formation, appear to have been thinned out or eroded in the Red Mountain area.

Stratified rocks occupy the ridges and the southern and northern slopes at Red Mountain and consist of intermediate pyroclastics, finely banded, partially carbonaceous argillites and tuffaceous sediments, and chert (units 1-5, 13 and 16). The strata generally strike northwest and dip steeply towards the southwest, but strike and dip are locally highly variable as a result of up-doming by a hornblende-feldspar porphyry (Goldslide Intrusion) and satellite intrusions. Top indicators within the tuffaceous sediments (load casts, graded bedding) indicate that the sequence is right side up.

A distinct volcanoclastic unit northeast of the Marc Zone at the edge of the Cambria Icefield consists of coarse limestone fragments in a fine-grained dacitic tuff. Due to finely disseminated pyrite within the matrix the unit weathers to a rusty brown colour. A similar rock occurs at Lost Mountain further south.

The volcano-sedimentary sequence appears to represent an intermediate to distal volcanic facies. The closest recognized Lower Jurassic volcanic centre is located in the Big Missouri-Premier area about 15 kilometres to the north (Alldrick, 1989).

A hypabyssal, hornblende-plagioclase porphyritic intrusion (Goldslide Intrusion, units 6, 8) of granodiorite to diorite compostion occupies the cirque as well as the western and eastern slopes of Red Mountain. The groundmass of the porphyry grades from weakly phaneritic at deeper levels to aphanitic at higher levels and closer to the country rock contact. Euhedral hornblende crystals constitute up to 25% of the rock and are up to 2.0 centimetres long. Plagioclase crystals are usually smaller than

2.0 mm and constitute up to 25% of the rock. The ratio of hornblende to plagioclase varies. A fine-grained and more equigranular phase of the intrusion is dominated by densely disseminated plagioclase. Phenocrysts of pyroxene, biotite, orthoclase and quartz are less abundant.

A wide contact zone occurs between the volcano-sedimentary package and the intrusion. This zone is strongly brecciated and contains argillite and/or pyroclastic rock fragments within an intrusive matrix. Quartz stockwork is locally developed within the border phase of this intrusion. Weak to intense silicification, sericitization and propylitization are associated with these quartz stockwork zones. An extensive zone of pyritization and sericitization surrounds the Goldslide Intrusion and is responsible for the gossaneous appearance of Red Mountain. A Lower Jurassic date of 200 Ma has been determined on a hornblende sample (argon-argon) for the Goldslide Intrusion.

A granodioritic to quartz-monzonitic intrusion, the Erin Stock (unit 12), is exposed at the southern tip of Red Mountain and appears to continue south under the Bromley Glacier onto Lost Mountain. The stock and associated aplitic dykes intrude a sequence of thinly bedded argillites, calcareous sediments and intermediate pyroclastics. The sediments have been extensively skarnified and hornfelsed. The stock itself is cut by a number of fine-grained basaltic dykes. A Lower Tertiary age of 45 +/- 2 Ma has been determined from a biotite sample by argon-argon methods.

Several sets of dykes (units 7, 10-11) cut the sedimentary and pyroclastic rocks at Red Mountain, including:

a) potassium feldspar porphyritic dykes- light grey with subhedral feldspar crystal and quartz eyes in aphanitic matrix. Mainly northeast trending. The appearance and relative age relationships indicate that these dykes may correlate with the Early Jurassic Texas Creek intrusive suite.

b) microdioritic dykes- green-grey, fine grained feldspar-hornblende porphyritic, generally northwest trending and southwest dipping. Plagioclase occurs as anhedral grains up to 1 mm, with hornblende as anhedral to prismatic crystals up to 1.5 mm.

c) lamprophyre dykes- green-grey, with minor vesicles and typically composed of green acicular hornblende and plagioclase in a dense matrix. These dykes have a north-northwesterly trend and cut all other types of dykes. The appear to be related to the Oligocene-Miocene lamprophyre dyke suite known from the Stewart area.

STRUCTURE

The most prominent fold in the Red Mountain area is a large antiform with a north-northwest trending axis running from the Bromley Glacier north to Bear River. Grove, 1986, recognized a fold in this same area which he described as a syncline. However, detailed mapping by Dihedral Exploration geologists show this structure to be an antiform. Most of the rocks on the east side of the Bromley Glacier dip steeply to the east and many of the rocks on the west side dip steeply to the west. Where tops indicators can be determined, most face outward. Rocks of the Upper Jurassic Salmon River Formation, a sequence of fine to coarse-grained clastic sediments and fossiliferous limestones, are exposed west of Bromley Glacier. The Betty Creek and Mount Dilworth Formations, which stratigraphically underlie the Salmon River, are not present in the Red Mountain area.

Discussions by Dihedral Exploration geologists with Anderson, Alldrick and Greig (pers. comm., 1991) lend support to the identification of the Salmon River Formation unit. This creates a problem with the structural interpretation as the sequence outwards from the centre of the fold is Salmon River then Unuk River Formation rocks. The correlations in the Red Mountain area are based largely on lithologic similarities. It is possible that the lithologic similarities are coincidental and that the apparent "Salmon River Formation" is in fact Triassic in age. If, however, the correlations are correct, then a major structural dislocation must be hypothesized in order to place younger rocks in the centre of the apparent antiform. It is possible that Unuk River Formation rocks have been thrust over Salmon River Formation rocks and that the resulting sequence was then warped into an antiform.

MINERALIZATION

Red Mountain is characterized by an extensive gossan, covering approximately 12 square kilometres. The property has attracted exploration activities for porphyry molybdenum-type targets in the 1960's. The molybdenite mineralization is controlled by northerly trending fractures along the northern contact of the Erin Stock (McAdam Point). The most significant mineralization is restricted to within 25 metres of the contact and overall occurrences were judged as non-economic. An occurrence of visible gold with values up to 27.42 gAu/t over 0.91 metres, 30.85 gAu/t over 0.61 metres and 64.45 gAu/t over 0.61 metres have been mentioned for this area in reports from the 1960's. The exact location and mode of occurrence for this gold mineralization has not been reported.

