# 1979 Assessment Report

VLF-EM Survey

Title:

DUFFY LAKE PROPERTY

Claims:

KW

Location:

Duffy Lake

92J 8 E & W

50° 25' N 122° 15' W

By:

L. Sookochoff, P.Eng.

Pan-American Consultants Ltd. 2602-1055 West Georgia Street

Vancouver, B.C.

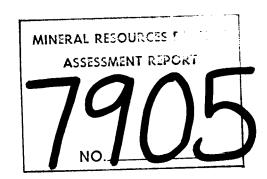
For:

Kennedy Resources Inc.

Suite 1105-1234 Barclay Street

Vancouver, B.C.

Dates of Work: September 11-13, 1979



## TABLE OF CONTENTS

SUMMARY	1.
INTRODUCTION	2.
PROPERTY	3.
LOCATION AND ACCESS	3.
PHYSIOGRAPHY	4.
WATER AND POWER	4.
TRANSPORTATION AND SUPPLIES	- •
HISTORY	5.
GEOLOGY AND MINERALIZATION	7.
VLF-EM SURVEY	8.
VLF-EM SURVEY RESULTS	9.
CONCLUSIONS	10.
RECOMMENDATIONS	11.
COST STATEMENT	12.
CERTIFICATE	13.

# ILLUSTRATIONS

LOCATION & CLAIM MAP
VLF-EM SURVEY RESULTS

#### SUMMARY

Kennedy Resources Inc. owns the KW claim situated at Duffey Lake 40 km east of Pemberton on which recent geological and geophysical surveys were completed. The survey delineated a strong EM northerly trending anomaly in addition to indicating anomalous gold and molybdenum values within float and outcrops on the property.

Rock chip samples of pelitic schists and quartz float returned values of greater than 1 ppm. Au (.029 oz. Au/ton) on the property. Mo results returned higher than average values.

A 1.75 meter sample on a road cut adjacent to the south of the property returned .037%  $MoS_2$ . A 50 meter random chip to the west of the zone returned .012%  $MoS_2$ .

## INTRODUCTION

During September 1979, an exploration program of geological mapping and a VLF-EM survey was completed on the KW mineral claim of Kennedy Resources Inc. located 40 km northwest of Pemberton.

The purpose of the preliminary exploration program was to determine the potential of the claim for the location of favorable geological structures which may localize economic mineral zones.

Molybdenite mineralization is exposed on a road cut within two hundred meters to the south of the claim block which is enclosed in a structural zone striking on to the KW claim.

The program was carried out during the period of September 11-13, 1979.

## PROPERTY

The property consists of one claim comprised of eight units. Particulars are as follows:

Claim Name	Record No.	Expiry Date
KW	939	September 5, 1980

#### LOCATION AND ACCESS

The claim is located at the northwest end of Duffy Lake 40 km east of Pemberton.

Access is via paved and gravel highway eastward from Pemberton to Creekside and Jaffre Creek to Duffey Lake.

A southern branch logging road off the Duffey Lake Highway provides access to the eastern portion of the property.

#### PHYSIOGRAPHY

The property lies within the Cayoosh Range of the Coast Mountains. Within the general area glaciated mountain peaks range up to 2900 meters above sea level. On the property, low to moderate slopes prevail with elevations up to 1650 meters. Major structures as typified by topography trend northwesterly and northeasterly.

#### WATER AND POWER

Sufficient water for all phases of the exploration program would be available from Blowdown Creek or other water courses on the property.

Initial power requirements would be supplied through diesel electric power.

#### TRANSPORTATION AND SUPPLIES

Railhead facilities are available at Pemberton 40 km to the west.

Most supplies would be available at Pemberton or Squamish to the west or Lillooett 40 km to the east.

#### HISTORY

The Molybdenite showing on the road cut, within two hundred meters south of the property has reportedly been tested by diamond drilling, however documented results are not available. The showing is presently within a reserved area where staking is not permitted.

Previous exploratory work on the ground covered by the KW claim is not known of to the writer.

In the immediate area of the property a silver occurrence located one and a half km north of the KW claim has been periodically explored.

Eight km to the north is the Borkley Valley gold silver occurrence hosted by the Bridge River Group of sediments.

