

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL REPORT

- on the -

SONGBIRD MINERAL CLAIMS

NANAIMO MINING DIVISION

- Prepared for -

EUREKA RESOURCES INC.

837 EAST CORDOVA STREET

VANCOUVER, B.C.

Work Completed: June 29 - December 30, 1983.

Location: $49^{\circ} 13'N$; $124^{\circ} 13'W$

GEOLOGICAL BRANCH F/1
ASSESSMENT REPORT SSE of Parksville, B.C.

11 926

Prepared By:

KERR, DAWSON & ASSOCIATES LTD.

#206 - 310 NICOLA STREET,

KAMLOOPS, B.C. V2C 2P5

John R. Kerr, P. Eng.

December 30, 1983.

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EUREKA RESOURCES INC.	
LOCATION MAP	
SONGBIRD PROPERTY	
NANAIMO MINING DIVISION, B.C.	
Technical Work by: Kerr, Dawson & Assoc. Ltd.	Date: Nov. 1983.
Scale: 1cm. = 87 km.	Dwg No. 292-1

INTRODUCTION

General Statement:

Eureka Resources Inc. acquired the Songbird Property by option agreement in the spring, 1983. The property consists of a previously developed gold occurrence in the favourable Paleozoic Sicker Group of volcanic and sedimentary rocks. The property was developed in two periods; 1964/65 by Gunnex Mines Ltd. and 1979/80 by Invex Resources Ltd. During the summer, 1983, Eureka completed geological mapping, rock chip and soil sampling and a VLF-EM Survey. This report summarizes the results of this programme.

Location and Access:

The property is located on the east side of Vancouver Island, approximately 15 km. south-southeast of Parksville, B.C. Geographic coordinates of the center of the claims is $49^{\circ} 13'N$ and $124^{\circ} 13'W$. (NTS 92F/1).

Access is possible from Highway #19 at Nanoose Bay a distance of 2 km. west and thence south a distance of 10 km. along an old logging road, the latter six kilometers being in poorly-maintained condition.

Topography & Vegetation:

The Songbird claims occur on the northeast slopes of Okay Mountain between the South Englishman River and Bonell Creek. The claim area covers the headwaters of Nanoose Creek, which empties into Georgia Strait at Nanoose Bay.

Relief is gentle to moderate with a general uniform northeasterly slope. Elevation range from 180 m. a.s.l. in the northeast portion of the claims to 680 m. a.s.l. on Okay Mountain.

Most of the property was logged years ago. Vegetation presently consists of secondary growth of spruce, balsam, fir and cedar with thick underbrush.

CLAIMS

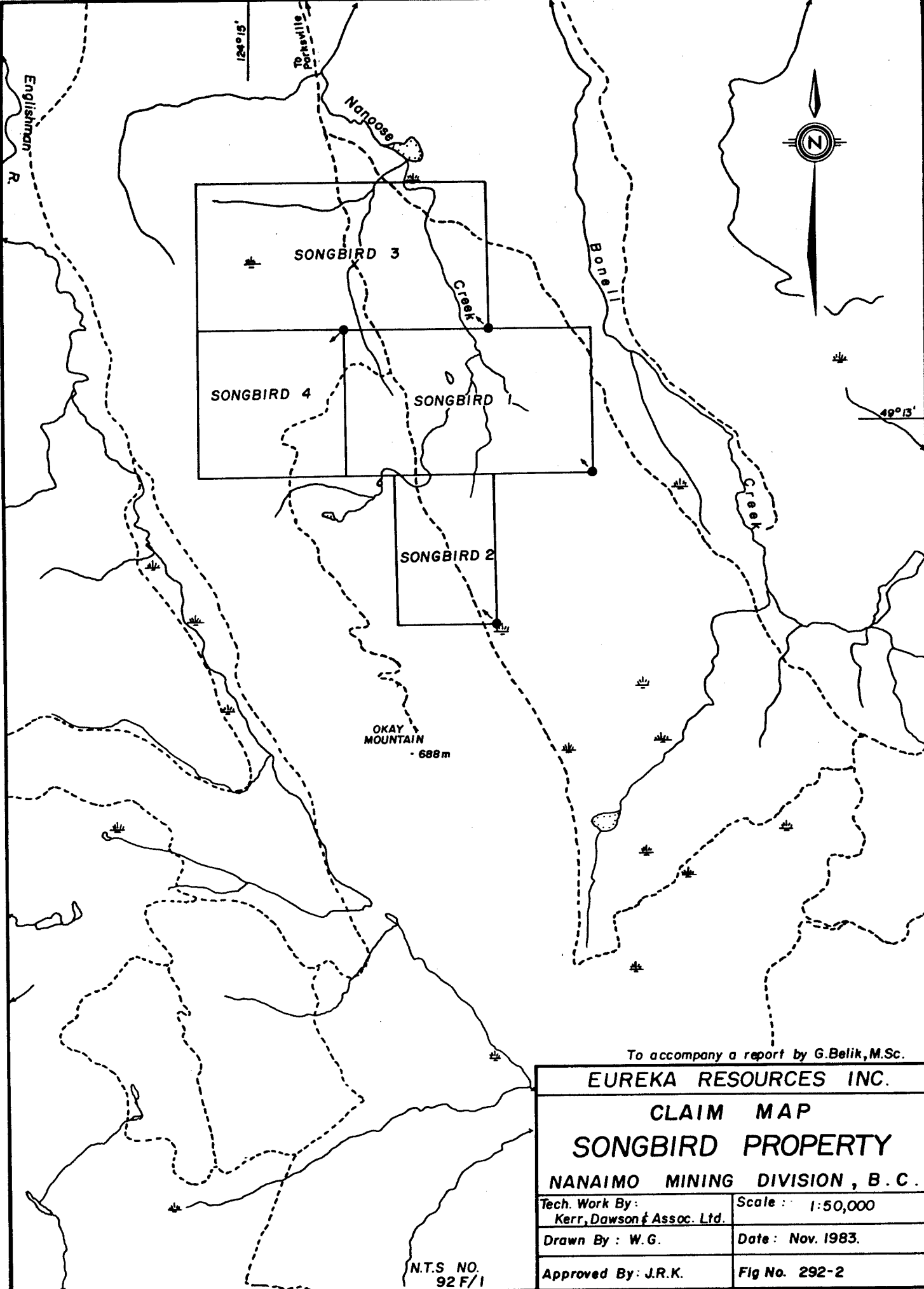
The property described in this report is comprised of 4 contiguous mineral claims totalling 48 units, as detailed below:

<u>Mining Division</u>	<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Record Date</u>
Nanaimo	Songbird 1	15	1323 1318	Feb. 16/83
Nanaimo	Songbird 2	6	1324 1319	Feb. 16/83
Nanaimo	Songbird 3	18	1525 ²	July 5/83
Nanaimo	Songbird 4	9	1526	July 5/83

Costs of the field programme as discussed will be applied to maintain the property until 1987.

The Songbird 1 and Songbird 2 claims are owned jointly by Mr. Doug Brownlee and Mr. Malcolm Bell, both of Vancouver, B.C. The Songbird 3 and Songbird 4 claims are owned by Eureka Resources Inc., 837 East Cordova Street, Vancouver, B.C.

An option to purchase a 90% interest in the Songbird 1 and 2 claims reportedly has been negotiated by Eureka Resources Inc.



To accompany a report by G.Belik, M.Sc.

EUREKA RESOURCES INC.	
CLAIM MAP	
SONGBIRD PROPERTY	
NANAIMO MINING DIVISION, B. C.	
Tech. Work By: Kerr, Dawson & Assoc. Ltd.	Scale: 1:50,000
Drawn By: W.G.	Date: Nov. 1983.
Approved By: J.R.K.	Fig No. 292-2

N.T.S. NO.
92 F/1

EXPLORATION HISTORY

The area of the known showings was first staked by Gunnex Ltd. in 1963. After carrying out a minor prospecting, mapping and soil sampling programme in 1963 and 1964, Gunnex allowed the claims to lapse.

The area was restaked in 1978 by Invex Resources Ltd. (Okay Claim). During the latter part of 1978 Invex carried out a programme of geological mapping, soil and silt sampling. This was followed in 1979 by geological mapping, hand trenching and the drilling of 14 plugger holes. According to a report by J.P. Elwell, P. Eng., dated August 31, 1979, the hand trench exposed a series of pyritic quartz lenses and veins dipping to the west. Chip samples taken across the vein zone reportedly indicated an average of 0.194 oz/ton gold and 1.39 oz/ton silver over a true width of 30 feet.