The northern tip of Lost Mountain covers the southern contact of the Erin Stock. The molybdenite-bearing quartz veins extend likewise for only a limited distance from the southern contact of the Erin Stock into the skarn and hornfels. Significant gold and silver mineralization is associated with sphalerite, pyrite, pyrrhotite, galena and chalcopyrite within narrow quartz veins and occurs further south on Lost Mountain (Mandy, Middle, Handy and Andy veins). The veins are predominantly hosted by a sequence of carbonaceous argillites and have a northwesterly strike and dip steeply to the southwest.

No other occurrences of gold were known at Red Mountain prior to Bond Gold Canada Inc.'s (now LAC Minerals Ltd.) 1989 exploration program. Several gold showings were subsequently discovered during the 1989 and 1990 programs (Assessment Reports #20,133 and #20,971, respectively), all of which are spatially related to the contact of the Goldslide Intrusion and the surrounding pyroclastic and sedimentary rocks. Mineralization occurs both within the intrusion as well as in the surrounding country rocks.

Individual mineralized areas are discussed in the ensuing sections. Surface sample descriptions with summarized results, and assay certificates are presented in Appendices A and B, respectively.

3.1 RIO BLANCO GEOLOGY AND MINERALIZATION (FIGURE 92-05)

Dihedral Exploration geologists spent from July 16-28, 1991 mapping (1:500), surveying and sampling (n=102) the Rio Blanco prospect, located on the north side of Red Mountain. Three days were spent in August retrieving additional samples. The following comments are provided by Dihedral Exploration geologists from an in-house report prepared for LAC Minerals Ltd.

GEOLOGY

Rio Blanco is located on the north side of Red Mountain within the Oro 4 claim. The area consists of northwest and north facing cliff faces which vary from 40 to 90 degrees, as well as lower angle slopes and gullies.

The majority of the Rio Blanco cliff faces are dip-slope contacts between the Goldslide hornblende porphyry (JiG: 200 Ma argon-argon age date) and interbedded fine-grained tuffs and siltstones (vapg). All rock types are extremely altered from contact metamorphism and/or hydrothermal alteration and are therefore difficult to identify. Sediments in lower Rio Blanco Creek look like Salmon River? (ssw unit) turbidites, and fresh rocks close to the summit of Red Mountain look like tuffs and agglomeratic rocks of the Unuk River Formation (vapg unit). The altered rocks at Rio Blanco could be either or both. Because we have a 200 Ma age for the Goldslide intrusive, the host rocks can not be Salmon River Formation sediments, and thus have been assigned to the Unuk River Formation.

Alteration mineralogy includes silica, sericite, phyrrhotite, pyrite, limonite and jarosite and is found in both the intrusive and country rocks. Alteration intensity increases with proximity to shears and contacts.

Structures at Rio Blanco are mostly a result of brittle deformation. Very few folds have been identified. There are generally two shear trends: a northwest set strikes 340-360 degrees and a northeast set strikes 040-050. Both fault sets dip 70-85 degrees to the west.

On average, the contacts of the intrusive and the sediments dip 60 degrees northwest. If the contact which forms the eastern cliff face continues at 60 degrees, it will underlie the A-8, H-1 and H-2 area, "the island", at a maximum estimated depth of 50 metres. To the west, there are several alternating contacts of sediment and intrusive, so it is not clear whether we are seeing several pendants of the sediments or if the porphyry has intruded as several parallel sills along bedding.

MINERALIZATION

A total of 102 samples (45201B-211, 45213-233, 45235-240B, 45301B-321B, 45323B-338B, 45340B-353B, 45357B-358B, 45360B-370B) were collected from the Rio Blanco prospect. All samples anomalous in gold (> 500 ppb) in the Rio Blanco area are from the sediments close to the contact with the Goldslide porphyry or in adjacent shears within the sediments. The highest values (4-26.7 ppm Au) are from samples within shears. Table 2 summarizes assay values of 1.00 ppm gold or greater.

Chip samples in the area of survey station H-2 indicate gold values in the sediments away from shears (chip 1) to be from 604 ppb to 2,010 ppb. Chip 2, comprised of six samples across a major shear 10 m wide, returned values ranging from 743 ppb to 28,200 ppb gold. This shear has been trace for approximately 380 metres with a strike and dip of 045/75NW degrees, respectively. Steep-dipping northwest shears are also mineralized.

Induced coupled plasma (ICP) geochemical results for Rio Blanco were run through a statistics program, results of which are found in Appendix A. The first set of results presents basic statistics such as the mean, standard deviation, standard error, and variance for Au, As, Ag, Ag:Au, Sb and Zn. Histograms were created for these elements, from which thresholds were chosen. Note that outliers were not removed.

On reviewing gold results on the Rio Blanco map, a relationship of high gold with structures and non-plutonic rocks becomes clear. Shears in the Goldslide intrusive do not necessarily contain anomalous gold. Shears in the sediments/tuffs almost always contain high gold, as do sediments/tuffs in contact with the

TABLE 2

RIO BLANCO SURFACE SAMPLE RESULT SUMMARY

SAMPLE NUMBER	WIDTH (m)	Au (ppm)	Ag (ppm)
45203B	0.50	4.78	0.1
45204B	0.50	5.80	1.9
45206B	0.50	1.58	0.2
45207B	0.15	1.74	0.1
45210B	1.00	3.37	1.1
45239B	0.15	3.00	3.0
45302B	0.15	1.37	0.3
45309B	0.15	28.20	4.7
45314B	7.00	8.30	2.3
45321B	0.15	1.42	1.2
45323B	1.00	2.92	1.5
45324B	1.00	12.80	0.9
45326B	0.15	2.81	0.1
45328B	1.00	3.02	0.1
45330B	0.15	2.17	1.5
45332B	0.15	3.27	0.1
45333B	0.15	1.18	0.1
45334B	0.15	7.56	0.5
45353B	0.15	2.62	0.7
45363B	grab	1.94	0.5
45364B	grab	1.88	0.8
45365B	1.57	5.73	0.1
45367B	grab	1.75	0.1
45368B	grab	15.80	3.0
45369B	grab	1.25	0.1

Goldslide intrusion. Silver is low in all samples, as is antimony. The only high zinc sample was from a massive sphalerite vein within a contact zone, probably a Late Tertiary mineralization event. Low silver and zinc may indicate a difference in mineralizing style from that at the Marc Zone to the southeast.

