ASSESSMENT REPORT

TITLE: 1979 GEOCHEMICAL SURVEY PROGRAM ON MCLAUGHLIN RIDGE PROPERTY, PORT ALBERNI, BRITISH COLUMBIA

CLAIMS INVOLVED	:	DEBBIE 1,2,3 LUCY 1,2,3, LINDA 1,2
TOTAL UNITS	:	123
LOCATION	:	ALBERNI AND NANAIMO MINING DIVISIONS 49° 13'N LATITUDE 124° 41'W LONGITUDE 92 F/2E N.T.S. MAP NO.
OWNER AND OPERATOR OF CLAIMS:		WESTERN MINES LIMITED
REPORT BY	:	RICHARD WALKER AND G. BENVENUTO OF WESTERN MINES LIMITED
WORK PERIOD	:	MAY 22 TO JUNE 26, 1979

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SUMMARY

The McLaughlin Ridge property, containing 8 claims and 123 units, was staked ten kilometres southeast of Port Alberni, British Columbia on the basis of a re-evaluation of the results of geochemical soil and geologic mapping surveys done by Western Mines Limited in the same area in 1973 and 1976.

Between May 23 and June 26, 1979, 681 soil samples were collected on the Debbie and Lucy claims, then analyzed for copper, lead and zinc.

The reconnaissance geochemical soil survey results indicate the presence of two, en échelons northwest-trending belts containing higher concentrations of copper, lead and zinc, that have an average areal extent of 3,445m long and 100m to 760m wide. These belts of higher metal concentrations are parallel to the regional strike of the Paleozoic Sicker Group of meta-volcanic rocks which underlie the area and may represent two stratigraphic horizons or repetition of one horizon within the Sicker Group containing higher concentrations of these base metals. A more detailed geochemical soil survey and geologic mapping are warranted by these preliminary results.

I. INTRODUCTION

A. LOCATION: 92 F2/E

The McLaughlin Ridge property is located in southeastern Vancouver Island, British Columbia, approximately ten air-kilometres southeast of Port Alberni (Figure 1). The property stretches across the northwest part of McLaughlin Ridge between Cameron River to the northeast and China Creek to the southwest and comprises 31 square kilometres. The extent of the property is 49° 14.3' to 49° 10.0' latitude and 124° 43.2' to 124° 38.7' longitude. Most of the property is underlain by Paleozoic meta-volcanic tuffs, flows and agglomerates of the Sicker Group (Muller, 1977).

B. ACCESS

The northern boundary of the property lies 0.7 km south of the Port Alberni - Parksville Highway #4 between 18 and 26 km from Port Alberni. The southern part is accessible from Port Alberni by a logging road along China Creek (Figure 1). A considerable amount of logging activity in the area has resulted in roads providing access by truck to a number of areas on the property.

C. PHYSIOGRAPHY

The McLaughlin Ridge divides the property into rugged northeast-, west- and southwest-facing slopes with relief up to 1000m. Numerous northerly trending creeks, which drain off the rather flat-topped ridge into the Cameron River and China Creek to the north and south respectively, in part provide the relatively abundant exposures of the bedrock. Williams, Mineral and Yellow Creeks and the northerly reaches of Cameron River are aligned to form a prominent north-trending, topographic lineament that incises McLaughlin Ridge and areas to the north and south.

The vegetation is characterized by dense forest growth of Douglas Fir, Hemlock and Balsam, and immature growth on logging "slashes".

D. PROPERTY DEFINITION

Western Mines Limited of 1103-595 Burrard Street, Vancouver, B.C. is the current owner and operator of the McLaughlin Ridge property. The property includes 8 claims that are divided into 12 to 20 units. The claims and claim groups are listed with recording information in Table 1. Two claims encompassed by the perimeter of the McLaughlin Ridge property are not held by Western Mines Limited; Crown Land Grant 215G and the Yellow claim held by Silver Cloud Mines Ltd. (bill of sale, July, 1979) (see Figure 1).

