# 19-#562-#7787

## ESPERANZA EXPLORATIONS LTD.

1027 - 470 Granville St., Vancouver, B.C. V6C 1V5 Telephone (604) 687-1658

REPORT ON

#### ROCK ASSAYS AND GEOLOGY

#### OF THE

#### HIXON CREEK PROSPECT

(Hixon Quartz 1 - 6, HQ, HQ 2 and HQ 3 Mineral Claims)

Cariboo Mining Division

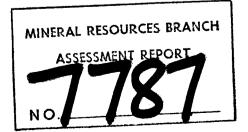
N.T.S. 92 G/7 E 93

Latitude 53<sup>0</sup> 27'N.

Longitude 122<sup>0</sup> 31'W.

September 6th, 1979.

John D. Jenks, Consulting Geologist.

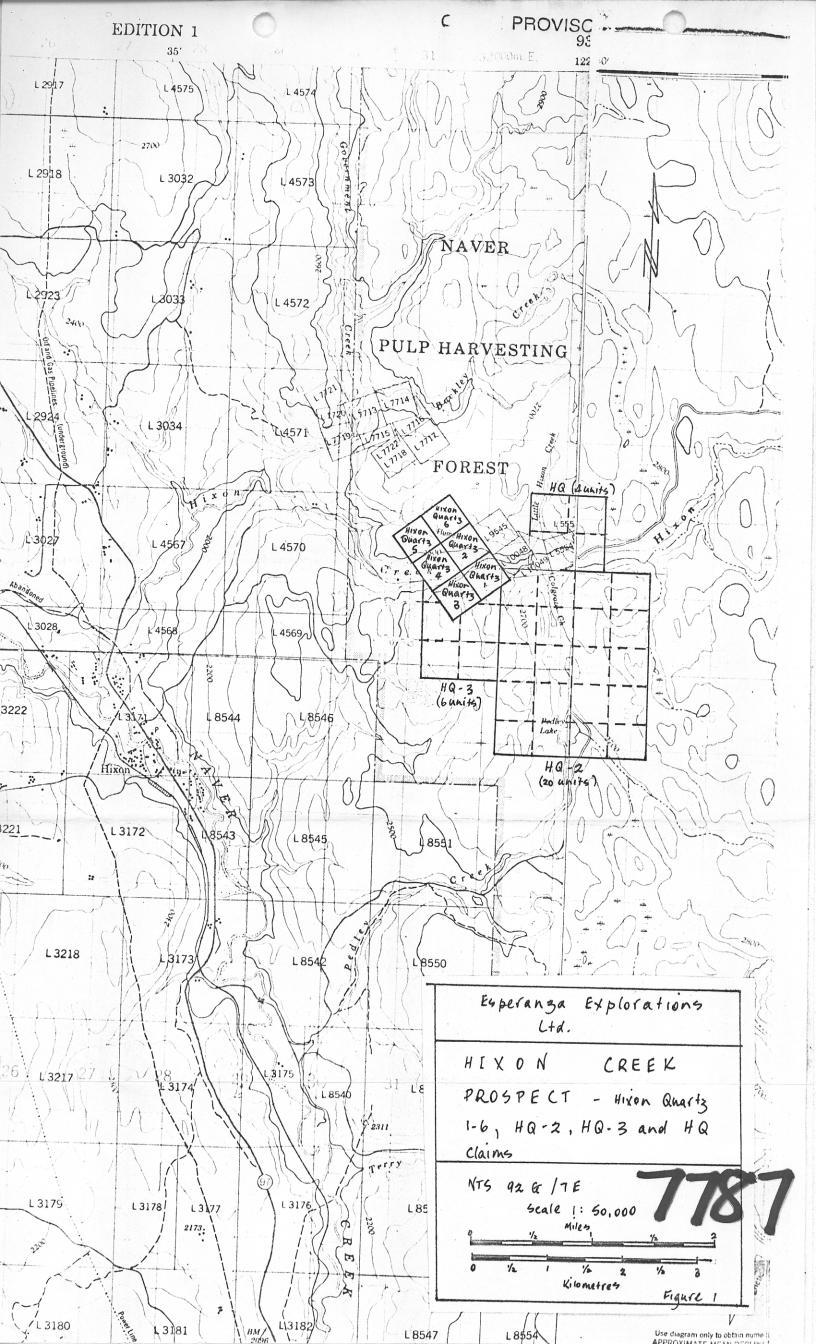


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| FIGURE 1 | HIXON CREEK PROSPECT - Hixon Quartz 1-6,<br>HQ-2, HQ-3 and HQ Claims | Frontispiece |
|----------|--|--------------|
| FIGURE 2 | GENERAL SAMPLE PLAN HIXON PROPERTY,<br>Hixon Ck., B.C. N.T.S. 92G/7E | In pocket    |



#### SUMMARY

The following report describes the geology of the Hixon Prospect and the rock sampling of dump and other material.

The property has been a minor lode-gold producer in the past. A 25-ton per day mill treated some 4,000 tons of ore during 1938-1939, a few hundred tons of which assayed in the one ounce (31 gm) per ton range.

Gold occurs in quartz-carbonate veins within altered greenstones. Associated minerals include pyrite, arsenopyrite, pyrrhotite and minor galena, sphalerite and chalcopyrite. The greenstones may be derived from basic sills forming part of a Juro-Triassic sequence of pelitic schists.

Prior work by Bethlehem Copper Corp. included soil sampling and diamond drilling but was not felt to be definitive.

Lack of outcrop hinders evaluation. Future work will rely heavily on diamond drilling, magnetometer and possibly I.P. work, and additional geologic mapping.

The prospect has the earmarks of a multiple vein-type deposit possibly similar to the Cariboo Gold Quartz Mine near Wells some eighty kilometers to the southeast.

