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# GOLD MOUNTAIN EXPLORATIONS LTD.

## Preliminary Geological Report

Placer Gold Leases - Coulter Creek and Slough Creek

Island Mountain, Wells, B.C.

Barkerville Gold Belt

Cariboo Mining Division

93 H 4/E

October 29, 1982.

Clive W. Ball, P.Eng.

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## APPENDICES



## MAPS

## I. CONCLUSION AND RECOMMENDATIONS

Preliminary testing reveals that the Coulter Creek placer leases have a promising potential and recent stripping with two Caterpillar tractors has exposed the floor of a gold-bearing channel at the site of an old adit in the eastern sector of the main placer pit.

Six widely spaced seismic lines were run by Huntec of Toronto in 1966. However, the results are somewhat inconclusive. Some depressions in bedrock were indicated and Huntec concluded that a closer grid seismic survey was required for more exact definition of profiles. This would enable delineation of bedrock channels which are considered to act as natural traps for concentration of gold.

Recent stripping with two Caterpillar tractors has removed a total of about 100,000 yards of overburden which appears to carry low but persistent gold values. The sand and gravel is still impounded but reliable sampling of this material would be difficult.

Abundant grey and blue clay is admixed with the silty matrix in the pit and the pebble and boulders amount to about 15 per cent by volume. No estimate of clay content can be given except that the writer believes that overall clay content in the pit may be as high as 40 per cent by volume.

The plant on the property can be readily assembled and with addition of excavating equipment such as front-end loader, back-hoe and Caterpillar tractor would be capable of treating auriferous gravel in the spring of 1983 at a rate of 600 cubic yards per day.

It is strongly recommended that testing of the gravels in the pit area be carried out using a Hawker-Siddeley sonic drill to dig a total of 40 holes on a grid spacing of 60 metres. Average depth of the holes is estimated to be 15 metres.

The work program as itemized in Appendix I is estimated to cost $169,300 and it is strongly recommended that funds be made available to institute and carry out the program with a view to achieving production in the spring of 1983.

## II. INTRODUCTION

The writer was commissioned by the Directors of Nexus Resource Corporation to visit the placer workings on Coulter Creek, and as a result a field examination was carried out on October 13, 1982. A previous visit was made to the property on 31st July, 1979 with Mr. J.E. La Fleur as guide.

In the recent visit, Mr. T.F. Schorn, a Director of Gold Mountain Explorations Ltd. acted as guide, and the impression was gained that the current work program is being vigorously pursued with good technical supervision by Mr. Schorn.

The present work program includes bulldozer stripping with two Caterpillar tractors and field sample testing using a Flying Dutchman gold sluice box which can handle up to 1 cubic yard of gravel per hour.

Three out of four samples taken from the pit walls during the writer's visit yielded small "tails" of free gold during final clean-up in the prospector's gold-pan.

## III. LOCATION AND ACCESS

The gold placer leases straddle Coulter Creek and Slough Creek and extend from the south-west flank of Island Mountain to Slough Creek. Elevations range from 4,000 feet to 4,500 feet above sea-level and the leases cover a surface area of approximately 1,000 acres.

Ground slopes are moderate to gentle and tree cover consists of douglas-fir, jack-pine and balsam with minor underbrush of willow and alder.

Coulter Creek is a strong flowing mountain stream with flow considered to be adequate for placer mining.

Centre of the placer leases is latitude 53°06' North and longitude 121°40' West.

Access is by the Barkerville black-top highway for a distance of 70 km. east of Quesnel and thence a distance of about 1 km. by all-weather gravel road to the camp on Coulter Creek. A dirt road leads from the camp to the "diggings" or auriferous gravel pit, a distance of less than 1½ km. The property is easy of access and the workings are on a south-facing slope, enabling early access in the spring.

## IV. PROPERTY AND OWNERSHIP

Four placer mining leases and seven placer leases are held by Gold Mountain Explorations Limited. The leases are contiguous to one another and straddle Coulter Creek and Slough Creek. The leases cover an area of 1,090 acres and are recorded in Quesnel-Cariboo Mining Division. Registered owner is Gold Mountain Exlporations Limited. Assessment work has been recorded to keep all of the leases in good standing up to September 1984.

The placer leases adjoin the producing lode gold mine of Mosquito Creek Gold Mining Co. Ltd.