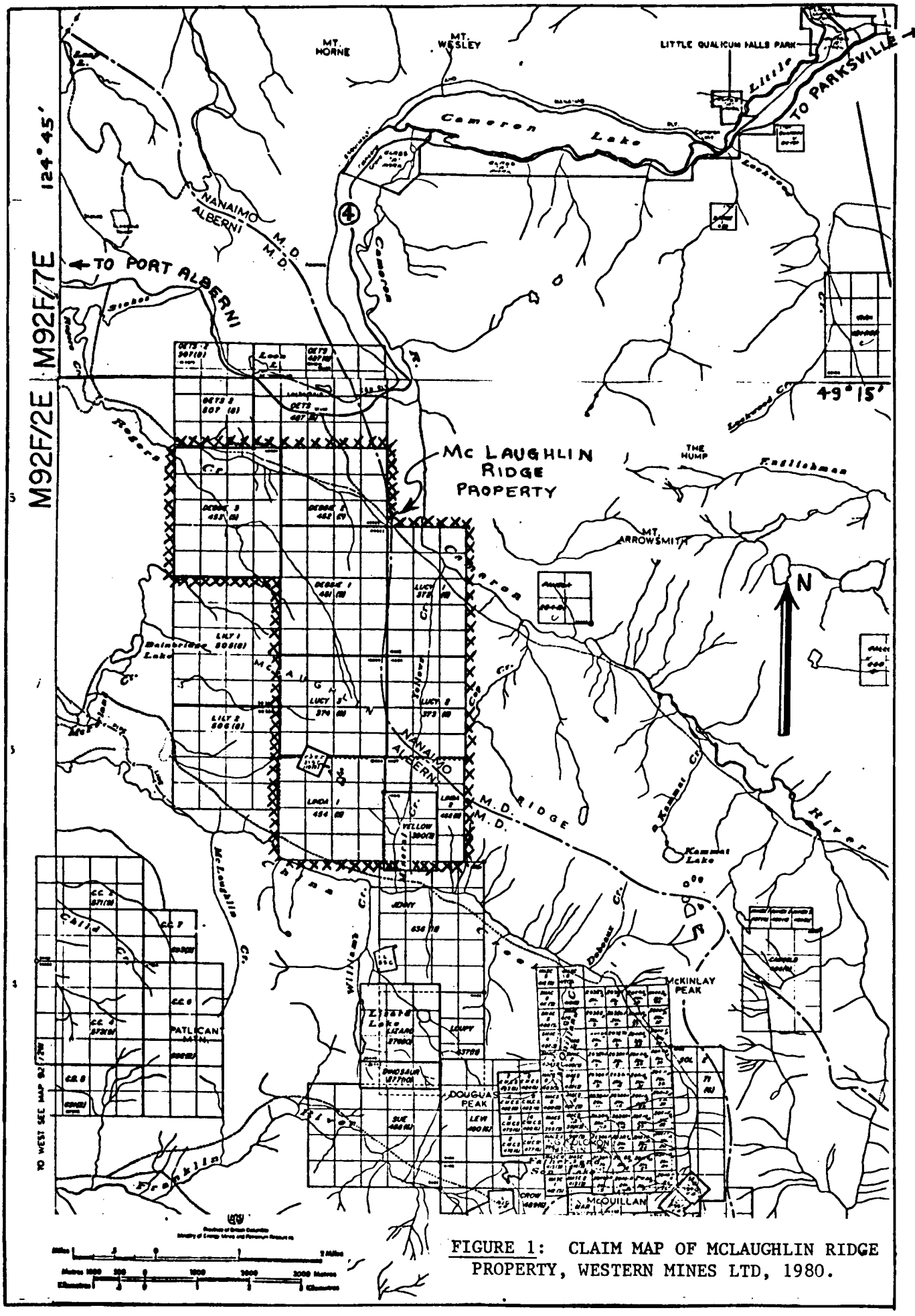

FIGURE 1: CLAIM MAP OF MCLAUGHLIN RIDGE PROPERTY, WESTERN MINES LTD, 1980.