#### INTRODUCTION

#### (a) General Geography, Physiography, Location and Access

The Hixon Quartz claims are located 55 kilometers south of Prince George and 5 kilometers east of the town of Hixon, B.C. The claim area may be reached via B.C. Highway 97 and 5 kilometers of good dirt road from Hixon.

Topography of the terrain is moderate and characterized by low hills heavily wooded by lodgepole pine. Elevations range from 670 to 850 meters while local relief is in the order of 180 meters.

Outcrop, which is scarce, is confined mainly to stream banks with the exception of the area north of Pedley Lake which has greater exposure in the vicinity of a northeasterly-trending ridge.

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#### (b) History and Property Definition

The immediate area has a sporadic history of lode and placer gold production dating back to the 1870's. At least 400,000 cubic meters of gravel have been washed yielding an unrecorded amount of gold.

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The late 1880's early activity included a substantial amount of underground tunnelling and the processing of ore through a stamp mill which reportedly ceased operation in the 1880's.

Acquisition of the prospect by the Quesnelle Quartz Mining Co. Ltd. during the mid 1930's resulted in the cleaning out of old workings, further underground advancement, and the construction of a 100 ton per day rated mill which ran briefly toward the end of the decade. The mill commenced operations in November, 1938, discontinued during 1939 and produced at an actual rate of 25 tons per day.

Bethlehem Copper Corporation conducted an exploration program during the early 1970's which included geologic mapping, soil sampling, and four holes of diamond drilling from surface totalling 450 meters.

The prospect was optioned in March, 1979, from prospectors Vic Guinet and Andrew Harman by Esperanza Explorations Ltd., during which time further claims were added. A limited amount of rock analyses were subsequently undertaken.