Water licences have been issued by the Ministry of Environment, Province of British Columbia and a Placer Reclamation Permit has been approved by the Minister of Energy, Mines and Petroleum Resources (see Appendix I). The status of the leases and pertinent details are shown in Table I below:-

# TABLE I.

Placer leases registered in the name of Gold Mountain Explorations Limited

## Placer Mining Leases:

| Record Number | Date of Registration | Area (Acres) |
|---|---|---|
| 6495 | 23 December 1964 | 80 |
| 6496 | 23 December 1964 | 80 |
| 6497 | 23 December 1964 | 80 |
| 6498 | 23 December 1964 | 80 |

Total Area = 320 acres

## Placer Leases:

| Record Number | Date of Registration | Area) (Acres) |
|---|---|---|
| 810 | 6 September 1978 | 110 |
| 811 | 6 September 1978 | 110 |
| 812 | 6 September 1978 | 110 |
| 813 | 6 September 1978 | 110 |
| 814 | 6 September 1978 | 110 |
| 815 | 6 September 1978 | 110 |
| 816 | 6 September 1978 | 110 |

Total area = 770 acres

## V. HISTORY AND PREVIOUS WORK

The earliest recorded work on Coulter Creek, the placer ground, was carried out in 1924, and in 1950 John Chouse drove an adit about 45 metres in order to cut an upper channel. The adit is reported to be partly in bedrock formation (slates). There is no official record of gold recovery by John Chouse, although it is unofficially recorded that he recovered some large nuggets.

According to S.S. Holland, British Columbia Department of Mines Bulletin No.28, the gold recovered from Coulter Creek placer workings had an average fineness of 900 and total production from 1879 to 1950 is 1,015 ounces of gold. It is interesting to note that in 1947 a clean-up was made on Coulter Creek after 65 days of monitoring and yielded 186 ounces of crude gold (Bulletin No.26, B.C. Department of Mines, S.S. Holland, 1948).

Placer operations in Slough Creek are described in Geological Survey Memoir No.149 by Johnson and Uglow. North of Slough Creek pay gravels up to 4 metres thick were reported at a depth of 25 metres from surface and it appears that the bulk of the gold recovered along Slough Creek came from the high benches, operated by Chinese companies using surface hydraulic methods.

Attempts were made to mine the gravels resting on bedrock under Slough Creek. Deep-lead mining was attempted by shaft sinking and driving entries in the underlying bedrock to tap the gravels. At a depth of 95 metres, the miners were not able to handle the high volumes and high pressure of water in the gravels. Samples of the gravels ran up to one-third of an ounce of gold and at times nearly one ounce of gold. Nevertheless, on account of the water problems very little gold was recovered and no deep-lead mining was attempted after 1907.

Total production recorded for Slough Creek according to S.S.Holland is 29,977 ounces of gold with an average fineness of 910. (Bulletin No.28 British Columbia Department of Mines).

From 1964 to 1967, Fleurmont Placer Development Limited endeavoured to reach the upper channel by the adit entry. The work was carried out by contractors and Mr. J.E. La Fleur, President of Fleurmont, engaged the services of a geological consultant, W.M. Sharp, P.Eng.

Testing in the adit consisted of taking bulk samples under the supervision of W.M. Sharp. Five bulk samples ran from $5.46 to $7.00 per yard with gold at $35 per ounce. Sharp estimated that such values would apply to and represent the 2 metres/2.5 metres depth of channel gravels.

The results are summarized in Table II below:

TABLE II.

| Sample Numbers | Recovered Gold Mg. | Value (¢) | Estim. Value per cub.yard based on gold at Can. $35/oz. | Estim. Value per cub. yard based on gold at Can.$400/oz. |
|---|---|---|---|---|
| 1 & 2 | 688.02 | 77,40 | $7.00 | $80.00 |
| 3 & 4 | 529.03 | 59.52 | $5.46 | $62.40 |
| 5 | 684.06 | 76.96 | $6.92 | $79.08 |

Samples 1 & 2 and 3 & 4 above taken from opposite walls of the adit were bulked together. Originally 3 cubic feet in volume, the samples were reduced by gold-pan concentration and bagged for assay of the total gold content.

Numerous samples in the overlying pit walls (overburden) were bulked to form Sample No.6 which W.M. Sharp averaged out to $0.38 per yard, with gold at $35.00 per ounce. All of the above samples were taken in June of 1964.

Sharp recommended continuing exploration for the upper channel located about 6 metres in vertical height above the floor level of the exploratory adit.

At the request of Fleurmont Placer Development Limited, a seismic refraction survey was conducted by Huntec Limited of Toronto in July 1966. Six seismic lines were run along North to North-westerly trending lines to cover the main placer area on Coulter Creek over a strike length of 635 metres. The object of the survey was to indicate bedrock channels and to establish profiles thereby delineating probable channels which are considered ideal for location of placer gold. The results are discussed in Section VI of this report.