Silver:gold ratio values are generally quite high, ranging from 0.02 to 1810.02, with a mean of 70.174. The highest count of values is in the range 1.00-20.00. The Marc Zone is characterized by silver:gold ratios of 4.00-10.00.

A correlation matrix indicates that there are no strong associations between any metals or minor elements. The best correlations are between elements such as aluminum and magnesium (0.888), aluminum and manganese (0.707), and aluminum and lithium (0.887). Barium shows moderate correlation with cadmium (0.494), potassium (0.422), lead (0.491) and zinc (0.512). Gold and silver have a 0.404 correlation, antimony and arsenic a 0.593 correlation (although note that antimony is very low overall), and tin and beryllium a 0.459 correlation.

Mineralization in the Rio Blanco area is associated with structures, and is hosted in the tuff/sediment contact unit. Elevated metal values are restricted to gold. Different geochemical indicators as well as structural control may indicate that Rio Blanco mineralization is remobilization of Marc Zone (or other) mineralization.

3.2 MCADAM POINT GEOLOGY AND MINERALIZATION (FIGURE 92-06)

The McAdam Point prospect is located on the west side of the Bromley glacier, approximately 2 kilometres south of the summit of Red Mountain. Elevations range from 1,000 to 1,250 metres. Outcrop is extensive, though locally covered by scree and talus. The terrain is moderately steep to partially vertical.

GEOLOGY

The McAdam Point area is underlain by northwesterly trending purple and grey-banded Salmon River Formation (ssw) argillites and greywackes. The sediments have been intruded, and hornfelsed, by an unaltered medium-grained biotite quartz monzonite (Erin Stock, Tim) with local aplite and quartz-potassium veining. A Lower Tertiary date of 45 +/- 2 Ma has been determined from a biotite sample by argon-argon methods. A hand specimen from the central portion of the intrusive contains approximately 15% biotite, 15% quartz, 25% plagioclase and abundant potassium feldspar, some in the form of large (to 2.5 cm) phenocrysts.

The intrusive extends for a distance of approximately 900 metres along the northeastern edge of the Bromley Glacier. It then appears to extend south beneath the Bromley Glacier to the northern tip of Lost Mountain. Numerous dykes radiate from the main intrusive body, which is itself cut by several andesitic to basaltic dykes (Tmd). On the western margin of the pluton, an apparent drag fold in the adjacent sediments indicates right lateral movement while the system was still hot enough for ductile deformation to take place.

The Erin Stock and adjacent hornfelsed sediments host several quartz-sulphide veins. Some veins contain a high molybdenite content, while others have pyrite as the primary sulphide. Chalcopyrite and sphalerite, +/- arsenopyrite occur locally. The main portion of the showing consists of three large (West, Middle and East), and several smaller veins, ranging up to about 20 cm in width. The veins occur in shear zones of up to a meter or so in width. In general, the quartz-pyrite veins are parallel or subparallel to the NNW trend of the main vein system, the exception being a vein in metasediments on the west side of the intrusive. In the hornfels on the west side of the intrusive, a shear zone 30 to 40 cm wide is traceable for approximately 50 metres. The zone contains up to 30% pyrite, some in cubes up to 1 cm on edge. It cuts sediments up to 90 metres from the contact.

MINERALIZATION

A total of 102 samples (45257B-260B, 45451B-500B, 45521B-534B, 45558B-583B, 45629B-636B) were taken from the McAdam Point area. Of the 102 samples, 31 assayed greater than 1 ppm gold. The highest gold assay, 103.8 ppm (45582B), came from a 20 cm sample of the Benito vein contain 50% pyrite. Table 3 summarizes assay values of 1.00 ppm gold or greater.

TABLE 3

MCADAM POINT SURFACE SAMPLE RESULT SUMMARY

SAMPLE NUMBER	WIDTH (m)	Au (ppm)	Ag (ppm)	Mo (ppm)
45259B	0.20	1.68	6.2	1319
45452B	0.50	1.70	2.9	596
45461B	1.00	1.23	3.0	138
45475B	1.00	8.73	32.5	336
45476B	1.00	3.14	7.5	988
45478B	0.50	17.70	57.0	129
45481B	0.50	22.24	38.9	177
45483B	1.00	3.65	8.6	318
45485B	0.35	17.00	73.9	182
45487B	0.80	9.44	29.4	630
45493B	1.00	24.53	43.1	187
45500B	0.60	57.10	130.1	1
45521B	1.00	24.69	49.0	103
45522B	0.40	28.14	71.0	1
45524B	0.80	2.32	13.4	134
45530B	1.00	6.07	22.4	39
45531B	1.00	2.92	14.3	336
45532B	1.00	5.56	53.8	144
45560B	0.15	29.4	59.1	65
45564B	0.15	5.62	35.4	5561
45568B	0.15	2.13	9.4	5
45569B	1.00	7.37	33.4	287
45571B	0.25	41.54	128.8	1
45577B	0.15	1.64	2.2	55
45579B	0.15	11.74	250.5	52
45581B	0.15	32.50	113.6	1
45582B	0.20	103.80	87.9	1
45583B	0.15	17.94	128.7	13918
45630B	0.15	8.91	25.5	1772
45632B	0.15	2.90	16.8	1
45636B	0.15	76.60	189.8	1

Base metal, gold, silver, arsenic and molybdenum data, determined from induced coupled plasma (ICP) geochemical analyses, were run for statistics on PC-XPLOR. These results are found in Appendix A. The first set of basic statistics show the mean and geometric mean, standard deviation and the coefficient of variation.

The second set of statistics involved the construction of a correlation matrix. Gold is moderately correlated with silver (0.486) and, to a lesser extent, with arsenic (0.265). Silver is moderately correlated with copper (0.348), lead (0.374) and zinc (0.585). Silver-lead-zinc correlations are well known from Tertiary mineralization in the Stewart area. Arsenic shows a low correlation with lead (0.102). Molybdenum shows a negative correlation with Au, Ag, Cu, Pb and Zn, and a negligible correlation with arsenic (0.016). Lead is moderately correlated with zinc, with a correlation coefficient of 0.586.

3.3 OTHER TARGETS (FIGURE 92-04)

Several additional target areas were investigated during the 1991 field season at Red Mountain. These included the follow-up of ground geophysical targets identified during 1990, a newly discovered prospect, the Meg zone, and additional smaller mineralized areas encountered during the course of mapping.