At present the Hixon Prospect consists of the following claims:

|                   | No. of Units |            |                  |
|-------------------|--------------|------------|------------------|
| <u>Claim Name</u> | of Claims    | Record No. | Anniversary Date |
| Hixon Quartz #1   | 1 (2-post)   | 61413      | Dec. 16, 1979    |
| Hixon Quartz #2   | 1 (2-post)   | 61414      | Dec. 16, 1979    |
| Hixon Quartz #3   | 1 (2-post)   | 821        | Sept. 1, 1979    |
| Hixon Quartz #4   | 1 (2-post)   | 822        | Sept. 1, 1979    |
| Hixon Quartz #5   | 1 (2-post)   | 823        | Sept. 1, 1979    |
| Hixon Quartz #6   | 1 (2-post)   | 824        | Sept. 1, 1979    |
| HQ                | 4 Units      | 856        | Sept. 25, 1979   |
| HQ 2              | 20 Units     | 969        | April 9, 1980    |
| HQ 3              | 6 Units      | 970        | April 9, 1980    |

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A recent grouping included the Hixon Quartz 1-6, the HQ and the HQ 2 claims on which two years' work assessment credit was submitted for application on the Hixon Quartz 1-6 and the HQ claims as per this report.

#### WORK SUMMARY

Three days were spent on the Hixon property perusing the geology and sampling and dump material in order to gain some understanding of gold values and possible ore controls prevailing.

To that end, eleven rock samples were taken and analysed for gold and silver at Min-En Laboratories Ltd., North Vancouver. Of these, two were channel samples of outcrop, two were talus samples and seven were samples of dump material taken from various locations (see map and appendix).

#### GEOLOGY AND MINERALIZATION

Gold occurs in quartz-carbonate veins and stringers within greenstone members of a northwesterly-trending sequence of pelitic schists of Juro-Triassic age. Geological interpretation of the Hixon Prospect is obscured by the fact that very little outcrop is seen on the property with the exception of stream banks and areas of higher ground, particularly to the north of Pedley Lake. In addition, all old tunnels, adits, and other workings are completely inaccessible.

Past lode-gold production records are sketchy and incomplete, however mention is made in the 1930's of tonnages milled of approximately 300 tons averaging one ounce (32 gm) of gold per ton.

A substantial amount of scattered dump material in the vicinity of the main shaft gives a good indication of the type of material mined. This consists primarily of greenstone (much of which has undergone carbonate alteration) containing quartz-carbonate veining. Among the minerals seen in the veins are pyrite, pyrrhotite, arsenopyrite and occasional galena, sphalerite, and chalcopyrite. Old reports mention the presence of native gold, native silver, and molybdenite, however these were not observed during the course of the examination. Other episodes of vein emplacement are suggested by the presence of barren quartz veins somewhat different in character from the above. An apple-green alteration mineral, steatite (?) is commonly observed in patches within the greenstones.

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Sporadic, highly-weathered outcrops along stream banks in the vicinity of the main shaft reveal a sequence of pelitic, sericitic schists with schistosities striking between 115° and 145° dipping 25° to 60° to the northeast. Occasional zones of lesser alterations display primary bedding in orientations similar to that of the schistosity. These same zones give a truer indication of the original units which include thin-bedded mudstones, siltstones, graphitic shales and minor sandstone or greywacke. It is suspected that within the region of the main shaft a number of basic sill horizons are included in the sequence, however because of the high degree of regional alteration this cannot be confirmed with absolute certainty from surface exposures. Barren, quartz-filled tension fractures are occasionally seen.

Outcrop exposed north of Pedley Lake along a northwesterly trending ridge consists of greenstone with sporadic quartz-carbonate veining. Whether this greenstone was originally a volcanic unit or a thick basic sill cannot be presently confirmed.

Government mapping portrays a northwesterly-trending fault running through the prospect to the east of the main shaft. Locally, outcrop is inadequate to confirm this feature's presence.

Similarly, aeromagnetic coverage of the area indicates the existence of a linear zone of northwesterly-trending magnetic highs corresponding rather closely with the western portion of the aforementioned fault.

In places a conglomerate irregularly overlies the older bedrock. This consists of coarse, cemented gravel and is felt to be Tertiary in age.

