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SUPERINTENDENT OF BROKERS

New Moon Hop. azE/RW

MINISTRY OF ENERGY, WANCOUVER STOCK EXCHANGE and PETROLEUM RESOUR (Venture Com-

AUG 2 STATEMENT OF MATERIAL FACTS #69/90 EFFECTIVE DATE: Wednesday, August 8, 1990

MAPLE RESOURCE CORP. SMITHERS, B.C. 11th Fl., 808 West Hastings St., Vancouver, B.C., V6C 2X4 Telephone: 604-687-7463 NAME OF ISSUER, ADDRESS OF HEAD OFFICE AND TELEPHONE NUMBER

#100 - 200 Granville Street, Vancouver, B.C., V6C 1S4 ADDRESS OF REGISTERED AND RECORDS OFFICES OF ISSUER

Central Guaranty Trust Company, 800 West Pender Street, Vancouver, British Columbia NAME AND ADDRESS OF REGISTRAR & TRANSFER AGENT FOR ISSUER'S SECURITIES IN BRITISH COLUMBIA

The securities offered hereunder are speculative in nature. Information concerning the risks involved may be obtained by reference to this document; further clarification, if required, may be sought from a broker.

OFFERING: 1,200,000 UNITS

The Offering may be increased by up to 180,000 Units (15% of Offering) to meet oversubscriptions. See "Plan of Distribution".

Each Unit consists of One Common Share and Two Series "B" Warrants, two such Warrants entitling the holder thereof who exercises such warrants to purchase one additional common share of the Issuer at any time up to the close of business within one year following the determined by the Exchange, Offering Day at the Offering Price.

rədmun	Offering Price (estimated)*	Commission	Estimated Net Pro- ceeds to be Received by the Issuer
Per Unit	\$1.00	\$0.075	\$0.925
Total	\$1,200,000	\$90,000	\$1,110,000
200041	++ <u>+</u> + <u></u>	+)0;000	

\* To be calculated in accordance with the Rules of the Vancouver Stock Exchange.

#### ADDITIONAL OFFERING

The Agents have agreed to purchase (the "Guarantee") any of the Units offered hereby which are unsubscribed for on the Offering Day (see "Consideration to Agents"). Any Units acquired by the Agents under the Guarantee will be distributed under this Statement of Material Facts through the facilities of the Vancouver Stock Exchange at the market price at the time of sale.

# AGENTS

L.O.M. Western Securities Ltd. #2200 - 609 Granville St. Vancouver, B.C. V7Y 1H2

Yorkton Continental Securities Inc. 10th Floor, IV Bentall Center 1055 Dunsmuir Street Vancouver, B.C. V7X 1L4

McDermid St. Lawrence Ltd. Suite 1000 - 601 West Hastings Street Vancouver, B.C., V6B 5E2

Neither the Superintendent of Brokers nor the Vancouver Stock Exchange has in any way passed upon the merits of the securities offered hereunder and any representation to the contrary is an offence.

#### 1. PLAN OF DISTRIBUTION

# A. THE OFFERING

By Agreement dated for reference June 5th 1990 (the "Agency Agreement"), Maple Resource Corp. (the "Issuer") appointed the following as its agents (the "Agents") to offer through the facilities of the Vancouver Stock Exchange (the "Exchange") 1,200,000 Units of the Issuer at a fixed price in the amounts set opposite their respective names (the "Offering"):

Ag	en	its

No. of Units

L.O.M. Western Securities Ltd.700,000Yorkton Continental Securities Inc.300,000McDermid St. Lawrence Ltd.200,000

The Offering will take place on the "Offering Day" which will be not more than one hundred eighty (180) calendar days after the date this Statement of Material Facts is accepted for filing by the Exchange and the Superintendent of Brokers (the "Effective Date").

The offering price of the Units (the "Offering Price") will be determined in accordance with the rules of the Exchange, at a premium over the average trading price of the Issuer's shares as determined by the Exchange, subject to the agreement of the Issuer and the Agents.

The Agent may overallot Units of the Issuer to cover oversubscriptions up to an amount equal to the lesser of the number oversubscribed or 15% of the Offering and, in such case, has an option for 60 days from the Offering Day to acquire Units from the Issuer at the Offering Price less commission to cover such overallotment (the "Greenshoe Option"). Alternatively, the Agent may cover such overallotment by making purchase of shares and Series "B" Warrants in the market through the facilities of the Exchange. The Issuer has the right to terminate the Greenshoe Option at any time prior to 12:00 noon on the day before the Offering Day.

The Agents reserve the right to offer selling group participation in the normal course of the brokerage business to selling groups of other licenced dealers, brokers and investment dealers who may or may not be offered part of the commissions derived from the Offering.

The obligations of the Agents under the Agency Agreement may be terminated prior to opening of the market on the Offering Day at

# MAPLE RESOURCE CORPORATION

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#### GEOLOGICAL EVALUATION REPORT

On The

NEW MOON PROPERTY

Omineca Mining Division, British Columbia

NTS 93E - 13E/W

Latitude 53° 57'N Longitude 127° 45'W

For

MAPLE RESOURCE CORPORATION 11th Floor, 808 West Hastings Street Vancouver, B.C. Canada V6C 2X6

> By Gerald D. Delane, P.Eng. April 5, 1990

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#### SUMMARY

The New Moon property is a polymetallic prospect containing significant values in gold, silver, lead, zinc and copper. It is located on the eastern margin of the Coast Mountains, 100 kilometres south of Smithers, in west-central British Columbia. Access is by helicopter from Smithers, Terrace, or Houston. A 74 kilometre all-weather gravel road connects Houston to a staging area on the east side of Morice Lake which lies within 18 kilometres of the property.

The property consists of 421 units in 25 contiguous claims which cover an area of approximately 110 square kilometres. Exploration work was first carried out on the property in the late 1960's and the results of the most recent work by Newmont Mines Ltd. (from 1985 - 1987) and by St. Joe Minerals (from 1982 have indicated the presence of polymetallic -1984) mineralization within a large vein stockwork epithermal system and in volcanogenic massive sulfide occurrences. St. Joe drilled four holes near a glacier to explore for the source of massive sulfide boulders and Newmont cut numerous trenches and drilled 36 test the vein-stockwork system for bulk holes to tonnage mineralization. Over twenty mineralized zones were identified by Newmont, seven of which were tested by limited amounts of diamond drilling. It is estimated that approximately \$2 million has been spent on work on the property since 1967.

The New Moon property is believed to contain a very large mineralized system within which as least two types of mineralization have been observed and which may be interpreted as a crude form of mineral zoning. The epithermal vein-stockwork system covers an area at least 3.2 x 2 kilometres on the plateau and may have potential for bulk tonnage deposits. Newmont's work in this area has advanced to a stage where considerable amounts of drilling would be required to define the extents and limits of several mineralized zones and to explore and test the system to The discovery of ferruginous chert boulders greater depths. containing banded copper rich massive sulfide mineralization near the terminus of the New Moon Glacier by earlier workers is significant and warrants more follow-up work in the vicinity in an attempt to locate the source of the boulders.

Newmont had proposed a work program for 1988 on the property but funding problems with their joint venture partner caused suspension of the program. The announced closure of all of Newmont's Canadian offices in the spring of 1989 and the termination or suspension of all of their exploration activities in Canada resulted in the optioning of the New Moon property to Lucero Resource Corp. on July 19, 1989. Lucero did not carry out

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work program on the property that year. Maple Resource Corp. has acquired an option to earn a 55% interest in the property from Lucero and has commissioned the writer to examine all of the data and to recommend a work program.

A staged three-phase, success-contingent work program budgeted at \$300,000, \$600,000, and \$900,000 respectively is proposed. Phase I will consist primarily of diamond drilling (about 900 metres) to test some of the vein-stockwork mineralized zones laterally and to depth. The scale and scope of Phases II and III will be contingent to a large extent upon the degree of success derived from the results of the preceding work programs and would likely be focussed on detailed diamond drilling for definition and delineation of known mineralized zones and also the testing (by trenching and drilling) of newly-discovered ones found by prospecting, mapping, in areas peripheral to currently known targets.

#### INTRODUCTION

This report was prepared at the request of the directors of Maple Resource Corp. Vancouver, British Columbia.

The purpose of the report is to examine the available information, assess the merit and potential of the New Moon Property and to recommend a staged exploration program and a proposed budget for 1990.

This report is based upon the writer's knowledge of the area gained while conducting regional studies and property examinations in the general region, a study of government maps and publications and of the results of previous exploration work carried out on the property. A field examination of the New Moon property was made by the author between September 5-13, 1985 while he was employed as Senior Geologist for Newmont Exploration of Canada Limited who had the property under option from 1985 to early 1989. The writer has observed the geology on the property, the mineralization in the trenches and in some of the drill cores.

The New Moon Property has undergone several periods of exploration activities since the 1960's when the general region experienced intensive exploration during the `porphyry copper era in British Columbia. Numerous mineral occurrences occur in the New Moon Property and past work on the claims has been directed primarily towards exploring the potentials for volcanogenic massive sulfide deposits and epithermal veinstockwork polymetallic mineralization.





# PROPERTY

The mineral claims are situated in the Omineca Mining Division on N.T.S. claim map sheet 93E - 13 E + W and presently comprise 25 contiguous multi-unit claims totalling 421 units. Between July 19, 1985 and June 18, 1989, the property had been held under option from prospector Charles Kowall to Newmont Mines Limited. On June 19, 1989, Newmont optioned the property to Lucero Resource Corp. of Vancouver, B.C. In April 1990, Maple Resource Corp. acquired an option to earn a 55% interest in the property from Lucero.

The claims are described and listed as follows:

Claim	No. of	Record	Record	Expiry
<u>Name</u>	<u>Units</u>	<u>Number</u>	Date	Date
Mistur Dour	10	022	0at 21 1077	0a+21 1990
MISLY Day	12	032	0ct. 21, 1977	Oct. 21, 1990
Copper Cliff	12	833	000. 21, 1977	000 21, 1990
New Moon	20	834	OCt. 21, 1977	OCt. 21, 1990
Full Moon 2	5	11922	May 29, 1990	May 29, 1991
Lunar 1	18	4718	Aug. 19, 1982	Aug. 19, 1990
Lunar 2	14	4719	Aug. 19, 1982	Aug. 19, 1990
Lunar 3	16	4720	Aug. 19, 1982	Aug. 19, 1990
Lunar 4	18	4764	Sept. 21, 1982	Sept. 21, 1990
Lunar 5	12	4765	Sept. 21, 1982	Sept. 21, 1990
Lunar 6	20	10436	May 29, 1989	May 29, 1991
Lunar 7	18	10434	May 29, 1989	May 29, 1991
Lunar 8	20	4838	Oct. 21, 1982	Oct. 21, 1990
Lunar 9	20	4839	Oct. 21, 1982	Oct. 21, 1990
Lunar 10	20	4840	Oct. 21, 1982	Oct. 21, 1990
Lunar 11	20	4841	Oct. 21, 1982	Oct. 21, 1990
Lunar 12	20	4842	Oct. 21, 1982	Oct. 21, 1990
Lunar 13	20	4843	Oct. 21, 1982	Oct. 21, 1990
Lunar 14	20	4844	Oct. 21, 1982	Oct. 21, 1990
Lunar 15	20	4845	Oct. 21, 1982	Oct. 21, 1990
Lunar 16	20	4852	Oct. 21, 1982	Oct. 21, 1990
Lunar 17	15	10435	May 29, 1989	May 29, 1991
Lunar 18	12	10437	May 29, 1989	May 29, 1991
Monitor	8	8842	Sept. 3, 1987	Sept. 3, 1990
Computer	18	8843	Sept. 3, 1987	Sept. 3, 1990
Landsat	20	8980	Sept. 18, 1987	Sept. 18, 1990

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# LOCATION ACCESS AND TOPOGRAPHY

The New Moon property is located on the eastern margin of the Coast Range Mountains, approximately 100 kilometres south of Smithers in west-central British Columbia. The claims are centred at  $53^{\circ}$  57'N and 127° 45'E, on map NTS 93E/13, and lie within the Omineca Mining Division. Access is by helicopter from Smithers, Terrace or Houston, B.C. A 74 kilometres all-weather gravel road connects Houston with a staging area on the east side of Morice Lake. From there it is 18 kilometres by helicopter across the lake to the base camp.