In 1980, Invex drilled two short holes from a setup located about 20 meters east of the trench. The results of this drilling are not available and it is not known whether the vein zone was penetrated.

No further work was reported by Invex and the Okay claim, which was allowed to lapse, was restaked in Feb. 1983, as the Songbird 2 claim. The Songbird 1 claim was also staked to cover the possible extension of the zone to the north.

Mr. Doug Brownlee, geologist, brought the Songbird claims to the attention of Mr. John Kerr. Mr. Kerr, acting as agent for Eureka Resources Inc., optioned the claims, expanded the claim area to the north and west and supervised a preliminary exploration programme in June and July, 1983. This work included geological mapping, soil sampling, a VLF-electromagnetic survey and trenching.

FIELD PROGRAMME - 1983

During the period June 27 - July 14, 1983, a three kilometer baseline, with 29 km. of grid lines were established covering the Songbird 1 and 2 mining claims. Lines were spaced at 50 and 100 meter intervals, with sample stations at 25 meter intervals in the area of the main showing, and at 300 meter intervals, with sample stations at 50 meter intervals in the northern portion of the surveyed area. Grid lines were established by compass and chain methods.

Soil samples were collected from all lines at the 25 or 50 meter sample stations. Samples were collected from the "B" horizon of soils, where possible. Due to the hummocky terraine, and swampy conditions in low-lying areas, samples could not be collected from all stations. Samples were placed in appropriately identified Kraft envelopes, and submitted to Acme Analytical Laboratories in Vancouver for gold and silver analysis.

All samples were dried and sieved to -80 mesh. The method of analysis for each metal is described on the geochemical certificates (Appendix B).

A VLF-EM survey was completed on most lines, readings taken at 25 or 50 meter stations, with a Sabre Electronic VLF-EM unit. Due to extreme wet conditions during the survey, the EM unit experienced shorting conditions towards the end of the survey, therefore Lines 24, 27 & 30N were not completed. As the baseline is oriented in a N-S direction, the Seattle, Wash. transmitting station was used for the survey.

The raw data was subjected to the Fraser filter method of displaying results. This method takes into account an averaging of four stations and provides a better representation of the data for the following reasons:

- 1). Tends to smooth out any erratic readings.
- 2). Provides positive numbers to display normal raw data cross-overs, which can subsequently be displayed by normal contour methods.
- 3). Eliminates some of the spurious effects of topography on interpretation of E.M. data.

The positive filtered values are displayed on accompanying map sheet, Fig. 282-6. Negative values were not calculated and are insignificant to the interpretation. They are displayed as (-). The positive values are contoured in 10^0 intervals, from which definite and possible/probable anomalies are interpreted.

The property was geologically mapped, with rock outcrops that are exposed along grid lines being identified. All rock outcrops are identified on Figure 282-3, indicating a preliminary geological interpretation. In addition several selected outcrops were chip sampled, the samples being submitted for gold and silver geochemical analysis.

A back-hoe was hired to clean out old trenches, and establish two new trenches in the area of the known showing. These trenches were all resampled and assayed for gold and silver, the results compiled on Figure 282-7.

GEOLOGY

The general geology of the area is summarized on GSC Map #49-1963, Geology of the Alberni Area, 92F/SE (1"=2 miles), by J.E. Muller.

In summary, the Songbird Property straddles the contact between the Paleozoic Sicker Group and the Upper Triassic Karmutsen Formation along the southeast margin of the Nanoose Uplift.

The Sicker Group is a complex package of volcanic and sedimentary strata which underlies extensive areas of south and central Vancouver Island. The group is host to several massive sulphide deposits including Westmin's Buttle Lake deposits and the Tye/Lenora deposit near Duncan. These deposits are intimately associated with felsic volcanic rocks and show a close spatial relationship to centers of venting within the volcanic pile.

Muller (1980), has subdivided the Sicker Group into three formations which include, in order of increasing age:

Buttle Lake Formation: mainly limestone; locally interbedded with calcareous siltstone and chert.

Myra Formation: basic to felsic tuffs, breccias and flows; thinly bedded to massive argillite, siltstone and chert.

Nitinat Formation: basaltic lavas which are locally pillowed or agglomeratic; minor mafic tuff.

Within the area of the Songbird Property lithologies of the Sicker Group are characteristic of the Myra Formation. Lithologies evident include: chert, tuffaceous chert, argillite, cherty argillite, fine grained felsic tuffs and greenschist. All units are penetratively foliated, strike north to north-northwest and dip 40° to 85° to the west. Most units are pyritic.

The Karmutsen Formation, which underlies most of the Songbird 4 claim and the western margins of the Songbird 1-3 claims, consists of basaltic flows and breccia with minor tuff and sedimentary interbeds. Regionally the formation is extensive and underlies about 30% of Vancouver Island, mainly along its eastern margin. Remnants of an undeformed, coarsely bedded, poorly sorted, polymictic conglomerate are locally preserved in the east half of the Songbird 1 claim. Within the region of the claim area, this unit is diagnostic of the basal member of the Cretaceous Nanaimo Group.

Within the center of the Songbird 2 claim, in close proximity to the inferred Sicker/Karmutsen contact, significant gold and silver mineralization occur within a strong fault breccia zone. The zone is about 10 meters wide, strikes north-northwest and dips 60° to 85° to the west-southwest. The zone is poorly exposed by a few small outcrops and shallow trenches over a strike length of about 80 meters beyond which it is totally concealed by overburden.

Quartz, in varying amounts, occurs throughout most of the zone as narrow, translucent-to milky-white veins, pods and breccia fragments. Most of the quartz contains pyrite and locally, minor chalcopyrite and galena. The host unit, which is highly sheared and brecciated, consists of a thinly bedded, black, chert/argillite sequence. Bedding locally is partly preserved. In 1979, Invex dug a shallow hand trench across the northern part of the zone. Samples taken by Invex from the zone returned an uncut, weighted average of 0.194 oz/ton gold and 1.39 oz/ton silver over a true width of 30 feet. Results of the sampling suggested that the gold/silver mineralization was largely confined to quartz vein material.

In 1983, Eureka reopened the Invex trench with a backhoe and resampled the mineralized section. Two additional trenches were made; one 20 meters to the north and one 30 meters to the south. These trench locations and the sample results obtained by Eureka are shown on Fig. No. 292-7. The center trench on Fig. No. 292-7 is the reopened Invex trench.

L-8+00 N

L-7+50 N

L-7+00 I

Eureka's sampling, in general, verified Invex's results although the average for the main zone was somewhat lower (0.130 oz/ton gold, 0.93 oz/ton silver over 8.0 meters). The center trench, which was extended a bit further to the west than Invex trench, partly exposed a second, subsidiary mineralized zone which assayed 0.167 oz/ton gold and 1.10 oz/ton silver.

Significant gold and silver values were also obtained from both of the other trenches and from a small outcrop situated 30 meters south of the trench.

GEOCHEMISTRY

Statistical analyses of soil geochemical data yielded the following results:

		<u>Ag</u>	<u>Au</u>
No. of samples	N-	655	655
Mean	M-	.247 ppm	6.07 ppb
Std. Deviation	S-	.399 ppm	6.54 ppb

From this, the following anomalous categories are derived:

	<u>Ag</u>	<u>Au</u>
Negative	< .25 ppm	< 6 ppb
Possibly Anomalous	.25-.65 ppm	6-10 ppb
Probably Anomalous	0.7-1.1 ppm	15-20 ppb
Definitely Anomalous	> 1.1 ppm	> 20 ppb

The various anomalous values are indicated on the accompanying geochemical plans (Figures 292-4 Au, and 292-5 Ag). Anomalous zones have been contoured according to the various categories.

There is a strong correlation of both gold and silver content in soil from L6 + 00N to L9 + 00N. Silver content in soil extends the definite anomalous trend to L11 + 00N, with erratic, however significant anomalies to L27 + 00N along this trend. Weak gold anomalies are associated with the silver to L11 + 00N.

Three other significant geochemical targets exist on the property.