TABLE 1

CLAIM GROUP AND UNIT INFORMATION

CLAIM GROUP	CLAIM	UNITS	RECORD NO.	RECORD DATE	EXPIRY DATE
LULIN	DEBBIE 3	20	453	May 2/79	May 2/80
	DEBBIE 2	12	452	May 2/79	May 2/80
	DEBBIE 1	20	451	May 2/79	May 2/80
	LUCY 3	16	374	May 2/79	May 2/80
	LUCY 1	15	372	May 2/79	May 2/80
	LUCY 2	12	373	May 2/79	May 2/80
	LINDA 2	12	455	May 2/79	May 2/80
	LINDA 1	16	454	May 2/79	May 2/80
	TOTAL	123			

E. PROPERTY HISTORY

The area, particularly along the tributaries of China Creek, has a rich and long history beginning as early as 1862 with small-scale placer mining which lead to sporadic production from gold-quartz veins. The Yellow claim, which straddles Mineral Creek, a tributary of China Creek (Figure 1), produced in the 1890's and again in 1936, a total of 403 tons of ore containing 303 oz. of gold and 52 oz. of silver. The ore was produced by Consolidated Alberni Gold Mining Company, then later by Vancouver Island Gold Mines Ltd. from thin quartz veins with minor free gold that cut andesitic flows and tuffs (Stevenson, 1944). Two kilometers to the south, on the east side of Williams Creek, the Alberni Gold Development Syndicate explored thin quartz-sulphide lenses in silicified andesite through various workings on the Regina claim group (Crown Land Grand 55G, Figure 1) in the late 1890's. The quartz lenses contain pyrite, chalcopyrite, galena, gold and silver but were never produced (Stevenson, 1944).

Further southeast, in the area of Mount McQuillan and King Solomon basin, a number of companies have been involved periodically in exploration and minor production from the late 1890's to present (see Stevenson, 1944 for a full description of deposits and workings). Most of the deposits are described as gold-quartz veins in andesite of the Sicker Group with variable amounts of pyrite, galena, sphalerite, chalcopyrite and gold. These deposits lie in a narrow north-trending belt just east of, and in alignment with, a string of feldspar porphyry stocks and dykes and an elongated body of diorite (Stevenson, 1944).

Western Mines Limited first became involved in exploration of the McLaughlin Ridge area in February 1973 when G.H. Scott staked the Amy claim, a 12 unit claim. In March, 1973, J. Szakacas staked the Sam claim for Keywest Resources Ltd. in the area surrounding Mineral Creek. Later, in August, 1976, G. Crooker restaked the

Amy and enlarged Western's holdings as the Sultan-Rupert-Dog claims covered approximately by the present Debbie 1,2 and Lucy 1,2 claims, Figure 1). In that same month, R. Tschach of Western Mines restaked the southern part of the Sam claim as the Shannon-Tasha claims (covered approximately by the southeast quarter of Linda 1 and the Jenny claims).

Western Mines conducted reconnaissance geologic mapping and geochemical soil surveys on the claims they staked in 1973 and 1976 (Assessment Reports #6153, #4875, #5594). Re-evaluation of the results of these early surveys, which delineated several promising areas with anomalous copper and zinc values, led Western Mines to re-stake the area as the McLaughlin Ridge property (Figure 1 and Table 1). Reconnaissance geochemical soil an silt sampling conducted by Western Mines in 1979 reconfirmed and extended the areas of anomalous copper, zinc and lead values within the Debbie and Lucy claims. The results of this preliminary survey indicate the presence of two northwest-trending, elongate belts containing anomalous values of copper, lead and zinc that stretch across the Debbie and Lucy claims. These belts are parallel to the regional strike of the Sicker Group volcanic rocks which suggests the presence of one, two or more stratigraphic horizons within the Sicker Group that contains higher base metal values. These results will be followed up with further investigations, but are insufficient to formulate an economic assessment.