Elevations on the property range from 775 metres (2500 feet) at Morice Lake to 2200 metres (7200 feet) at some of the peaks. The terrain is characterized by U-shaped valleys with steep sides and ridges and an alpine plateau where some of the mineralized zones area exposed. Surface exploration is generally limited to the summer season.

Small spruce, pine and alder are present in the valleys and the tree line is at approximately 1400 metres elevation. The higher parts of the property are covered by small glaciers and snow fields.

### EXPLORATION HISTORY

Several large undeveloped porphyry copper-molybdenum deposits occur in the general vicinity of the New Moon Property (e.g. Berg, Huckleberry, Ox Lake) and former precious metal producers nearby include the Emerald Glacier and the Silver Queen. Placer Dome's Equity Silver Mine (silver, copper, gold, antimony) located just south of Houston has been a producer since 1981.

In 1967 - 68, the Phelps Dodge Corporation staked the PC claims on the plateau to cover mineral showing presently known as the New Moon occurrences. Trenching, sampling and mapping followed. In 1969, Silver Standard Mines discovered banded massive sulfide chert boulders near the terinus of the New Moon Glacier in an area south of the PC claims. Staking followed but no further work was done and the claims were allowed to lapse.

Aggressive Mining Ltd. re-staked the lapsed PC claims as the Jow 1-20 claims in 1970 and during the next two years carried out geologic mapping, geophysics, trenching, sampling, and the drilling of five holes totaling 312 metres. Their reports suggest that the trenching outlined a mineralized zone 7.6 to 9.1 metres wide x 165 metres long that averaged 1.74% lead, 5.43% zinc, with minimal sampling for gold and silver. The results of drilling outlined a zone reported to average 2.97% lead, 8.52% zinc, 0.79 oz/ton silver and 0.046 oz/ton gold across 5.6 metres. Aggressive Mining stopped the work and dropped the claims because the silver values were considered too low.

In 1977, prospector C. Kowall re-staked the lapsed Jow claims as the Misty Day, New Moon, and Copper Cliff claims and optioned them to a joint venture group consisting of Silver Standard Mines, Norcen Energy, and Aquitaine Petroleum. The joint venture carried out limited prospecting, mapping, and geophysics and identified a favorable volcanogenic environment. The option was terminated by the joint venturers when they deemed the logistics to be too difficult.

In 1981, Kowall optioned the claims to Great Western Petroleum Corp. who completed a limited helicopter-borne geophysical survey before they optioned the property to St. Joe Minerals in 1982. St. Joe carried out a helicopter-borne EM-magnetometer survey over the property, and staked the Lunar 1-18 claims to almost surround the original Kowall claims.

In 1983 and 1984, St. Joe completed ground and helicopter-borne geophysical surveys, sampling and mapping around the massive sulfide target area and also on the plateau area where polymetallic vein mineralization was present. This exploration work was followed by the drilling of 936 metres of diamond drilling in four holes during 1984 in an attempt to locate the source of the massive sulfide boulders beneath the ice but no significant mineralization was encountered. The St. Joe and Great Western options were terminated and the title of the claims returned to Kowall in the spring of 1985.

Newmont Mines Ltd. optioned the New Moon property from Kowall in July 1985 and carried out a work program consisting of prospecting, geologic mapping, re-sampling of old trenches, new trenching, magnetometer surveys over four new widely-separated polymetallic vein or stockwork zones on the plateau area. In 1986, Newmont continued the exploration work on the plateau area extended geologic coverage with reconnaissance - type and mapping and some stream sediment geochemistry via fly-camps and helicopter set-outs. Newmont cut 58 bulldozed trenches totalling 1074 metres in length on the plateau in the vicinity of the Main, Splay, Misty Day, and Rhyolite Flat zones. In addition, 21 trenches totalling 142 metres were blasted or hand-dug in outlying areas (the North and Scree Zones) which were inaccessible to the tractor at the time. In the late summer of 1986, Newmont completed 1529 metres of diamond drilling in 17 holes to test the potential of vein-stockwork epithermal system on four mineralized zones in the plateau area.

In 1987, Newmont continued their work efforts in the same general areas (plus in the areas to the north of the Main Zone) which consisted of more geologic mapping, trenching (totalling 1100 metres), rock chip sampling, and the diamond drilling of 1266 metres in 19 holes. Prospecting carried out by Newmont and by St. Joe has led to the identification of 23 mineralized zones or showings, seven of which have undergone some limited drilling during the 1986 and 1987 work programs by Newmont.

A planned 1988 work program by Newmont was not carried out when the funding partner decided at the last moment not to contribute its share of the proposed budget. In the spring if 1989, Newmont's Canadian operations were terminated and the New Moon property was subsequently acquired from Newmont by Lucero Resource Corp. on July 19, 1989. No work program was carried out by Lucero on the property in 1989.

An agreement has been consummated between Lucero and Maple Resource Corp. permitting Maple to acquire a 55% interest in the New Moon property and they have commissioned the writer to submit a report with recommendations and budgets for a staged work program.

#### **GEOLOGY**

The New Moon property is underlain by rocks of early to mid-Jurassic Hazelton Group in close proximity to the Coast Plutonic Complex (Figure 3). The Hazelton rocks consist primarily of intermediate to felsic volcanics and are considered to be part of the Telkwa Formation (Figure 4). The volcanics consist primarily of pyroclastics, agglomerates, lapilli tuffs ranging to fine grained ash tuffs. They are usually of andesitic composition, but rhyolite and dacite flows are also present.

The volcanics have been cut by intrusive bodies which consist of plugs of granite - granodiorite composition (Topley Intrusions) and a variety of dykes ( including mafic, felsic, and aplite).

The tuffs and flows are generally flat to moderately dipping with no major folds observed. Faulting has been noted to be fairly prevalent in the volcanic stratigraphy on New Moon and is considered to be a localizing factor in the development of the mineralized zones. Conspicuous faulting occurs along either a NW-SE or NE-SW trend with displacements less than five metres. and their dips range from steep to moderate. The faulting is believed to be related to underlying intrusive activities or by dilatant flexures in response to lateral stress in a NW-SE direction.

Alteration on the New Moon property occurs in several styles. Low grade alteration minerals of epidote, prehnite and calcite have been observed to occur as veins or veinlets that cut the strata, as primary porosity fillings that form amygdules and breccia fillings, and as a matrix component of secondarv minerals in pyroclastics and flows. Zeolitic alteration has also observed to be fairly common in the andesitic rocks on the Silicification has been observed to be often present property. along shears or fault zones and clay alteration, chloritization, and K-spar rimming of quartz veins have also been noted.



FORMATIONS, MEMBERS, AND FACIES OF THE HAZELTON GROUP

Unit	Lithology	Thickness (m)	Age
Smithers Formation	Greywacke, argillite, siltstone, sandstone, sharpstone, conglomerate, glauconitic sandstone, ash-fall tuff, tuffaceous sediments	40 - 800	Middle Toarcian to Lower Callovian
Bait Member	Argillite, siltstone, fine-grained greywacke, limestone, sharpstone conglomerate, tuff and tuffaceous sediments	30 - 450	Middle Toarcian to Middle Bajocian
Yuen Member	Siltstone, tuffaceous siltstone, reddish tuff, fine tuff- aceous greywacke	780	Toarcian to Middle Bajocian
<u>Nilkitkwa</u> Formation	Shale, siltstone, greywacke, limy shale, limestone, rhyo- dacite airfall tuff and breccia, basalt	30 - 1200	Early Pliensbachian to Middle Toarcian
Carruthers Member	Pillow basalt, aquagene tuff, breccia, minor flows and limestone	60	Late Pliensbachian to Early Toarcian
Ankwell Member	Subaerial and subaqueous alkali olivine basalt, minor basalt, minor basalt, minor sandstone and limestone	10 - 1000	Middle Toarcian
Red Tuff Member	Subaerial airfall tuff, lapilli tuff, rhyolite to basalt flow breccia and tuff, minor subaqueous volcanics	50 - 300	Middle and ? Late Toarcian
<u>Telkwa</u> Formation	· · · · · · · · · · · · · · · · · · ·		Late Sinemurian to Early Pliensbachian
Howson sub- aerial facies	Calc-alkaline basalt to rhyolite flows; breccia, tuff; intravolcanic sediments; minor marl	1000 - 2500	
Babine shelf facies	Calc-alkaline basalt to rhyolite; subaerial and subaq- eous flow, breccia, and tuff; limestone, greywacke, siltstone, and shale	1000 ?	
Kotsine subaqueous facies	Calc-alkaline basalt and rhyolite; subaqueous flow, breccia, tuff, pillow breccia; limestone, greywacke, siltstone and shale	30 - 1500	
Bear Lake subaerial facies	Calc-alkaline basalt to rhyolite flow, breccia, and tuff; and intravolcanic sediments	2000	
Sikanni clas- tic-volcanic facies	- Subaerial conglomerate, sandstone, mudstone, lahar, rhyo- dacite flow, breccia, basalt, andesite; minor shallow- marine sandstone and conglomerate	- 200 - 1000 -	A. D. Delance

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Source: Tipper & Richards, GSC Bulletin 270, 1976



#### **MINERALIZATION**

Mineralization has been found to be widespread on the New Moon property and can be broadly grouped in two main categories, namely:

- a) Polymetallic, relatively high level, vein type mineralization, primarily lead-zinc-silver, and with lesser amounts of gold and copper.
- b) Stratiform volcanogenic or skarn type sulfide mineralization, primarily copper but with lesser and at times significant amounts of silver and zinc.

The epithermal base and precious metal mineralization occurs in close proximity to quartz-carbonate vein-filled fault or fracture zones. Vein mineralogy consists primarily of sphalerite and galena with lesser amounts of pyrite, chalcopyrite, malachite and azurite. Gold and silver are associated, but not always in direct correlation with the base metals. Electrum has been observed with pyrite in polished section. The mineralized zones tend to pinch and swell along strike and down dip with grades being variable.

The massive to semi-massive sulfide boulders have been located in moraines near the toe of the New Moon glacier which has been named the Boulder Zone. The boulders are angular, up to one metre in size and appear to contain three distinct styles of mineralization which are described as follows:

- a) Massive galena/sphalerite with pyrite in silicified, carbonatized and chloritized andesitic flow rock.
- b) Heavy specular hematite, chalcopyrite, magnetite and minor sphalerite in jasperoidal chert - (skarn?).
- c) chalcopyrite and pyrite in a chloritized and epidotized grey cherty rock.

Skarn type mineralization occurs at the Shadow Valley Showing and consists of a lens of massive magnetite with minor chalcopyrite, pyrite, galena and sphalerite hosted in a calcareous horizon in hornfelsed andesitic tuffs. The lens is reported to be two to three metres thick and to be exposed for 300 metres on surface.

# DESCRIPTIONS OF MINERAL ZONES AND SHOWINGS

At least twenty-three mineralized zones or showings have been identified on the property by earlier workers and a brief description of each occurrence follows:

1. MAIN ZONE - consists of a series of quartz-carbonate breccia veins which occur in andesitic and rhyolitic flows and tuffs. The mineralization consists of banded veins in part brecciated that contain disseminated to semi-massive galena and sphalerite with lesser amounts of pyrite, chalcopyrite, malachite and azurite. The sulphides also often exhibit colloform textures. Hematite and manganese staining were generally found in close proximity to The Main Zone has been traced along strike by the veins. trenching (23 bulldozer trenches) for at least 250 metres and the width has been found to vary from 1.0 to 10.3 metres and averages about four metres and has moderate dips. Newmont's drilling has shown that the zone pinches and swells along strike and down dip and that it is still persistent at a vertical depth of 200 metres where drill hole 86-14 intersected an 8.9 metre mineralized zone within which a 4.2 metre section averaged 3.60% lead, 12.24% zinc, 0.23% copper, 0.62 oz/ton silver and 0.042 oz/ton gold. Trench sampling and drilling to date has shown the zone to average 1.90% lead, 5.81 % zinc, 0.45 oz/ton silver, 0.029 oz/ton gold with extensions open at least to the south and to depth.



