REPORT

ON THE

AU PROPERTY

Kennedy Lake Area Alberni Mining Division British Columbia

FOR

KENNEDY RIVER GOLD INC.

BY

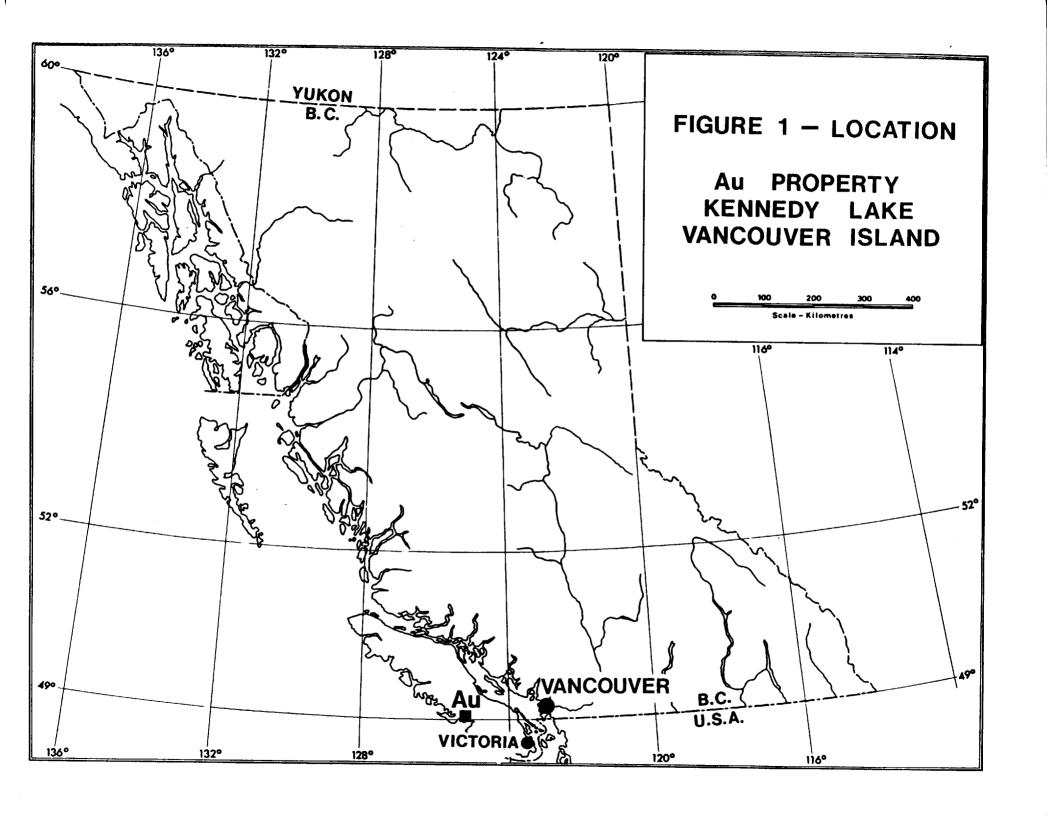
N.C. CARTER, PH.D. P.ENG. March 31,1988

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# SUMMARY

Kennedy River Gold Inc. has entered into an agreement to conduct further exploratory work on the AU gold prospect near Kennedy Lake on southwest Vancouver Island, British Columbia.

The property includes quartz veins developed in a persistent shear zone in granitic rocks which has been traced over a 500 metre strike length. Ten surface samples of quartz vein material, collected over a 400 metre strike interval, have a weighted average grade of 0.435 oz/ton gold over an average width of 0.45 metre and include values of up to 1.125 oz/ton over 0.30 metre. Limited diamond drilling indicates that gold values persist to depth and over greater widths than seen on surface.

Additional diamond drilling is warranted, with emphasis directed to the western part of the zone adjacent to the contact between granitic and volcanic rocks. Two parallel quartz veins are present within a wider shear/alteration zone in this area.

The program is recommended to include 600 metres of diamond drilling from four sites at an estimated cost of \$110,000.00.

# INTRODUCTION

Kennedy River Gold Inc. has entered into an agreement for the purpose of conducting further exploratory work on the AU gold property near the west coast of Vancouver Island, British Columbia.

This report, prepared at the request of Kennedy River Gold Inc., is based on available information pertaining to previous work on the property. The writer has not visited the AU property but has examined similar styles of gold mineralization 11 km southwest and numerous other mineral deposits on central Vancouver Island.

