

800377

REPORT ON THE
NUGGET II CLAIM
NEW WESTMINSTER MINING DIVISION
HARRISON LAKE, B.C.

for

CALLEX MINERAL EXPLORATIONS LTD.

101 - 744 West Hastings Street
Vancouver, B.C. V6C 1A5

by

W.G. Hainsworth, P. Eng.

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Vancouver, B.C.

March 15, 1983

TABLE OF CONTENTS

| | |
|-------------------------------|--------|
| Summary and Conclusions | Page 1 |
| Introduction | Page 3 |
| Location and Access | Page 4 |
| Property | Page 5 |
| History | Page 6 |
| Regional Geology | Page 7 |
| Local Geology | Page 8 |
| Recommendations | Page 9 |

Appendices

| | |
|--------------|---------------------------------------|
| Appendix "A" | Writer's Certificate |
| Appendix "B" | Estimated Cost of Recommended Program |
| Appendix "C" | Assay Certificate |
| Appendix "D" | Bibliographies |

Figures

| | |
|----------|-------------------------------|
| Figure 1 | Location Map following Page 4 |
| Figure 2 | Claim Map following Page 5 |

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SUMMARY AND CONCLUSIONS

The Harrison Lake area of the New Westminster Mining Division within which the Nugget II claim lies has seen sporadic exploration efforts dating back to the Cariboo gold rush of the 1860's. However no commercial exploitation of mineral deposits was undertaken in the immediate vicinity. Although numerous mineral deposits have been identified in this particular region, production came from deposits to the west or south of the lake.

Harrison Lake, likely the site of a scoured old fault plane, separates Jurassic-Cretaceous sediments lying to the west from older Paleozoic flow rocks outcropping east of the lake. Later Cretaceous quartz diorite intrusives have intruded formations on both sides of the lake. The Nugget II claim includes intermediate to acid volcanics with their pyroclastic equivalents underlying a faulted gneiss formation in the eastern section of the claim group.

Several miles northwest of the Nugget II, a Vancouver-based exploration company has outlined a gold deposit of present small dimensions and modest grade. Drilling is reported to be continuing on this property.

Sampling of several quartz structures on the Nugget II claim returned minor gold and silver values.

The Nugget II claim of Callex Mineral Exploration Ltd. lies within formations which are amendable to mineralization. The quartz vein structures and localized pyrite mineralization within the bedded formations attest to the possibilities of gold deposition. The claim is worthy of further investigation.

A staged program based on a success contingency is recommended. The first stage, broken into two phases, would consist of the initial phase being that of search and identification of target areas. Included in this phase would be mapping, rock sampling geochemistry and ground geophysics (EM 16 and magnetometer) at an estimated cost of \$17,000. The second phase would be the proving up of the targets, through a restricted 2,000 feet of diamond drilling at an estimated cost of \$60,000.

The second stage would be contingent upon the success generated in the target identification of Phase II. The size of this program would be variable, again dependant upon the success of the earlier programs.

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INTRODUCTION

The Nugget II claim property consisting of twenty (20) units is situated on the east shore of Harrison Lake approximately thirty-six kilometers (22 miles) up the lake (north) from Harrison Hot Springs, B.C. The claim was examined March 5 - 6, 1983 at the request of Mr. Dil Gujral, Managing director of Callex Mineral Exploration Ltd.

The terrain is extremely rugged with steep (25° - 30°) slopes rising out of the lake. Vegetation is thick and combined with the steepness of the slopes slows progress through the claims. Should drilling be contemplated consideration should be given to emplacement of the drill on sites by helicopter.

Mineralization occurs as finely distributed pyrite in sheared, altered tuffs. Values in gold and silver are occasionally associated with the pyritic contents.

There has been no past production from the property and little information is available as to past exploration efforts.

LOCATION AND ACCESS

The claim group is located on the eastern shoreline of Harrison Lake, thirty-six kilometers north of the town of Harrison Hot Springs, B.C.

The Nugget II claim is within the New Westminster Mining Division with the claim centering on north $49^{\circ} 37'$ longitude and west $121^{\circ} 52'$ latitude. Its National Topographic System location is 92/H/12W.

Access to the claim group is by a gravel road up the west side of Harrison Lake to marker 56 kilometers. From this boat unloading area it is 7.9 kilometers down and across the lake to the legal Corner Post of the claim.

Harrison Hot Springs is 83 kilometers from Vancouver, just off highway #7.

REGIONAL GEOLOGY

The Harrison Lake area is contained between the Coastal mountains on the west and the Cascade mountain system to the east. The area west of the lake is composed primarily of Jurassics and later Cretaceous sediments which have been intruded by older Cretaceous acid intrusives. On the east side of the lake Paleozoic intermediate volcanics and their equivalents host large areas of older Cretaceous quartz diorite bodies. The rocks have undergone low grade metamorphism and are folded and faulted in a complex manner.

Harrison Lake lies along the plane of a major fault zone.

Glaciation has been strong throughout the area with the lake itself probably being scoured out along an old fault zone by glacial action.

LOCAL GEOLOGY

The writer walked the shoreline of the Nugget II group noting the geology and sampling where it was considered necessary. To avoid sheer shoreline cliffs traverses were made up the steep hillside where occasional outcrops were examined.