2. The TWILIGHT ZONE is located about 100 metres west of the Main Zone and has been trenched (by four trenches) to expose a mineralized zone that is at least 30 metres long by 1 to 3 metres wide and has a similar N-S trend as the Main Zone. A shallow drill hole, 86-7, cut a 10 metres wide shear zone which contained a 1.5 metres quartz vein that averaged 0.46% copper, 2.69% lead, 7.77% zinc, 1.10 oz/ton silver, and 0.007 oz/ton gold. The zone has not been delineated.

3. The SPLAY ZONE is a north-striking offshoot of the Main Zone and has been traced by float and outcrop (and three trenches) for a distance of 125 metres with widths varying from 1 to 3 metres. The type of mineralization is similar to that found in the Main Zone, i.e. disseminated to semi-massive sulphides (mainly galena and spalerite) occurring in a fault controlled quartz-carbonate vein system. Trench values were found to be variable with the best trench located at the extreme north end of the zone and averaged 4.26% lead, 3.23% zinc, 10.55 oz/ton silver and 0.028 oz/ton gold across a sampled width of 3.2 metres. Two shallow drill holes, 86-8 and 86-9, tested the zone at 25 metres depth and the best drill intersection averaged 1.71% lead, 2.55% zinc, 3.30 oz/ton silver, and 0.005 oz/ton gold over 1.3 metres.

4. The RHYOLITE FLATS ZONE is located about 1000 metres westerly from the Main Zone. The zone strikes northeast and has been outlined by eleven trenches for a distance of 250 metres with widths varying form 1 to 4 metres. Mineralization is similar to the other vein zones but values from trench sampling were found to be generally low although a one metres sampled interval returned 2.29% lead, 4.99% zinc, 0.26 oz/ton silver and 0.02 oz/ton gold. The zone appears to pinch out to the northeast on surface and its possible extension in the opposite direction is obscured by drift cover. This zone had not been tested with drilling by Newmont.

5. THE "D" ZONE is located about 1000 metres north of the Main Zone and occurs along the contact between andesite dykes and rhyolite flows. Along the contact several narrow quartzcarbonate veins are exposed for up to ten metres. Within the veins are variable amounts of galena, sphalerite with lesser chalcopyrite and pyrite. Two hand trenches, three metres and 13 metres long, were cut across the zone and the best sample interval averaged 0.13% copper, 1.93% lead, 3.79% zinc, 0.44 oz/ton silver and 0.023 oz/ton gold over two metres.

6. THE NORTH ZONE is located about 1500 metres north-northeast of the Main Zone. The vein system has been traced by trenching (32 hand trenches) and five drill holes over a distance of 780 metres (N-S) and is still open in both directions. It occurs in a subvertical, east dipping fault zone and varies from 1.0 to 18 metres in width. At surface the veins range in thickness from

less that 1.0 to 3 metres wide and consists of colloform quartz and carbonate with pyrite, aggregates of galena. sphalerite, and chalcopyrite in highly variable amounts ranging from disseminations to semi-massive pods. A weak-to-moderate quartz vein-stockwork which extends outwards for up to 10 metres developed adjacent to the veins. The adjacent rocks is (andesitic and rhyolitic flows and tuffs) are generally highly silicified and moderately chloritized and sericitized. Hematite and manganese staining are also conspicuous near the veins. The best trench (87-1) averaged 0.13% copper, 1.22% lead, 2.57% zinc, 39.90 oz/ton silver and 0.234 oz/ton gold over four metres, followed by an eleven metre barren interval, then by seven metre grading 0.01% copper, 0.13% lead, 0.021% zinc, 4.19 oz/ton silver and 0.017 oz/ton gold. The best drill intersection was obtained from hole 87-10 which averaged 0.04% copper, 0.63% lead, 1.02% zinc, 8.7 oz/ton silver and 0.098 oz/ton gold over 5.4 metres.

7. THE NORTHEAST ZONE lies about 250 metres north of the North Zone and has been outlined by mapping, trenching (thirteen hand trenches) and two drill holes for at least 280 metres along a north-northeast strike. The zone dips steeply to the east, varies from two to twenty metres in width and contains individual quartz and quartz-carbonate veins up to one metre wide. Mineralogy of the veins is similar to those occurring in the North Zone. The best trench sample contained 15.6 oz/ton silver and 0.036 oz/ton gold over 2.0 metres and the best drill intercept from drill hole 87-16 graded 0.20% lead, 0.39% zinc, 13.9 oz/ton silver and 0.024 oz/ton gold over 2.0 metres.

8. THE C.R. ZONE is located about 150 metres west of the North Zone. Trenching (15) and mapping have outlined a zone that is at least 280 metres long (N-S) by 10 to 25 metres wide and which is composed of sheeted quartz veins and accompanying stockworks that occupy a fault-fracture zone which parallels the North Zone. The style of mineralization here is similar to that occurring in the North and Northeast Zones. The best trench sample returned an assay of 0.21% copper, 4.04% lead, 3.52% zinc, 4.22 oz/ton silver and 0.015 oz/ton gold across 3.5 metres.

9. THE B.R. ZONE lies about 100 metres southeast of the North Zone. It consists of a single one to three metres wide carbonate-quartz zone accompanied by minor sheeted veins. It occurs in an area of steep terrain and cliffs and has been traced along strike for at least 500 metres in a N-S direction with possible extensions obscured by snow and talus cover. Because of adverse terrain conditions only 60 metres of the observable strike length was cut by nine hand trenches to expose the partly colloform and vuggy vein which contained minor disseminations of erratically - distributed pyrite, galena, and sphalerite. The best chip sample averaged 8.87 oz/ton silver and 0.031 oz/ton gold over 2.0 metres.

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10. THE SCREE ZONE is located about 500 metres southeast of the North Zone and covers an area 250 x 150 metres in which extensive steeply dipping, sheeted and stockwork quartz veining occurs. The north and south extensions are obscured by ice and snow The mineralization consists of pyrite, chalcopyrite, cover. sphalerite occurring as disseminations within galena and rhyolite and andesite flows and tuffs that have undergone alteration indicated by intense, pervasive silicification and moderate sericitization in the rhyolites and weak silicification and chloritization in the andesites. Twenty-seven trenches were cut and five holes drilled on the Scree Zone. The best trench assays reported were 5.67 oz/ton silver and 0.081 oz/ton gold over 4.0 metres and 2.45 oz/ton silver and 0.376 oz/ton gold over 2.0 metres. Assay results from five drill holes suggest that the gold and silver values are erratically distributed with the best drill intercept from hole 87-13 assaying 8.90 oz/ton silver and 0.105 oz/ton gold over 0.7 metres.

11. THE MISTY DAY ZONE is located about 600 metres northwest of the Main Zone and consists of a northeasterly-trending, faultcontrolled, quartz-carbonate vein and breccia system. It has been traced discontinuously over a distance of 350 metres and varies in width from 0.5 to 5.0 metres. The zone dips steeply to the west and appears to be offset along strike by faulting. Mineralization consists of irregularly disseminated galena and sphalerite with lesser pyrite and chalcopyrite. Fourteen bulldozer trenches were cut on the zone and 10 shallow holes were drilled. Some of the better drill intercepts reported are 0.66% lead, 2.15% zinc, 38.6 oz/ton silver and 0.075 oz/ton gold over 6.2 metres (in hole 86-10), 0.17% lead, 0.26% zinc, 20.30 oz.ton silver, and 0.107 oz/ton gold over 2.1 metres (in drill hole 87-1), and 7.32 oz/ton silver and 0.09 oz/ton gold over 5.8 metres (in drill hole 87-7).



12. THE NORTH ZONE EXTENSION is located about 800 metres north of the North Zone and appears to occur along the same faultfracture system. It is composed of narrow (one-three metre) variably dipping, discontinuous, quartz - carbonate veins that have been traced over a length of 500 metres. The veins are in part sheeted, colloform and vuggy and contain disseminated pyrite and minor galena. Six trenches were cut across the zone and trench values were found to be generally low with the best assay obtained was 1.9 oz/ton silver and 0.008 oz/ton gold over 2.0 metres.

13. THE COMPUTER ZONE is located about six kilometres south of the Main Zone. The showings consist of several erraticallydistributed, northwest striking, steeply dipping quartz veins which occur in an area of complex geology. The veins are up to five metres wide, are weakly colloform, discontinuous, and are barren of sulfides. Adjacent to the veins, the rhyolitic flows were observed to be only weakly altered primarily with epidote. Fourteen hand trenches were dug across several of the veins and yielded chip samples which contained only anomalous values (up to 80 ppb gold and 0.3 ppm silver) in precious metals.

14. THE CREEK ZONE lies about 400 metres southeast of Main Zone. It consists of minor quartz-vein stockwork and attendant silicification contained within boulders found to be scattered over an area 10 x 20 metres. The narrow veinlets (one-five centimeters) contain only minor amounts of galena and sphalerite and a trace of chalcopyrite. Grab samples from gougey material in the trench produced no significant values.

15. THE PB ZONE is located about 150 metres south of the Rhyolite Flats Showings and consists of erratic quartz veins (up to ten centimeters) in which minor amounts of galena, sphalerite, chalcopyrite and pyrite occur. Samples returned only very low values.

16. THE CAMP ZONE is located about 500 metres east of the Main Zone and consists primarily of float boulders containing narrow (one-ten centimeters) quartz veins in rhyolite tuffs. The zone trends northeasterly and dips steeply to the southeast. Visible alteration is very weak. Two trenches were cut across the best mineralized (minor galena, sphalerite, and pyrite) area but trench samplings yielded only very low values, the best being 0.83% lead, 0.21% zinc, 0.25 oz/ton silver and 0.004 oz/ton gold over 1.0 metre.

17. THE LUNAR 4 SHOWING is located about four kilometres east of the Main Zone or near the east boundary of the Lunar 4 claim. The north-trending, west-dipping zone covers an area 700 x 50 metres which is centred near the fault contact between rhyolite and andesite tuffs. Weak and narrow (one-five centimeters) quartz veins are associated with the fault contact and contain only minor amounts of pyrite and chalcopyrite. A series of chip samples taken across the strike of the zone failed to detect any significant values.

18. THE LUNAR 12 ZONE is located about four kilometres northnorthwest of the Main Zone and consists of a number of quartzcarbonate veins in andesite tuff. The veins are up to 1.0 metre wide, discontinuous and variably mineralized with disseminated pyrite, chalcopyrite, malachite and azurite. The best grab sample returned values of 1.74% copper, 0.01% lead, 0.01% zinc, 1.66 oz/ton silver and 0.002 oz/ton gold.

19. THE NORTH CANYON MALACHITE SHOWING is located about 1000 metres northwest of the Rhyolite Flats Zone. It has been described as a discontinuous though apparently stratiform malachite showing exposed on the northwest wall of the North Canyon. It has not been investigated due to the very steep and precipitous cliff walls. The showing is estimated to be at least 200 metres and one to two metres wide.

20. THE FULL MOON MALACHITE SHOWING this zone is located about 2.5 kilometres south of the Main Zone and approximately 500 metres southeast of the south end of the Boulder Zone. It consists of weak malachite staining and fracture controlled chalcopyrite mineralization but appears to be confined to a particular stratigraphic horizon.

21. THE LANDSAT SHOWING is located about 5.5 kilometres southwest of the Main Zone and consists of "discontinuous sulfide bearing pods" which are up to 4.0 metres wide by 7.0 metres long and are hosted in rhyolite and andesite flows and tuffs. The mineralization is primarily pyrite and chalcopyrite. A 4.0 metre trench sample assayed 2.47% copper, 0.55% lead, 0.02% zinc, 9.42 oz/ton silver, and 0.009 oz/ton gold.

22. THE SHADOW SHOWING is located about 2.5 kilometres southwest of the Main Zone on the Lunar 5 claim. It is reported to be a bedded sulfide and oxide showing exposed on the north side of Shadow Valley. The showing has an exposed strike length of approximately 300 metres. Several distinct beds of rusty coloured sulfide (mainly pyrite and chalcopyrite) and dark coloured oxide (mostly magnetite) average between 0.5 and 1.5 metres in thickness. The showing has been cut in three places by Topley granodiorite and locally resembles skarn. Grab samples of the mineralization returned values up to 0.5 to 0.7% copper and 1.07 to 1.48 oz/ton silver. The highest gold values were 0.001 oz/ton.