# LOCATION AND ACCESS

The AU property is situated near the southwest coast of Vancouver Island (Figure 1) at latitude 49°09' North and longitude 125°23' West in NTS map-area 92F/3W.

The mineral claims, 30 km northeast of Ucluelet, are accessible by way of a 2 km trail leading off highway 4 at the northeast end of Kennedy Lake or by helicopter (Figure 2).

# MINERAL PROPERTY

Kennedy River Gold Inc. has entered into an agreement with Multinational Resources Inc. with respect to two contiguous Modified Grid mineral claims comprising the AU property in the Alberni Mining Division of British Columbia. The claims are

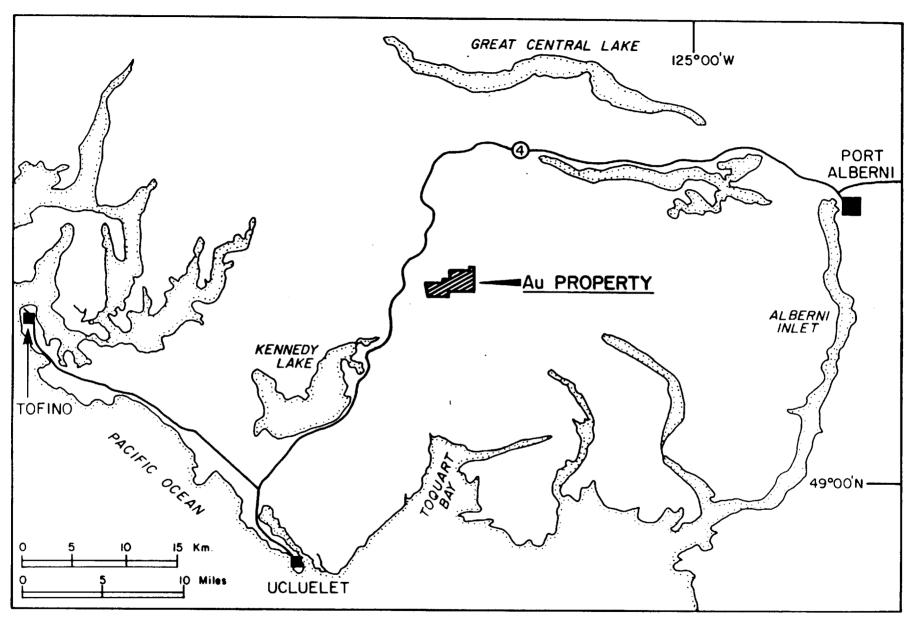


FIGURE 2 - Au PROPERTY

shown on Figure 3 and details are as follows:

Claim Name	Record Number	Units	Date of Record
Au 1 - 8	1873	12	October, 1983
Mackenzie Au	1847	20	September, 1983

The mineral claims are believed to have been located pursuant to procedures as specified by the Mineral Act Regulations of the Province of British Columbia. No claim posts or lines have been examined by the writer.

# PHYSICAL SETTING

The AU property exhibits features typical of the west coast of Vancouver Island.

The claims are located in the Mackenzie Range immediately east of Kennedy River (Figure 3). Elevations rise abruptly from 80 metres along the west boundary of the Au 1-8 claim to more than 1400 metres in the central part of the Mackenzie Au claim. Topography is rugged and much of the property area is covered with mature stands of cedar, fir, hemlock and balsam. Dense underbrush is prevalent at lower elevations.

The main mineralized zone in the central part of the Au 1-8 claim, at an elevation of 200 - 300 metres, (Figure 3) is exposed in a creek bed which is dry during the summer months.