GROUND GEOPHYSICS

Seven ground geophysical targets (DR#1 to DR#7) were identified for follow-up during the 1990 exploration program on Red Mountain. Each of the targets are described and discussed below. Sample descriptions with summarized assay results, and assay certificates are provided in Appendices A and B, respectively.

Target DR#1: This geophysical target was identified as strong magnetic low and is located at 0+50S/9+85W. From east to west on lines 1+50S to 0+50N and between the grid coordinates 8+80W to 11+25W, the target area is underlain by the following units:

1) Strongly silicified and foliated (NNW to NNE) hornblende porphyry (approximately 8+80W to 9+15W)
2) Strongly silicified NNW to NNE striking, moderately WSW to NNW dipping ash tuff, locally intercalated with argillite and silty argillite (approximately 9+15W to 9+85W)
3) Predominately coarse-grained, fresh hornblende porphyry, locally strongly silicified and foliated (approximately 9+85W to 10+70W)
4) ash tuff from approximately 10+70W to 11+25W

Mineralization consists of variable amounts of medium-grained sugary pyrite (up to 5%), +/- arsenopyrite and sphalerite occurring in small pods and in narrow, northerly trending shears and fractures. Gold and silver assay results are summarized in Table 4. Structures noted during the mapping include northerly trending, moderately to subvertically west/west-southwest dipping shears, and east-west trending, subvertical to vertically dipping shears. The shear zones are generally traced over distances no greater than 12-15 metres. A 165 metre long northwest trending snow covered gully at approximately 9+85W obscures the contact between the hornblende porphyry and ash tuffs may represent a fault zone.

TABLE 4

GEOPHYSICAL TARGET DR#1 SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppb)	Ag (ppm)
45501B*	1.00	442	0.1
45502B	grab	38	1.1
45503B	grab	312	0.3
45504B	grab	531	0.1
45505B	grab	85	1.2
45506B	grab	8	0.1
45507B	grab	1	1.3
45508B	grab	33	2.3
45410B	grab	90	0.1
45411B	grab	62	0.1

* 1.63% As

<u>Target DR#2:</u> This geophysical target consists of two conductors having small coincident magnetic highs, and weak EM response with moderate definition. They lie in the southern lobe of an intense northeast-trending magnetic low. The target is located at grid

coordinates 0+50S/4+00W. A grid was established between the coordinates of 0+50S to 5+40S with north-south cross lines every 40 metres running 100 metres to the north and 100 metres to the south.

The majority of the gridded area is underlain by variably silicified (weak to pervasive) dark black very fine ash tuff/argillite. A coarse ash tuff unit occurs in the northeast portion of the map area, roughly between 0+50S/3+00W and 0+50N/3+40W. It is moderately chloritic, weak to moderately silicified with anhedral plagioclase 1-2 mm in size. A moderately to strongly chloritized, fine-grained hornblende porphyry outcrops between 0+50S/5+00W and 0+50S/5+40W. The northern and eastern contacts of the porphyry with the tuff/argillite are obscured by snow. The southern and western extent of the porphyry have not been determined. A 20-80 cm limestone horizon occurs in the southeastern portion of the gridded area within the tuff/argillites and can be traced for a strike length of approximately 25 metres.

The argillite and volcanic units have a north-northeasterly strike with moderate dips of 45-65 degrees to the east-northeast. A 68 degree-trending vertical shear noted at approximately 1+00S, 3+30W offsets the limestone unit by some 20 metres to the east.

Three samples were collected from this geophysical target area. Table 5 summarizes gold and silver assay results. No significant mineralization was noted during the mapping. The tuff/argillites contain ubiquitous trace to 1%, 1-2 mm disseminated euhedral pyrite, locally with minor traces of finely disseminated pyrrhotite. Two representative samples (45198B, 45199B) were taken. The coarse ash tuff unit contains traces of disseminated pyrite. One sample (45200B) from this unit was taken. It contained 2% medium-grained sugary disseminated and stringers of pyrite. No mineralization was noted in the hornblende porphyry.

TABLE 5

GEOPHYSICAL TARGET DR#2 SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppb)	Ag (ppm)
45198B	1.25	64	4.3
45199B	1.50	59	1.3
45200B	1.50	4	0.2

Target DR#3: This geophysical target, located at grid coordinates 1+00S/0+60W, is poorly defined. It is mainly based on a possible fault-offset northeastward extension of the Marc Zone mineralization along a magnetic break, thought to be a fault, and along the northwestern margin of the intense Marc Zone magnetic low. A very small residual low is in the north end of the target area. The target are is underlain by a talus slope directly below the Marc Zone. Mineralization consists of semi-massive pyritic talus derived from the Marc Zone. Talus sample TS91-01 assayed 189 ppb Au and 1.1 ppm Ag.

Target DR#4: This target, located at coordinates 2+00S/1+35E, is a magnetic high bounded to the southeast by a magnetic break with a few conductors along the break giving a poorly-defined target. A single conductor with a strong coincident magnetic high is the focus of the target area.

Mapping shows the area to be underlain by hornblende porphyry. The porphyry is slightly to moderately chloritized and generally has well developed hornblende phenocrysts. Five small subparallel faults trending 020/80E to 040/80E were noted. These are commonly 2-3 cm in width and no longer than 5 metres. Some contain ferricrete and small pods of semi-massive pyrite. A total of twelve samples were collected in a 200 metre radius around the target. Table 6 summarizes gold and silver assay results.

TABLE 6

GEOPHYSICAL TARGET DR#4 SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppb)	Ag (ppm)
45509B	grab	240	0.6
45510B	grab	182	0.9
45511B	grab	1790	0.6
45512B	grab	561	0.6
45513B	grab	7000	4.3
45514B	grab	54	0.7
45515B	grab	50	1.0
45516B	grab	228	0.6
45517B	1.00	48	0.6
45518B	grab	45	1.0
45519B	grab	25	0.6
45520B	grab	245	1.7

Samples 45510B-511B, 45515B-516B and 45519B, taken along these faults, consisted of 1-10% pyrite over narrow widths. Samples 45509B, 45509B, 45517B-518B and 45520B were taken in relatively blocky porphyry with up to 2% coarse-grained euhedral pyrite along cross-cutting fractures. Samples 45511B-512B contained 3-5% pyrite in small pods within relatively fresh porphyry. Sample 45513B is a dark grey to black limestone or carbonaceous siltstone block approximately 1.5 x 0.30 metres within the porphyry. The sample contained 2-3% chalcopyrite, 1-2% pyrite and abundant malachite and azurite staining.