- L7 + 50N @ 6 + 25W. A high silver value (5ppm) and weak gold value, is associated with a strong E.M. conductor and mapped fault or shear zone.
- L11, 12 & 13 + 00N @ 9 + 50W. Strong gold values in soil correlate well with the northern extension of the E.M. conductor noted above.
- L4, 5 & 6 + 00N @ 1 + 00W. Strong gold and moderate silver values in soil have no correlation with interpreted geological or E.M. features.

There is an unusual silver geochemical feature expressed on Lines 6 + 00N and 11 + 00N, with high background values indicated along a high percentage of each line. Interpretation of this data suggests a cross-cutting feature along the lines, however a more realistic evaluation of this data would be a laboratory problem (contamination?) for these series of samples.

VLf - EM SURVEY

The positive Fraser filtered data are plotted on a surface plan of the grid (Figure 292-6). The 10° , 20° and 30° contours were drawn, indicating anomalous zones. Values $>30^{\circ}$ are considered definitely anomalous.

A significant conductor is interpreted to coincide with the main surface showing, and the definitely anomalous zone extends over the full length of the surveyed area from L3 + 00N to L21 + 00N. This conductor coincides well with the mapped and interpreted fault zone which transects the full length of the claims.

A second conductor is subparallel to the main conductor and is located 250 - 300 meters to the west. The conductor is well defined from L6 + 00N to L10 + 00N, however is erratically indicated on Lines 1 + 50N, 3 + 00N, 15 + 00N and 18 + 00N. The defined portion of the conductor coincides with a mapped fault zone and high silver value in soil.

ECONOMIC POTENTIAL & RECOMMENDATIONS

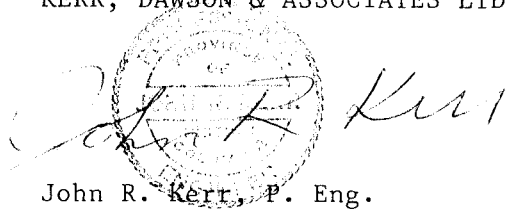
The existence of gold-silver values ranging 0.10 to 0.20 oz/ton Au and 1.0 - 2.0 oz/ton Ag over widths of 8 - 15 meters is certainly of economic significance. This zone has been exposed and sampled on surface over a strike length of 100 meters (see Figure 292-7, trench and assay plan). This zone is indicated by geochemistry and geophysics to exist over the full length of the surveyed area (> 2.0 km.)

A second zone indicated by a mapped fault zone, geochemistry, and geophysics may exist 250 - 300 meters west of the main zone, however to date has not been exposed or sampled on surface. Both zones are worthy of further exploration and development, therefore the following programme is recommended:

- 1). Allow for approximately 500 meters of diamond drilling in the main showing area.
- 2). Back-hoe trenching along the extended strike of the main zone, and on the second zone indicated to the west.
- 3). Continued geochemistry and VLF - EM surveys completed to the north of the surveyed area.

Respectfully Submitted By:

KERR, DAWSON & ASSOCIATES LTD.


John R. Kerr, P. Eng.
GEOLOGIST.

December 30, 1983.

Kamloops, B.C.

APPENDIX A

COST STATEMENT

COST STATEMENT

Field Programme June 29 - July 13, 1983.

LABOUR:

John R. Kerr, P. Eng. 2 3/4 days @ \$250.00/day	\$687.50	
W. Gruenwald, Geologist 10 days @ \$220.00/day	2,200.00	
M. Dawson, Sr. Field Tech. 16 days @ \$160.00/day	2,560.00	
K. Davies, Assistant 13 days @ \$130.00/day	1,690.00	
B. Game, Assistant 16 days @ \$120.00/day	<u>1,920.00</u>	
		\$9,057.50
Truck Rental		1,106.95
Assays & Geochemical Costs		4,419.00
Room & Board		1,570.10
Car Rental, Misc. Transport		313.50
Equipment Rental		400.00
Back-Hoe Rental		180.00
Purchase Supplies & Map Control		<u>291.10</u>
		\$17,338.15

Report Preparation & Compilation of Data

November/December, 1983.

John R. Kerr, P. Eng. 2 1/2 days @ \$250.00/day	625.00	
W. Gruenwald, Geologist 4 3/4 days @ \$240.00/day	1,140.00	
Secretarial	180.00	
Printing & Photocopying	<u>134.20</u>	
		<u>2,079.20</u>
	TOTAL:	<u><u>\$19,417.35</u></u>

APPENDIX B

ASSAYS & GEOCHEMICAL DATA

GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR.
THE SAMPLE IS DILUTED TO 10 MLS WITH WATER. ELEMENTS ANALYSED BY AA : AG.
SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., -80 MESH.
AU* - 10 GM, IGNITED, HOT AQUA REGIA LEACH MIBK EXTRACTION, AA ANALYSIS.

ASSAYER *Dean Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

KERR DAWSON & ASSOCIATES PROJECT # GROUP SONG FILE # 83-1192PAGE# 1

SAMPLE	AG PPM	AU* PFB
30N 15W	.1	5
30N 14+50W	.1	5
30N 14W	.1	10
30N 13+50W	.2	5
30N 13W	.2	5
30N 12+50W	.1	10
30N 12W	.1	5
30N 11+50W	.1	5
30N 11W	.1	5
30N 10+50W	.1	5
30N 10W	.1	5
30N 9+50W	.2	5
30N 9W	.1	5
30N 8+50W	.1	5
30N 8W	.1	5
30N 7+50W	.1	5
30N 7W	.1	10
30N 6+50W	.2	5
30N 6W	.1	5
30N 5+50W	.1	5
30N 5W	.1	5
30N 4+50W	.1	5
30N 4W	.1	5
30N 3+50W	.1	5
30N 3W	.1	5
30N 2W	.1	5
30N 1+50W	.1	5
30N 1W	.1	5
30N 0+50W	.1	10
30N 0+25W	.1	5
27N 17W	.1	5
27N 16+50W	.1	5
27N 16W	.1	5
27N 15+50W	.1	5
27N 15W	.1	5
27N 14+50W	.1	5
27N 14W	.1	5

SAMPLE	AG PPM	AU* PPB
27N 13+50W	.1	5
27N 13W	.1	5
27N 12+50W	.1	5
27N 12W	.1	5
27N 11+50W	.2	5
27N 11W	.1	5
27N 10+50W	5.0	5
27N 9+50W	.1	5
27N 9W	.1	5
27N 8+50W	.2	5
27N 8W	.2	5
27N 7+50W	.1	5
27N 7W	.1	10
27N 6+50W	.1	5
27N 6W	.3	5
27N 5+50W	.1	5
27N 5W	.1	5
27N 4+50W	.3	5
27N 4W	.1	5
27N 3+50W	.1	5
27N 3W	.1	5
27N 2+50W	.2	5
27N 2W	.3	5
27N 1+50W	.1	5
27N 1W	.3	5
27N 0+50W	.1	5
27N 0W	.2	5
24N 16W+50	.1	5
24N 16+50W	.1	10
24N 15W+50	.2	5
24N ¹⁵⁺⁰⁰ 14+50W	.3	5
24N 14+50W	.3	5
24N 14W	.1	5
24N 13+50W	.1	5
24N 13W	.1	5
24N 12+50W	.1	5
24N 12W	.1	5
24N 11+50W	1.2	15

SAMPLE	AG PPM	AU* PPB
24N 10+50W	.1	5
24N 10W	.1	5
24N 9+50W	.1	5
9+25W	.1	310
24N 8+50W	.1	5
24N 8W	.1	5
24N 7+50W	.1	5
24N 7W	.1	5
24N 6+50W	.1	5
24N 6W	.1	5
24N 5+50W	.1	5
24N 5W	.1	5
24N 4W	.1	5
24N 3+50W	.1	5
24N 3W	.1	5
24N 2+50W	.1	10
24N 2W	.1	5
24N 1+50W	.1	5
24N 1W	.2	5
24N 0+50W	.3	10
24N 0W	.1	5
24N 0+50E	.1	5
24N 1E	.2	10
24N 1+50E	.3	5
24N 2+50E	.1	5
24N 3E	.1	5
24N 3+50E	.1	5
24N 4E	.1	5
24N 4+50E	.1	5
24N 5E	.2	5
24N 5+50E	.3	10
24N 6E	.1	5
24N 6+50E	.4	5
24N 7E	.1	5
24N 7+50E	.1	10
24N 8E	.3	5
24N 8+50E	.1	5
24N 9E	.1	5