#### HISTORY

Gold- bearing quartz veins were discovered in the Kennedy

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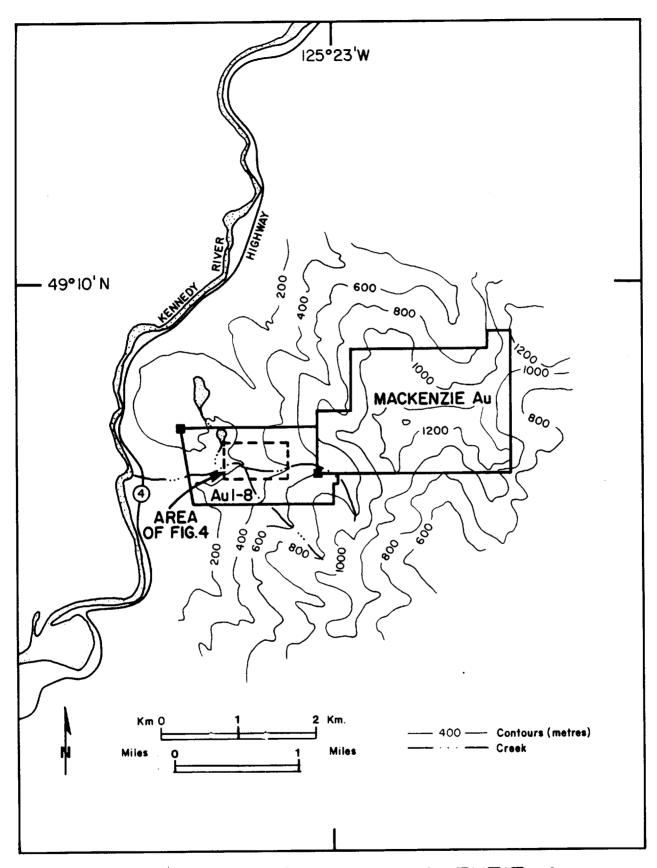


FIG. 3 - Au I-8 AND MACKENZIE Au MINERAL CLAIMS

River area prior to 1900. Limited production (400 tons) from the Rose Marie and Leora properties, north and south of the AU property respectively, took place between 1899 and 1915.

Numerous other prospects were sporadically explored through the 1930's. Renewed activity has been underway in the area since 1980.

The main zone on the AU property was apparently discovered in 1962 (Taylor,1980). Initial work included prospecting, hand trenching and sampling. A limited VLF-EM survey was undertaken in the area of the present Au 1-8 claim in 1979 and surface sampling was carried out in 1980 after Multinational Resources Inc. had acquired the property (Taylor,1980).

Additional trenching and blasting in 1982 permitted more detailed surface sampling of the main zone. A 1983 program, with Teck Explorations Ltd. as operator on behalf of Multinational, included 12.8 km of magnetometer surveys, the collection and analysis of 485 soil samples, geological mapping and 174.8 metres of Winkie diamond drilling in seven holes (Folk, 1984). All work was carried out on the Au 1-8 claim.

Follow-up work in 1984 consisted of detailed soil sampling, blasting of 7 trenches and excavation of 8 prospect pits on the Au 1-8 claim. Limited prospecting and stream sediment sampling was also undertaken on the Mackenzie Au claim which was staked in 1983.

Direct costs of 1983 and 1984 exploratory programs total \$91,120.00

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# REGIONAL GEOLOGY AND MINERALIZATION

Vancouver Island makes up the southern part of the Insular belt, the westernmost tectonic subdivision of the Canadian Cordillera. The southern Insular belt is dominated by Paleozoic and Mesozoic volcanic-plutonic complexes overalin on the east coast of Vancouver Island by clastic sedimentary rocks of Cretaceous age. Tertiary nasic volcanic rocks are prevalent in the south Island area and granitic intrusions, also of Tertiary age, are widespread along the west coast.

Vancouver Island hosts a variety of mineral deposits, including volcanogenic polymetallic massive sulfides at Buttle Lake and near Duncan, which are hosted by late Paleozoic Sicker Group volcanic rocks. Island Copper near Port Hardy is a porphyry copper-molybdenum deposit with significant by-product gold and which is related to Mesozoic subvolcanic intrusions. Iron-copper skarns, hosted by late Triassic limestones marginal to granitic intrusions, are numerous in the central and northern Island areas.

The west coast of Vancouver Island is noted for gold-bearing vein deposits. Many of these are at least spatially related to Tertiary granitic intrusions, the most notable examples being the Zeballos camp and the Kennedy Lake and Mount Washington areas.

Oldest rocks in the Kennedy Lake - Long Beach area are

Karmutsen mafic volcanic rocks of late Triassic age. A limestoneclastic sedimentary rock sequence lies between the Karmutsen

Formation and Bonanza Group intermediate to felsic volcanics.

Island granitic intrusions, comagnatic with Bonanza volcanics, underlie broad areas west and east of Kennedy Lake. These are in part gneissic rocks believed to have been derived from older Paleozoic formations. Tertiary granitic intrusions occur as elongate stocks north and south of Kennedy Lake.

