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PRELIMINARY GEOLOGY AND SOIL GEOCHEMISTRY

HUMMING BIRD CLAIM GROUP

APEX CREEK AREA

NELSON MINING DIVISION

NELSON, B.C.

NTS 82 F/6 E

LATITUDE 49°28'N, LONGITUDE 117°10'W

FILMED

Prepared for

EAGLE RIDGE RESOURCES LTD.
GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,867

ARCTEX ENGINEERING SERVICES

Locke B. Goldsmith, P.Eng.
Consulting Geologist

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Geologist

July 21, 1986

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	(Pocket inside back cover)

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HUMMING BIRD CLAIM GROUP

APEX CREEK AREA

NELSON MINING DIVISION

NELSON, B.C.

SUMMARY

The Humming Bird 1 to 11 mineral claims are located in the Nelson Mining Division, 9 km southeast of Nelson, B.C. The claims straddle the northern edge of a roof pendant comprised of Mid-Mesozoic or older Ymir Group sediments which have been intruded by the early Upper Jurassic Nelson batholith.

Lead-zinc-silver-gold mineralization occurs in bedding-parallel veins and fault breccia zones within the argillaceous quartzites of the Ymir Group. Similar veins hosted in the granodiorite are reported to occur on the property, but these were not observed.

Soil geochemical sampling has indicated two areas, one with anomalous Pb, the other with anomalous Zn values. These occur remote from known mineralized areas and are not considered high priority exploration possibilities.

Available targets within the immediate vicinity of the underground workings appear to be extensions and remnants of previously mined veins. The potential to develop appreciable tonnages containing economic grades appears to be limited. Assessment work has been filed to keep the claims in good standing for one year. Otherwise no additional exploration should be contemplated at this time.

INTRODUCTION

The Humming Bird 1 to 11 (inclusive) mineral claims are located in the Nelson Mining Division, 9 kilometres southeast of Nelson, B.C. They cover the southwestern flanks and crest of the ridge dividing Five Mile Creek and Apex Creek drainages. Elevation of the property ranges from 1585 metres to 2000 metres above sea level. The claims include co-ordinates N49° 28' latitude, W117° 10' longitude, on NTS map sheet 82 F/6 E.

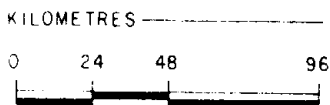
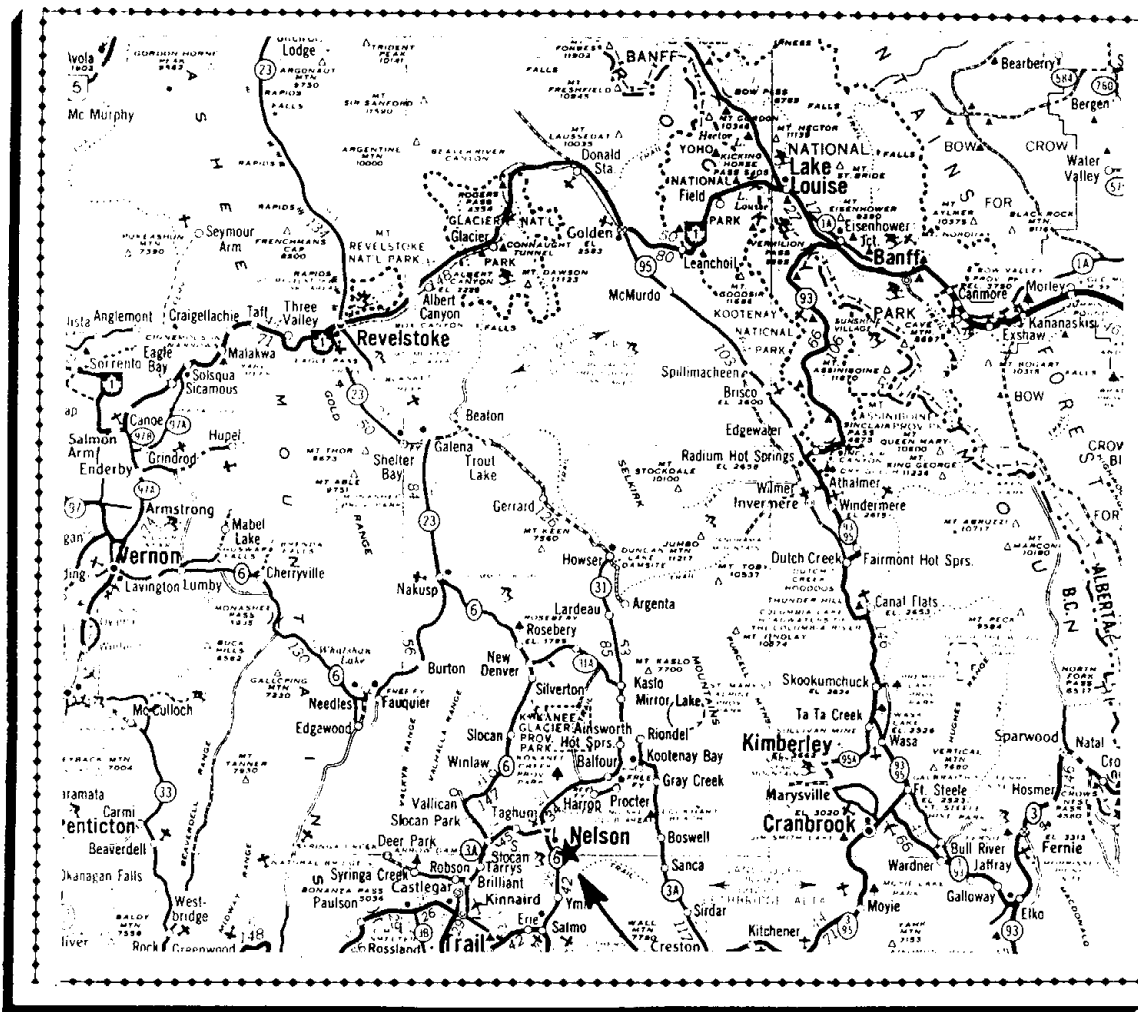
The accompanying claim map shows the property to be comprised of eleven two-post located claims (six full-sized claims and five various-sized portions) totalling approximately 177 hectares.

<i>Claim Name</i>	<i>Record Number</i>	<i>Expiry Date</i>
Humming Bird 1	782(9)	11 September 1988
Humming Bird 2	783(9)	11 September 1988
Humming Bird 3	2683(7)	12 July 1987
Humming Bird 4-11	3345(7) - 3352(7)	22 July 1987

Access to the property from Nelson can be achieved by vehicle from Highway 6 and thence by an all-weather gravel road servicing Whitewater Ski area. The latter departs Highway 6, 9.5 kilometres south of Nelson. The gravel road passes within 0.5 kilometres of the southern part of the claim group. At a distance of 7.0 kilometres from Highway 6 an old mine access road crosses Apex Creek and continues up to the mine workings, a distance of approximately 2 kilometres. The mine road requires bridge repairs and bulldozer work to permit vehicle access onto the claims. One day of dozer time should be adequate to make the road passable.

Initiation of Phase I recommendations (T.R. Tough, 1983) was carried out in July 1986. The programme included prospecting, a geochemical soil sampling survey, and preliminary geological mapping in the vicinity of the two workings. The objective was to assess the potential of the property to host economic concentrations of precious and base metal mineralization.