SAMPLE	AG PPM	AU* PPB
21N 15+50W	.1	5
21N 14+50W	.1	5
21N 14W	.1	5
21N 13W	.1	5
21N 12+50W	.1	5
21N 12W	.1	5
21N 11+50W	.1	5
21N 11W	.1	5
21N 10+50W	.1	5
21N 10W	.1	5
21N 9+50W	.1	5
21N 9W	.1	5
21N 8+50W	.2	5
21N 8W	.4	5
21N 7+50W	.1	5
21N 7W	.1	5
21N 6+50W	.1	5
21N 6W	.1	5
21N 5+50W	.1	5
21N 5W	.3	5
21N 4+50W	.2	5
21N 4W	.4	5
21N 3+50W	.3	5
21N 3W	.7	5
21N 2+50W	.8	5
21N 2W	.9	5
21N 1+50W	.6	5
21N 1W	.4	5
21N 0+50W	.4	5
21N 0A	.7	5
21N 0W	.3	5
21N 0+50E	.4	10
21N 1E	.1	5
21N 1+50E	.2	5
21N 2E	.3	5
21N 2+50E	.2	5
21N 3E	.1	5

SAMPLE	AG PPM	AU* PPB
21N 3+50E	.1	5
21N 4E	.1	5
21N 4+50E	.2	5
21N 5E	.2	5
21N 5+50E	.1	5
21N 6E	.1	5
21N 6+50E	.1	5
21N 7E	.1	5
21N 7+50E	.1	5
21N 8E	.1	5
21N 8+50E	.4	5
21N 9E	.3	5
21N 9+50E	.1	5
21N 10E	.3	5
18N 15W	.1	5
18N 14+50W	.1	5
18N 14W	.1	5
18N 13+50W	.1	5
18N 13W	.1	5
18N 12+50W	.1	5
18N 12W	.1	5
18N 11+50W	.1	5
18N 11W	.1	5
18N 10+50W	.1	5
18N 10W	.1	5
18N 9+50W	.1	5
18N 9W	.1	5
18N 8+50W	.1	5
18N 8W	.1	5
18N 7+50W	.1	5
18N 7W	.1	5
18N 6+50W	.1	5
18N 5+50W	.1	5
18N 5W	.1	5
18N 4+50W	.1	5
18N 4W	.1	5
18N 3+50W	.1	5

SAMPLE	AG PPM	AU* PPB
18N 3W	.5	5
18N 2+50W	1.3	5
18N 2W	.3	5
18N 1W	.2	5
18N 0+50W	.1	5
18N 0W	.4	5
18N 0+50E	.1	5
18N 1E	1.2	5
18N 1+50E	.6	5
18N 2E	.1	5
18N 2+50E	.1	5
18N 3E	2.8	15
18N 3+50E	.4	5
18N 4E	.3	5
18N 4+50E	.4	5
18N 5E	.5	5
18N 5+50E	.5	5
18N 6E	.6	5
18N 6+50E	.3	5
18N 7E	.2	5
18N 7+50E	.2	5
18N 8E	.6	5
18N 8+50E	.4	5
18N 9E	.4	5
18N 9+50E	.5	5
18N 10E	.6	5
15N 10W	.4	10
15N 9+50W	.2	5
15N 9W	.3	5
15N 8+50W	.4	5
15N 7+50W	.5	5
15N 7W	.2	5
15N 6+50W	.5	5
15N 6W	.6	5
15N 5W	.2	5
15N 4+50W	.4	5

SAMPLE	AG PPM	AU* PPB
15N 4W	.1	5
15N 3+50W	.2	5
15N 3W	.1	15
15N 2+50W	.1	5
15N 2W	.1	5
15N 1+50W	.3	5
15N 1W	.1	5
15N 0+50W	.2	5
15N 0W	.7	5
14N 10W	.1	5
14N 9+50W	.2	5
14N 9W	.1	5
14N 8+50W	.1	5
14N 8W	.1	5
14N 7+50W	.1	5
14N 7W	.1	5
14N 6W	.1	5
14N 5+50W	.4	5
14N 5W	.1	5
14N 4+50W	.4	5
14N 4W	.1	5
14N 3+50W	.1	5
14N 3W	.1	5
14N 2+50W	.1	5
14N 2W	.1	5
14N 1+50W	.1	5
14N 1W	.1	5
14N 0+50W	.1	5
14N 0W	.2	5
13N 10W	.1	5
13N 9+50W	.1	60
13N 9W	.1	5
13N 8+50W	.1	5
13N 8W	.1	5
13N 7+50W	.1	5
13N 7W	.1	5
13N 6+50W	.1	5

SAMPLE	AG PPM	AU PPB
13N 6W	.1	5
13N 5+50W	.1	5
13N 5W	.1	5
13N 4+50W	.1	5
13N 4W	.1	5
13N 3+50W	.1	5
13N 3W	.1	5
13N 2+50W	.1	5
13N 2W	.7	5
13N 1+50W	.2	5
13N 1W	.3	5
13N 0+50W	.2	5
13N 0W	.2	5
12N 10W	.1	5
12N 9+50W	.1	45
12N 9W	.8	5
12N 8W	.1	5
12N 7+50W	.1	5
12N 7W	.1	5
12N 6+50W	.1	5
12N 6W	.1	5
12N 5+50W	.1	5
12N 5W	.1	5
12N 4+50W	.2	1
12N 4W	.1	5
12N 3+50W	.1	5
12N 3W	.1	5
12N 2+50W	.1	5
12N 2W	.1	5
12N 1+50W	.1	5
12N 1W	.1	5
12N 0+50W	.1	5
12N 0W	.1	5
11N 10W	.1	105
11N 9+50W	.1	5
11N 9W	.1	5
11N 8+50W	.1	5

SAMPLE	AG PPM	AU* PPB
11N 8W	.2	5
11N 7+50W	.2	5
11N 7+25W	.1	5
11N 7W	.1	5
11N 6+75W	.1	5
11N 6+50W	.2	5
11N 6+25W	.3	5
11N 6W	.5	5
11N 5+75W	.5	5
11N 5+50W	1.0	5
11N 5+25W	.3	5
11N 5W	.7	5
11N 4+75W	.3	5
11N 4+50W	.9	5
11N 4+25W	.5	5
11N 4W	.5	5
11N 3+75W	.3	5
11N 3+50W	1.0	5
11N 3+25W	.4	5
11N 3W	.3	5
11N 2+75W	.5	5
11N 2+50W	.6	5
11N 2W	.4	5
11N 1+50W	.7	5
11N 1W	1.1	5
11N 0+50W	.4	5
11N 0W	.6	5
10+50N 7+50W	.6	5
10+50N 7+25W	.3	5
10+50N 7W	.1	5
10+50N 6+75W	.1	5
10+50N 6+50W	.2	5
10+50N 6+25W	.1	5
10+50N 6W	.1	5
10+50N 5+75W	.1	5
10+50N 5+50W	.8	5
10+50N 5+25W	.5	10
10+50N 5W	.4	10

SAMPLE	AG PPM	AU PPB
10+50N 4+75W	.1	5
10+50N 4+50W	.1	5
10+50N 4+25W	.4	5
10+50N 4W	.1	5
10+50N 3+75W	.1	5
10+50N 3+50W	.4	15
10+50N 3+25W	.2	5
10+50N 3W	.4	5
10+50N 2+75W	.6	5
10+50N 2+50W	.8	10
10N 10W	.1	5
10N 9+50W	.2	5
10N 9W	.1	5
10N 8+50W	.1	5
10N 8W	.1	5
10N 7+50W	.1	5
10N 7+25W	.1	5
10N 7W	.1	5
10N 6+75W	.1	5
10N 6+50W	.1	5
10N 6+25	.1	5
10N 6W	.1	5
10N 5+75W	.1	5
10N 5+50W	.1	5
10N 5+25W	.1	5
10N 5W	.3	5
10N 4+75W	.2	5
10N 4+50W	.1	5
10N 4+25W	.1	5
10N 4W	.1	15
10N 3+75W	.1	5
10N 3+50W	.2	5
10N 3+25W	.3	5
10N 3W	.2	5
10N 2+75W	.1	5
10N 2+50W	.1	5
10N 2W	.1	5