Fleurmont Placer Development Limited proceeded with extensive hydraulic testing and by the use of a "monitor" removed a considerable volume of overburden. The work was terminated in 1967. It was concluded by W.M.Sharp that the testing plant used by Fleurmont for removal of overburden and using one long sluice box (about 120 metres in length) for testing only recovered about 10 per cent of the gold. Somewhat in excess of 30 ounces of gold were actually recovered at this stage.

Following upon the cessation of the above sluicing operations in 1966, Mr. La Fleur started to investigate the use of a jig as alternative to the sluice box system to recover the gold. A large Dutch circular jig was installed on the property and tested in 1977 in the presence of mining engineering representatives from Holland. The jig appeared to be suitable for high recovery and high volume.

However, the jig was sold in 1978 and a new group of people took over Fleurmont which was renamed Gold Mountain Explorations Ltd. In 1982 the new owners are preparing the property for production early in 1983.

At this date, one of the Directors of Gold Mountain Explorations Ltd. is on the placer site supervising stripping with two Caterpillar tractors in order to gain access and expose the known upper channel. In this latest endeavour over 100,000 cubic yards has been excavated.

Samples are currently being taken from the placer pit walls and are processed in a Flying Dutchman gold sluice box equipped with rubber mats and expanded metal mesh. The results during the writer's visit are considered very favourable.

## VI. SEISMIC REFRACTION SURVEY BY HUNTEC

In July 1966, Huntec Limited, Toronto, Ontario, carried out a seismic refraction survey. Six seismic lines were run with an average length of 180 metres. Line spacing varied from 180 metres to 430 metres and covered a total length of 1,000 metres along the long axis of the placer pit.

The bedrock profiles estimated by Huntec seem to be generally smooth. Lines 1 & 2 show slight contortions in the bedrock profile. Line 3 shows two minor bedrock depressions. Line 4 indicates two bedrock depressions, but no relationship can be established between lines 3 and 4 depressions.

Pronounced depressions in Line 5 may be due to either a highly weathered bedrock or overburden which has become highly cemented or clay rich, thus forming a "false bedrock" profile.

No positive conclusions could be deduced by Huntec in relation to Line 6 although it was considered that the depth to bedrock was considered shallow - up to a maximum of 17 metres.

It was concluded by Huntec that a closer grid seismic survey is essential in order to ascertain "whether the indicated depressions constitute continuous channels or local elliptical depressions."

## VII. DESCRIPTION OF PLACER WORKINGS, COULTER CREEK

The existing hydraulic pit on the North west bank of Coulter Creek covers an area 470 metres by 185 metres and the height of the upper rim of

the pit varies from 25 metres to 44 metres above the adit level. The pit runs North-east to South-west and the old adit 45 metres in length was driven northwards between 1940 and 1950. The adit is shown on Figure 3 and is located at the east end of the pit.

Subsequent to the writer's visit to the property on October 13, 1982, one of the Directors reported that bulldozer stripping had uncovered and broken into the old adit which was driven partly in bedrock. This is the same adit which was sampled by W.M. Sharp, P.Eng. in 1964, with the very favourable results indicated in Section V of this report.

W.M. Sharp also reported that a large number of samples taken from the overlying pit walls averaged 38 cents in gold per yard, with gold at $35.00 per ounce. A great deal of this overlying gravel has now been stripped and pushed downstream from the existing pit. It is still impounded, but reliable sampling of this spoil would be very difficult at this stage.

The pit walls examined by the writer in October 1982 consist of layered silt and grey clay with interspersed pebbles and boulders of phyllite (slate) and blue quartzite. The pebbles are mostly rounded, but some are quite angular and average about 22 cm. in diameter. Rare boulders up to 1.2 metres by 0.3 metres were noted and these are composed of slate and quartzite. In some areas of the pit pebble beds up to 5 feet thick were noted and the pebbles are set in a clay and silt matrix. Throughout the pit walls the silt is invariably mixed with abundant grey and blue clay. Whilst no attempt has been made to estimate the overall pebble and boulder content in the pit, it is probably of the order of 10 to 15 per cent by volume.

Where stratification can be detected the bedding is invariably flat-wavy.

Three samples taken from the pit walls during the writer's visit yielded small grains of gold in the prospector's pan, the largest grain being about 1.5 mm. by 0.3 mm. - a flat nugget.

One of the Directors of the Company and the field crew are using a Flying Dutchman gold sluice box which can treat up to 1 yard of gravel per hour. Three sloping plates are covered by rubber mat and expanded steel mesh. From preliminary observations the machine appears to be a good recovery device for testing of placer gold. Currently the crew are testing the pit walls and most of their samples run at about 1/3 yard of gravel. Samples are presently being prepared for assaying and the results will be available in two weeks time.