EAGLE RIDGE RESOURCES LTD. HUMMING BIRD PROPERTY



LOCATION MAP

Apex Creek area,
Nelson Mining Division

JAMES M. LOGAN & LOCKE B. GOLDSMITH, P. Eng.
GEOLOGIST CONSULTING GEOLOGIST



Arctex Engineering Services June 1986

HISTORY

The following is condensed from the Minister of Mines, Report for 1933 (1934).

Following the discovery of high-grade gold-bearing float in a tributary of Five Mile Creek, ground sluicing resulted in exposing two parallel quartz veins. By 1922, the upper vein had been exposed for 30 metres, with an open cut at the northeast end and a 3-metre incline shaft at the southwest end. The open cut exposed an ore shoot which returned assays across 0.61 metres of 176.6 gm Au/tonne, 110 gm Ag/tonne, 5.5% Pb and 1.9% Zn (Rpt. of Minister of Mines, 1921). By 1932, the camp was supplied with bunk and cookhouse, a portable 2-drill gas-driven compressor, blacksmith shop and assorted mining equipment. Underground workings explored the vein along 40 metres of drifting. The drift trends 055° Az. A lower adit was started 265 metres southwest and 42 metres vertically below the portal of the upper adit. Records are incomplete and it is uncertain whether the mineralized breccia vein which was intersected in the lower adit corresponds to the vein in the upper adit.

Production from the Humming Bird claims is recorded for 1933 and 1934. This totalled 76 tonnes, containing 1.96 kg Au, 4.70 kg Ag, 5.15×10^3 kg Zn, and 1.33×10^3 kg Pb (Little, 1960).

GEOLOGY

Regional

The Humming Bird claims lie along the western margin of the Kootenay Arc. This complex metamorphic and structural belt marks the transition from North American rocks of the Cordilleran miogeocline to the allochthonous terranes that were accreted to the craton in mid-Jurassic time.

The property is situated on the northeastern margin of a roof pendant composed of Mid-Mesozoic or older metasediments which has been crosscut by later, Jurassic intrusives. Pelitic, arenaceous and calcareous rocks of the Ymir Group, correlated in part with the Archibald Formation and the Upper Triassic Slocan Group (Little, 1985), underlie the southern portion of the claims. In the northern

half of the property, extensive areas are underlain by medium-grained massive to gneissic granodiorite of the early Upper Jurassic Nelson batholith.

Local Stratigraphy

The Ymir Group sediments in the Apex area are apparently equivalent to the middle or upper sections of the Group as described by Little (1960). The sediments include argillaceous quartzites, banded argillaceous quartzites, argillites and calcareous quartzites.

Argillaceous quartzites predominate over much of the southern claims. Bedding thickness averages 15 cm, though 0.5 metres is not uncommon. In outcrop it weathers a light brown colour. A banded variety described by McAllister (1951) was also encountered. The banded argillaceous member consists of uniform 2 cm to 5 cm thick bands, varying in colour from light grey to greenish grey, and in biotite content. Near the granite this rock has been thoroughly recrystallized, in places resembling chert. This unit is exposed at the portal of the lower adit and along the trail up-slope from the portal. Argillites, lesser slates, and hornfelsed rocks are exposed along the mine access road and in cliffs west of the northwest-trending canyon, indicated by Little (1985) to contain a fault. Calcareous quartzites are reported to be exposed in the canyon walls, south of the lower workings (McAllister, 1951). A section of calcareous quartzites (approximately 3 metres wide) was mapped along Line 1S between stations 4 and 5E.

The average trend of the sediments is 070° Az with dips of 50° to 60° SE. A prominent jointing set strikes 090° Az and dips 070° S and N.

Intrusives

Granitic rocks of the early Upper Jurassic Nelson batholith occupy much of the northern portion of the claims. The composition is granodiorite, hornblende > biotite, and the texture commonly gneissic.

Numerous granitic sills, averaging 0.6 m in thickness, cut the sedimentary rocks (McAllister, 1951). A lamprophyre dyke reported in the area between the granite contact and quartzites north of the lower adit portal was not located during mapping.

The granodiorite is well jointed along planes trending 070° Az to 100° Az and dipping steeply to the southeast or south.

UNDERGROUND WORKINGS

Two principal areas have been explored by underground development. The main or upper adit is located at baseline, 00, and an elevation of 1769 metres a.s.l. The lower adit is 53 metres vertically below (1716 metres a.s.l.) at 1+50S 2+00W. Numerous open cuts, prospect pits and trenches are scattered over the claims; most are sloughed but several can be seen to contain barren quartz or quartz containing base metal sulphides.

Underground development on the main vein includes a 22.9-metre crosscut which intersects the vein and drifting which explores the vein 26 metres to the north and 13.7 metres southerly. The vein is wider, of banded structure, and better mineralized in the section north of the crosscut. Assays taken across the face of the drift at the northeast end are as follows:

<i>Location</i>	<i>Width</i>	<i>gm Au/tonne</i>	<i>gm Ag/tonne</i>	<i>% Pb</i>
Near back	0.25 m	25.4	31.0	-
Waist level	0.46 m	20.3	18.1	1.37
Near floor	0.51 m	18.1	13.5	3.79

[From N.W. Emmens, in Minister of Mines Ann. Rpt., 1934.]

A 15.2-metre inclined shaft further explores the vein at the north end of the drift (Minister of Mines Ann. Rpt., 1946).

The lower adit (at 1+50S 2+00W) was initiated to intersect the down-dip extension of the main vein. The adit follows a breccia vein striking 080° Az and dipping 45°S. The total length is not reported but reference to the character of mineralization at 35 m suggests a minimum length (McAllister, 1951). Six metres from the portal, brecciated and mineralized quartzite was intersected with a hangingwall striking 040° Az and dipping 60°SE (N.W. Emmens, in Minister of Mines Ann. Rpt., 1934). Brecciation extends the entire width of the adit (+1.5 metres) and where brecciation is "pronounced", replacement of the wallrock by sulphides has occurred

in addition to fracture and open space fillings. Assays taken across the face (1) (7.3 m from portal) and the entire width of the adit (2) (9.2 m from portal) are as follows:

	<i>Width (m)</i>	<i>gm Au/tonne</i>	<i>gm Ag/tonne</i>	<i>% Pb</i>
(1)	1.5	6.8	66.6	10.27
(2)	2.0	4.5	49.1	7.08

MINERALIZATION

Mineralized occurrences have been explored and developed in the past at two locations, one within the claims (Humming Bird 1), the second located immediately adjacent to the west of the first. Both workings were visited, and appeared to be accessible, at least at the portal, but neither was entered. The character of mineralization has been established from studying dump material collected at each of the workings, together with any published reports. Several additional open cuts were located and sampled during the soil geochemical survey.

Mineralization in the lower adit located on the HB-11 (not part of the Humming Bird property) comprises several discontinuous roughly bedding-parallel (~ E-W trending) quartz veins. These occupy a >2 m wide fault zone, characterized by brecciated silicified country rock in places replaced by sphalerite, galena and pyrite. The sulphides occupy crosscutting fractures/veinlets in open space filling textures, bedding parallel veinlets, veins and discontinuous blebs and lenses, a texture suggesting preferential replacement of limy (?) portions of the host rock. Pyrite is also often present as large euhedral cubes.