Mineral deposits in the area include the Catface porphyry copper-molybdenum prospect north of Tofino which is related to a Tertiary granite and the formerly producing Brynnor iron skarn deposit several km south of Kennedy Lake. A number of gold-bearing quartz veins occur principally in Karmutsen and Bonanza volcanics and in granitic rocks in the Kennedy Lake are and northeast of Tofino.

Quartz veins near Kennedy Lake occupy east to northeast trending shear zones believed to be tensional features marginal to west-northwest faults which transect all rock types. Quartz veins within the shear zones strike east-west to east-northeast and dip northerly at moderate to steep angles. Vein widths are variable, ranging from 10 cm to 2 metres, and averaging 50 cm. Sulfide contents, mainly pyrite, pyrrhotite and some chalcopyrite and sphalerite, range from 2 to 20%. Gold values are associated with the sulfide minerals.

Shear zones and quartz veins are developed mainly in Karmutsen intermediate to basic volcanic rocks and to a lesser degree in Island intrusion granitic rocks (Henneberry, 1987). Wallrocks are altered and bleached 50 cm outward from vein contacts and principal

alteration minerals include silica, chlorite, carbonate and sericite.

Three of the gold-bearing quartz veins in the Kennedy River area (Leora, Rose Marie, Tommy K) have undergone limited production totalling 396 tons yielding 9992 g gold (0.732 oz/ton) and 5388 g silver (0.40 oz/ton).

# PROPERTY GEOLOGY AND MINERALIZATION

The AU property is underlain by late Triassic Karmutsen

Formation basic volcanic rocks which are intruded by Island

granitic rocks. A regional west-northwest fault extends through

the property near the boundary between the Au 1-8 and Mackenzie Au

claims.

Much of the Mackenzie Au claim and the western half of the Au 1-8 claim are underlain by fine to medium grained leucocratic biotite-hornblende granodiorite (Folk,1984). The granitic rocks are in partial fault contact with Karmutsen fine grained, massive green volcanic rocks which underlie the western half of the Au 1-8 claim. Volcanic rocks marginal to the granitic contact are hornfelsed and contain up to 8% disseminated pyrite and pyrrhotite (Folk,1984).

Northwest-striking andesite dykes, up to 4 metres wide, were noted cutting the granitic rocks.

A magnetometer survey, at 25 metre intervals along 100 metre spaced north-south lines, showed generally flat response over areas underlain by granitic rocks with locally higher magnetic

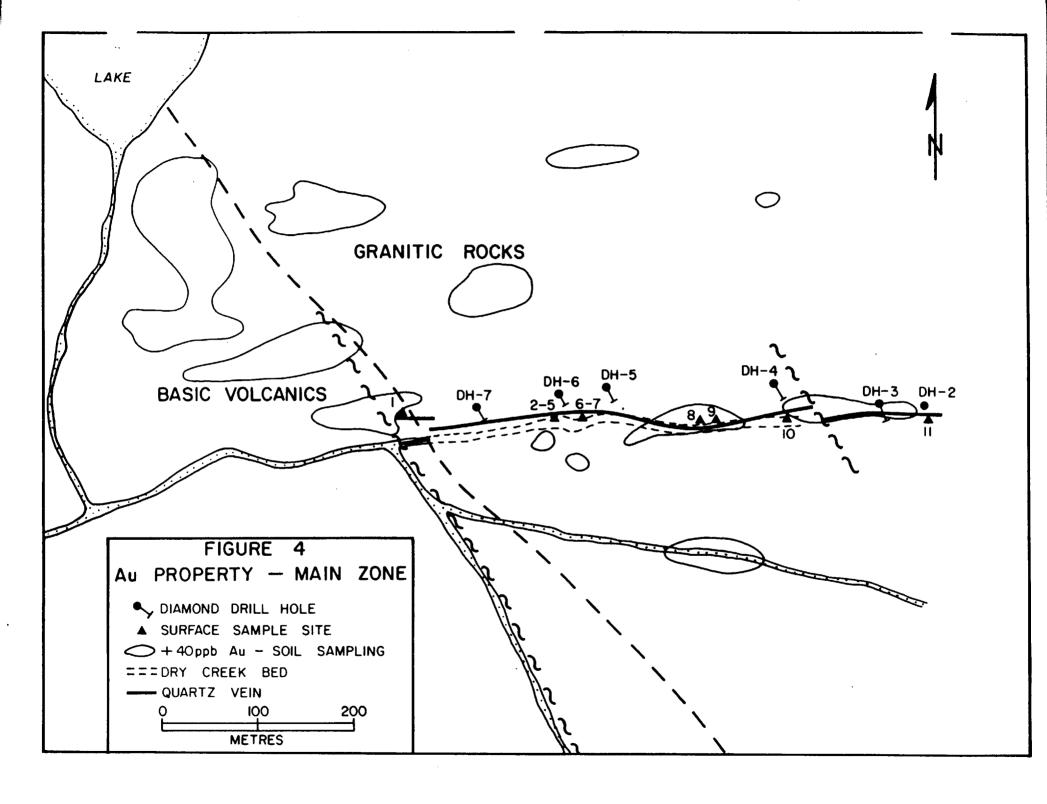
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responses indicating andesite dykes. Highest magnetic intensities were obtained in areas underlain by Karmutsen volcanic rocks, particularly adjacent to the granitic contact.