23. THE BOULDER SHOWING is located about 2.2 kilometres south of the Main Zone and consists of a large accumulation of semimassive to massive sulfide boulders whose source would appear to be under the New Moon Glacier. Earlier workers on the Boulder

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Showing have divided the mineralized boulders into three types:

- a) Massive galena/sphalerite with pyrite occurring in silicified, carbonatized and chloritized andesite flows.
  Float boulders of this type of mineralization were found primarily 500 - 600 metres from the upper end of the moraine.
- b) Heavy specular hematite, chalcopyrite, magnetite plus minor sphalerite in jasperoidal chert.
- c) Chalcopyrite and pyrite in a chlorite and epidote altered grey, cherty host rock.

Copper-bearing sulfide boulders were more common toward the upper end of the moraine. The mineralized boulders are subangular to sub-rounded and up to one metre in diameter and comprise about 3% of the moraine material from the edge of the glacier to about the first 100 metres. Assays of the boulders have returned values up to 12% Cu with lesser values in zinc and silver. Gold content is consistently low.

Studies by glaciologists have determined that the source of the massive sulfide mineralization should be under the glacier which covers an area roughly 1000 metres square and is surrounded by andesitic volcanics with minor chert and limey chert horizons.

Four diamond drill holes from two set-ups were bored by St. Joe Minerals Inc. in 1984 but no significant values were encountered. However, it is evident that none of these holes tested a coincident magnetic and VLF-EM feature which occurs near the centre of the glacier.

# CONCLUSIONS AND RECOMMENDATIONS

The New Moon property contains a very large mineralized system. Two types of mineralization are known to be present and may be interpreted to represent a crude mineral zoning which may have been complicated by later intrusion and remobilization. A number of copper-rich massive showings near the New Moon Glacier suggest an original volcanogenic setting. Numerous epithermal polymetallic vein/stockwork occurrences are distributed over a  $2.5 \times 5$  kilometres area on the plateau and may have been remobilized from a common source. Such a large target area may have potential for bulk tonnage deposits.

There remains a potential for polymetallic, massive sulfide deposits with significant precious metal credits since the drilling by St. Joe in 1984 failed to test the geophysical anomaly under the glacier which some believe could indicate a source of some of the massive sulfide boulders.

Based on current knowledge and information, the zones in order of importance and priority are considered to be the following:

HIGH: North, Northeast, C.R., Scree, Misty Day, and Main

MODERATE: Rhyolite Flats, Twilight, Splay, North Zone Extension, Boulder

LOW: D, Lunar, Creek Camp, Shadow, Pb, Computer

The Main Zone averages 1.90% lead, 5.81% zinc, 0.45 oz/ton silver and 0.029 oz/ton gold. It has been drill tested over a length of 360 metres and to a depth of 213 metres with widths ranging from 1.5 to 9 metres and is open for extensions at least to the south and to depth. The fault-controlled North, Northeast and Scree Zones occur discontinuously over 2 kilometres along a fault system and contain stockworking over large area which warrant more drilling to test for extensions along strike and down dip.

Previous Newmont drilling on the Misty Day Zone has outlined a silver and gold - bearing zone, trending northeasterly, is 2.1 to 6.1 metre wide, at least 135 metres long and extends vertically to a depth of at least 85 metres. The southern extension of the zone may have been down-dropped or offset to the west. Two drill holes located 200 and 250 metres south of the Misty Day Zone intersected intervals of sheared quartz veining that may represent the southern extension.

Additional drilling and deep drilling (greater than 75 metres) is

required on the Misty Day occurrences particularly in the vicinity of drill holes 87-4 to 7 in order to determine if the mineralized structure increases in grade and width with depth.

A series of widely-spaced, deep and shallow holes should be drilled on the C.R. Zone to test its size, continuity and grade. Some limited drilling should also be carried out on the Rhyolite Flats area where anomalous gold, silver, lead and zinc values were obtained from a mineral zone which extends over a distance of at least 250 metres.

Concurrent with the foregoing drill programs, more exploration work to include intensive prospecting, additional mapping and sampling should be carried out on the property to locate any other zones or target areas that may require trenching or drill testing.

staged three-phase drilling and exploration program Α is The Phase I portion of the work program will recommended. include approximately 900 metres of drilling in six-eight holes test the mineralized stockwork extensions of the North, to Northeast and Scree Zones. There is no provision in the budget for `outside' exploration work during this initial phase. Early July to early-September is considered the best work period to conduct exploration work on the New Moon property. Because of the lack of a reliable supply of water for drilling or camp purposes in the vicinity of the proposed drilling in the North-Northeast - C.R and Scree zones, it is recommended that the crews should be based out of Newmont's former campsite (near the Main Zone) and be supported by a full-time helicopter based at the The closest water supply for drilling for the Phase I camp. drilling will likely be the pond source near the Misty Day showings.

A helicopter - portable drill which can utilize relatively small-sized drill pads (eg. J.K. Smit 300 drill) is recommended because of the often limited and restricted size of some of the probable drill sites. The drill should also have sufficient power to drill through highly - silicified or skarny-type rocks.

The extent of Phases II and III work programs will be largely contingent on the degree of success of the Phase I program and accordingly will be focussed on more detail drilling on the more attractive and known mineral zones and on new zones yet to be discovered by renewed exploration work with the objective to more accurately ascertain their limits and grade.

# PROPOSED 1990 EXPLORATION BUDGET FOR NEW MOON PROJECT

Phase I - Diamond drilling ~ 900 metre BQ holes, 6-8 holes, using 2 shifts/day, 7 days/week - complete in 25 days.

# Personnel - Labour Costs

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Project geologist - 31 days @ \$350/day	= \$	11,000
Field assistant - core splitting, etc - 31 days @ \$150/da	=	5,000
Camp Cook - 31 days @ \$150/day	=	5,000
Total labour costs	=	21,000
Diamond Drilling ~ 900 metres @ \$100/metre	=	90,000
2 - contract trenchers, drill site preparations 10 days @ \$500/day	=	5,000
Helicopter charter - 100 hrs @ \$600/hr	=	60,000
Assay Charges - 300 samples @ \$20.00	=	6,000
Room & Board - 275 man-days @ \$40.00	=	11,000
Camp supplies - tents, lumber, camp fuel, generator rentals, etc	=	25,000
Air fares for crew - Vancouver to Smithers & return	=	5,000
Communication - radio rental, telephone	=	2,000
Expediting	=	1,000
Freight charges - camp gear to Smithers & to Morice Lake staging area via truck haul	=	3,000
Report compilation, drafting, typing & reproduction	=	4,000
Management fee 15%	=	45,000
Contingency allowance	<u>=</u>	22,000
Total of Phase I budget	= \$	300,000

= \$ 300,00 = \$ 300,00

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**Phase II -** to include 1500 metre of diamond drilling & geologic mapping, prospecting, sampling, trenching for new mineralized occurrences.

Personnel - Labour costs 21,000 Project geologist - 60 days @ \$350 = Geologist - core logging & prospecting 60 days @ \$250 = 15,000 Geologist - prospecting, mapping 60 days @ \$ 250 15,000 = 1 field assistant - core splitting etc. 9,000 60 days @ \$150 = 2 - geological field assistants = 18,000 60 days @ \$150 9,000 Camp cook - 60 days @ \$150 = = 87,000 Total labour costs = 150,000Diamond drilling - 1500 metre BQ @ \$100/metre Assaying - 500 core samples @ \$20 10,000 == 5,000 250 rock samples @ \$20 = = 90,000 Helicopter charter ~ 150 hrs @ \$600/hr 2 - contract trenchers - 24 days @ \$500/day = 12,000Room and Board - 16 people = 675 man-days @ \$40 = 27,000 Camp supplies - tents, lumber, camp fuel, = 40,000 equipment rentals, Air fares - Vancouver to Smithers & return = 10,000 5,000 Communication - radio rental, telephone charges = 3,000 Expediting = Truck haul freight charges for camp gear 5,000 to Smithers and to staging area near Morice Lake = = 6,000 Report compilation, drafting, reproduction, typing = 90,000 Management fees 15%

G. D. Alani

Contingency allowance 10%

= 60,000

Total of Phase II budget

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\$ 600,000

Phase III - contingent on results of Phase I and II programs will be primarily diamond drilling and trenching to define the grade and limits of the mineralization.

Total cost of Phase III program - \$ 900,000

J. D. Delan

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#### CERTIFICATE

I, Gerald Dennis Delane, of 1178 West 26th Avenue, Vancouver, B.C., hereby certify that:

- 1. I am a Consulting Geologist with an office at 1178 West 26th Ave, Vancouver, B.C.
- 2. I am a graduate of the University of British Columbia with a degree of Bachelor of Science in Geology and Geophysics (1961)
- 3. I have been practicing my profession continuously since graduation, including 18 years as Senior Geologist with Newmont Exploration of Canada Ltd. and Getty Minerals Ltd.
- 4. I am a registered member in good standing of the Association of Professional Engineers of British Columbia, the Geological Association of Canada and the Society of Mining Engineers of A.I.M.E.
- 5. This report is based upon:

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- a. My personal knowledge gained as senior geologist for Newmont in supervision of the project
- b. A personal field examination of the property during the period September 5-13, 1985.
- c. An examination of company reports on the New Moon property, available government information and maps.
- d. My personal knowledge of the general area gained from regional studies and field examinations in the general vicinity of the property.
- 6. I have not received nor do I expect to receive any interest (direct, indirect, or contingent) in the properties described herein, nor in the securities of Maple Resource Corp. in respect of services rendered in this report.
7. I consent to the use of this report to satisfy the requirements of the Vancouver Stock Exchange and the B.C. Securities Comissions.

Dated At Vancouver British Columbia, this 5th day of April, 1990.

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G.D. Delane, P. Eng.

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# MAPLE RESOURCE CORP.

# **INTERIM FINANCIAL INFORMATION**

# April 30, 1990

(UNAUDITED)

REPORT ON MAPLE RESOURCE CORPORATION'S 4-J'S PROJECT

> ISKUT-SULPHURETS AREA SKEENA MINING DIVISION BRITISH COLUMBIA

B. Dewonck, F.G.A.C.B. Barnes, Geologist

February 19, 1990

# OREQUEST

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#### SUMMARY

Maple Resource Corp. has entered into an agreement with Teuton Resources Corp. to earn a 60% interest in the 4-J's Project. These claims are located approximately 40 km northwest of Stewart B.C. near the Bowser River, NTS 104B/8E, (Figure 1) in the Skeena Mining Division.

The property lies within the Iskut-Sulphurets-Stewart mining camp, an area of currently intense exploration and development activity that has recently seen the reactivation of some old deposits and the discovery of several new precious metal deposits.

Volcanic and sedimentary units of the Jurassic Hazelton Group underlie the property. These are predominantly of the Salmon River Formation with rocks tentatively identified as Betty Creek volcanics and volcaniclastics on the eastern and western margins of the property. Intrusive plugs of feldspar porphyry are exposed through the centre of the property.

Previous work has included geological mapping and prospecting, sampling, airborne and ground geophysical surveys. These programs have located two significant styles of mineralization on the property (the John Showing), a stratiform Pb-Zn-Ag-Au target (in place) and quartz-carbonate vein hosted Pb-Zn-Sb-Au-Ag mineralization (in float). Values of up to 39.5 oz/t silver, 64.5% lead, 38.1% zinc and 0.098 oz/t gold have been received from rock samples taken during previous programs containing massive sphalerite and galena as well as bournonite and native antimony. The primary target of the 1989 field program on the 4-J's property encompassed both the stratiform and vein type mineralization within a highly altered zone marginal to the icefield. This quartz-sericite-pyrite zone extends north northwesterly through the John and into the Jonas claim. A grid was re-established over the John Showing and three zones described in previous work were located - the Main, Centre and South Zones. In addition a new zone, named the North Zone, was defined, incorporating two types of vein mineralization. The first includes northwest-trending quartz-pyrite veins in massive argillite, up to 1.0 m wide and 40 metres in exposed length. The other is a northeast-trending, discontinuous massive sulphide vein approximately 0.2 m wide exposed over 12 metres.

The grid area was mapped at a scale of 1:1500, a VLF-EM survey was carried out over a portion of the grid (curtailed by inclement weather) and numerous chip and channel samples were collected. Prospective areas on the property outside the known showings were examined as weather and topography permitted and grab samples were collected. In total, 365 rock samples were collected. Soil samples (91) were collected along topographic contours to the northeast of the grid area. Grid lines total 8.5 km of which 4.5 km were covered by the VLF-EM survey. The source of the vein-hosted Pb-Zn-Sb-Au-Ag mineralization was not determined.