A 0.8 m thick quartz breccia vein, barren of visible sulphides, is exposed by open cut approximately 12 m north of the lower portal. This vein was chip-sampled (HB-4) across its width and returned values of 76 ppm Pb, 37 ppm Zn, 0.3 ppm Ag and <5 ppb Au. The vein trends 076° Az and dips 42° SE. The vein occupies the hangingwall of a brecciated/fractured fault zone which is greater than 2.0 m wide. Both are barren of any visible sulphides.

Mineralization present within the property occurs in the northwestern corner of the Humming Bird 1 claim, within sediments of the Ymir Group. The main work-

ings (upper adit) explore a single, well defined quartz vein which averages less than 16 cm in width. The quartz vein is mineralized with galena and sphalerite. Pyrite occurs as fine-grained stringers throughout the vein, as fracture fillings and open-space fillings between vuggy quartz. Traces of chalcopyrite were noted associated with sphalerite. The character of the quartz varies from massive (containing sphalerite and pyrite), fractures (galena, sphalerite, pyrite), vuggy (pyrite \pm pyrrhotite) to banded, which contains graphitic selvages and traces of pyrite. Gold is reported from quartz which appears barren, while the banded texture returned the best values (Minister of Mines, Ann. Rpt., 1921). A grab sample (HB-1) of quartz vein material representative of the various textures and sulphide assemblages described above returned the following results: 27.1 gm Au/tonne, 35.5 gm Ag/tonne, 2.96% Pb, and 1.09% Zn.

A 0.25 m wide quartz vein, the main vein (?), exposed in open cuts above the portal, was chip-sampled across 0.35 m (including silicified hangingwall rocks) with the following results: 2630 ppm Pb, 57 ppm Zn, 4.8 ppm Ag, and 1150 ppb Au. Traces of galena were noted. The lower 10 cm (above footwall) of the vein are banded or ribbon quartz.

Old reports refer to a vein 23 m northwest of, and parallel with, the vein now exposed in the upper adit. The exploratory adit to this vein is now completely caved (Tough, 1983).

An open cut located at 1S 3E contains a 0.5 m bedding parallel, barren, massive quartz vein. The vein character immediately above the footwall (10 to 15 cm) is banded, the remainder being massive to bullish and jointed. A chip sample across this vein returned 400 ppm Pb, 70 ppm Zn, 1.6 ppm Ag, and 85 ppb Au.

At baseline, 5S, an open cut exposes a quartz vein mineralized with pyrite, within granodiorite. The nature of exposure suggests subcrop or talus blocks, not in place material. The vein material was not sampled.

Numerous other open cuts, trenches and pits, now mostly sloughed, cover the hillslope south of the main workings.

GEOCHEMICAL SURVEY

A programme of soil geochemical sampling was conducted over the Humming Bird group of claims. Soil samples were collected at 100-metre intervals along approximate west to east trending lines (097° Az) spaced 100 metres apart along a north-south (007° Az) baseline. A total of 14.5 km of grid lines were sampled and 151 samples collected.

Samples were delivered to Chemex Labs Ltd. in North Vancouver and analysed geochemically for Au, Ag, Pb, and Zn concentrations. Analysis was by standard atomic absorption on the -80 fraction. Results are appended.

GEOCHEMICAL RESULTS

By adapting the method of Hawkes and Webb (1962) a threshold exists at $\bar{x} + 2S$ (mean plus 2 standard deviations), such that the upper 2½ percent of the values are assumed to be anomalous. Applying this procedure to all the soil geochemical data, thresholds of 40 ppm Pb and 201 ppm Zn are established (Table 1). Separate threshold calculations for predominant bedrock type, i.e. north half of grid for granitic rocks, were not undertaken.

TABLE 1

<i>Element</i>	<i>N</i>	\bar{x} (ppm)	<i>S</i> (ppm)	$\bar{x} + 2S$ (ppm)
Pb	151	18.9	10.6	40.1
Zn	151	93.8	53.7	201.2

Four of the five elevated Pb values occur in the northern portion of the claim group (in Humming Bird 2 and 5 claims) at L 2N 2E (41 ppm Pb), 3N 00 (42 ppm Pb), 3N 2W (67 ppm Pb), and 4N 2W (52 ppm Pb). This area is underlain by granodiorite although overburden obscures outcrops. An additional anomalous Pb value occurs at L 4S 00 (62 ppm Pb). This is located in the vicinity of a granitic body which intrudes the quartzites. Old trenches at L 5S 00 show pyrite-mineralized quartz veins within granitic subcrop.

Anomalous Zn values are located on L 2S at 00 (500 ppm Zn) and 1W (216 ppm Zn), L 3S 3E (204 ppm Zn) and L 4S 2+10W (202 ppm Zn). All of the Zn anomalies are derived from areas underlain by Ymir Group sediments.

The gold values in all soil samples are low. The highest value, Au 20 ppb, is located at 4 N 00.

DISCUSSION

The area containing anomalous lead values is centered on baseline 3N. Underlying bedrock is granodiorite. This northwest-trending cluster of four values defines a zone 350 metres long. No outcrop was noted in the immediate area.

Tough (1983) describes additional workings located in the granodiorite, approximately 600 metres northeast of the mine buildings at an elevation of 6,300 feet. The vein strikes 150° Az, dips 40° NE, and has been explored by a 15 m inclined shaft. The shaft encountered a lens of massive pyrrhotite with lesser sphalerite, galena, chalcopyrite, marcasite, pyrite, limonite and hematite. No values are reported other than "low gold".

The anomalous lead values may be an expression of a parallel structure located at the baseline 3N. The highest gold value, 20 ppb, originated in this area, at baseline 4N.

The high zinc values do not cluster as closely as the lead. The area located on the baseline at 2S and 2S 1W could represent down-slope dispersion from a northeasterly trending vein.

Published data on the lower adit workings describe a 2.0 metre wide fault breccia zone, mineralized with precious and base metals. Only two assays are reported (Minister of Mines, Ann. Rpt., 1934) which returned gold values of 6.8 g and 4.5 g/tonne across 1.5 and 2.0 m, respectively. Mineralization occurs both as replacement of the wallrock and in quartz veins. Exploration of this fault zone is not recorded beyond 35 m from the portal. The potential of this zone to host broader widths of mineralization would seem to be better than the quartz vein in the upper workings. However, this adit is outside the boundaries of the property.

CONCLUSIONS

Mineralization is hosted within the Ymir Group sediments in bedding-parallel quartz veins and fault breccia zones located close to the granodiorite contact. The character of the quartz veins suggests several mineralizing events. The relationship between gold and base metal sulphides is unestablished, though each may represent a separate event.

Anomalous lead and zinc values in soils are present on the Humming Bird mineral claims. Soil geochemistry does not indicate anomalous gold values.

No new targets for concentrated exploration were defined by the investigations. Some extensions or pillars may remain unmined in the old workings but the dimensions of such mineralization are probably small.

RECOMMENDATIONS

Assessment work has been filed in order to keep the claims in good standing for one year. No further exploration is recommended at this time.