Soil geochemical sampling was undertaken over the same grid. Soil development is generally poor with much of the area featuring colluvium (broken bedrock) beneath extensive moss cover. Samples collected were analyzed for gold and silver and areas with gold values above 40 ppb are shown on Figure 4. Several of these anomalous areas obviously reflect the main zone while others in the western part of the area shown are near the volcanic-granitic contact and include gold values of up to 680 ppb(Folk,1984). These anomalous areas overlie areas of disseminated sulfides in volcanic rocks, bedrock samples of which yielded values in the 0.001 to 0.002 oz/ton gold range (Folk,1984).

The main mineralized zone (Figure 4) consists of intermittently exposed quartz veining within an east-west shear zone which has been traced over 500 metres in the central part of the Au 1-8 claim. A creek bed follows the shear zone which is probably a tensional feature developed between two northwest striking faults, the westernmost of which is along the volcanic-granite contact (Figure 4). Where exposed, the vein dips north and widths are up to 1 metre with the overall average being 0.4 metre. Two parallel quartz veins, up to 10 metres apart, occupy the western 200 metres of the shear zone.

The vein contacts are marked by narrow zones of clay-rich



fault gouge and bordered by a 2 to 4 metre wide silicified and pyritized zone which is gradational to a 10 metre wide envelope of chloritized granitic rocks. The alteration halo is wider in the western half of the zone where two veins are present.

The quartz vein contains pyrite and traces of sphalerite and chalcopyrite. Surface sampling by Teck Explorations Ltd. yielded gold values of up to 1.125 oz/ton over 0.3 metre and 10 samples over a 400 metre strike interval had a weighted average grade of 0.435 oz/ton gold over an average width of 0.45 metre. Sample results are tabulated below and locations are shown on Figure 4.

TABLE I

Sample Number	Width (metres)	Gold(oz/ton)		
1	0.09	0.145		
2	0.40	0.091		
3	0.40	0.235		
4	0.40	0.841		
5	0.40	0.117		
6	0.40	0.258		
7	1.0	0,512		
8	0.40	0.446		
9	0.40	0.135		
10	0.30	1.125		
11	0.40	0.640		

Best gold values are restricted to the quartz veins; only low values have been obtained from from samples of altered wallrocks. Silver values are low, the overall gold:silver ratio being about 2:1.

Six Winkie (EX size) diamond drill holes were completed along the shear zone/quartz vein structure in 1983 (Folk,1984). The first hole at the east end of the structure was abandoned

for mechanical reasons. Hole locations are shown on Figure 4 and results are listed in Table II.

Drilling showed dips of the shear zone/quartz vein to be in the order of 60-65° north at the east end of the zone, flattening to about 45° at the western end where the alteration zone is wider and two parallel quartz veins are present. Vein widths apparently increase to an average 0.8 metre down dip over the interval drilled and gold values are comparable with those obtained from surface sampling.

As noted in Table II, core recoveries ranged from 7 to 75% and sludge samples collected over the same intervals were equivalent to, or greater than values obtained from core samples.

# CONCLUSIONS AND RECOMMENDATIONS

The AU property includes a persistent east-west shear zone in granitic rocks which has been traced over a 500 metre strike length. Quartz veins, averaging 0.4 metre in width and containing consistent gold values, occur at a number of intervals along the exposed strike length of the shear zone. Limited diamond drilling indicates that gold values persist for at least 20 metres down dip and that widths of the vein increase with depth.