The 1989 program was successful in outlining three primary target areas:

 The sedimentary exhalative (sedex) style lead-zinc-silver mineralization located in the vicinity of old trenches and a shear in the west central portion of the Main Zone.

- 2) Shear hosted vein mineralization in the Main Zone (vein near the ice margin, west of the above mentioned trenches) and the North zone (norhtwest trending quartz-pyrite veins and northeast trending galena-pyrite vein).
- The highly anomalous soil samples collected along contours northeast of the grid area.

Grid controlled mapping, prospecting and sampling is recommended to define hand blasted trenching targets on the first two targets. The third target requires additional soil sampling to follow up on present results in conjunction with detailed mapping of the general area. This work should be grid controlled.

Much of the property remains relatively unexplored and prospecting should continue in conjunction with contour soil sampling where practical. Costs for this Phase II program are estimated at \$250,000. A Phase III diamond drilling program, contingent on positive results from the Phase II work, is estimated at \$350,000.



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B. Dewonck, F.G.A.C.

B. Barnes, Geologist

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Table I Claim Information

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**INTRODUCTION** 

This report, prepared by UreQuest Consultants Ltd. on behalf of Maple Resource Corporation, summarizes regional and property history, regional geology and reviews the 1989 exploration program. Recommendations are made for further work.

The property is situated in the Iskut-Sulphurets-Stewart area which has recently experienced a resurgence in exploration activity leading to the redevelopment of several existing gold deposits and the discovery of several new ones.

The information contained in this report is derived from the references cited, supervision and execution by OreQuest Consultants Ltd. of the field program described herein and familiarity with the region gained by OreQuest through work conducted on behalf of various companies in 1987, 1988 and 1989.

#### LOCATION AND ACCESS

The 4-J's Project is located about 40 km north-northwest of Stewart, British Columbia. The property's coordinates are 56°19'N and 130°07'W, on map 104B/8E.

Access to the property is via helicopter from Stewart approximately 40 air kilometres to the south. An old mine road, to the East Gold Mine, runs within 2 km of the southeast corner of the claim block.

The airstrip at the Tide Lake Flats, situated at the terminus of the Granduc Mining road 4 km southeast of the property, could be utilized for mobilization, demobilization and crew support. The 1989 field crew was based in Stewart and

experienced frequent helicopter flight delays and cancellations due to inclement weather. The late season start up should be avoided in future if possible to minimize these delays.

#### CLIMATE, PHYSIOGRAPHY AND VEGETATION

Elevations on the 4-J's Project range from 600 m in the valley of the Bowser River on the east side of the property up to 2275 m on the peaks to the west. The claims are immediately south of the Frank Mackie Glacier which also covers much of the higher areas.

Low lying regions are vegetated by mature mountain hemlock and balsam. This changes to subalpine and alpine vegetation consisting of stunted shrubs and grasses. Outcrop is plentiful and, in those areas where the ice has receded, is virtually continuous.

Climate in the area is severe, particularly at the higher elevations. Heavy snowfalls in winter and rain in the short summer working season are typical of the Iskut-Sulphurets-Stewart area. Inclement weather conditions and reliance on helicopter transport make this a high cost area to explore for minerals.

#### CLAIM STATUS

The 4-J's Project consists of 6 modified grid claims, totalling 90 units, within the Skeena Mining Division (Figure 2). The status of the claims appears in Table 1. The expiry dates reflect assessment filed on the basis of work described in this report, for which approval is pending.



#### TABLE I - CLAIM INFORMATION

Claim Name	No. of Units	Record No.	Date of Record	Expiry Date*	
Lambda	20	5327	April 22, 1986	April 22, 1993	
Xi	20	5330	April 22, 1986	April 22, 1993	
Jack	12	3626	November 1, 1982	November 1, 1993	
Jim	12	3623	November 1, 1982	November 1, 1993	
John	18	3624	November 1, 1982	November 1, 1993	
Jonas	8	3625	November 1, 1982	November 1, 1993	

\* These dates reflect work recently filed for assessment credit for which approval is pending.

#### REGIONAL SETTING

The Stewart area has been mined actively since the early 1900s and is one of the most prolific mining districts in British Columbia (Grove, 1971). Most prominent among the numerous mining properties are the Silbak - Premier, Big Missouri and Granduc deposits, located 13 km north, 20 km north and 39 km northwest of Stewart respectively. The road leading to the Tide Lake airstrip provides access to both Premier and Big Missouri and was the road access to Granduc's mill facilities immediately southwest of the airstrip.

The Premier vein system, first staked in 1910, produced in excess of 1.8 million ounces of gold and 41 million ounces of silver from 4.7 million tons (to 1968). The nearby Big Missouri deposit, first staked in 1904, did not produce until 1938 and then only until 1942. During this time 847,615 tons were mined, producing 58,384 ounces of gold and 52,677 ounces of silver. Both these deposits, however, have recently been re-evaluated by Westmin Resources Ltd. who is placing them both into production with announced reserves of 6.1 million tons grading 0.064 oz/ton gold, 2.39 oz/ton silver and 1.86 million tons grading 0.09 oz/ton gold and 0.67 oz/ton silver respectively (Canadian Mines Handbook, 1989-90).

The Granduc deposit, a massive sulphide copper orebody, was discovered in 1951 and put into production in 1971 with reserves of 39.32 million tons grading 1.73% copper with minor gold and silver values. Production ceased in 1978 but the mine was reactivated in 1980 until early 1984. Production to 1978 totalled 13,423,340 tonnes grading 1.32% copper and later production (1981-82) was 1,114,271 tonnes grading 1.17% copper.

Scottie Gold Mines commenced production on a vein deposit at the north end of Summit Lake (10 km south of the Project area) in 1981 with reserves of 186,680 tons grading 0.76 oz/ton gold. It closed in 1985, having experienced financial difficulties brought on by depressed metal prices and loss of infrastructure as a result of the closure of the nearby Granduc facilities.

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Bond International Gold Inc. recently announced the initial drill results from their Red Mountain Project (News Release, September 29, 1989). One discovery, referred to as the Marc Zone, produced a 66 m drill intersection grading 9.88 g/ton gold and 49.29 g/ton silver. Another area, the Willoughby Gossan Zone, produced a 20.5 m intersection grading 24.98 g/ton gold and 184.21 g/ton silver. The Red Mountain Project area is situated approximately 15 km east of Stewart.

The 4-J's Project lies to the south of the Iskut-Sulphurets area which has seen extensive exploration in the last three years. The Iskut area originally attracted interest at the turn of the century when prospectors, returning south from the Yukon goldfields searched for placer gold and staked bedrock gossans. In the 1970s the porphyry copper boom drew exploration into the area. The new era of gold exploration began with the 1979 option of the Sulphurets claim block by Esso

Minerals Canada and the 1980 acquisition of the Mount Johnny claims by Skyline Explorations Ltd. Skyline commissioned its mill in July, 1988. Cominco Ltd. and Prime Resources Corp. are projected to announce a feasibility decision on the adjacent Snip deposit in early 1990. There has been limited production from Catear Resources Ltd.'s Goldwedge Zone where the mill was commissioned in June, 1988.

Beyond these projects, and except for limited early placer gold recovery from some creeks, the area has had no mineral production history. Since 1979, more than 70 new mineral prospects have been identified, though ground acquisition was relatively slow until the fall of 1987 when the promising results of summer exploration programs became known and the provincial government announced the upcoming release of analytical results from a regional stream sediment survey. By April 1988, all open ground had been staked. More than 60 companies hold ground in the Iskut-Sulphurets belt but to date only small areas within this 40 x 80 km district have received extensive exploration.

In the Sulphurets Creek camp, 21 km north-northeast of the property near Brucejack Lake, the West Zone of Newhawk Gold Mines Ltd. / Granduc Mines Ltd. / Corona Corporation is reported to contain 715,400 tons grading 0.431 oz/ton gold and 19.70 oz/ton silver while the Snowfield Gold Zone and Sulphurets Lake gold zone are bulk tonnage low grade deposits containing 7.7 million tons of 0.075 oz/ton gold and 20 million tons of 0.08 oz/ton gold respectively (GCNL Aug. 24, 1989, Feb. 12, 1990). Catear Resources Ltd.'s Gold Wedge Zone is reported to contain 146,437 tons of 0.827 oz/t gold and 2.56 oz/t silver in a similar setting (Canadian Mines Handbook, 1989-90).

The Doc deposit located 24 km west-northwest of the 4-J's property hosts 470,000 tons grading 0.27 oz/ton gold and 1.31 oz/ton silver, within a series of high grade but narrow quartz veins.

On the Snip property situated 77 km to the northwest, the Twin Zone, a 3 to 25 ft thick discordant shear vein cuts a thickly bedded sequence of intensely carbonatized feldspathic wackes and siltstones. Twin Zone reserves in all categories have been reported as 1,032,000 tons of 0.875 oz/ton gold (Prime Resources, 1989). This does not include additional reserves which may be developed outside the Twin Zone when mining begins. Twin Zone mineralization occurs in a banded shear zone comprising alternating bands of massive calcite, heavily disseminated to massive pyrite, crackle quartz and thin bands of biotite-chlorite.

At Skyline's Johnny Mountain deposit, reserves in all categories are estimated at 876,000 tons of 0.55 oz/ton gold and 1.00 oz/ton silver with copper, zinc, and lead (Northern Miner, Aug. 21, 1989). Five major areas of gold-bearing sulphide are known. The most important Stonehouse Zone consists of sulphide-potassium feldspar-quartz vein and stockwork systems which have been only partly explored.

The most recently discovered and perhaps the most exciting gold mineralization occurs on the Eskay Creek property of Calpine Resources Inc. / Stikine Resources Ltd., located 46 km north-northwest of the property. At the original 21 Zone discovery gold grading up to 0.73 oz/ton over 96.5 ft, occurs in several distinct lithologies in a 300 ft wide fault zone at a contact between Lower Jurassic Mt. Dilworth Formation volcanics and sediments (Northern Miner, 1988, p.20; Calpine Resources Incorporated News Release, January 6, 1989). More recent results have

returned 0.875 oz/ton gold over 682.2 ft (CA89-109), 91.8 ft of 0.453 oz/ton gold and 16.91 oz/ton silver (CA89-93) and 55.8 ft of 0.867 oz/ton gold and 19.92 oz/ton silver (CA89-101 - Calpine News Release, August 21, 1989). The 21 Zone has now been traced over a minimum strike length of 1300 m and remains open at depth and to the northeast. Probable geological reserves are presently estimated at 1,256,000 tons grading 1.52 oz/ton gold and 38.0 oz/ton silver (GCNL Feb. 16, 1990). These deposits as well as several other deposits and mineral occurrences are identified in Figure 3a.

#### REGIONAL GEOLOGY

The 4-J's Project lies within an area of regional mapping published in 1986 by the provincial government (E.W. Grove, 1986). Grove defined a sequence of late Paleozoic and Mesozoic volcanics and sediments as the Stewart Complex, bordered by the Coast Plutonic Complex to the west, the sedimentary Bowser Basin to the east, Alice Arm to the south and the Iskut River to the north. The regional geology in Figure 3b is taken from Grove's map of the area.

This regional mapping is currently being updated and reinterpreted by both federal and provincial geological surveys. One result of the recent work is a still evolving nomenclature of units and age categorization. Grove (1986) included rocks from Lower Jurassic to Upper Jurassic in the Hazelton Group (Unuk River, Betty Creek, Salmon River and Nass Formations) and referred to upper Triassic rocks as the Takla Group. Alldrick (1989) now refers to the upper Triassic rocks as Stuhini Group and limits the Hazelton Group to Unuk River, Betty Creek and the newly designated Mt. Dilworth Formations (all Lower Jurassic). The sedimentary Salmon River Formation is tentatively assigned to the Spatzizi Group (Lower to Middle Jurassic) and overlying sediments are designated Ashman Formation of the Bowser Group (Middle Jurassic). The term Nass Formation does not appear.