Respectfully submitted,



Locke B. Goldsmith, P.Eng.
Consulting Geologist



James M. Logan
Geologist

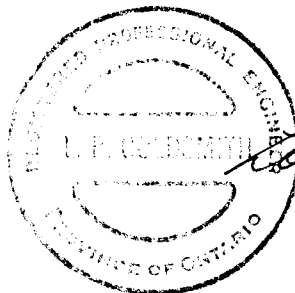
Vancouver, B.C.

July 21, 1986

ENGINEER'S CERTIFICATE

LOCKE B. GOLDSMITH

1. I, Locke B. Goldsmith, am a Registered Professional Engineer in the Province of Ontario and the Northwest Territories, and a Registered Professional Geologist in the State of Oregon. My address is 301, 1855 Balsam Street, Vancouver, B.C.
2. I have a B.Sc. (Honours) degree in Geology from Michigan Technological University, a M.Sc. degree in Geology from the University of British Columbia, and have done postgraduate study in Geology at Michigan Tech and the University of Nevada. I am a graduate of the Haileybury School of Mines, and am a Certified Mining Technician. I am a Member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy, and a Fellow of the Geological Association of Canada.
3. I have been engaged in mining exploration for the past 27 years.
4. I have co-authored the report entitled, "Preliminary Geology and Soil Geochemistry, Humming Bird Claim Group, Apex Creek Area, Nelson Mining Division, Nelson, B.C." dated July 1986. The report is based upon field-work and research supervised by the author.
5. I have no ownership in the property, nor in the stocks of Eagle Ridge Resources Ltd.
6. I consent to the use of this report in a prospectus, or in a statement of material facts related to the raising of funds.



Respectfully submitted,

A handwritten signature in cursive script that reads 'Locke B. Goldsmith'.

Locke B. Goldsmith, P.Eng.
Consulting Geologist

Vancouver, B.C.

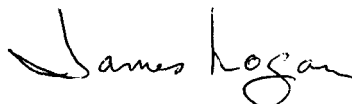
July 21, 1986

STATEMENT OF QUALIFICATIONS

JAMES M. LOGAN

1. I, James M. Logan, of 4651 West 16th Avenue, Vancouver, B.C. V6R 3E9, am a graduate of Brock University, Ontario, with a B.Sc. (Honours) degree in Geology, and an M.Sc. degree in Geology from the University of British Columbia.
2. I have been engaged in mining exploration for 9 years.
3. I have co-authored the report entitled, "Preliminary Geology and Soil Geochemistry, Humming Bird Claim Group, Apex Creek Area, Nelson Mining Division, Nelson, B.C.", dated July 1986. The report is based on field investigations conducted by the author.
4. I have no interest in the property, nor do I anticipate to receive any such interest in the property or in the company or companies involved.
5. I consent to the use of this report in a prospectus or in a statement of material facts related to the raising of funds.

Respectfully submitted,



James M. Logan, M.Sc.
Geologist

Vancouver, B.C.

July 21, 1986

REFERENCES

- Hawkes, H.E. and Webb, J.S. 1962. Geochemistry in mineral exploration. Harper and Row, 415 p.
- Little, H.W. 1960. Nelson map-area, west half, British Columbia. Geol. Surv. Canada, Mem. 308, 205 p.
- Little, H.W. 1985. Nelson, British Columbia. Geol. Surv. Canada, Open File Map 1195.
- McAllister, A.L. 1951. Ymir map-area, British Columbia. Geol. Surv. Canada, Paper 51-4.
- Minister of Mines, British Columbia, Annual Reports. 1921, p. G144; 1930, p. A262; 1932, p. A185; 1933, pp. A221-A223; 1946, p. 140.
- Tough, T.R. 1983. Preliminary geological report on the Humming Bird property. Prepared for Eagle Ridge Resources Ltd., p. 17.

COST STATEMENT, 1986 PROGRAMME

Personnel:

L.B. Goldsmith, $\frac{1}{4}$ June 26, $\frac{1}{4}$ July 8, $\frac{1}{4}$ 21, $\frac{1}{4}$ 22, total 1 day @ \$400/day	\$ 400.00	
J. Logan, July 4-8, 17-19, total 8 days @ \$360/day	2,880.00	
G. Bennett, July 4-7, total 4 days @ \$230/day	920.00	
	<u>4,200.00</u>	\$4,200.00

Accommodation, Food:

$\$453.15 \div 13 \text{ man/days} = \$34.85/\text{man/day}$		453.15
--	--	--------

Transportation:

4x4 vehicle, 4 days @ \$45/day	180.00	
Car, 2 days	0	
1344 km @ \$0.30/km	403.20	
Gas	109.14	
	<u>692.34</u>	692.34
$\div 6 \text{ vehicle days} = \$115.39/\text{vehicle/day}$		

Analyses:

1 assay	26.50	
3 rock geochem.	39.45	
151 soil geochem.	1,568.45	
	<u>1,634.40</u>	1,634.40
$\div 155 = \$10.54/\text{sample}$		

Report:

Drafting, typing, prints, photocopies, materials		<u>708.85</u>
	Total:	\$ 6,996.40

A P P E N D I X

SAMPLE DESCRIPTIONS

- HB-1 (Baseline, 00) Grab sample of vein material located on dump of main level workings. Quartz mineralized with sphalerite and galena, pyrite as fracture fillings. Vein quartz varies from massive to banded and in places vuggy. Vugs are often filled with pyrite and lesser pyrrhotite (?). Sample contains moderately oxidized rocks.
- HB-2 (00, 0+20E) 0.35 m chip sample across a 0.25 m wide quartz vein exposed in open cut above portal of main vein. Quartz is banded with graphitic partings for 10 cm above footwall and contains traces of galena in the more massive central section of vein. Quartzites are silicified for ~10 cm above hangingwall and are included in chip sample.
- HB-3 (1S 3E) 0.5 m chip sample across barren, massive quartz vein. The vein is bedding parallel and jointed as is host rock. Along footwall, 10 cm of vein is banded, containing graphitic partings. Hangingwall less defined with silicification extending into grey quartzites. No visible sulphides.
- HB-4 (1+05S 2+10W) 0.8 m chip sample across massive, barren looking breccia quartz vein. Bound by narrow carbonaceous gangue zones within a wide fracture/fault zone. No visible sulphides. Located approximately 12 m north of lower adit portal.

Gold F.A.-A.A. Combo Method ppb:

For low grade samples and geochemical materials, 10 gram samples are fused in litharge, carbonate and siliceous flux with the addition of 10 mg of Au-free Ag metal and cupelled. The silver bead is parted with dilute HNO₃ and then treated with aqua regia. The salts are dissolved in dilute HCl and analyzed for Au on an atomic absorption spectrophotometer.

Detection limit: 5 ppb

Copper, Lead, Zinc, Silver ppm:

1.0 gm sample is digested with perchloric-nitric acid (HClO₄-HNO₃) for approximately 2 hours. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Copper, lead, zinc and silver are determined by atomic absorption techniques. Silver and lead are corrected for background absorption.

Detection limit: Copper, Zinc - 1 ppm
Silver - 0.2 ppm
Lead - 2 ppm

Arsenic ppm:

A 1.0 gm sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with KI and mixed. A portion of the reduced solution is converted to arsine with NaBH₄ and the arsenic content determined using flameless atomic absorption.

Detection limit: 1 ppm



Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : GOLDSMITH, MR. L. B.