Target DR#5: This target, located at 3+00S/12+20W, consists of three conductors which define a northeast trend and have weak to moderate associated magnetic highs.

An area 250 metres by 200 metres centred around the geophysical target was prospected and sampled. Table 7 summarizes gold and silver assay results. Approximately 70% of the area is covered by talus with the remaining 30% consisting of pervasively silicified fine ash tuff, and what appears to be silicified hornblende porphyry (12+00W to 12+50W, 2+00S to 3+00S). A northwest trending shear is noted approximately 150 metres west of the target area. Mineralization consists of fine disseminated pyrite concentrated along fracture planes, generally in amounts of less than 1%.

TABLE 7

GEOPHYSICAL TARGET DR#5 SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppb)	Ag (ppm)
45407B	grab	92	0.9
45408B	grab	2	1.2
45409B	grab	1	1.0

Targets DR#6-DR#7: These two geophysical targets were evaluated at the same time. DR#6 is located at 16+00S/12+50W, while DR#7 occurs at 16+00S/9+80W. Target DR#6 area contains five conductors with weak to moderate associated magnetic highs. The EM anomalies range from very weak to weak. They are partially in a residual magnetic low which curves around the conductive area. Target DR#7 is a pronounced residual magnetic high accompanied by six HEM conductor picks with coincident magnetic highs.

The majority of the area on line 16+00S is underlain by strong to pervasively silicified fine and coarse ash tuffs between 8+00W to 12+00W and 12+50W to 14+20W. Hornblende porphyry outcrops between 12+00W and 12+50W. Northwest trending, moderately to steeply northeast dipping andesitic dykes occur at 8+55W and 11+15W. A northwest trending shear is noted at 16+00S/11+40W. The shear can be followed for 100 metres, at which point it becomes obscured by talus and snow.

Mineralization consits of finely disseminated pyrite concentrated along hair-line fracture planes, generally less than 1%, and traces of pyrrhotite. Six samples were taken within the two target areas. Gold and silver assay results, summarized in Table 8, returned only background levels for gold.

TABLE 8

GEOPHYSICAL TARGETS DR#6-DR#7 SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppb)	Ag (ppm)
45401B	grab	10	2.3
45402B	grab	6	2.0
45403B	0.80	19	2.3
45404B	grab	1	2.0
45405B	grab	1	2.1
45406B	grab	1	2.0

TALUS SAMPLING

Nine composite talus samples (TS91-02 to TS91-03, TS91-06 to TS91-12) were collected from talus on the northern slopes of Red Mountain, commencing just west of the Marc Zone. Ten sub-samples comprise each individual composite sample, with sub-sample talus material being collected every 10 metres. Each composite sample therefore is representative of 100 metres of talus material. ICP gold, silver, arsenic, antimony, and base metal assay results, reported in ppm with the exception gold which is in ppb, are summarized in Table 9. Full results are provided in Appendix A.

TABLE 9

TALUS SAMPLE SUMMARY

SAMPLE #	Au	Ag	Cu	Pb	Zn	As	Sb
TS91-02	84	0.4	69	78	119	249	<5
TS91-03	366	0.6	102	62	107	304	<5
TS91-06	46	1.0	128	45	492	192	<5
TS91-07	84	1.4	146	57	398	139	8
TS91-08	35	2.0	143	133	494	110	<5
TS91-09	28	1.2	107	61	314	75	9
TS91-10	59	0.6	122	38	288	89	13
TS91-11	41	0.7	145	37	218	69	<5
TS91-12	56	0.7	156	26	148	153	<5

MEG ZONE

The Meg zone occurs at approximately 9+50S and 1+20W and can be traced for 340 metres to 8+00S and 4+20W. This zone, a northwest-trending, moderately southwest dipping fault structure up to 1 metre in width, cuts strongly silicified hornblende-feldspar porphyry and ash tuff units. The fault structure is strongly oxidized and mineralized by variable amounts of pyrite, pyrrhotite, galena, chalcopyrite and sphalerite.

A total of 32 samples (45992B-994B, 45420B-423B, 45651B-661B, 45663B-664B, 45667B-669B, 45671-672B, 45678B-684B) were taken from within and proximal to the structure. All of these sample are anomalous in gold. One sample (45664B), containing massive pyrrhotite within the fault structure, yielded 8.00 ppm gold over 1.00 metre.

RED MOUNTAIN GENERAL

An additional 82 samples (45164B--172B, 45176B-197B, 45412B-417B, 45722B, 45726B, 45984B-45991B, 45995B-45999B, 45212B, 45234B, 45556B-557B, 45662B, 45665B-666B, 45670B, 45673B-677B, 45685B-697B, 45718B-720B) were collected from various locations on Red Mountain during the course of the exploration program. Of the 82 samples taken, 18 assayed greater than 1.00 ppm gold. Gold and silver values for these samples have been summarized in Table 10.

Four of the 18 samples assayed greater than 10.00 ppm gold. Sample 45193B, located some 600 metres southwest of the Meg Zone, contained 5% pyrite disseminated along fracture planes within a silicified and chloritized hornblende porphyry. Sample 45414B, located 400 metres west of the Meg Zone, contained 30% semi-massive coarse-grained pyrite pods within an oxidized structure (210/55 NW) cutting an ash tuff unit. Sample 45721B (15+00S, 20+50W) contained 4-5% pyrite and chalcopyrite within a sericitized and silicified

TABLE 10

RED MOUNTAIN GENERAL SURFACE SAMPLE SUMMARY

SAMPLE #	WIDTH (m)	Au (ppm)	Ag (ppm)
45164B	0.15	1.36	37.7
45176B	0.50	6.60	1.5
45177B	0.40	2.02	3.7
45193B	0.15	25.70	0.9
45721B	0.15	20.88	91.8
45984B	0.15	1.02	1.1
45985B	0.15	1.63	1.1
45722B	0.15	1.49	29.6
45414B	0.15	22.20	35.9
45415B	0.15	1.71	2.9
45416B	0.15	3.95	15.3
45417B	0.15	3.80	0.1
45670B	0.15	1.23	1.2
45675B	0.15	1.72	0.5
45676B	0.15	3.00	0.5
45687B	1.00	11.19	8.0
45688B	1.00	8.50	8.5
45718B	0.20	1.41	10.1

fine ash tuff. Sample 45687B, approximately 350 metres northwest of the Meg Zone, contained 5% disseminated pyrite and trace chalcopyrite within a sheared ash tuff unit. An adjacent sample (45688B) containing 2% disseminated pyrite and trace chalcopyrite assayed 8.5 ppm gold.