### LEGEND FOR FIGURE 3a

	PROPERTY OWNER AND/OR NAME	AND/OR ELEMENTS
1	Westmin Resources Ltd./Silbak Premier Mines	6,100,000 tons 0.064 oz/t Au, 2.39 oz/t Ag
2	Explorations Itd	1 860 000 tons 0.09 oz/t Au. 0.67 oz/ton Ag
3	Noranda (Todd Creek Project)	Au
4	Scottie Gold Mine	Au
5	Granduc	10.890.000 tons 1.79% Cu
6	Echo Bay Mines/Magna Ventures/Silver Princess	
0	Resources (Doc Project)	470,000 tons 0.27 oz/ton Au, 1.31 oz/ton Ag
7	Western Canadian Mining (Kerr Project)	Cu. Au
8	Catear Resources Ltd. (Gold Wedge)	146.437 tons 0.827 oz/ton Au
9	Newhawk/Lacana/Granduc (Sulphurets Project -	
-	West Zone)	854,072 tons 0.354 oz/t Au, 22.94 oz/ton Ag
10	Prime/Stikine Resources Ltd.	
	(Eskay Creek Project)	1,256,000 tons 1.52 oz/t Au, 38.9 oz/t Ag
11	Consolidated Silver Standard Mines Ltd.	
	(E & L Deposit)	3,200,000 tons 0.80% Ni, 0.60% Cu
12	Inel Resources Ltd.	Au, Ag, Cu, Pb, Zn
13	Skyline Gold Corporation (Stonehouse	
	Gold Deposit)	876,000 tons 0.55 oz/ton Au, 1.0 oz/ton Ag
14	Kestrel Resources Ltd.	Au, Ag, Cu, Pb, Zn
15	Hector Resources Inc. (Golden Spray Vein)	Au, Ag
16	Tungco Resources Corp.	Au, Ag, Cu, Pb, Zn
17	Winslow	Au, Ag, Cu, Pb, Zn
18	Cominco/Prime (Snip Deposit)	1,032,000 tons 0.875 oz/ton Au
19	Pezgold Resource Corp.	Ag, Au
20	Meridor Resources Ltd.	Au
21	Prime/American Ore Ltd./Golden Band	Au
22	Magenta Development Corp./Crest	Conserved and the second second
	Resources Ltd.	Au, Ag, Cu, Pb
23	Ticker Tape Resources Ltd. (King Vein)	Au
24	Pezgold Resource Corp.	Au
25	Consolidated Sea-Gold Corp.	Au
26	Gulf International Minerals Ltd.	
	(Northwest Zone)	Au, Ag, Cu
27	Kerr Claims	Ag, Cu, Au
28	Pezgold Resource Corp. (Cuba Zone)	Ag, PD, Zn
29	Pezgola Resource Corp. (Ken Zone)	Cu, Au
30	Avondale Resources Inc. (Forrest Project)	AU, Ag, CU
31	Pass Lake Resources Ltd. (Trek Project)	125,000,000,towe 1,06% Cu, 0,397 g/t Au
32	Galore Creek	7 94 a/t Ag
2.2	Continental Cold Corp	
26	Relley Recourses Itd (Serebet Recourses Itd	Au, Ag, Cu
34	(Jack Hilson Project)	Au Cu
25	(Jack Wilson Floject) Pass Lake Poseuroes (td. (ID Preject)	
36	Lac Minerals (Hankin Deak Droject)	Δι.
27	Schaft Crook	910 000 000 tons 0 30% (u - 0 020% Mo. 0.113
51	Jenary Oleen	$\rho/t \Delta n = 0.992 \ \rho/t \Delta p$
3.8	Pavdirt	200,000 tons 0.120 oz/ton Au
39	Bond International Gold (Red Mountain)	
	Some Enternational Gora (Rea nouncality	

SHALL PARE FOR MALENCE



#### LEGEND FOR FIGURE 3b

SEDIN	IENTARY AND VOLCANIC ROCKS	
	QUATERNARY	
1	RECENT	
20	UNCONSOLIDATED DEPOSITS; RIVER FLOODPLAIN, ESTUARINE, RIVER CHANNEL AND TERRACES, ALLUVIAL FANS, DELTAS AND BEACHES, OUTWASH, GLACIAL LAKE SEDIMENTS, TILL, PEAT, LANDSLIDES, VOLCANIC ASH, HOTSPRING DEPOSITS	
	BASALT FLOWS (a), CINDERS, ASH (b)	
	PLEISTOCENE AND RECENT	
	BASALT FLOWS	
Ŀ	URASSIC	
٢	AZELTON GROUP	
L N	JPPER JURASSIC	
	ILTSTONE, GREYWACKE, SANDSTONE, SOME CALCARENITE, ARGIL- ITE, CONGLOMERATE, MINOR LIMESTONE, MINOR COAL (INCLU- ING EQUIVALENT SHALE, PHYLLITE, AND SCHIST)	
h	AIDOLE JURASSIC	
[16] S	ALTSTONE, GREYWACKE, SANDSTONE, SOME CALCARENITE, MINOR IMESTONE, ARGILLITE, CONLOMERATE, LITTORAL DEPOSITS	
N 21 4	HYOLITE, RHYOLITE BRECCIA; CRYSTAL AND LITHIC TUFF	ADIT
6	ETTY CREEK FORMATION	ANTICLIN
	ILLOW LAVA, BROKEN PILLOW BRECCIA (6); ANDESITIC AND BAS-	BEDDING
U <b>G</b>	REEN, RED, PURPLE, AND BLACK VOLCANIC BRECCIA, CONLOM-	BOUNDAR
	ERATE, SANDSTONE, AND SILTSTONE (4); CRYSTAL AND LITHIC UFF (5); SILTSTONE (c); MINOR CHERT AND LIMESTONE (IN-	CONTOUR
	LUDES SOME LAVA (+14)} (d)	FAULT ID
ī L		FAULT (T
G	REEN, RED, AND PURPLE VOLCANIC BRECCIA, CONGLEMENTE,	FAULT M
S.	ANDSTONE, AND SILTSTONE (a); CRYSTAL AND LITHIC TUFF (b); ANDSTONE (c); CONGLOMERATE (d); LIMESTONE (a); CHERT (f);	FOLD AX
M	INOR COAL (g)	FOSSIL LO
	ILLOW LAVA (e); VOLCANIC FLOWS (b)	GEOLOGIC
Т	RIASSIC	GLACIAL
U	PPER TRIASSIC	GRAVEL,
Т	AKLA GROUP (?)	HEIGHT I
	LLISTONE, SANDSTONE, CONGLOMENATE (A); VOLCANIC SILI- Tone, Sandstone, conlongerate (b); and some breccia (c); Rystal and lithic tuff (d); limestone (a)	INTERNAT
	PLUTONIC POCKS	MARSH
		MINING P
0	LIGOCENE AND YOUNGER	. RIDGE TO
G	RANODIORITE (c); BASALT (d)	SCHISTOR
5 5 5	OCENE (STOCKS, ETC.) AND OLDER	SYNCLINE
	UARTZ DIORITE (a); GRANODIORITE (b); MONZONITE (c); QUARTZ	TUNNEL
7 α 7 δο ΤΙ	DAST PLUTONIC COMPLEX: GRANODIORITE (6); QUARTZ DIORITE ); QUARTZ MONZONITE, SOME GRANITE (6); MIGMATITE – AGMA- TE (6)	VOLCANIC
JL	JRASSIC	Compliation by N. H. He Geolean of
M	IDDLE JURASSIC AND YOUNGER ?	
GF (d)	NANODIORITE (6); DIORITE (6); SYENODIORITE (c); MONZONITE ; ALASKITE (c)	
ι 2 ια 5	WER JURASSIC AND YOUNGER ?	
	UNITE 187; STERUGADONU IDI; STENITE ICI	
TI	RIASSIC	
	ORITE (a); QUARTZ DIORITE (b); GRANODIORITE (c)	
	HORNBLENDE PREDOMINANT	
	METAMORPHIC ROCKS	
т	ERTIARY	
3 HC	DRNFELS (a); PHYLLITE, SCHIST (b); SOME GNEISS (c)	
JL	IRASSIC	
2 HC 2 CA	)RNFELS (a); PHYLLITE, SEMISCHIST, SCHIST (b); GNEISS (c), TACLASITE, MYLONITE (d), TACTITE (a)	
TF	RIASSIC	
I SC	HIST (a); GNEISS (b); CATACLASITE, MYLONITE (c)	
BIC PO	IRNBLENDE OR AMPHIBOLE DEVELOPED	
AR	FA UNMAPPED	

SYMBOLS

•

ADIT
ANTICLINE (NORMAL, OVERTURNED)
BEDDING (HORIZONTAL, INCLINED, VERTICAL, CONTORTED) + 11 4
BOUNDARY MONUMENT
CONTOURS (INTERVAL 1,000 FEET)
FAULT (DEFINED, APPROXIMATE)
FAULT (THRUST)
FAULT MOVEMENT (APPARENT)
FOLD AXES, MINERAL LINEATION (HORIZONTAL, INCLINED)
FOSSIL LOCALITY
GEOLOGICAL CONTACT (DEFINED, APPROXIMATE)
GLACIAL STRIAE
GRAVEL, SAND, OR MUD
HEIGHT IN FEET ABOVE MEAN SEA LEVEL
INTERNATIONAL BOUNDARY
IOINT SYSTEM (INCLINED, VERTICAL)
MARSH
MINING PROPERTY
RIDGE TOP
CHISTOBITY (INCLINED, VERTICAL)
SYNCLINE (NORMAL, OVERTURNED)
runnel
OLCANIC CONE

Compliation and geology by E. W. Grové, 1964 to 1970, with assistance by N. H. Haimila and R. V. Kirkam, 1966 and Jemes T. Fyles, 1967. Geology of the Alice Arm area by N. C. Carter, 1964 to 1968. The Unuk River Formation consists predominantly of volcanic rocks and sediments which include lithic tuffs, pillow lavas and carbonate lenses; and some thin bedded siltstones. It forms an angular unconformally with the underlying upper friassic units. Betty Creek Formation rocks are characterized by bright fed and green volcaniclastic agglomerates, with sporadic intercalated andesitic flows, pillow lavas, chert, and some carbonate lenses. These unconformably overlif the Unuk River Formation. The Mt. Dilworth Formation consists of dioritic to thyolitic lapilli to ash tuffs and flows with argillaceous sediments. The Salmon River Formation is a thick assemblage of intensely folded colour banded siltstones and fithic wackes that form a conformable to disconformable contact with the underlying Betty Creek or Mt. Dilworth Formation. Weakly deformed dark coloured argillites and wackes with lesser intraformational conglomerates of the Ashman Formation unconformably overly the Salmon River Formation.

These volcanic and sedimentary successions were intruded by the Coast Plutonic Complex during the Cretaceous and Tertiary periods. A wide variety of intrusive phases are present including granodiorite, quartz monzonite, and diorite.

Major structural features of the Stewart Complex include the western boundary contact with the Coast Plutonic Complex. The northern boundary is at the Iskut River where extensive deformation has thrust Palaeozoić strata south across Middle Jurassic and older units. Younger faulting has also occurred around the Iskut. A line of Quaternary volcanic flows marks the southern limit of the complex and the Meziadin Hinge defines the eastern border.

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Grove (1986) classifies the mineralization in the Stewart-Iskut area into three categories: fissure veins and replacement veins, massive sulphide deposits and porphyry deposits. Recent exploration and development activity has focused on the first type, in the northern part of the Stewart Complex – the Iskut-Sulphurets area and Alldrick et al (1989) have summarized the geological setting as follows:

> "Country rocks are Upper Triassic to Lower Jurassic Hazelton Group andesitic pyroclastics and related Characteristic ore minerals sedimentary rocks. include electrum, native gold and silver, as well as Base metals are present in silver sulphosalts. recoverable amount in some deposits. The ore deposits and alteration assemblages are typical of mesothermal to epithermal vein systems in island arc Combined age dates from lead to environments. isotope studies indicate that the early Jurassic volcanic and intrusive host rocks and the mineralization are essentially coeval; they formed about 195 million years ago. This age is similar to deposits in the Stewart and Alice Arm mining camps to the south, and the Toodoggone camp to the east all hosted in Hazelton Group Rocks.