Fourteen km to the southeast are the Silver Queen and Patrick silver-lead-zinc showings occurring within intrusives.

The former producing Bralorne-Pioneer gold mines are located 50 km to the northwest.

#### GEOLOGY AND MINERALIZATION

The formations underlying the property consist principally of meta pelitic sediments, pelitic and pelitic biotite shcists and hornfelsic rocks of the Bridge River series. Plentiful coarse diorite float occurs on the property, however specific locations of quartz diorite were only located west of and adjacent to Blowdown Creek.

Pelitic schists which may contain associated quartz stringers, lenses or grains, strike from 290° to 320° which direction parallel various topographical features on the property. Hornfelsed sediments exhibiting a granular texture associated biotite and quartz veining predominate in the area centered by 150W, 200S.

"Dioritization" of the host rock increases from this area to the direction of Blowdown Creek. To the south occurrences of quartz float indicate quartz veins up to 15 cm wide.

Mineralization at the road cut south of the property occurs as molybdenite splashes within quartz veins which are associated with a shear zone striking at  $230^{\circ}$  with a dip of  $80^{\circ}$ E.

# VLF-EM SURVEY SABRE 27

The VLF-EM receiver measures the distortion imposed by a secondary magnetic field on a primary magnetic field. In this case, the primary field is produced by a transmitter located at Seattle, Washington which is transmitting at 18.6 KH<sub>3</sub>. The secondary field would be produced by a conductive body such as a sulphide body.

However, as the VLF-EM utilizes a frequency which is conducive to locating zones of much lower conductivity and thus can be useful as an aid in the geological interpretation of the survey area.

In the survey, initially a N-S baseline was established along the central portion of the property for control purposes. Stations were flagged and marked at 50 meter intervals along the base line. East-west survey lines were then established at 100 meter intervals along the base line. Readings along these lines were taken every 50 meters with a station marked on red flagging at each reading point. A total of 10.5 line km of survey were completed.

In processing the VLF-EM results, the readings were Frazer filtered. This process essentially exposes conductor areas that may not be obvious in unfiltered date. The conductors are expressed as peaks in positive results rather than cross-overs.

### VLF-EM SURVEY RESULTS

The results of the VLF-EM survey revealed an anomalous zone extending from OS to 800S and paralleling Blowdown Creek to the west and thus could represent a secondary parallel structure. Minor associated splay structures may be represented by the localized anomaly at 200E 700S. The assumed structure of Blowdown Creek was not expressed as an anomaly.

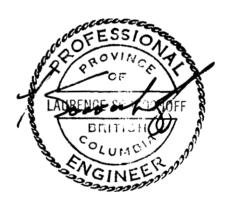
The zone parallels a major structural direction as indicated by Blowdown Creek and within outcrops of the area.

## CONCLUSIONS

The VLF-EM survey disclosed a structure which parallels a major topographically expressed fault which is not indicated as an anomaly. Thus the anomaly may be an expression of structure with associated sulphides. However the anomaly may indicate other features such as a clay zone, carbonaceous sediments or a subsurface lithological contact and only additional field information will determine the causitive source.

# RECOMMENDATIONS

It is recommended that additional exploration comprised of a geochemical and magnetometer survey be carried out to provide additional correllative information to determine prime target areas for localized testing.



# COST STATEMENT

L. Sookochoff - field supervision	\$150
G. Sookochoff	
Sept. 11-13, 1979-3 days @ \$75	225
Room and board 3 man days @ \$45	135
Car Rental 3 days @ \$22	
plus 680 km @ .10 ½ X \$134	67
Equipment rental 3 days @ \$20	60
Compilation	175
Drafting and Printing	75
Report	750
	\$1,637

#### CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 2602-1055 West Georgia Street, Vancouver, B.C.

### I further certify that:

- 1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2. I have been practising my profession for the past thirteen years.
- 3. I am registered with the Association of Professional Engineers of British Columbia.
- 4. The information for the accompanying report is based on a geological and VLF-EM survey carried out on the property during September 1979.

Laurence Sookochoff, P.Eng. Consulting Geologist

March 6, 1980 Vancouver, B.C.