A

SAMPLE	AG PPM	AU* PPB
10N 1+50W	.1	10
10N 1W	.1	5
10N 0+50W	.2	5
10N 0W	.3	5
9+50N 7+50W	.1	5
9+50N 7+25W	.1	5
9+50N 7W	.1	5
9+50N 6+75W	.1	5
9+50N 6+50W	.1	5
9+50N 6+25W	.1	5
9+50N 6W	.1	5
9+50N 5+75W	.1	5
9+50N 5+50W	.1	5
9+50N 5+25W	.2	5
9+50N 5W	.2	5
9+50N 4+75W	.1	5
9+50N 4+50W	.1	5
9+50N 4+25W	.2	5
9+50N 4W	.2	5
9+50N 3+75W	.3	5
9+50N 3+50W	.1	5
9+50N 3+25W	.2	5
9+50N 3W	.2	10
9+50N 2+75W	.1	5
9+50N 2+50W	.1	5
9N 10W	.1	5
9N 9+50W	.1	5
9N 9W	.1	5
9N 8+50W	.1	5
9N 8W	.1	5
9N 7+50W	.1	5
9N 7+25W	.1	5
9N 7W	.1	5
9N 6+75W	.1	5
9N 6+50W	.1	5
9N 6+25W	.1	5
9N 6W	.1	5

SAMPLE	AG PPM	AU* PPB
9N 5+75W	.1	5
9N 5+50W	.1	5
9N 5+25W	.1	5
9N 5W	.1	5
9N 4+75W	.1	5
9N 4+50W	1.1	10
9N 4+25W	.1	15
9N 4W	.1	5
9N 3+75W	.1	5
9N 3+50W	.1	10
9N 3+25W	.1	5
9N 3W	.2	10
9N 2+75W	.3	5
9N 2+50W	.1	5
9N 2W	.1	5
9N 1+50W	.1	5
9N 1W	.5	5
9N 0+50W	.2	5
9N 0W	.7	5
8+50N 7+50W	.3	5
8+50N 7+25W	.1	5
8+50N 7W	.1	5
8+50N 6+75W	.1	10
8+50N 6+50W	.1	5
8+50N 6+25W	.1	5
8+50N 6W	.1	5
8+50N 5+75W	.1	5
8+50N 5+50W	.1	5
8+50N 5+25W	.1	10
8+50N 5W	.1	5
8+50N 4+75W	.1	5
8+50N 4+50W	.1	5
8+50N 4+25W	2.9	55
8+50N 4W	.3	10
8+50N 3+75W	.2	5
8+50N 3+50W	.3	5
8+50N 3+25W	.2	5

SAMPLE	AG PPM	AU* PPB
8+50N 3W	.3	5
8+50N 2+75W	.1	5
8+50N 2+50W	.1	5
8N 10W	.1	5
8N 9+50W	.1	5
8N 9W	.1	10
8N 8+50W	.1	5
8N 8W	.1	5
8N 7+50W	.1	5
8N 7+25W	.1	5
8N 7W	.1	5
8N 6+75W	.1	5
8N 6+50W	.1	5
8N 6+25W	.1	5
8N 6W	.1	5
8N 5+75W	.1	5
8N 5+50W	.1	5
8N 5+25W	.1	5
8N 5W	.1	5
8N 4+75W	.1	5
8N 4+50W	.1	5
8N 4+25W	3.4	235
8N 4W	2.4	165
8N 3+75W	.1	5
8N 3+50W	.3	20
8N 3+25W	.1	5
8N 3W	.2	5
8N 2+75W	.1	5
8N 2+50W	.1	5
8N 2W	.1	5
8N 1+50W	.1	5
8N 1W	.1	5
8N 0+50W	.1	5
8N 0W	.1	5
7+50N 7+50W	.1	5
7+50N 7+25W	.1	5
7+50N 7W	.1	5

SAMPLE	AG PPM	AU* PPB
7+50N 6+75W	.2	5
7+50N 6+50W	.3	5
7+50N 6+25W	5.0	5
7+50N 6W	.1	5
7+50N 5+75W	.1	5
7+50N 5+50W	.1	5
7+50N 5+25W	.1	5
7+50N 5W	.1	5
7+50N 4+75W	.1	5
7+50N 4+50W	.1	5
7+50N 4+25W	.2	10
7+50N 4W	1.5	70
7+50N 3+75W	.2	10
7+50N 3+50W	.1	5
7+50N 3+25W	.1	5
7+50N 3W	.1	5
7+50N 2+75W	.1	5
7+50N 2+50W	.1	5
7N 10W	.2	5
7N 9+50W	.1	5
7N 9W	.1	5
7N 8+50W	.1	5
7N 8W	.1	5
7N 7+50W	.1	5
7N 7+25W	.1	5
7N 6+75W	.1	5
7N 6+50W	.1	5
7N 6+25W	.3	5
7N 6W	.1	5
7N 5+75W	.1	5
7N 5+50W	.1	5
7N 5+25W	.1	10
7N 5W	.1	5
7N 4+75W	.1	5
7N 4+50W	.1	5
7N 4+25W	.1	5

SAMPLE	AG PPM	AU* PPB
7N 4W	.1	5
7N 3+75W	2.2	180
7N 3+50W	.1	5
7N 3+25W	.1	5
7N 3W	.1	5
7N 2+75W	.1	5
7N 2+50W	.1	5
7N 2W	.2	5
7N 1+50W	.1	5
7N 1W	.9	5
7N 0+50W	.2	5
7N 0W	.1	5
7N 0+30E	.2	5
6+50N 7+50W	.1	5
6+50N 7+25W	.2	15
6+50N 7W	.1	5
6+50N 6+75W	.1	5
6+50N 6+50W	.1	5
6+50N 6+25W	.1	5
6+50N 6W	.1	5
6+50N 5+75W	.1	5
6+50N 5+50W	.1	5
6+50N 5+25W	.1	5
6+50N 5W	.1	5
6+50N 4+75W	.1	5
6+50N 4+50W	.1	5
6+50N 4+25W	.1	5
6+50N 4W	.1	5
6+50N 3+75W	.1	5
6+50N 3+50W	.1	5
6+50N 3+25W	.1	5
6+50N 3W	.1	5
6+50N 2+75W	.1	5
6+50N 2+50W	.1	5
6N 10W	.1	5
6N 9+50W	.1	5
6N 9W	.1	5

SAMPLE	AG PPM	AU* PPB
6N 8+50W	.6	5
6N 8W	.5	5
6N 7+50W	.1	5
6N 7+25W	.4	5
6N 7W	.3	5
6N 6+75W	.4	5
6N 6+50W	.6	5
6N 6+25W	.7	5
6N 6W	.5	5
6N 5+75W	.4	5
6N 5+50W	.6	4
6N 5+25W	.3	5
6N 5+10W	.4	5
6N 5W	.4	5
6N 4+75W	.7	5
6N 4+50W	.4	5
6N 4+25W	.2	5
6N 4W	.4	5
6N 3+75W	.5	10
6N 3+50W	.4	5
6N 3+25W	.5	5
6N 3W	.4	5
6N 2+75W	.8	5
6N 2+50W	.9	5
6N 2W	.5	5
6N 1+50W	.2	5
6N 1W	.4	40
6N 0+50	.8	10
6N 0W	.4	5
5N 10W	1.1	5
5N 9+50W	.4	5
5N 9W	.6	5
5N 8+50W	.1	5
5N 8W	.2	5
5N 7+50W	.1	5
5N 7W	.3	5
5N 6+50W	.4	5
5N 6W	.3	5

SAMPLE	AG PPM	AU* PPB
5N 5+50W	.3	10
5N 5W	.3	5
5N 4+50W	.4	5
5N 4W	.1	5
5N 3+50W	.1	5
5N 3W	.1	5
5N 2+50W	.1	5
5N 2W	.1	5
5N 1W	.2	10
5N 0+50W	.4	5
5N 0W	.4	15
4N 10W	.2	5
4N 9+50W	.2	10
4N 9W	.3	5
4N 8+50W	.2	5
4N 8W	.1	45
4N 7+50W	.1	5
4N 7W	.3	5
4N 6+50W	.1	5
4N 6W	.1	5
4N 5+50W	.1	5
4N 5W	.2	5
4N 4+50W	.5	5
4N 4W	.4	5
4N 3+50W	.4	5
4N 3W	.3	5
4N 2+50W	.1	5
4N 2W	.2	5
4N 1+50W	.3	5
4N 1W	.1	10
4N 0+50W	.1	5
4N 0W	.2	55
3N 10W	.3	5
3N 9W	.4	5
3N 8+50W	.3	5
3N 8W	.4	5
3N 7+50W	.8	5