The shear zone and related alteration zone increase in width over the westernmost 200 metres of strike length closest to the granitic-volcanic contact. Two parallel quartz veins, 10 metres apart and both carrying gold values, are contained within this

TABLE II

DRILL RESULTS

Hole _#	West Metres	North Metres	Dip Degrees	Az. <u>Degrees</u>	Length Metres	From (m)	To (m)	Length (m)	Au <u>0z./t</u>	Ag <u>0z./t</u>	Remarks
1	2+43	0+31	-60	156	3.4						Abandoned
2	2+46	0+15.5	90	-	25.3	19.8 19.2 20.9 20.9	20.45 20.9 21.3 22.1	0.65 1.7 0.4 1.2	0.093 0.073 0.040 0.048	0.04 0.01 0.02 0.01	Core 7% Rec. Sludge Core 35% Rec. Sludge
3	2+88	0+16	-62	160	27.9	16.6 16.9	17.25 18.0	0.65 1.1	0.016 0.243	0.02 0.13	Core 57% Rec. Sludge
4	3+95	0+39	-60	150	25.6	23.14 24.1	24.06 24.2	0.92 0.1	0.284 0.203	0.25 0.11	Core 35% Rec. Sludge
5	5+70	0+59	-60	150	34.0	24.5 24.2	25.2 25.8	0.7 1.6	0.252 0.032	0.25 0.05	Core 75% Rec. Sludge
6	6+27	0+41	-70	150	32.8	17.6 16.9 18.3	18.3 18.3 19.8	0.7 1.4 1.5	0.172 0.652 0.282	0.22 0.43 0.17	Core 68% Rec. Sludge Sludge
						29.6	30.3	0.7	0.314	0.18	Sludge, second vein
7	7+10	0+31.5	-70	150	25.8	14.3 13.9	15.1 15.1	0.8 1.2	0.572 0.452	0.41 0.18	Core 40% Rec. Sludge
						23.6 22.9	24.1 24.1	0.5 1.2	0.608 0.211	0.31 0.07	Core 33% Rec. Sludge

part of the zone. The shear zone is not exposed within the volcanic rocks marginal to the contact, but soil geochemistry does show enhanced gold values in this area.

Possible parallel vein systems 300 metres north of the main zone are indicated by surface samples yielding up to 0.467 oz/ton over 0.33 metre (Folk,1984) and as yet unexplained areas of anomalous soil geochemistry exist south of the main zone.

Additional sampling of the structure is warranted.utilizing a larger diamond drill capable of drilling NQ-size core which should result in reasonable core recoveries. It is recommended that drilling be undertaken from 4 sites in the wider part of the shear zone/alteration zone near its western end. Three inclined holes of 35,50 and 65 metre depths should be drilled from each site to test for continuity of gold grades at depth and along strike.

Helicopter access will be required for the recommended program.

Additional work can be considered pending results of this first phase program.

# COST ESTIMATE

Diamond drilling - 600 metres @ \$100/metre (all-inclusive price including camp)	\$60,000.00
Helicopter support - 20 hours @ \$500/hour	\$10,000.00
Drill site preparation, camp construction	\$8,000.00
Analytical costs	\$7,500.00
Supervision, reporting	\$10,000.00
Contingencies	\$14,500.00
Total	\$110,000.00

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# REFERENCES

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- Pasieka, C.T. (1983): A Property Report on the Au Claims, Kennedy Lake Area, Alberni Mining Division, Vancouver Island, British Columbia private report for Multinational Resources Inc.
- Taylor, B. (1980): Report on the Au 1-8 Mineral Claims, Alberni
  Mining Division, Kennedy Lake, British Columbia
   private report for Multinational Resources Inc.

#### CERTIFICATE

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, B.C., do hereby certify that:

- 1. I am a Consulting Geologist registered with the Association of Professional Engineers of British Columbia since 1966.
- 2. I am a graduate of the University of New Brunswick with B.Sc. (1960), Michigan Technological University with M.S. (1962) and the University of British Columbia with Ph.D. (1974).
- 3. I have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.
- 4. The foregoing report on the AU property, Alberni Mining Division, British Columbia, is based on reports dealing with previous exploration work on the property and on the writer's background knowledge of Vancouver Island mineral deposits.
- 5. I hold no interest, direct or indirect, in the AU property or in the securities of Kennedy River Gold Inc.
- 6. Permission is hereby granted to Kennedy River Gold Inc. to use this report in support of a Prspectus to be submitted to the British Columbia Securities Commission and to the Vancouver Stock Exchange.

N.C. Carter, Ph.D. P.Eng.

Victoria, B.C. March 31,1988