#301-1855 BALSAM STREET
VANCOUVER, B.C.
V6K 3M3

GOLDSMITH
404-1112 W. PENDER
VANCOUVER, B.C.

CERT. # : A8614877-001-A
INVOICE # : I8614877
DATE : 17-JUL-86
P.O. # : NONE

CC: J. LOGAN

Sample description	Prep code	Pb ppm	Zn ppm	Au ppb FA+AA			
LD 1+00E	201	17	186	5	--	--	--
LD 2+00E	201	8	75	<5	--	--	--
LD 3+00E	201	7	34	<5	--	--	--
LD 4+00E	201	11	136	<5	--	--	--
LD 5+00E	201	10	77	<5	--	--	--
LD 6+00E	201	9	44	<5	--	--	--
LD 7+00E	201	9	23	<5	--	--	--
LD 8+00E	201	12	63	<5	--	--	--
LD 9+00E	201	22	101	<5	--	--	--
LD 1+00W	201	18	78	<5	--	--	--
LD 2+00W	201	24	86	<5	--	--	--
LD 3+00W	201	28	85	5	--	--	--
LD 4+00W	201	27	30	<5	--	--	--
LD 5+00W	201	13	101	<5	--	--	--
L1N 0+00	201	12	81	<5	--	--	--
L1N 1+00E	201	16	86	<5	--	--	--
L1N 2+00E	201	14	77	<5	--	--	--
L1N 3+00E	201	8	34	<5	--	--	--
L1N 4+00E	201	8	82	<5	--	--	--
L1N 5+00E	201	21	26	<5	--	--	--
L1N 6+00E	201	9	81	<5	--	--	--
L1N 7+00E	201	15	24	5	--	--	--
L1N 8+00E	201	5	8	<5	--	--	--
L1N 9+00E	201	24	76	<5	--	--	--
L1N 10+00E	201	12	51	<5	--	--	--
L1N 1+00W	201	12	19	<5	--	--	--
L1N 2+00W	201	25	88	<5	--	--	--
L1N 3+00W	201	20	160	<5	--	--	--
L1N 4+00W	201	17	90	<5	--	--	--
L1N 5+00W	201	16	57	<5	--	--	--
L2N 0+00	201	15	53	<5	--	--	--
L2N 1+00E	201	21	82	<5	--	--	--
L2N 2+00E	201	41	40	<5	--	--	--
L2N 3+00E	201	15	52	<5	--	--	--
L2N 4+00E	201	12	51	<5	--	--	--
L2N 5+00E	201	17	37	<5	--	--	--
L2N 6+00E	201	12	99	<5	--	--	--
L2N 7+00E	201	15	45	<5	--	--	--
L2N 8+00E	201	10	67	<5	--	--	--
L2N 9+00E	201	21	116	<5	--	--	--

VOI rev. 4/85

7 18.9
S 10.6 F.R.S
(K=25) = 40.1

93.8
Certified by Hart Bichler
53.7
= 201.0



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CERTIFICATE OF ANALYSIS

TO : GOLDSMITH, MR. L. B.

#301-1855 BALSAM STREET
VANCOUVER, B.C.
V6K 3M3

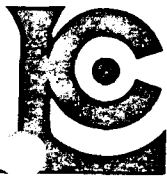
CERT. # : A8614877-002-A
INVOICE # : I8614877
DATE : 17-JUL-86
P.O. # : NONE

CC: J. LOGAN

Sample description	Prep code	Pb ppm	Zn ppm	Au ppb FA+AA			
L2N 10+00E	201	19	91	<5	--	--	--
L2N 1+00W	201	17	110	<5	--	--	--
L2N 2+00W	201	13	117	5	--	--	--
L2N 3+00W	201	30	71	<5	--	--	--
L2N 4+00W	201	11	71	<5	--	--	--
L2N 5+00W	201	8	62	<5	--	--	--
L3N 0+00	203	42	90	<5	--	--	--
L3N 1+00E	201	12	47	<5	--	--	--
L3N 2+00E	201	20	55	<5	--	--	--
L3N 3+00E	201	12	91	<5	--	--	--
L3N 4+00E	201	24	89	<5	--	--	--
L3N 5+00E	201	14	74	<5	--	--	--
L3N 6+00E	201	15	93	<5	--	--	--
L3N 7+00E	201	14	84	<5	--	--	--
L3N 8+00E	201	10	97	<5	--	--	--
L3N 9+00E	201	16	95	<5	--	--	--
L3N 10+00E	201	18	88	<5	--	--	--
L3N 1+00W	201	25	91	<5	--	--	--
L3N 2+00W	203	67	96	<5	--	--	--
L3N 3+00W	201	19	78	<5	--	--	--
L3N 4+00W	203	25	75	<5	--	--	--
L3N 5+00W	201	15	59	<5	--	--	--
L4N 0+00	201	10	75	20	--	--	--
L4N 1+00E	201	20	94	<5	--	--	--
L4N 2+00E	201	10	75	<5	--	--	--
L4N 3+00E	201	18	104	<5	--	--	--
L4N 4+00E	201	17	91	<5	--	--	--
L4N 5+00E	201	13	86	<5	--	--	--
L4N 6+00E	201	3	76	<5	--	--	--
L4N 7+00E	201	19	120	<5	--	--	--
L4N 8+00E	201	18	102	<5	--	--	--
L4N 9+00E	201	17	112	<5	--	--	--
L4N 10+00E	201	12	122	10	--	--	--
L4N 1+00W	201	39	114	<5	--	--	--
L4N 2+00W	201	52	112	<5	--	--	--
L4N 3+00W	201	37	109	<5	--	--	--
L4N 4+00W	201	19	59	<5	--	--	--
L4N 5+00W	201	18	47	<5	--	--	--
L5N 0+00	201	32	104	<5	--	--	--
L5N 8+00E	201	23	91	<5	--	--	--

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CERTIFICATE OF ANALYSIS

TO : GOLDSMITH, MR. L. B.

#301-1855 BALSAM STREET
VANCOUVER, B.C.
V6K 3M3

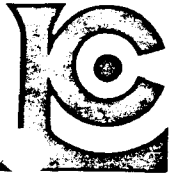
CERT. # : A8614877-003-A
INVOICE # : I8614877
DATE : 17-JUL-86
P.O. # : NONE