SAMPLE	AG PPM	AU* PPB
3N 7W	.2	5
3N 6+50W	.6	5
3N 6W	.7	5
3N 5+50W	.1	5
3N 5W	.1	5
3N 4+50W	.4	5
3N 4W	.1	5
3N 3+50W	.1	5
3N 3W	.1	5
3N 2+50W	.2	5
3N 2W	.3	5
1+50N 10W	.2	5
1+50N 9+50W	.7	5
1+50N 7W	.3	5
1+50N 6+50W	.3	5
1+50N 6W	.4	5
1+50N 5+50W	.3	5
1+50N 5W	.4	5
1+50N 4+50W	.5	5
1+50N 4W	.1	5
1+50N 3+50W	.1	5
1+50N 3W	.2	5
1+50N 2+50W	.5	5
1+50N 2W	.3	5

SAMPLE	AG PPM	AU* PPB
R-1	.6	15
R-2	.4	5
R-3	.4	5
R-4	.2	5
R-5	.1	5
R-6	.1	5
R-7	.1	5
R-8	.7	10
R-9	.2	5
R-10	.1	5
R-11	.1	5
R-12	.1	5
R-13	.6	5
R-14	35.0	3100
R-15	.6	10
R-16	.8	15
R-17	.5	5
R-18	.5	5
R-19	.2	5
R-20	.7	25
R-21	1.2	60
R-22	11.3	660
R-23	2.4	75
R-24	1.4	15
R-25	3.4	430
R-26	2.4	260
R-27	1.6	60
R-28	31.8	3200
R-29	1.6	70
R-30	40.0	4500
R-31	32.5	2700
R-32	29.0	2600
R-33	6.9	90



To: Kerr, Dawson & Associates Ltd.,
Suite 206 - 310 Nicola St.,
Kamloops, B.C.
V2C 2P5

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone: 253 - 3158

83-1192 B

File No. _____

Type of Samples Rock

Disposition _____

ASSAY CERTIFICATE

F A

No.	Sample	Ag oz/ton	Au oz/ton					No.
1	R - 14	1.10	.134		1.70			1
2								2
3	22	.26	.073		3.20			3
4	23	.08	.007					4
5	24	.05	.002					5
6	25	.09	.026		2.00			6
7	26	.07	.024		5.00			7
8	27	.04	.003					8
9	28	.94	.128					9
10	29	.06	.003		1.50			10
11	30	1.26	.221		1.50			11
12	31	1.00	.111					12
13	R - 32	.73	.126					13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED _____

DATE REPORTS MAILED July 25, 1983

ASSAYER _____

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

APPENDIX C

WRITER'S CERTIFICATE

JOHN R. KERR, P. ENG.

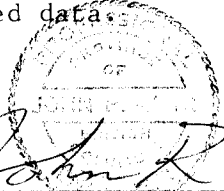
Geological Engineer

#206 - 310 NICOLA STREET • KAMLOOPS, B.C. V2C 2P5 • TELEPHONE (604) 374-0544

CERTIFICATE

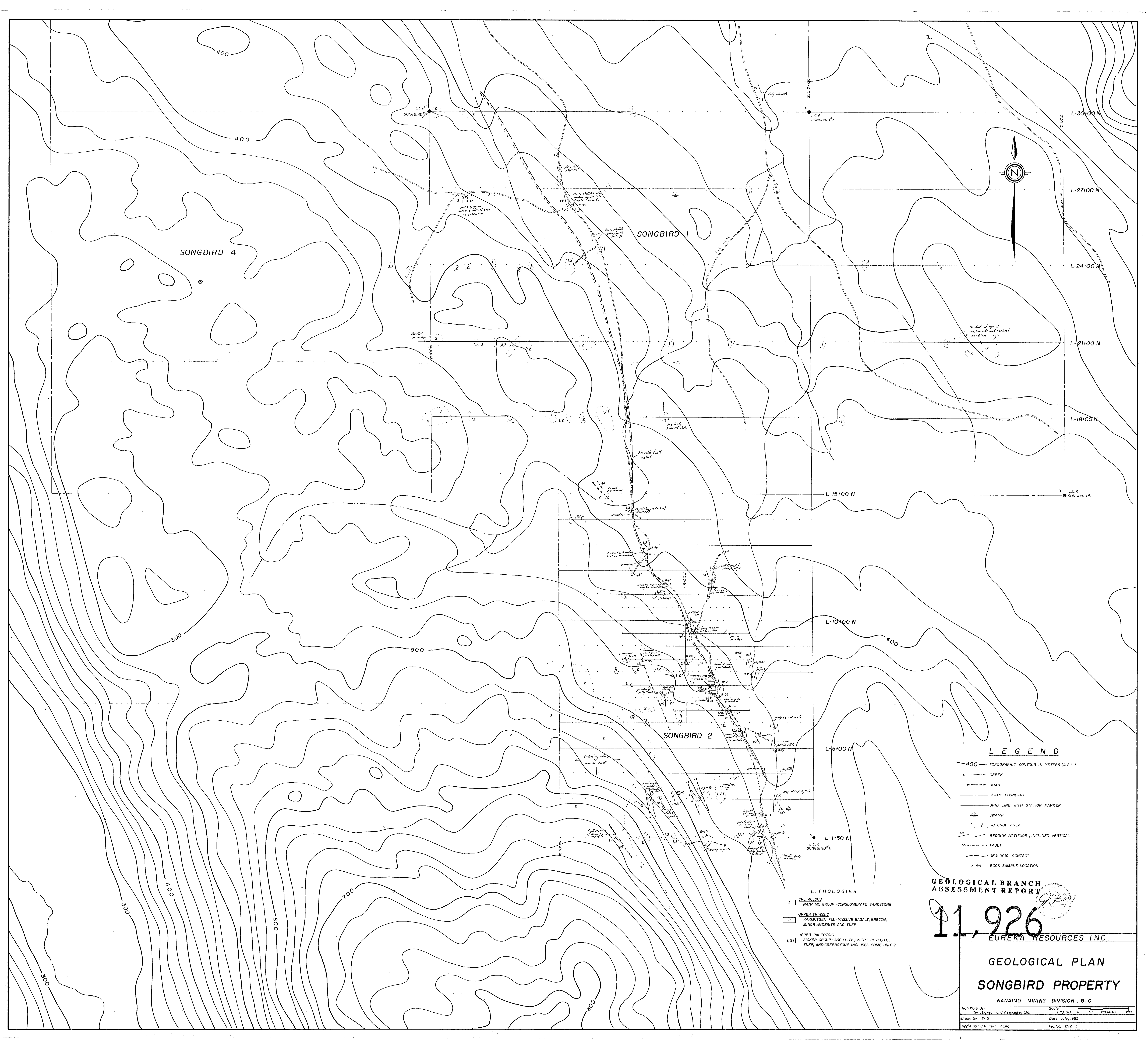
I, JOHN R. KERR, OF KAMLOOPS, B.C. DO HEREBY CERTIFY THAT:

- (1). I am a member of the Association of Professional Engineers of British Columbia and a Fellow of the Geological Association of Canada.
- (2). I am a geologist employed by Kerr, Dawson and Associates Ltd. of #206- 310 Nicola Street, Kamloops, B.C.
- (3). I am a graduate of the University of British Columbia (1964), with a B.A. Sc. degree in Geological Engineering.
- (4). I am an officer and director of Eureka Resources Inc.,
- (5). I supervised and assisted in the collection of data as compiled in this report. I am the author of this report which is based on the aforementioned data.


John R. Kerr
John R. Kerr, P. Eng.

December 30, 1983.

KAMLOOPS, B.C.