F. SUMMARY OF WORK DONE

1. Geochemical Survey

Between May 23 and June 26, 1979, a total of 681 soil and 8 silt samples were collected with a grubhoe from the "B" - soil horizon at 50m intervals along claim lines and along east-west lines either bisecting or trisecting the Debbie 1,2,3 and Lucy 1,2 claims (Figure 2 in pocket). Six silt samples were taken at 150m intervals along a creek in the south-central part of the Debbie 2 claim (Figure 2). The soil, silt and rock samples were analyzed at Min-En Labs Ltd., 705 West 15th Street, North Vancouver, B.C. The soil and silt samples were dried, screened to -80 mesh, digested in nitric and perchloric acids and tested by Atomic Absorption Analysis for copper, lead and zinc (results reported in parts per million (ppm), see Figure 2).

2. Photogrammetric Maps

Two 1:5000 scale topographic maps (contour interval of 20m) covering 78 sq. km were produced by Pacific Survey Corp. of 1409 West Pender Street, Vancouver, for the purpose of locating and plotting the results of the

F. SUMMARY OF WORK DONE (CONT'D)

2. Photogrammetric Maps (Cont'd)

geochemical soil survey analyses from the McLaughlin property. These maps were made from one inch to 40 chains, Department of Energy, Mines & Resources aerial photographs and were reduced to 1:10,000 scale (Figure 2).

3. LINE CUTTING

Approximately 17 km of line cutting was done in conjunction with the geochemical soil sampling survey. Three north-south cut baselines were established along the eastern boundary of the following claims: (1) Debbie3 & Lily 1; 2) Debbie 2,1 and Lucy 3; 3) Lucy 1 and 2.

II. DETAILED TECHNICAL DATA AND INTERPRETATION

Geochemical Survey

The purpose of the reconnaissance geochemical soil and silt surveys was to delineate areas in the central part of the McLaughlin Ridge property which might contain anomalous copper, lead and zinc values and thereby form a basis for future detailed geochemical and geologic surveys.

Results (Figure 2)

The concentration obtained from analyzes for copper range from 4 to 425 ppm, for lead from 3 to 80 ppm and for zinc from 9 to 1850 ppm. A visual inspection of histograms for copper, lead and zinc suggests the following approximate levels of concentration significance:

	COPPER		LEAD		ZINC	
	ppm	Cumulative %	ppm	Cumulative %	ppm	Cumulative %
BACKGROUND	4-100	90.3	3-30	94.6	9-100	89.1
HIGHLY ANOMALOUS	200	98.7	40	98.9	500	99.4

Although the spacing between the geochemical soil sample grid lines is relatively large (approximately 1750m east-west and 1000m north-south spacing), the preliminary geochemical soil survey suggests the presence of two northwest-trending, en échelon belts of higher copper-concentrations (greater than 100 ppm). One belt extends about 3330m from the northeast corner of Debbie 3 to the northeast corner of Debbie 1 and varies in width from 510m in the northwest to 760m in the southeast. The second belt extends about 3560m from the southeast corner of Debbie 3 to the southeast corner of Debbie 1 and varies from 100m wide in the northwest to 760m wide in the southeast. In a general manner, higher zinc-concentrations (greater than 100 ppm) coincide with higher copper-concentrations although areas containing higher zinc-

concentrations are narrower and more limited in extent than those of copper. Two samples with anomalous zinc values, which were collected in the west-centre edge of Lucy 3 and the northwest corner of Lucy 3 are not associated with anomalous copper values. Higher lead-concentrations (greater than 30 ppm) are broadly to closely associated with higher concentrations of both copper and zinc.

The two northwesterly trending belts of higher copper-concentrations and associated lead and zinc are parallel to the regional lithologic strike of the Sicker Group volcanic rocks as shown by Muller (1977). This suggests that the source of the higher concentrations of these base metals either follows one stratigraphic horizon within the Sicker Group that has been structurally repeated or follows two separate horizons. Clarification of the nature of the source and the distribution of anomalous values should result from more detailed geochemical soil sampling and geological mapping in the area.