CC: J. LOGAN

Sample description	Prep code	Pb ppm	Zn ppm	Au ppb FA+AA			
L5N 9+00E	201	15	87	<5	--	--	--
L5N 10+00E	201	17	111	<5	--	--	--
L5N 1+00W	201	30	88	<5	--	--	--
L5N 2+00W	201	29	130	<5	--	--	--
L5N 3+00W	201	38	76	<5	--	--	--
L5N 4+00W	201	27	70	<5	--	--	--
L5N 5+00W	201	25	49	<5	--	--	--
L6N 1+00W	201	22	104	<5	--	--	--
L6N 2+00W	201	37	103	<5	--	--	--
L6N 3+00W	201	30	89	<5	--	--	--
L6N 4+00W	201	27	81	<5	--	--	--
L6N 5+00W	201	16	78	<5	--	--	--
L1S 0+00	201	14	123	<5	--	--	--
L1S 1+00E	201	11	68	<5	--	--	--
L1S 2+00E	201	35	135	<5	--	--	--
L1S 3+00E	201	11	70	<5	--	--	--
L1S 4+00E	201	8	48	<5	--	--	--
L1S 5+00E	201	5	165	<5	--	--	--
L1S 6+00E	201	16	77	<5	--	--	--
L1S 7+00E	201	7	114	<5	--	--	--
L1S 7+25E	201	5	112	<5	--	--	--
L1S 10+00E	201	19	18	<5	--	--	--
L1S 1+00W	201	16	220	<5	--	--	--
L1S 2+00W	201	25	183	<5	--	--	--
L1S 3+00W	201	15	151	<5	--	--	--
L1S 4+00W	201	26	158	<5	--	--	--
L1S 5+00W	201	28	56	<5	--	--	--
L1S 6+00W	201	20	95	<5	--	--	--
L1S 7+00W	201	39	45	<5	--	--	--
L1S 8+00W	201	22	45	<5	--	--	--
L1S 9+00W	201	36	83	<5	--	--	--
L1S 10+00W	201	21	91	<5	--	--	--
L2S 0+00	201	32	500	<5	--	--	--
L2S 1+00E	201	23	81	<5	--	--	--
L2S 2+00E	201	16	60	<5	--	--	--
L2S 3+00E	201	13	82	<5	--	--	--
L2S 4+00E	201	7	50	<5	--	--	--
L2S 5+00E	201	12	55	<5	--	--	--
L2S 1+00W	201	29	216	<5	--	--	--
L2S 2+00W	201	10	80	<5	--	--	--

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CERTIFICATE OF ANALYSIS

TO : GOLDSMITH, MR. L. B.

#301-1855 BALSAM STREET
VANCOUVER, B.C.
V6K 3M3

CERT. # : A8614877-004-A
INVOICE # : I8614877
DATE : 17-JUL-86
P.O. # : NONE

CC: J. LOGAN

Sample description	Prep code	Pb ppm	Zn ppm	Au ppb FA+AA			
L2S 3+00W	201	14	134	<5	--	--	--
L2S 4+00W	201	11	44	<5	--	--	--
L2S 5+00W	201	13	51	<5	--	--	--
L2S 6+00W	201	15	47	<5	--	--	--
L2S 7+00W	201	14	31	<5	--	--	--
L2S 8+00W	201	16	85	<5	--	--	--
L2S 9+00W	203	10	8	<5	--	--	--
L2S 10+00W	201	20	114	<5	--	--	--
L3S 0+00	201	32	125	<5	--	--	--
L3S 1+00E	201	39	151	<5	--	--	--
L3S 2+00E	201	14	126	<5	--	--	--
L3S 3+00E	201	13	204	<5	--	--	--
L3S 4+00E	201	11	115	<5	--	--	--
L3S 5+00E	201	6	73	<5	--	--	--
L4S 0+00	201	62	152	<5	--	--	--
L4S 1+00W	201	18	89	<5	--	--	--
L4S 2+10W	201	35	202	<5	--	--	--
L4S 3+00W	201	17	118	<5	--	--	--
L4S 4+00W	201	10	84	<5	--	--	--
L5S 0+00	201	23	170	<5	--	--	--
L5S 1+00E	201	28	195	<5	--	--	--
L5S 2+00E	201	11	180	<5	--	--	--
L5S 1+20W	201	39	177	<5	--	--	--
L5S 2+20W	201	15	163	<5	--	--	--
L4S 3+00W	201	10	105	<5	--	--	--
L4S 4+00W	201	8	114	<5	--	--	--
L6S 1+00E	201	10	83	<5	--	--	--
L6S 2+00E	201	13	102	<5	--	--	--
L7S 0+00	201	8	96	<5	--	--	--
L7S 1+00E	201	7	112	<5	--	--	--
L7S 1+00W	201	27	155	<5	--	--	--

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CERTIFICATE OF ASSAY

TO : ARCTEX ENGINEERING

301 - 1855 BALSAM ST.
VANCOUVER, B.C.
V6K 3M3

CERT. # : A8615054-001-A
INVOICE # : 18615054
DATE : 21-JUL-86
P.C. # : NONE

CC: J. LOGAN

Sample description	Prep code	Pb %	Zn %	Ag FA oz/T	Au FA oz/T		
HB-1	207	2.96	1.08	1.26	0.962	--	--

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.....
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TO : ARCTEX ENGINEERING