LEGEND

- 400 — TOPOGRAPHIC CONTOUR IN METERS (A.S.L.)
- CREEK
- ROAD
- CLAIM BOUNDARY
- GRID LINE WITH STATION MARKER
- SWAMP
- OUTCROP AREA
- BEDDING ATTITUDE, INCLINED, VERTICAL
- FAULT
- GEOLOGIC CONTACT
- X R13 ROCK SAMPLE LOCATION

- LITHOLOGIES**
- 3 CRETACEOUS
NANAIMO GROUP - CONGLOMERATE, SANDSTONE
 - 2 UPPER TRIASSIC
KARMUTSEN F.M. - MASSIVE BASALT, BRECCIA,
MINOR ANDESITE AND TUFF.
 - 1,2 UPPER PALEOZOIC
SICKER GROUP - ARGILLITE, CHERT, PHYLLITE,
TUFF, AND GREENSTONE. INCLUDES SOME UNIT 2

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

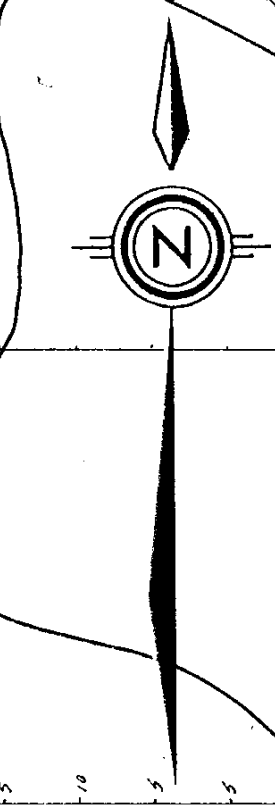
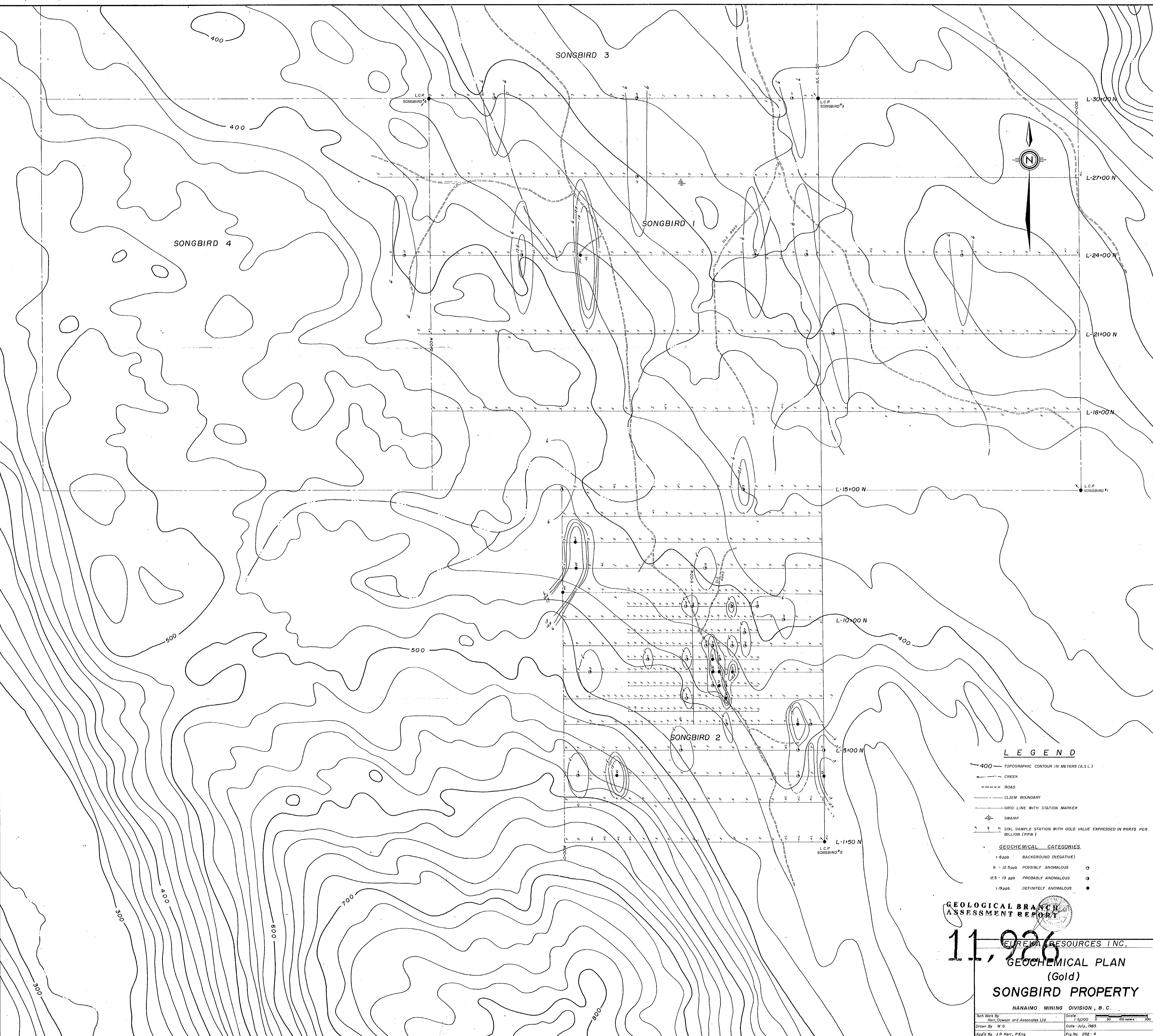
11,926

EUREKA RESOURCES INC.

**GEOLOGICAL PLAN
SONGBIRD PROPERTY**

NANAIMO MINING DIVISION, B.C.

Recl Work By: Kerr, Dawson and Associates Ltd. Scale: 1:5000 0 50 100 meters 0 50
 Drawn By: W.G. Date: July, 1983
 Appl'd By: J.R. Kerr, P.Eng. Fig No. 292-3



LEGEND

- 400 — TOPOGRAPHIC CONTOUR IN METERS (A.S.L.)
 - CREEK
 - ROAD
 - CLAIM BOUNDARY
 - GRID LINE WITH STATION MARKER
 - SWAMP
 - □ SOIL SAMPLE STATION WITH GOLD VALUE EXPRESSED IN PARTS PER BILLION (PPB.)
- GEOCHEMICAL CATEGORIES**
- < 6ppb BACKGROUND (NEGATIVE)
 - 6 - 12.5ppb POSSIBLY ANOMALOUS ○
 - 12.5 - 19 ppb PROBABLY ANOMALOUS □
 - > 19ppb DEFINITELY ANOMALOUS ●