3.4 WHOLE ROCK GEOCHEMISTRY (FIGURES 92-04, 92-07)

A limited geochemical whole rock sampling program (n=47, GCH91-01 to GCH91-47) was conducted over a portion of the Marc Zone during the latter stages of the exploration program. AFM and K2O-Na2O diagrams were generated from anhydrous sample data using NewPet, a geochemical computer program developed at Memorial University of Newfoundland. No discrimination was made on the data based on rock type. The AFM diagram is representative of volcanic whole rock geochemical data, while the data set used, in part, represents both volcanic and intrusive rocks. Whole rock geochemical results and the related diagrams are provided in Appendix B.

The K2O-Na2O diagram shows a strong depletion in Na2O with increasing K2O. This may reflect an increase in the intensity of sericitic alteration. The AFM diagram shows a clustering of the data within the calc-alkaline field. Three samples (GCH91-23,-32,-38) plot towards the tholeitic field. The high iron can be explained by pyrite in the sample.

4.0 1991 DIAMOND DRILL PROGRAM

The principal objective of the 1991 diamond drill program was to follow-up on the results of the 1990 diamond drilling at the Marc Zone, and the extension of this zone along strike and to depth. A total of 2,627.66 metres of BQTW-sized core in 11 holes (all on the Oro 1 claim) was drilled at the Marc Zone. This include the re-entry and deepening of three 1990 holes (MC90-28, MC90-41, MC90-51).

A total of 1,453 split core samples were submitted for 31 element ICP and fire assay for gold to Min-En Labs of North Vancouver. Check assaying of selected pulps was conducted by Bondar Clegg of North Vancouver. All drill core is stored at LAC Minerals Ltd. warehouse in Stewart.

4.1 MARC ZONE INTRODUCTION

The Marc Zone is located in the northeastern portion of the Red Mountain property south of Red Mountain summit. The discovery of this zone in 1989 resulted from tracing heavily mineralized float uphill to its bedrock source. Mineralization is exposed at the foot of a vertical cliff (elevation 1930 metres) and extends at surface for about 30 metres along strike with a width varying from 3 to 20 metres.

Marc Zone mineralization occurs as irregularly shaped sulphide lenses (North, Main and East) associated with the brecciated contact of the Goldslide Intrusion. The hydrothermal alteration consists of strong to pervasive sericitization, moderate to strong pyritization, moderate chloritization and moderate silicification. The silicification reflects mainly an increase in modal quartz as a consequence of sericitization. Moderate to strong potassic alteration as well as albitization occur locally. The presence of tourmaline is restricted to silicified zones within the hornblende-feldspar porpyhyry intrusion. Breccia fragments are strongly corroded and partly digested by the hydrothermal alteration.

Mineralization consists of densely disseminated to massive (>60%) pyrite and/or pyrite stringers and veinlets and variable amounts of associated pyrrhotite and sphalerite as well as minor chlcopyrite, arsenopyrite, galena, tetrahedrite and various tellurides. Several phases of mineralization and deformation are indicated by the presence of different generations of pyrite as well as breccia fragments consisting of pyrite. High grade gold values are usually associated with the semi-massive, coarse-grained pyrite aggregates, but also occur with stockwork pyrite stringers and veinlets. Visible gold is rare and was noted only in one instance within a small quartz vein. Gold occurs as native gold, electrum and as tellurides.

Native gold, as observed in polished thin sections, ranges in size from 10 to 500 microns and occurs as threads, interstitial pockets, and partial networks within the pyrite as well as moulded on to the periphery of pyrite fragments within the gangue and latered wall rock. Hessite (Ag2Te), altaite (PbTe), petsite (Ag3AuTe2), calaverite (AuTe2), sylvanite (AuAgTe4), native tellurium, aurostibite (AuSb), bournontite (PbCuSb3), hedleyite (?) (Bi7Te3), native bismuth and bismuthinite (Bi7S3) contain a significant amount of the gold and are closely associated with native gold and electrum.

Continuous Marc Zone mineralization has been outlined between sections -0+25N and 1+25N. The most significant intersections were obtained from hole MC90.35 with a core interval of 55.5 metres yielding 12.08 gAu/t and from hole MC90.40 which yielded 36.37 gAu/t over 25.50 metres. In addition, Marc Zone style mineralization with values of up to 8.78 gAu/t over a core length of 18 metres was intersected in holes on sections 2+25N to 2+75N.

A mineral inventory of 933,000 tonnes with a grade of 12.20 gAu/t (uncut) and 36.08 gAg/t has been calculated. Mineral inventory blocking was calculated using a 3 gram cut-off over a minimum width of 3 metres.

A UTEM geophysical zone (UTEM Zone) overlying the north end of the Marc Zone is a silver-rich sphalerite and pyrrhotite zone with associated anomalous gold, lead and copper values. This zone was intersected in holes on sections 2+25N to 2+75N, up to 200 metres above Marc Zone style mineralization. The mineralizatin consists of 5-8% sphalerite, 3-5% pyrrhotite, 2-4% pyrite and traces of chalcopyrite. The sulphides occur as matrix fill, anastomosing stringers and fine laminae parallel to bedding within a moderately to highly brecciated sequence of tuffs. Values range up to 0.58 gAu/t, 69.22 gAg/t, 5.60% zinc, 0.47% lead and 0.06% copper over a core length of 9.0 metres. Silver/gold ratios for the UTEM zone are considerably higher than those for the Marc Zone gold mineralization (40 to >100 versus 1-10).