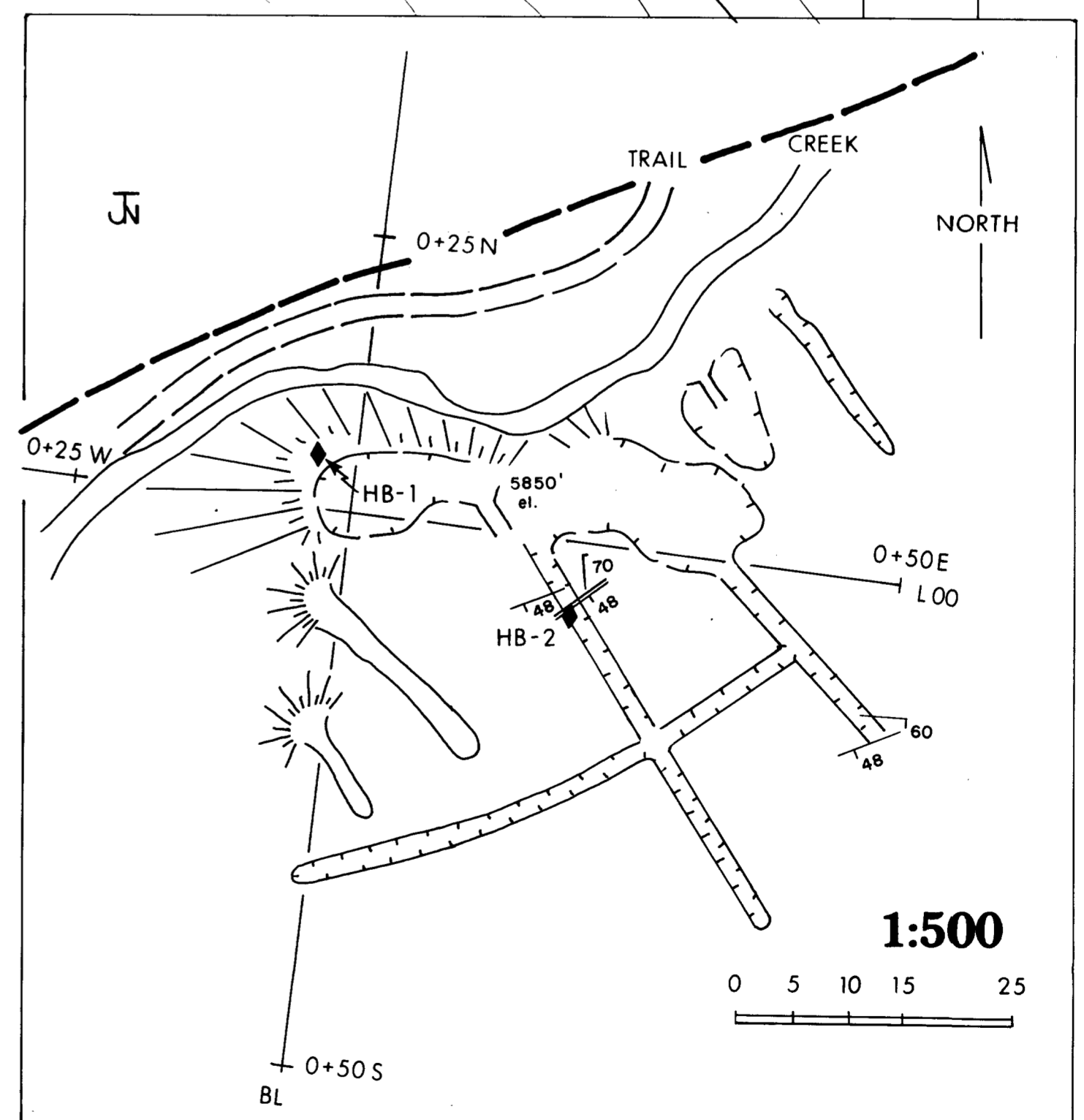
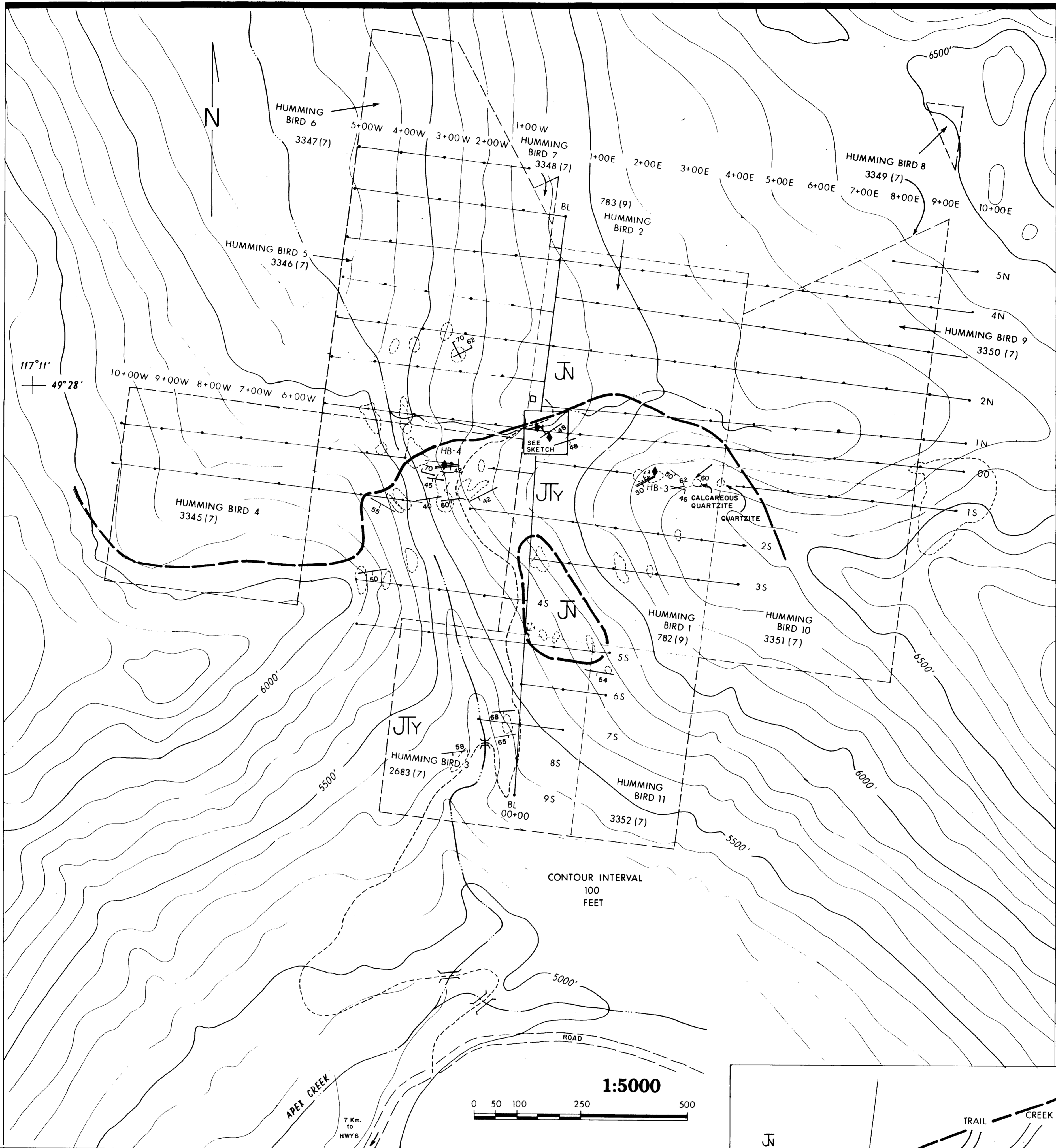
301 - 1855 BALSAM ST.
VANCOUVER, B.C.
V6K 3M3

CERT. # : A8615055-001-A
INVOICE # : I8615055
DATE : 23-JUL-86
P.C. # : NCNE

CC: J. LOGAN

Sample description	Prep code	Pb ppm	Zn ppm	Ag ppm Aqua R	Au ppb FA+AA		
HB-2	205	2630	57	4.8	1150	--	--
HB-3	205	400	70	1.6	85	--	--
HB-4	205	76	37	0.3	<5	--	--

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EAGLE RIDGE RESOURCES LTD.
HUMMING BIRD PROPERTY
 Apex Creek area, Nelson Mining Division 82F/6E
 GEOLOGY MAP
 ASSESSMENT REPORT