Shoreline geology is composed primarily of sheared altered tuffs. They are light grey to grey-green in colour, fine textured and well bedded. Shearings has developed along bedding planes. The formation is normally mineral dry but in several locations disseminated pyrite was observed occasionally identified by its rusty surface discolouration. At a point 125 meters (410 feet) along the shoreline south from the Legal Corner Post, a sample, #8285, was chipped across a meter (3 feet) width of moderately pyritized tuff. The sample assayed 0.001 ounces gold per ton and 0.02 ounces silver per ton. In addition the tuff beds are cut by both discordant and concordant quartz veins of variable dimensions. Of the vein structures seen none exceeded $7\frac{1}{2}$ meters (25 feet) in length or 30 centimeters (12 inches) in width. Little mineralization was seen in the quartz structures. A sample, #8284, was cut over a $4\frac{1}{2}$ meters (15 feet) length from a barren looking quartz vein averaging 10 centimeters (4 inches) in width. The sample returned 0.001 ounces gold per ton and 0.01 ounces silver per ton.

In one location, several hundred feet up the hillside, rock outcroppings exposed massive andesite flow rocks of medium grained texture. No mineralization was evident. Several rock slides were predominately volcanic.

In two locations along the shoreline, narrow limestone exposures lay just below the waterline.

The tuff beds trend south 25° east with very flat attitudes, normally 25° to 35° to the northeast.

Government mapping indicates a fault contact within the claim block with gneissic material overlying the flow type formations.

RECOMMENDATIONS

In so far as the writer is aware there has been no organized exploration program carried out on the Nugget II claim of Callex Mineral Explorations Ltd.

In view of the success presently being generated at the Rhyolite Resources property on the opposite shore of Harrison Lake the writer proposes the following success oriented program for the Nugget II claim at an estimated cost of \$17,000 for Phase I of Stage I and \$60,000 for Phase II of Stage I.

Stage I

Phase I

This would entail the establishing of a property control grid (east-west flagged lines at 200 foot spacings) from which would be run surface geological mapping, a geochemical soil survey and two geophysical surveys. This would create better than 30 miles (50 km) of line plus baselines.

The geophysical surveys would consist of an EM 16 VLF survey to delineate structures common to mineral localization and a magnetometer survey to delineate lithological differences.

Should old pits or trenches be encountered the cleaning, examining and sampling of these excavations would be a major consideration.

Phase II

Once the various targets have been identified, then sub surface examination in the form of diamond drilling is recommended. The specific targets would be allotted their priority drill footage so as to stay within the program drill footage.

Stage II

Upon success being generated in Stage I, this stage would be an expansion of the initial drill results of the previous program. It would involve trenching of specific areas with accompanying sampling in addition to target delineation diamond drilling. Possibly included within this program would be underground excavation work.

Respectfully submitted,

W.G. Hainsworth, P. Eng.
Consulting Geologist

APPENDIX A
CERTIFICATE

I, W.G. Hainsworth, P. Eng., of Vancouver, B.C. do hereby certify:

- (1) That I am a Consulting Geologist residing at #4 - 4100 Salish Drive, Vancouver, B.C.
- (2) That I am a graduate of the University of Western Ontario, London, Ontario, Bachelor of Science Degree, Honours Geology.
- (3) That I have practiced my profession for some 30 years.
- (4) That I have been a continuous member of the Association of Professional Engineers of British Columbia since 1965 and am a Professional Geologist registered with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1979.
- (5) That I have no financial interest, direct or indirect, in Callex Mineral Exploration Ltd., and do not expect to obtain any such interest.
- (6) That the information contained in this report is based on a visit to the Nugget II property on March 5-6, 1983 and perusal of all pertinent information available.
- (7) Consent is herewith given to Callex Mineral Exploration Ltd., to use any or all material from this report in information circulars, offerings or shareholders' brochures.

W.G. Hainsworth, P. Eng. (B.C.)
P. Geol. (Alta.)

To accompany:
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APPENDIX B
ESTIMATED COST OF RECOMMENDED PROGRAM

Stage 1

Phase I

Reconnaissance Surveying and Target Identification.

Program

Grid Preparation
Geological mapping
Geochemistry
EM 16 VLF Survey
Magnetometer Survey
Cleaning and Sampling of old trenches (if applicable)

Estimated Field Duration: 1 month

Estimated Cost

Salaries

| | | |
|-----------|---------------------|--------------|
| Geologist | 1 mo. @ \$3,500/mo. | \$ 3,500 |
| Assistant | 1 mo. @ \$2,200/mo. | <u>2,200</u> |

\$ 5,700

Fees

| | |
|----------------------------------|-----------------|
| Professional 10 days @ \$400/day | \$ <u>4,000</u> |
|----------------------------------|-----------------|

4,000

General Expenses

| | |
|---|------------|
| Vehical Rental (4 wd. 1 mo. @ \$750/mo.) | \$ 750 |
| Boat and Engine Rental 1 mo. @ 500/mo. | 500 |
| Fuel | 500 |
| Radio Communication Rental 1 mo. @ | 100 |
| Camp supplies and food | 2,500 |
| Assaying (Soils and Rock) | 600 |
| Equipment (Mag., EM16, Honda generator) rental (1 mo.) | <u>800</u> |

5,750

| | |
|-----------------|--------------|
| | 15,450 |
| Contingency 10% | <u>1,550</u> |

\$17,000

Phase II
Target Evaluation

Program: Diamond Drilling

Estimated Cost

2,000 feet of BQ wireline
diamond drilling on specific
targets. Estimated \$30/foot all inclusive \$ 60,000

Total Stage I \$ 77,000

Stage II

This stage for which costs have not been estimated would depend upon the results obtained in Stage I. It would consist of detailed sampling, drilling and, possibly, development headings.

APPENDIX D

Bibliographies

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1939, Pg. A100.

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November 30, 1982 Prospectus, Rhyolite Resources Inc.