REFERENCES

Muller, J.E., 1977, Geology of Vancouver Island, Open File Map No. 463, Map Production Division, Department of Lands, Forests and Water Resources, Victoria, B.C., 3 sheets.

Stevenson, J.S., 1944, Geology and Ore Deposits of the China Creek Area, Vancouver Island, British Columbia, Report of the Minister of Mines, 1944, p. A142-G161.

APPENDIX A

DETAILED EXPENDITURES FOR GEOCHEMICAL SOIL SURVEY

WAGES AND TYPE OF WORK - work period: May 22 to June 26, 1979

HARLAN MEADE, senior geologist, 6 days supervision, 2 days in transit; 8 days @ $120.00/day - $960.00 TOTAL WAGES.
ALLAN GALLEY, geologist, 2 days supervision, 2 days in transit; 4 days @ $78.00/day - $312.00 TOTAL WAGES.
TRENT BOLLINGER, geologic assistant, 7 days linecutting and 9 days soil sampling, 2 days in transit,; 18 days @ $60.00/day - $1080.00 TOTAL WAGES.
BRUCE DOWNING, geologic assistant, 7 days linecutting and 6 days soil sampling, 2 days in transit; 15 days @ $60.00/day - $900.00 TOTAL WAGES.
ROB WOODWARD, geologic assistant, 5 days linecutting, 13½ days soil sampling, 2 days in transit, 1 day orientation; 21½ days @ $56.00/day - $1204.00 TOTAL WAGES.
WARREN THAM, geologic assistant, 2 days linecutting,13 days soil sampling, 2 days in transit, 1 day orientation; 18 days @ $56.00/day - $1008.00 TOTAL WAGES.
THOMAS MAURER, geologic assistant, 6 days linecutting, 11½ days soil sampling, 2 days in transit, 1 day orientation; 20½ days @ $56.00/day - $1148.00 TOTAL WAGES.
(NOTE: 17 km of linecutting done in conjunction with soil sampling)

ACCOMMODATION AND FOOD

May 22 to June 26,1979, 91 man-days @ $17.00/day accommodation and $18.00/man-day food - $3185.00 TOTAL COST.

TRANSPORTATION

May 22 to June 26,1979, 19 days @ $50.00/day operation costs and gas for 2 company-owned 4x4 trucks for transportation to and from claims - $950.00 TOTAL COST.

GEOCHEMICAL SOIL SAMPLE SURVEY ANALYSES

681 soil and 8 silt samples analyized for Cu, Pb, Zn @ $3.30/sample (includes $0.50/sample for sample preparation) - SUBTOTAL COST: $2,273.70

Freight charges to Vancouver - SUBTOTAL COST: $ 131.00

Total Cost of Soil and Silt Analyses - $2,404.70

FIELD EQUIPMENT

Sample bags, topofil, grubhoes, field books, axes, flagging, backpacks, etc. - $500.00 TOTAL COST.

APPENDIX A (p. 2)

REPORT PREPARATION

Preparation (2 man-days @ $56.00/day and drafting (K.D.H. Holdings Ltd., 52 hours @ $15.00/hour) of geochemical soil survey map (Figure 2) - $892.00 TOTAL COST.

Preparation of 2 - 1:5000 scale topographic maps (Pacific Survey Corp.): $3,320.00 and film positive reduction of above maps to 1:10,000 scale (Figure 2): $283.40 - $3,603.40 TOTAL COST.

Preparation of assessment report, 8 man-days @ $90.00/day and 5 man-days @ $52.00/day - $980.00 TOTAL COST.

TOTAL COST OF GEOCHEMICAL SOIL SURVEY AND ASSESSMENT REPORT - $19,127.10

COST PER SOIL SAMPLE: $19,127.10/689 samples = $27.76 TOTAL COST/SAMPLE (includes cost of map preparation, wages, transportation, accommodiation, food, supplies, analyses and report).