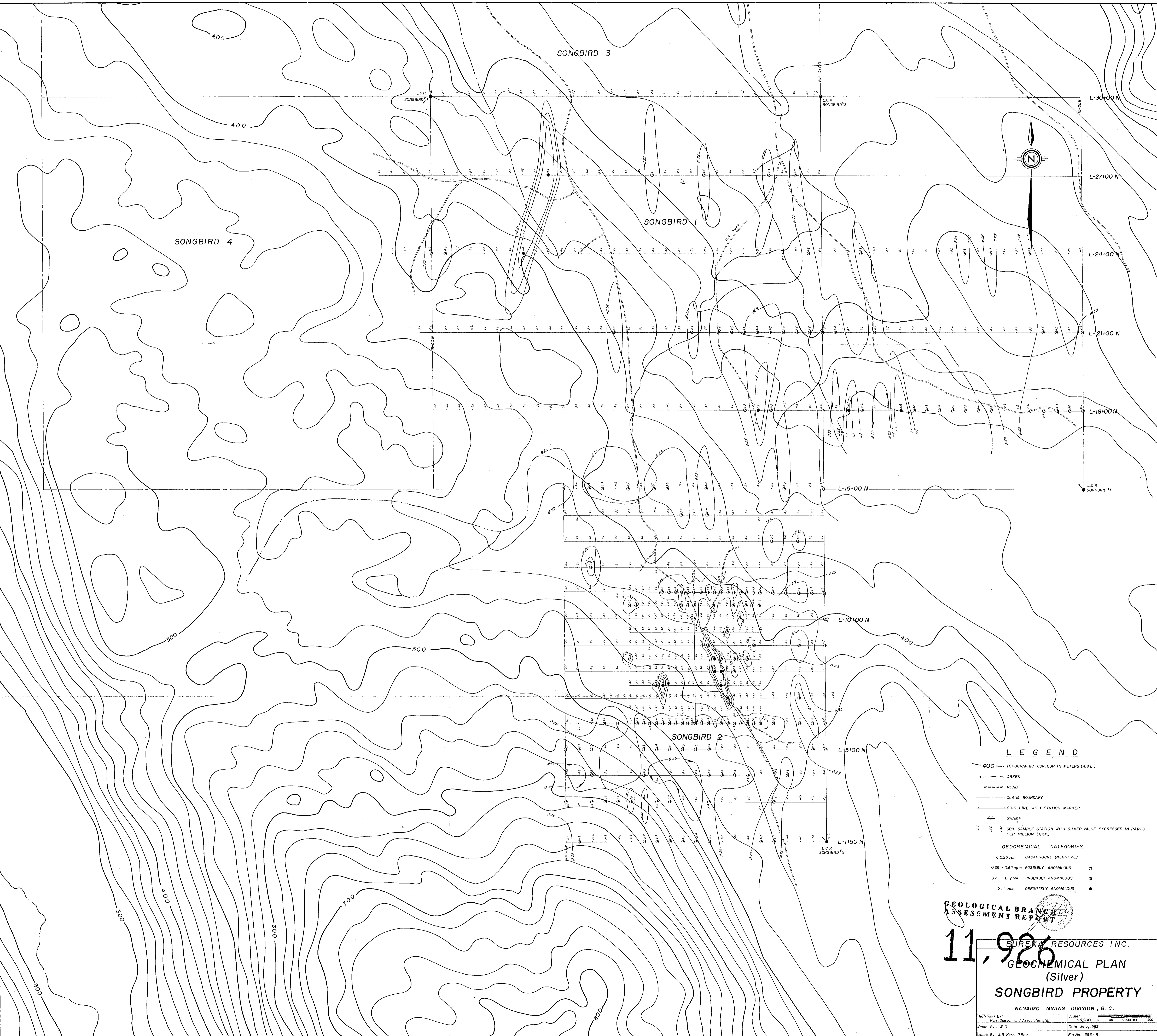
GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,926

EUREKA RESOURCES INC.
GEOCHEMICAL PLAN
(Gold)
SONGBIRD PROPERTY

NANAIMO MINING DIVISION, B. C.

Tech Work By Kerr, Dawson and Associates Ltd.	Scale 1:5000
Drawn By: W.G.	Date: July, 1983.
App'd By: J.R. Kerr, P.Eng.	Fig. No. 292-4



LEGEND

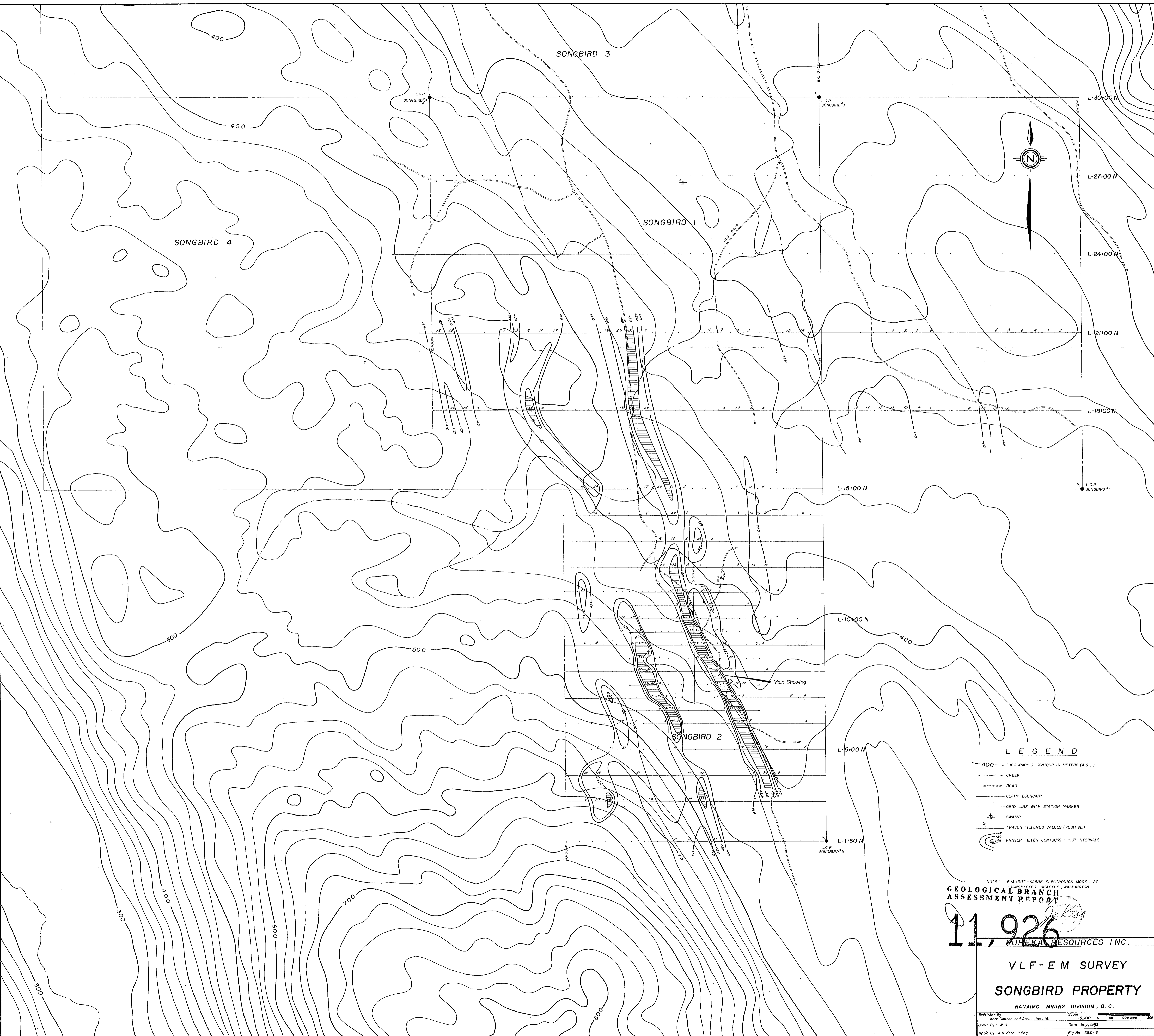
- 400 — TOPOGRAPHIC CONTOUR IN METERS (A.S.L.)
 - CREEK
 - ROAD
 - CLAIM BOUNDARY
 - GRID LINE WITH STATION MARKER
 - SWAMP
 - □ SOIL SAMPLE STATION WITH SILVER VALUE EXPRESSED IN PARTS PER MILLION (PPM)
- GEOCHEMICAL CATEGORIES**
- < 0.25ppm BACKGROUND (NEGATIVE)
 - 0.25 - 0.65ppm POSSIBLY ANOMALOUS ○
 - 0.7 - 1.1ppm PROBABLY ANOMALOUS □
 - > 1.1ppm DEFINITELY ANOMALOUS ●

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,926
BUREKA RESOURCES INC.
GEOCHEMICAL PLAN
(Silver)
SONGBIRD PROPERTY

NANAIMO MINING DIVISION, B. C.

Tech Work By Kerr, Dawson and Associates Ltd.	Scale 1:5000 0 50 100 meters
Drawn By W. G.	Date July, 1993
App'd By J. R. Kerr, P. Eng.	Fig No. 292-5



LEGEND

- 400 — TOPOGRAPHIC CONTOUR IN METERS (A.S.L.)
- CREEK
- ROAD
- CLAIM BOUNDARY
- GRID LINE WITH STATION MARKER
- SWAMP
- FRASER FILTERED VALUES (POSITIVE)
- FRASER FILTER CONTOURS - 10' INTERVALS

NOTE: E.M. UNIT - SABRE ELECTRONICS MODEL 27
 TRANSMITTER - SEATTLE, WASHINGTON.

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

11,926

PUREKA RESOURCES INC.

**VLF-E M SURVEY
 SONGBIRD PROPERTY**

NANAIMO MINING DIVISION, B. C.

Tech Work By: Kerr, Dawson and Associates Ltd.	Scale: 1:5,000
Drawn By: W.G.	Date: July, 1993
App'd By: J.R. Kerr, P.Eng.	Fig No: 292-6