> All original discoveries resulted from prospecting programs, although follow-up rock geochemistry surveys have identified additional mineral zones nearby and induced polarization surveys have successfully delineated high-sulphide areas within large alteration zones. Typical prospect evaluation involves initial sampling of blasted bedrock trenches followed by large-diameter diamond drilling. Regionally, the two mining camps stand out as strong geochemical anomalies in gold and silver, but associated or "pathfinder" elements differ between the camps: the Iskut area is anomalous in lead, zinc, copper and cobalt; the Sulphurets area is anomalous in copper, arsenic, antimony, mercury, barium and fluorine."

#### PROPERTY HISTORY

Exploration in the immediate area of the 4-J's property began around 1926 when free gold was discovered on the East Gold property (about 1 km southeast of the

claims). In the early 1930's, prospecting uncovered a series of auriferous, crosscutting quartz-sulphide veins and shear zones on ground now covered by the Haida claim (owned by Consolidated Silver Standard Mines). This latter property, called the "Portland", originally consisted of 16 claims, and occupied portions of the present John and Jim claims (Figure 2).

A buoyant market for precious metals revived interest in this part of the Stewart area in 1980. Many former prospects along with proximal zones of favourable geology were subjected to reconnaissance surveys by exploration companies. The "4-J's" (Jim, John, Jonas and Jack claims) and parts of the surrounding Alphabet group (Gamma, Zeta, Eta, Kappa, Lambda and Xi) were examined during this period and a summary of this activity is presented below.

- 1980-82 The Catspaw claim adjoining the southeast corner was staked by Elan Exploration Ltd. of Calgary and optioned to E & B Exploration. E & B undertook minor prospecting, sampling and geological mapping before returning the property to Elan. Several of the streams draining the Catspaw and Jim claims were noted to carry gold colours when panned by prospectors.
- 1983 The Catspaw claim was optioned to Teuton Resources Corp.; the property was enlarged by staking the 4-J's claims and the Gamma claim. A stratiform lead-zinc-antimony (gold-silver) occurrence and a boulder train of argentiferous quartz sulphide mineralization was discovered on the John claim. This latter work was undertaken by Billikin Resources under option (the option was relinquished the following year).
- 1984 The 4-J's claims were optioned by Teuton to Canadian United Minerals Inc. An airborne EM and Mag survey disclosed two EM anomalies under ice cover proximal to the stratiform mineralization noted on the John claim.
- 1985 Noranda Exploration Company re-optioned the 4-J's from Canadian United. Prospecting, sampling and geophysical surveys were carried out identifying several types of mineralization prior to returning the property to Teuton (A lingering snowpack prevented examination of the stratiform occurrence).

1986

Work by Teuton prospectors on the Gamma claim, 4km north of the 4-J's showings, on the north side of Frank Mackie Glacier, discovered several argentiferous quartz sulphide veins and an auriferous, pyritic, quartz brecciated agglomerate. A small rock geochemical program on the Catspaw claim disclosed several gold anomalies.

1987 The claims were optioned by Teuton to Wedgewood Resources who carried out a field program supervised by Kruchkowski Consultants of Calgary. This concentrated on prospecting, trenching, sampling and geochemical surveys on the 4-J's claims and surrounding ground.

1988 Exploration on the 4-J's property by Wedgewood Resources concentrated on the massive sulphide mineralization along the edge of the retreating ice cap. This zone consists of veins, stockworks "sedex" and stratiform style base metal-precious metal mineralization associated with a wide (up to 50 m) area of sericitic Values up to 0.098 oz/t Au, 39.5 oz/t Ag, 1.18% Cu, alteration. 64.5% Pb and 38.1% Zn were received. Wedgewood relinquished their option in early 1989.

PROPERTY GEOLOGY

The focus of the 1989 exploration program, conducted by OreQuest Consultants Ltd. on behalf of Maple Resource Corp., was directed toward evaluating the area of known showings as well as the identification of other mineralized areas. Little time was allotted to systematic property scale mapping. In spite of this it appears that a much greater proportion of the property is underlain by Salmon River sediments than indicated by Grove (Figure 4). More recent regional mapping (Alldrick and Britton, 1988) also suggests this to be the case. Green and maroon volcanics were noted in the northwest corner of the property and interbedded tuffs and sediments outcrop on the southeastern margin of the claims. These would likely belong to the Lower Jurassic Betty Creek Formation, possibly forming the flanks of a northeast – southwest trending synclinal feature with a core of Salmon River sediments.

The nature of these contacts is unknown at this time and will require more detailed study to determine their exact relationships. Within the area of known mineralization (northeast corner John claim) are numerous dykes and two plugs of

- 39583 <5.0.8/1 0 - 39584 <5.1.2/1 8 - 39586 <5.3.8/1 5 - 39586 (5.1.2/1.0 - 39586 (5.1.2/1.0 - 39586 (5.0.8/1.1 - 39588 (5.0.8/0.8 0 4561 15 A 9562 15 A 39486 15 39579 5.1.0/2.3 39580 (5.0.6/1 1 39581 (6.1.0/0.9 39582 10.1.2/10 ...... goasan. 30876 504 10 30877 5.04/07 30878 26.04/11 idded greywacke -9559 -5 800 9558 85 & A 39498 15/0 6 39497 20.0 6 49630 25.1.0 - greywacke argilite shale 39487 (0 082).12 A 39492 170.0.2 39489 140.10 A 39494 240.10 39489 45.0 8 39493 120.02 40 39488 200.98 A 39493 120.02 40 39500 420.8.2 A \_\_\_\_\_\_39499 35.0.6 Soil sample lines -A9601 95 5 2 .9552 10 (see Figure 8) A9653 25 .9651 5 A 9567 (0.013) A9580 10 9549 5 6928 590.2 4 6929 350.1.8 6927 150.10 6926 690.1.8 6925 75.0.8 9555 190A gossamed silicious & quartz veining AR48 150 495 46 90 A9566 15 , alitatore 1.2 me interbedded tuff greywacke - siltstone JONAS JACK 9545 130 49538 110 massive green-purple volcanic breccias - lapili tuffs suitstone - argillite 85.88.26 24 feldapar JIM \_ 9564 35 NORTH ZONE -JOHN 9542 170 - 9540 450 - porphyry 9543 210 - 9540 450 - 4839 850 70 150 nythmically bedded sillstone - argillite avitation 1 7+00N A9326 15 9841 75 A9327 20 0325 <5 A0324 290 A 9580 30 0322 10 112.0 1001 4 0323 120 MAIN ZONE A9877 10 A9579 10 A9578 10 argilite 9536 20A 9537 90 A A9573 10 2+00N 9535 65 A 9534 (5A -rhythmically bedded sittatone - argillite A\$672 45 ..... LAMBDA A 9875 15 A\$576 20 Felsic tuff - quartzite XI 2+005 9570 180 massive arglillte 9593 (0,788/0,788/0,780) 39992 20,10 9692 (0,038) 399931 (0.057),24,0 A A38984 640.4 0 45 argillite 9571 25 1 - 1 -A 8500 20 S0003 050,1.4 A9874130 9567 20 A ~ LEGEND Argillite -calcarenite SOUTH ZONE 9328 <5 Greb sample Gold in ppb (oz/t) 39678 26,0 4/1 1 Chie/channel semple A 9584 160 1 Gold in ppb (oz/t) silver in ppm (oz/t)/sample length in metter 50 A9585 270 Berlition A9588 20 Geological contact (approximate,interred) 49587 70 9588 170 Fault or shee OREQUEST MAPLE RESOURCE CORP A9889 (0 048) (0.048) gossen silicious & A quertr veining 9590 (0.052,0.053) float 9691 35 Figure 4 4J'S PROJECT arollite GENERALIZED PROPERTY GEOLOGY siltelone and ROCK SAMPLE 9328 16 silistone - calcare calcarenite LOCATIONS 9328 <5 15 . goasan A9331 (6 4 9332 10 8330 (5A British Columbia 80 / 500 1000 NTS 104B/8E A9333 <6 . 9334 (6A metres January 1990 x\*3

feldspar porphyry which intrude the argillites along a northwest - southeast trend. The showings are spatially related to these intrusives and northeast trending fault/shear zones.

The general geology in the southeast corner of the Jim claim comprises primarily massive to foliated, black to grey argillites (Figure 4). The area has been affected by complex folding and faulting. There is little or no mineralization associated with the main fault but a secondary shear contains up to 5% pyrite. The quartz-carbonate veins are 10-30 cm wide, 1-5 metres long, oriented roughly parallel to the direction of shearing. An andesite porphyry dyke (not shown) crosscuts the argillite and is truncated by the main fault. A grab sample of float, taken from the southeast corner of the Jim claim, contains pyrite and arsenopyrite (?) in quartzite and assayed 0.788 oz/ton gold.

A grid with a north-south baseline and 50 metre interval crosslines was established over the showings, along the eastern margin of an icefield. It covers three occurrences (Main, Centre and South Zones) as determined by previous workers and a new zone (North) discovered during the 1989 field season. Crosslines were picketed at 25 metre intervals over the showings with the baseline used as a tieline between the South and Centre Zones. In total 6600 metres of crosslines and 1900 metres of baseline were established. A geological mapping program combined with chip/channel sampling was completed over all zones. Wherever possible, channel sampling utilizing a portable rocksaw with a diamond blade was carried out, especially in the area of the old Main Zone trenches. Where channel samples were impractical, continuous chip samples were collected using a hammer and chisel. Grab samples were collected mainly during reconnaissance traverses outside the grid

area. A VLF-EM survey over the grid area was begun but only partially completed because of deteriorating weather conditions.

#### Grid Geology

The grid area (Figure 4) comprises a distal basin sedimentary sequence of thin bedded to massive argillites, shales, calcareous greywacke, siltstones and arenaceous dolomitic limestones (calcarenite) of the Salmon River Formation. Argillites were mapped on the western portion of the grid and grade into greywackesiltstone-shale sequences in the east. Irregular calcarenite pods occur within the argillite sequence; the calcarenite outcrops are easily distinguished by their light brown limonite gossans and massive texture.

Feldspar porphyry units occur in three distinct forms. In the central portion of the grid, a violently emplaced feldspar porphyry plug or dyke, as evidenced by proximal breccia zones and large gossanous zenoliths, cuts the bedding fabric at a high angle, in the vicinity of line 0+00. Radiating from this plug are 10-20 metre wide, aphanitic to porphyritic dykes, which crosscut primary bedding at low angles. The dykes transect the grid area, extending off property to the southeast and beneath the glacier to the northwest. A second feldspar porphyry plug occurs in the northern portion of the grid from approximately line 7+00N to L9+00N at 3+50W. This intrusive is less porphyritic than the central porphyry and no zenoliths or breccia zones were mapped in the adjacent areas. Bedding/shear orientations in the host argillite proximal to the intrusion are parallel to the intrusive/sediment contact, making the porphyry appear to be conformable with the host sediments.

North Zone

The newly identified North Zone contains two types of vein mineralization. The first vein type includes northwest-trending quartz-pyrite veins hosted by massive argillites. At least four veins, exhibiting pinch and swell textures and apparent offsets along a northeast trending fault system, were sampled. Generally the veins are up to 1.0 metre wide and extend over 40 metres along strike. Sulphide mineralization within these veins is disseminated to massive pyrite, up to 50% pyrite in selected samples. Twenty-nine channel samples and nine chip samples were collected (Figure 5a). The highest gold values occurred over a 1.5 metre continuous chip sample of a quartz boxwork vein (sample #39416: 0.198/0.199 oz/ton gold and 3.2 ppm silver). A second sample on this vein, approximately 5.0 metres to the west assayed 7 ppb gold and 3.4 ppm silver from a 1.2 metre chip sample (#39415).

Other anomalous gold assays received from separate veins in this zone are chip samples #39471 (0.047 oz/ton gold over 2.0 metres) and #39474 (0.039 oz/ton gold over 1.5 metres). Both samples were taken from a northwest trending vein exposed over 40 metres of strike length between line 7+00N and L7+50N. A total of seven chip samples were collected over the length of the vein, including the two values listed above. The remaining five samples assayed from 310 ppb to 660 ppb gold.