4.2 MARC ZONE STRUCTURAL SETTING (FIGURE 92-07)

A one week structural study over the Marc Zone was conducted by Dr. Herb Helmstaedt of Queen's University, Kingston Ontario. The final report from this study is provided in Appendix D. In summary, the following structural points can be made:

-there are only very minor off-sets along east-west trending faults and any significant displacement by these structures of the Marc Zone can be ruled out.

-there are significant north-northwest trending normal faults west of the Marc Zone which may have a cumulative down dropping effect of up to 100 metres. All drilling to date has been east of these structures. The scarcity of kinematic indicators and a marker horizon, as well as the re-mobilization of sulphides into faults and fractures, makes a prediction of the amount of offset impossible. The expected effect would be a down dropping of the western (down-dip) extension of the Marc Zone.

4.3 1991 DRILL RESULTS (FIGURES 92-08 TO 92-18)

The drill program tested the Marc Zone over a strike length of 350 metres (Section -1+00N to 2+50N; Figures 92-08 to 92-18; geological legend on following page). Diamond drill hole MC91-70 tested the Meg Zone at -9+00N. The geological legend is given in Table 11 and significant diamond drill intersections are summarized in Table 12. Diamond drill logs are located in Appendix C.

MC91-63

Diamond drill hole MC91-63 was planned to test the north Marc Zone lense mineralization. Gold mineralization in this hole occurs within a porphyritic matrix supported hetrolithic breccia (Marc Zone: 361.00-381.77 m) and the footwall hornblende-feldspar porphyry (381.77-404.5 m). Sulphide contents average 5-10% coarse-grained pyrite, to 3% pyrrhotite and 1% sphalerite. Alteration consists of weak to moderate silicification and sericitization.

MC91-64

Diamond drill hole MC91-64, planned to test the main Marc Zone lense, did not encounter any well developed Marc Zone style mineralization. Scattered low grade gold mineralization between the interval 306.00 to 332.00 metres occurs predominately within hornblende-feldspar porphyry and minor sulphide (307.00-308.22 m) and ash (327.5-336.35 m) breccias. Sulphides average 3-5% disseminated and coarse-grained pyrite, to 3% pyrrhotite and trace to 1% sphalerite. Alteration is primarly moderate sericitization.

table 11: geological legend for drill sections

table 12: significant diamond drill intersections

MC91-65

Diamond drill hole MC91-65 was planned to test the western edge of the main Marc Zone lense. Sporadic gold mineralization was encountered over narrow widths between 157.00 and 389.50 metres. No well developed Marc Zone was intercepted. The best intersection occurs between the interval 268.50 to 270.75 metres within a hornblende-feldspar porphyry containing angular pyrite-altered lapilli-sized fragments and a 50 cm massive pyrite-quartz vein.

MC91-66

Diamond drill hole MC91-66, designed to test the southern edge of the main Marc Zone lense, encountered low grade gold mineralization between the interval 157.00 to 195.00 metres within a moderately to strongly silicified hornblende-feldspar porphyry averaging 5-6% pyrite and 1% pyrrhotite. No well developed Marc Zone mineralization was intersected.

MC91-67

Diamond drill hole MC91-67 was planned as a step-out hole south of the know main Marc Zone lense mineralization. No well developed Marc Zone style mineralization was encountered in this hole. The best single intersection occurs between 53.50 to 55.00 metres within a chloritic altered hornblende-feldspar porphyry containing 1-2% disseminated pyrite and pyrrhotite.

MC91-68

Diamond drill hole MC91-68 was planned to test the southeastern edge of the main Marc Zone lense, as well as the east Marc Zone lense. Scattered low grade gold values in the 1.00 to 2.00 ppm range were obtained in this hole. The best single intercept (1.97 ppm gold) occurs between 21.00 to 22.50 metres within an intercalated, chloritic altered hornblende-feldspar porphyry and coarse ash tuff unit. Mineralization consists of 2-3% disseminated pyrite, pyrrhotite and sphalerite. No well developed Marc Zone mineralization was intersected in this hole.

MC91-69

Diamond drill hole MC91-69 was planned to test the southern edges of both the main and east Marc Zone lenses. No well developed Marc Zone mineralization was intersected in this hole. Several gold values ranging from 1.00 to 11.45 ppm over narrow widths occur throughout. The best intercept occurs between 67.00 and 69.00 metres within a silicified hornblende porphyry containing 20-30% pyrite stockwork veins.

MC91-70

This hole, designed to test the surface showing of the Meg zone, failed to intercept any significant gold mineralization at depth. The best gold intercept occurs between 22.00 and 23.50 metres and yeilded a value of 0.21 ppm within a strongly silicified, fine-grained hornblende-feldspar porphyry or ash tuff.

MC90-28 extension

This hole, planned to test the southern edge of the main Marc Zone lense, was extended by 195.07 metres from its' original 1990 depth of 236.60 metres. No significant gold mineralization was encountered. The best gold result occurs between 322.50 and 324.00 metres within silicified coarse ash tuff containing 3-5% disseminated pyrite and pyrrhotite.

MC90-41 extension

Hole MC90-41, planned to test the western edge of the main Marc Zone lense, was extended by 135.96 metres from an original 1990 depth of 249.90 metres. No well developed Marc Zone was intersected. Scattered gold values ranging from 1.00 to 5.98 ppm occur within both hornblende-feldspar porphyry and argillitic units. Mineralization averages 3-5% disseminated pyrite and pyrrhotite.

MC90-51 extension

MC90-51, planned to test the northern edge of the main Marc Zone lense, was extended by 111.84 metres from an original 1990 depth of 338.33 metres. No well developed Marc Zone was intersected. Low gold values in the range of 1.00 to 3.00 ppm are hosted by sericitic-chloritic-silicic altered intrusive and pyroclastic units. Mineralization averages 3-5% disseminated pyrite and pyrrhotite.

5.0 ENVIRONMENTAL BASELINE STUDY

An environmental baseline study was initiated during the fall of 1990, and is ongoing. The study included the installation of an automatic weather station (wind speed and direction, temperature, precipitation) in the cirque of Red Mountain, a baseline water quality survey on samples from Goldslide Creek and Bitter Creek, as well as the installation of an automatic water level recorder and flow gauge in Bitter Creek at the highway bridge. A data report of the environmental baseline study is provided in Appendix E.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The diverse styles of mineralization present at the Red Mountain property indicate a very prospective precious and base metal district related to a Lower Jurassic volcano-plutonic island arc system. The main focus of the 1991 program was continued geological and geochemical evaluation of the Marc Zone, Rio Blanco and McAdam Point.