It would appear that the greatest lode-gold potential would be in vein stockwork within the greenstone units, possibly in proximity to greenstone-schist contacts.

There is also a chance that the more quartzose members of the schists could also prove favourable.

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#### DISCUSSION OF SAMPLING RESULTS

Sampling results from the Hixon Property are as follows:

| Sample |   |       | Au          |      | Ag          |
|--------|---|-------|-------------|------|-------------|
| Number | Location  | oz/T  | gm/metric T | oz/T | gm/metric T |
| DI     | Dump material (graphitic schist)<br>Hixon Creek, south bank.                  | 0.015 | 0.42        | 0.14 | 3.95        |
| 2      | Dump material, greenstone with<br>quartz veining, Hixon Creek,<br>south bank. | 0.014 | 0.39        | 0.08 | 2,26        |
| 3      | Dump material, greenstone with<br>quartz veining, Hixon Creek,<br>south bank. | 0.102 | 2.88        | 0.13 | 3.67        |
| 4      | Dump material, greenstone with<br>quartz veining, Hixon Creek,<br>south bank. | 0.002 | 0.06        | 0.04 | 1.12        |
| 5      | Dump material, greenstone with<br>quartz veining, Hixon Creek,<br>south bank. | 0.002 | 0.06        | 0.03 | 0.84        |
| 6      | Oxidized dump material, 500 meters southeast of main shaft.                   | 0.029 | 0.82        | 0.09 | 2.54        |
| 7      | Channel sample, schist, north bank<br>Hixon Creek.                            | 0.003 | 0.08        | 0.04 | 1.12        |
| 8      | Channel sample, schist, north bank<br>Hixon Creek.                            | 0.001 | 0.03        | 0.03 | 0.84        |
| 9      | Talus material, 800 meters S.E. of main shaft.                                | 0.002 | 0.06        | 0.03 | 0.84        |
| 10     | Greenstone with quartz veining from pit north of Pedley Lake.                 | 0.002 | 0.06        | 0.04 | 1.24        |
| 'n     | Talus material, 800 meters S.E.<br>of main shaft.                             | 0.006 | 0.17        | 0.04 | 1.24        |

With the exception of sample # D3, gold values are too low to have any positive economic implications. Sample #D3 at 2.88 gms/ton could be near the lower limit of economic viability in a large-tonnage, open cast type of operation. That the prospect has this type of potential has yet to be proven.

It would seem unlikely that the dump samples taken are truly representative of the original ore material, the best of which went through the mill during 1938-1939. To verify the original grades, fresh vein samples would have to be obtained by diamond drilling.

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#### CONCLUSIONS AND RECOMMENDATIONS

Prior lode-gold mining activity during the 1930's totalled an estimated 4,000 tons of underground vein material of indeterminate grade, some of which averaged approximately one ounce (32 gms) of gold per ton.

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Subsequent exploratory work by Bethlehem Copper Corp. in the 1970's centering around soil geochemistry and follow-up diamond drilling was not felt to be definitive for a number of reasons, two of which involved the lack of suitability of the immediate area for soil geochemistry and the subsequent poor placement of hole locations together with questionable core recovery.

Surface sampling of dump material as covered in this report similarly does not appear definitive since the samples may not be representative of the ore-grade material previously milled.

Lack of surface outcrops is a prime factor in evaluation of the prospect. As the old workings are collapsed and in highly broken incompetent schists, diamond drilling would be the cheapest way to gain further information with respect to geology and gold distribution.

Ground magnetometer work could prove useful in delineating distribution of the greenstones. Should a correlation between pyrite and gold content be indicated then I.P. could be used to advantage.

The quality of the geologic mapping could also be upgraded. In summary, the areas of greatest gold potential would appear to lie in the more competent rock members such as the greenstones and the more quartzose members of the schists. Other members such as the mudstones, siltstones, graphitic and talcy schists would not appear to hold great promise.