TO ACCOMPANY REPORT BY
 JAMES M. LOGAN & LOCKE B. GOLDSMITH, P. Eng.
 GEOLOGIST

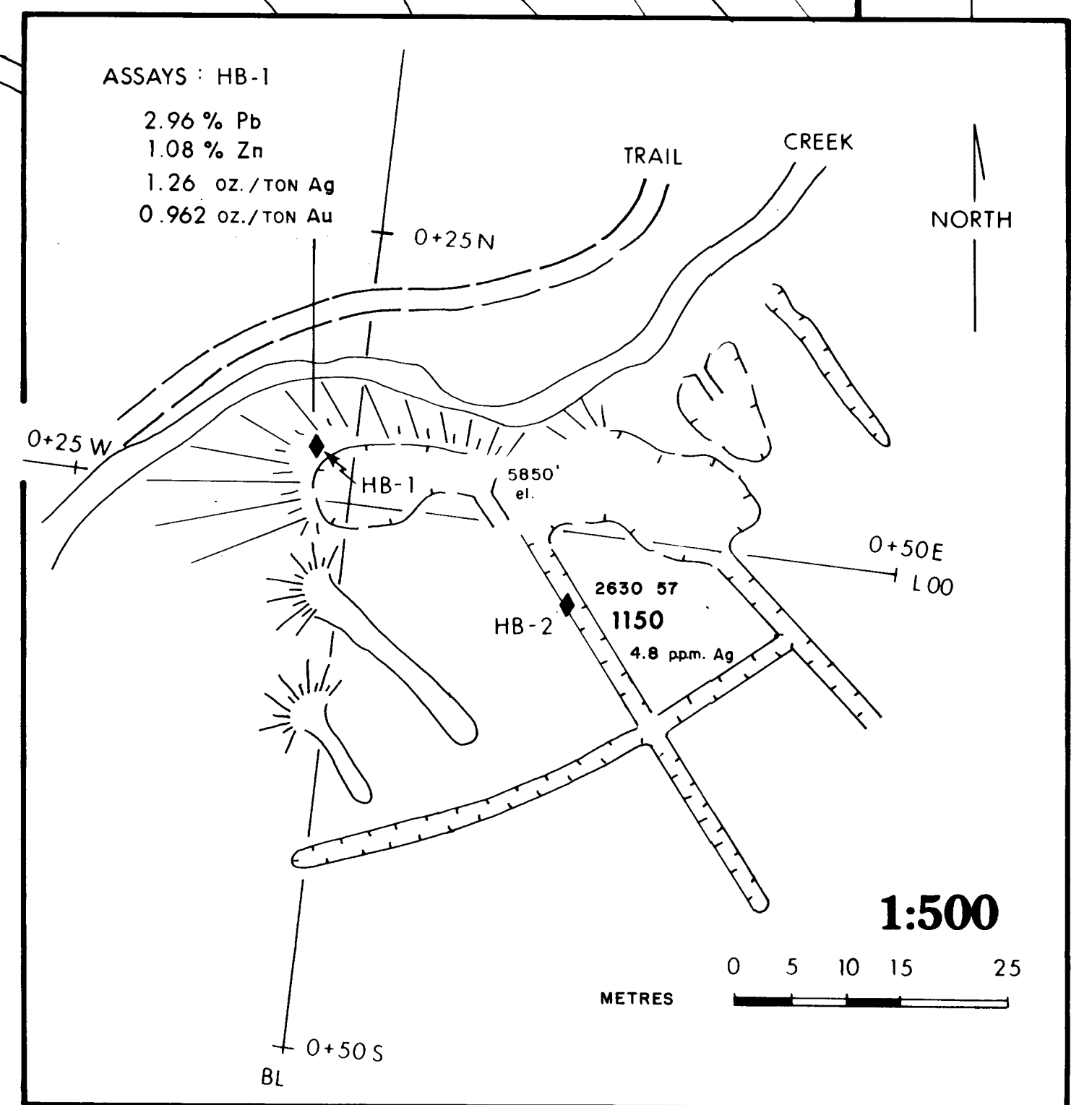
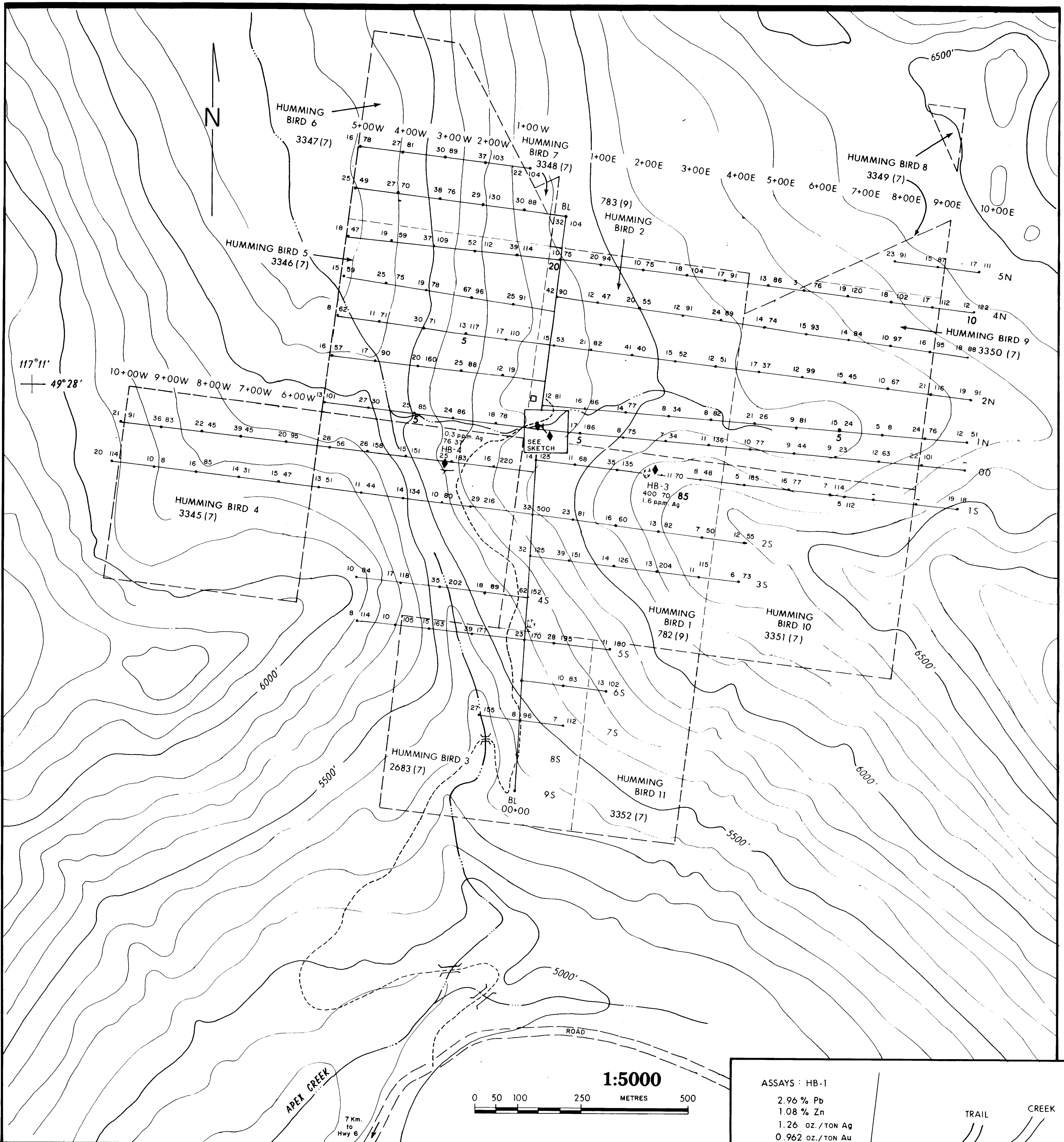
14,867

Arctex Engineering Services June 1986

- Symbols**
- | | | | | | |
|-------------|----------------------|-------------|----------------------|----------|-----------|
| TRAIL | BRIDGE | ADIT | GEOLOGICAL BOUNDARY | OUTCROP | VEIN |
| CREEK | TRENCHING, OPEN CUTS | SOIL SAMPLE | BEDDING TOPS UNKNOWN | JOINTING | LINEATION |
| ROCK SAMPLE | | | | | |

JN UPPER JURASSIC
 NELSON INTRUSIONS : GNEISSIC GRANODIORITE

JTY LOWER JURASSIC ?
 YMIR GROUP : ARGILLACEOUS QUARTZITES



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,867 **EAGLE RIDGE RESOURCES LTD.**
HUMMING BIRD PROPERTY
Apex Creek area, Nelson Mining Division 82F/6E

GEOCHEMISTRY: Pb Zn Au

TO ACCOMPANY REPORT BY
JAMES M. LOGAN & LOCKE B. GOLDSMITH, P.Eng.
GEOLOGIST CONSULTING GEOLOGIST

Arctex Engineering Services June 1986