Marc Zone mineralization occurs as irregular shaped lenses, the location of which is controlled by the intrusive brecciated contact of the Goldslide Intrusion with the surrounding volcanic country rocks. Gold is associated with semi-massive to massive aggregates, stringers, veinlets and disseminations of pyrite. Drilling to date has tested the Marc Zone mineralization over a strike length of 350 metres, 150 metres of which is continuous in the central portion. Relogging of all Marc Zone drill core and refining of the interpretation is warranted in light of the mixed 1991 diamond drill results. A detailed whole rock geochemical sampling program over the Marc Zone is recommended.

Rio Blanco alteration mineralogy consists of silica, sericite, pyrrhotite, pyrite, limonite and jarosite and is found in both the intrusive and volcanic country rocks. Gold mineralization is associated with structures hosted in the volcanic/sediment contact unit as well with the volcanic/sediment contact with the Goldslide Intrusion. A detailed whole rock geochemical sampling program over the Rio Blanco area is recommended.

McAdam Point gold mineralization is hosted by north-northwest trending quartz-sulphide veins within the Erin Stock and adjacent hornfelsed sediments. The veins occur in shear zones of up to 1 metre in width. Follow-up work at McAdam Point should consist of additional mapping and sampling. A short drill hole on the Main vein system is recommended to test the continuity of the structure to depth.

Additional gold-bearing showings on Red Mountain should be further evaluated by detailed mapping and sampling.

A snowpack evaluation should be conducted during the winter months in order to assess the avalanche hazards along the proposed access route into Red Mountain.

7.0 COST STATEMENT

EXPENDITURE TYPE		TOTAL $
Salaries, Wages, Consulting Fees		168,782.14
Meals		1,142.71
Travel and Accomodation		10,330.90
Vehicle Rental and Expenses		706.46
Camp Expenses and Field Equipment		40,478.31
Diamond Drilling		385,431.47
Aircraft Charter Fixed Wing		523.60
Aircraft Charter Rotary		53,105.38
Assays and Analyses		42,168.92
Postage, Courier and Shipping		6,185.49
Equipment Rentals, Repairs, Maintenance		1,122.27
Office Supplies		295.22
Reproduction, Drafting, Photos and Maps		6,829.69
Computer Rental		636.00
Telephone and Fax		172.10
Storage and Security		7,200.20
Miscellaneous		132.39
Report Preparation (Estimate)		3,000.00
Total	$	728,243.25

8.0 CERTIFICATE OF QUALIFICATIONS

I, Adrian Dana Bray, of 1041 Comox St. Apt. 46, Vancouver B.C., do hereby certify that:

1. I have studied Geology at Acadia University in Wolfville, Nova Scotia and have received a Bachelor of Sciences degree with Honours in Geology in October of 1986.

2. I am an associate member in good standing of the Geological Association of Canada.

3. I have continuously practised my profession since graduation in Nova Scotia, Ontario, Quebec and British Columbia.

4. I am employed by LAC Minerals Ltd.

5. The statements in this report are based on office compilation on the Red Mountain property. The field work was conducted from July 3rd to September 14, 1991. I have personally conducted or supervised the work described in this report.

Dated at Vancouver this 1st day of July, 1992.

Adrian Da Bray

ADRIAN D. BRAY

8.0 CERTIFICATE OF QUALIFICATIONS

I, Rajbinder Bob Singh, of 7430 168 Street of Surrey B.C., hereby certify that:

1. I have studied Geology at The University of British Columbia and have received a Bachelor of Science degree in Geology in May, 1991.

2. I have continuously practised my profession since graduation in British Columbia.

3. I am employed by LAC Minerals Ltd.

4. The statements in this report are based on office compilation on the Red Mountain property. The field work was conducted from July 3rd to September 14, 1991. I have personally conducted the work described in this report.

Dated at Vancouver this 30th day of June, 1992.

RAJBINDER BOB SINGH

CERTIFICATE OF QUALLIFICATIONS

I, Katharine F. Bull of PO Box 81418, Fairbanks, Alaska, do hearby certify that:

1. I have received a Bachelor of Science degree in geology from the University of Washington of Seattle, Washington in 1984, and a Master of Science degree from University of Alaska in Fairbanks, Alaska in 1988.

2. I am a member in good standing of the Alaska Miners Association and of the Association of Women Science.

3. I have continuously practiced my profession since 1981, in Alaska, Arizona, British Columbia and Greenland.

4. I am a partner of Dihedral Exploration of PO Box 110918, Anchorage, Alaska.

5. The statements in this report are based on field work on claims at intervals during the period from July 31 to September 9, 1991.

Dated at Vancouver this 3rd day of December, 1991.

Katharine F. Bull

CERTIFICATE OF QUALLIFICATIONS

I, Toni K. Hinderman, of 3401 West 64th Avenue, Apt. 6, Anchorage, Alaska, do hearby certify that:

1. I have received a Bachelor of Arts degree in geology from Dartmouth College in Hanover, New Hampshire in 1966 and a Master of Science degree from Stanford University in Stanford, California in 1968.

2. I am a member in good standing of the Society of Mining and Exploration of The American Institute of Mining and Metallurgy, of the Alaska Miners Association, and of the Northwest Mining Association.

3. I have continuously practiced my profession since honorable discharge from the U. S. Army in 1969.

4. I am a partner of Alaska Earth Sciences of 11341 Olive Lane, Anchorage, Alaska.

5. The statements in this report are based on field work on claims at intervals during the period from July 31 to September 9, 1991.

Dated at Vancouver this 3rd day of December, 1991.

Toni K. Hinderman

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APPENDIX A

SURFACE SAMPLE DESCRIPTIONS AND RESULTS

APPENDIX B

ASSAY CERTIFICATES

APPENDIX C

DRILL LOGS

APPENDIX D

STUCUTURAL STUDY

APPENDIX E

ENVIRONMENTAL BASE-LINE STUDY