It would be reasonable to visualize in the Hixon Prospect a situation not unlike that of the Cariboo Gold Quartz Mine near Wells, B.C., eighty kilometers to the southeast where gold-bearing quartz veins occur in close association with rather prevalent north-northwesterly strike faulting. That being the case, perhaps an effort should be made to pinpoint the locality of the fault shown on the government geologic maps and to focus activities in that area.

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#### STATEMENT OF COSTS

The following costs were incurred during the geochemical evaluation of the Hixon Property during May, 1979:

| Assays and Geochemical Analyses  |           | \$ 90.00    |
|--|-----------|-------------|
| Consulting Fees<br>G.H. Rayner - 3 days field work May 26,27,28, 1979)<br>plus 2 days report writing @ \$225/day | \$1125.00 |             |
| J. Jenks - 3 days field work and report writing<br>(May 26,27,28, 1979) @ \$150/day                              | 450.00    | \$1,575.00  |
| Food and Accommodation<br>6 days @ \$35/man/day  |           | 210.00      |
| Transportation   |           |             |
| Vancouver-Hixon-Vancouver<br>= 1000 miles @ 35¢/mile   | \$350.00  | •           |
| Salmon Arm-Hixon-Salmon Arm<br>700 miles @ 25¢/mile  | 175.00    | 525.00      |
| Total Expenditure  | 3         | \$ 2,400.00 |

Respectfully submitted,

John Jenks, B.Sc., Consulting Geologist, Salmon Arm, B.C. September 6th, 1979.

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#### CERTIFICATE

I, John S. Brock, of 3029 Proctor Avenue, West Vancouver, British Columbia, DO HEREBY CERTIFY:

- That I am a geologist and geophysicist with a business office at 1027 - 470 Granville Street, Vancouver, B.C.
- That I am a graduate in geology and geophysics of the University of British Columbia (B.Sc - 1964).
- 3) That I am a Fellow of the Geological Association of Canada (1967), a member of the Canadian Institute of Mining and Metallurgy (1966), and a member of the Society of Exploration Geophysicists (1968).
- 4) That I have practiced my profession as a geologist and geophysicist for the past fifteen years.
- 5) That to the best of my knowledge and belief, the Statement of Costs presented in this report "REPORT ON ROCK ASSAYS AND GEOLOGY OF THE HIXON CREEK PROSPECT" is both correct and true.
- 6) That I hold an interest in the shares of Esperanza Explorations Ltd. and that I am president and director of Esperanza Explorations Ltd.

John S. Brock

SWORN BEFORE ME at the City of Vancouver, in the Province of British Columbia, this 26 day of \_\_\_\_\_\_\_\_\_\_, 1979.

A Notary Public in and for the Province of British Columbia.

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| Minister of Mines, B.C.          | (1933, 4, 5, 8, 9) Report of the Minister of Mines,<br>B.C., Queen's Printer.                        |
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| Richards, F. (1948)              | "Cariboo Gold Quartz Mine", Structural Geology<br>of Canadian Ore Deposits, CIMM publication.        |
|                                  |  |

### CERTIFICATE OF ASSAY

# APPENDIX

MIN-EN LABORATORIES LTD. 705 WEST 15TH STREET NORTH VANCOUVER, B.C. Phone: 980-5814 Certificate of Assay

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| SAMPLE No.                            | <u> </u>    | Au         |                           |             |                               |
|                                       | <u> </u>    | oz/ton_    |                           |             |                               |
| D_1                                   | 14          | .015       | Hixon Ck. · South b       | enk;dump    | <u>mtl. ; graphitic</u> shot. |
|                                       |             | .014       | - 4                       | 0-          | j greenshe. w. B              |
| 3                                     | 13          |            | - d                       | p -         |                               |
| <u>.</u>                              | 04          | 002        | -d                        | 0           |                               |
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|                                       |             | MIN-EN     | Laboratories Ltd          | li          | APPEND                        |