CLAIM GROUP APPORTIONMENT OF GEOCHEMICAL SOIL SURVEY COST

CLAIM GROUP	NO. OF SOIL SAMPLES COLLECTED	COST OF ASSESSMENT WORK DONE (@$27.76/SAMPLE)
DEBBIE 3	117	$3,248.
DEBBIE 2	84 Soil, 8 Silt	$2,544.
DEBBIE 1	161	$4,469.
LUCY 3	118	$3,276.
LULIN	150	$4,164.
LINDA	45	$1,249.

APPORTIONMENT OF ASSESSMENT WORK COSTS AND PAC WITHDRAWALS

CLAIM, GROUP	UNITS	ASSESSMENT WORK REQUIRED	VALUE OF ASSESSMENT WORK DONE	PAC WITHDRAWALS	PAC DEPOSITS	YEARS APPLIED
DEBBIE 3	20	$2,000.	$3,248.	$ 752.	-	2
DEBBIE 2	12	$1,200.	$2,544.	-	$144.	2
DEBBIE 1	20	$2,000.	$4,469.	-	$469.	2
LUCY 3	16	$1,600.	$3,276.	-	$ 76.	2
LULIN	39	$3,900.	$4,164.	-	$264.	1
LINDA	16	$1,600.	$1,249.	$ 351.	-	1
			TOTAL	$1,103.	$953.	

BALANCE: $150. PAC WITHDRAWAL

APPENDIX B-1

WESTERN MINES LIMITED

EXPLORATION VANCOUVER ISLAND REGION

STATEMENT OF QUALIFICATIONS

I, Gary Louis Benvenuto, of the town of Campbell River, British Columbia, hereby certify that:

1. I am a geologist, residing at 4125 Discovery Drive, #7, in Campbell River, B.C. with a business address of Western Mines Ltd, P.O. Box 8000, Campbell River, B.C.

2. I graduated with a B.Sc. degree in geology from California State University at Los Angeles in 1972 and with a Ph.D. degree in geology from Queen's University, Kingston, Ontario in 1978.

3. I am an associate member of the Geological Association of Canada.

4. I have practiced exploration geology with Cominco Ltd. from May to October, 1979 and with Western Mines Ltd. from January, 1980 to present.

Dated: May 7, 1980

Signed: Gary Benvenuto

Gary Benvenuto
Project Geologist
Western Mines Ltd.

APPENDIX B-2

WESTERN MINES LIMITED

EXPLORATION VANCOUVER ISLAND REGION

STATEMENT OF QUALIFICATIONS

I, Richard Randall Walker, of the town of Campbell River, British Columbia, hereby certify that:

1. I am a geologist, residing at Race Point Road in Campbell River, British Columbia with a business address of : Western Mines Ltd., P.O. Box 8000, Campbell River, British Columbia, V9W 5E2.

2. I graduated with a B.Sc. degree in geology from the University of Alberta, Edmonton in 1970 and an M.Sc. degree in geology from the University of Alberta, Edmonton in 1976.

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

4. I have practiced geology as: Research Geologist for Texasgulf Canada Ltd in Timmins,Ontario from 1972 to 1976; Joint Ventures Geologist for Saskatchewan Mining Development Corporation in Regina, Saskatchewan from 1977 to 1978; Exploration geologist for Western Mines Ltd. in Campbell River from 1978 to present.

Dated: May 8 1980

Signed: R R Walker.

R.R. Walker
Exploration Manager - Vancouver Island
Western Mines Ltd.

FIGURE 2

WESTERN MINES LTD.

DEBBIE GROUP

(Soil Geochemistry)

Cu, Pb, Zn

Scale 1:3000 1 0 100 200 300 400m

CON TOUR INTERVAL = 20 metres

Date JAN, 80 Drawn by T.F.M. Map No. X

MINERAL RESOURCES BRANCH ASSESSMENT REPORT

LEGEND

Road

Claim post

Cu / Pb / Zn Soil

Au Au, Zn Silt