The second vein type is a narrow, approximately 0.2 metre wide, discontinuous massive sulphide vein exposed over 12 metres of strike length (Figure 5a, detailed area). The vein trends northeast and, where exposed, displays a continuous width of 0.1 to 0.2 metres. Galena and pyrite were identified in the vein, in concentrations of up to 90% combined in selected samples. Vein samples assayed as



high as 2.12/2.16 oz/ton gold and 1.57 oz/ton silver over a 0.14 metre continuous chip (#9616). Other vein samples along strike assayed 1.33/1.27 oz/ton gold and 35 ppm silver over a 0.1 metre chip (#39418); 0.107/0.110 oz/ton gold and 16.05 oz/ton silver over a 0.2 metre chip (#39424); 0.278 oz/ton gold and 8.12 oz/ton silver from a 0.25 metre chip (#9622); 0.158 oz/ton gold and 45.3 oz/ton silver from a 0.2 metre chip (#39421). Gold and silver values appear to be proportional to sulphide content in the samples.

Two converging fault structures transect the zone, striking northeast and north-south. The northeast striking structure is visible over 175 metres and is approximately 5.0 metres wide. The north-south structure parallels the 4+25W baseline and was mapped over 175 metres of strike and approximately 15.0 metres of width. Both are characterized by ductile shearing and strong fabric development within a massive argillite host.

Both structures are similar in orientation and fabric development to the Main Zone shear which returned anomalous lead-zinc values (see next section), however base metal values from samples within the North Zone structures were not significant. A high of 100 ppm lead and 140 ppm zinc were returned from seven channel and seven chip samples within these structures (see table on Figure 5a). The highest gold value was returned from a 0.6 metre chip of graphitic metasediment, assaying 570 ppb gold and 1.8 ppm silver (#9613).

Samples #9605 (710 ppb gold) and #9606 (170 ppb gold) are grab samples taken from a 0.20 metre wide quartz-galena vein within sheared argillite. The samples

have mineralogy similar to the auriferous quartz-galena veins sampled in the detailed area and are possibly genetically related.

Main Zone

The Main Zone comprises three old, shallow trenches within a quartz-graphiteargillite shear zone which cuts across the argillite hosted sedimentary exhalative ("sedex") Pb-Zn-Ag-Au mineralization and probably hosts remobilized material (Figure 5b). The structure trends north-east but schistosity orientation within the zone is variable. The fabric is a contorted crenulation of slickensided graphitic argillite with 5-20% ellipsoidal milky quartz blebs. The old trenches were oriented subparallel to the shear zone, but 1989 channel samples were collected perpendicular to the structural trend.

Approximately 15 metres north of the trenches, between lines 0+00N and L3+50N, are several flagged float samples of coarse grained galena and milky quartz. These samples, along with the trenches, are from previous surveys. The source of the float was not determined by the 1989 field work.

Approximately 40 metres west of the trenches, adjacent to the glacier, a 0.2 metre wide vein of massive sphalerite-pyrite and minor chalcopyrite, which assayed 0.112/0.110 oz/ton gold, was located in 1989 (#9322). The vein extends 3 metres out from under the glacier before pinching out.

Channel samples collected this year in the quartz graphite shear zone (site of the old trenches) assayed only weakly anomalous gold in 17 samples. The highest gold value (410 ppb over 0.8 metre) was collected adjacent to one of the trenches.



Lead-zinc values were generally anomalous throughout, with a high of 2.29% lead, 2.18% zinc and 33 ppm silver over 1.3 metres (see table on Figure 5b). No sulphide minerals were observed in the graphitic argillites or the quartz blebs. Previous work has determined that microscopically fine laminae of galena and sphalerite occur within the graphitic argillites and are the source of the lead-zinc-silver values. This style of mineralization is of possible sedex origin and therefore has potential as a stratiform occurrence. Sampling to date has focused largely on the shear zone itself where mineralization has likely been remobilized and altered in character. Systematic investigation of stratiform mineralization beyond the immediate shear area is required.

#### Centre Zone

The Centre Zone, located 300 m south of the Main Zone, comprises two types of mineralization: sericite-jarosite-pyrite shears within the central feldspar porphyry plug and pyritized-sericitized argillite/siltstone zenoliths (Figure 5c). The only sulphide mineral observed within the zone was pyrite, locally in concentrations of up to 20% in the zenoliths.

The shears in the porphyry consist of discrete veins in an envelope of intense sericite-jarosite alteration within a broader alteration halo of the same material. Primary textures of the porphyritic feldspars have been destroyed.

The more mineralized zenoliths have a more pervasive, but less intense, sericite alteration halo. Primary textures are still evident within the broader alteration zones surrounding the zenoliths.



The Centre Zone and surrounding area was originally mapped and sampled by Wedgewood Resources Ltd. (Burson, 1988). The Wedgewood geology map indicates the Main Zone lead-zinc showing to be south of the Centre Zone, however, descriptions of the feldspar porphyry unit and the position of their camp on the 1989 grid indicate that the Main Zone is in reality approximately 300 metres north and 550 metres west of the Centre Zone. A tent frame was located approximately 100 metres west of the baseline between line 0+50N and L1+50N. The similarity of the two glacial tongues north and south of the Main Zone combined with the fact that snow cover obscured most outcrops for the entire summer of 1988 could account for this apparent discrepancy.

No significant results are reported from the Centre Zone.

#### South Zone

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The South Zone cosists of lenses and disseminations of pyrite in and around quartz veins hosted by massive argillites (Figure 5d). The veins are discontinuous and narrow, approximately 0.1 metre wide, and contain up to 20% pyrite.

Highest gold values for the zone were returned from a vein sample containing massive pyrite which assayed 55 ppb gold over a 0.8 metre channel sample.

#### SOIL GEOCHEMISTRY

Only three contour soil lines covering the slopes north and east of the grid area (downslope) were collected before conditions forced the termination of 1989 field work. Samples were collected from the B horizon at an average depth of 10-20 cm, using a grubhoe. The lines cover portions of the 3000, 3500 and 4000 foot


elevation contours. The 3500 foot contour line produced anomalous gold values over 550 metres with values ranging from 30 ppb to 0.067 oz/ton (Figure 6). The anomalies occur approximately 1000 metres north-northeast of the North Zone (Figure 4). No geological follow up was done in this area and it remains to be determined whether they represent a transported anomaly in talus originating from the North Zone or a possible extension of North Zone structures and auriferous veins.

A single soil gold anomaly of 300 ppb was returned from the 3000 foot contour approximately 1500 metres northeast of the North Zone. The anomaly does not occur directly downslope from anomalies on the 3500 contour but it is in the down-ice direction from both the North Zone and the other anomalous soils. Again no follow up was done in this area.

The soil survey, although not completed, returned significant gold values from two locales which should receive detailed coverage during the next field season to determine their source. Soil sampling should also be extended over unexplored parts of the property where practical.

#### **PROPERTY GEOPHYSICS**

#### VLF-EM Survey

A VLF-EM ground survey was completed over the North, Main and portions of the Centre Zone, west of baseline 0+00. Survey anomalies plot on north-south and northeast trends with the strongest anomaly paralleling the north-south structure at the western contact of the feldspar porphyry in the North Zone (Figure 5a). The anomaly extends south along the structure and is offset to the east, near line 7+00N, by 25 metres. The anomaly extends south from the offset to the Main Zone

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shear, where it appears to follow the southwest trend of the shear (Figure 5b). Observable surface structures coincident with the anomaly occur only in the North and Main Zones. The anomaly, however, may be of particular significance with respect to the stratiform "sedex" mineralization identified in the Main Zone. As indicated previously sampling has been done primarily on structures and veins. Continuity of this anomaly beyond the readily visible structural features, through the area between the zones, may represent stratiform mineralization not exposed on surface or not yet recognized as such. Outcrops between the zones, along the anomaly trend, do contain increased concentrations of disseminated pyrite.

A second anomaly extends from L4+50N to L6+00N northeast of the Main Zone proper (Figure 5b). It roughly parallels bedding orientations in the area. Sampling of outcrops coincident with this trend indicate a higher pyrite content within the sediments (1-2%). The anomaly is thought to represent a unit containing slightly elevated pyrite concentrations.

Two much shorter conductors occur west of the Centre Zone on lines 1+50N and L1+00N, at 1+75W and 2+75W, both trending north (Figure 5c). The anomalies are weak, there are no coincident rock samples and it is undetermined at this time what the sources of these anomalies are.

### CONCLUSIONS AND RECOMMENDATIONS

The 1989 field program re-established grid control over the previously defined John Showing, locating the Main, Centre, and South Zones. A new zone, the North Zone, was also located, contour soil sampling produced highly anomalous gold values

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approximately 1000 metres north-northeast of the grid area and significant gold values were received from grab samples in the southeast corner of the Jim claim.

Three primary areas should receive further attention. The argillite-hosted sedex style lead-zinc-silver mineralization in the Main Zone should be trenched in an east-west direction to provide continuous fresh exposure across the width of the zone, beyond the limits of the shear zone itself. Although complicated by the superposition of faulting where sampled, the implied stratiform nature of this mineralization provides a potentially substantial target. The VLF-EM anomaly which extends to the north is a potential drill target and the southerly extension (albeit ice-covered) remains to be investigated on the ground.

The two types of vein occurrences defined in the North Zone require detailed mapping, prospecting and sampling to establish trenching targets and extent beyond the present grid. Gold values in the quartz-pyrite veins are not spectacular but certainly indicate that this particular vein system is anomalous in gold and as such is worthy of follow up work. The massive pyrite vein is quite narrow but does carry significant gold. It is possible that similar veins remain to be discovered and detailed examination of the immediate area, as well as areas outside the grid to the north, is recommended.

A natural extension of the above work is to examine in detail the area of the anomalous contour soil samples located well to the north of the grid area. This would involve prospecting and mapping in conjunction with fill-in contour soil sampling to identify the anomaly source and possible relationship to the North Zone.

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The property in general is relatively unexplored and deserves further work, particularly in the southeast corner of the Jim claim where follow up of goldbearing grab samples has been cursory. Contour soil sampling should be carried out where practical and more time should be devoted to geological mapping on a property wide scale. A Phase II program estimated at \$250,000 is proposed to carry out this work. A Phase III diamond drilling program estimated to cost \$350,000 would follow, contingent on positive results from the Phase II work.

#### BUDGET ESTIMATE

Phase II

Mobilization/Demobilization	\$ 20,000
Field Costs (Labour, Camp Costs, Equipment Rental, Consumables)	117,000
Support Costs (Helicopter, Freight, Expediting)	25,000
Assays	15,000
Preliminary Compilation and Report	20,000
Contingency @ 10%	20,000
Subtotal	\$217,000
Management Fee @ 15%	33,000
Total	\$250,000

Phase III

Diamond Drilling: 1380	m @ \$200/m all inclusive	\$276,000
Contingency @ 10%		28,000
Subtotal		\$304,000
Management Fee @ 15%		46,000
Total		\$350,000

# STATEMENT OF QUALIFICATIONS

I, Bernard Dewonck, of 11931 Dunford Road, Richmond, British Columbia hereby certify:

- I am a graduate of the University of British Columbia (1974) and hold a BSc.
  degree in geology.
- 2. I am an independent consulting geologist retained by OreQuest Consultants Ltd. of #306-595 Howe Street, Vancouver, British Columbia, for the purposes of supervising the exploration program described herein as conducted by B. Barnes and the preparation of this report.
- 3. I have been employed in my profession by various mining companies since graduation.
- 4. I am a Fellow of the Geological Association of Canada.

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- 5. I am a member of the Canadian Institute of Mining and Metallurgy.
- 6. This report is based on a review of information listed in the Bibliography, a visit to the property in August, 1989 and data collected by OreQuest Consultants Ltd.
- 7. Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the property or in the securities of Maple Resource Corporation.
- 8. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statements of Material Facts or other public document.

Bernard Dewonck Consulting Geologist

DATED at Vancouver, British Columbia, this 19th day of February, 1990.

### STATEMENT OF QUALIFICATIONS

I, Brett Barnes, of Box 2, Wilberforce, Ontario, hereby certify:

- I am a graduate of Lakehead University (1982) and hold a BSc. degree in geology.
- I am presently employed as a consulting geologist with OreQuest Consultants
  Ltd. of #306-595 Howe Street, Vancouver, British Columbia.
- 3. This report is derived from field work conducted by OreQuest Consultants Ltd. and the information cited in the bibliography.
- 4. Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the property or in the securities of Maple Resource Corporation.
- 5. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document.

## Brett Barnes Geologist

DATED at Thunder Bay, Ontario, this 19th day of February, 1990.