Shortly after the writer's visit, one of the Directors of Gold Mountain Explorations Limited reported that the Flying Dutchman sluice box tests in the gravel at the old adit indicated values of a few dollars per yard, and one prospector's pan gave a gold "tail" by which he estimated that the samples of gravel would run up to one-half ounce gold per cubic yard.

## VIII. EQUIPMENT

The gold recovery equipment on the property being held for Gold Mountain Explorations Ltd. and suitable for high volume includes the following:

Grizzly
Vibrating screen
Trommel
Concentrating table 3 metres x 10 metres with hungarian riffles ahead of poly instant turf covered by expanded metal screen.

## IX. RECOMMENDED WORK PROGRAM

Small-scale bulk sampling with the Flying Dutchman gold sluice box is to continue.

The large-scale gold recovery plant on the property comprising grizzly, vibrating screen and trommel is considered adequate in size to handle at least 600 cubic yards of sand and gravel per day. Construction of the large sectionalized concentrating table, 3 metres x 10 metres and consisting of riffles, poly-instant turf and expanded metal mesh is being undertaken on the property. All of the above equipment in addition to excavating equipment such as front-end loader, back-hoe and bulldozer are to be readied for production in the spring of 1983.

It is strongly recommended that testing of the gravels in the pit area be carried out utilizing a Hawker Siddeley sonic drill to dig a total of 40 test holes for a total of 610 metres of drilling at an estimated total cost of $79,300. Preliminary grid spacing for drilling is 61 metres.

Total cost of the recommended work program as itemised in Appendix I is $169,300.

Respectfully submitted,

Vancouver, B.C.
29 October, 1982.

Clive W. Ball, P.Eng.
Consulting Geologist

## APPENDIX I.

## RECOMMENDED WORK PROGRAM

| | | |
|---|---|---|
| 1. | Preparation and assaying of field samples ..... | $ 5,000 |
| 2. | Camp costs and transportation ..... | 10,000 |
| 3. | Test drilling of placer ground with Hawker Siddeley sonic drill - 40 drill holes averaging 15.25 metres deep = 610 metres at total cost of $130 per metre ..... | 79,300 |
| 4. | Setting up and assembling gold recovery plant and completion of gold recovery table with plant capacity of 600 cubic yards of gravel per day ..... | 20,000 |
| 5. | Assaying ..... | 10,000 |
| 6. | Engineering and office overhead ..... | 20,000 |
| | Contingencies ..... | 25,000 |
| | TOTAL ..... | $169,300 |

## APPENDIX III.

## WRITER'S CERTIFICATE

I, Clive W. Ball, of 3191 West 36th Avenue, Vancouver, B.C. hereby certify as follows:

1. I am a consulting geologist residing at the above address.

2. I am an honours graduate of the University of Queensland, Brisbane, Australia, holding a M.Sc. degree in Geology and Mineralogy.

3. As a geologist, I have practised my profession since 1935 in mining geology and exploration. For 30 years I was employed as a geologist on the staff of Placer Development Limited, retiring as Chief Geologist of Canex Placer Limited in 1978.

4. I am registered as a member of the Association of Professional Engineers (Geological) of the Province of British Columbia.

5. My knowledge of the property is based on a study of published reports and maps by the Geological Survey of Canada and the British Columbia Department of Mines in addition to reports, maps and air photos made available through the courtesy of Gold Mountain Explorations Limited.

6. Physical inventory and knowledge of the property and terrain is based on a visit to the property on 31st July 1979 under the guidance of Mr. J.E. La Fleur and more recently on a visit to the placer workings on 13 October, 1982, guided by Mr. T. Schorn, one of the Directors of Gold Mountain Explorations Ltd.

7. I hold no interest whatsoever in the Company or the property of Nexus Resource Corporation as encompassed in my report.

Vancouver, B.C.
29 October, 1982.

Clive W. Ball, P.Eng.
Consulting Geologist.

## APPENDIX IV.

## REFERENCES

### Published Reports


1. Holland S.S. - Bulletin No. 26, British Columbia Department of Mines, Victoria, B.C., 1948.

2. Holland S.S. - Bulletin No. 28, British Columbia Department of Mines, Victoria, B.C., 1950.

3. Johnston, W.A. and Uglow, W.L. - Geological Survey Memoir No. 149 - Placer and Gold Deposits of Barkerville, Cariboo District, Pages 141 - 153. Published Ottawa, 1926.

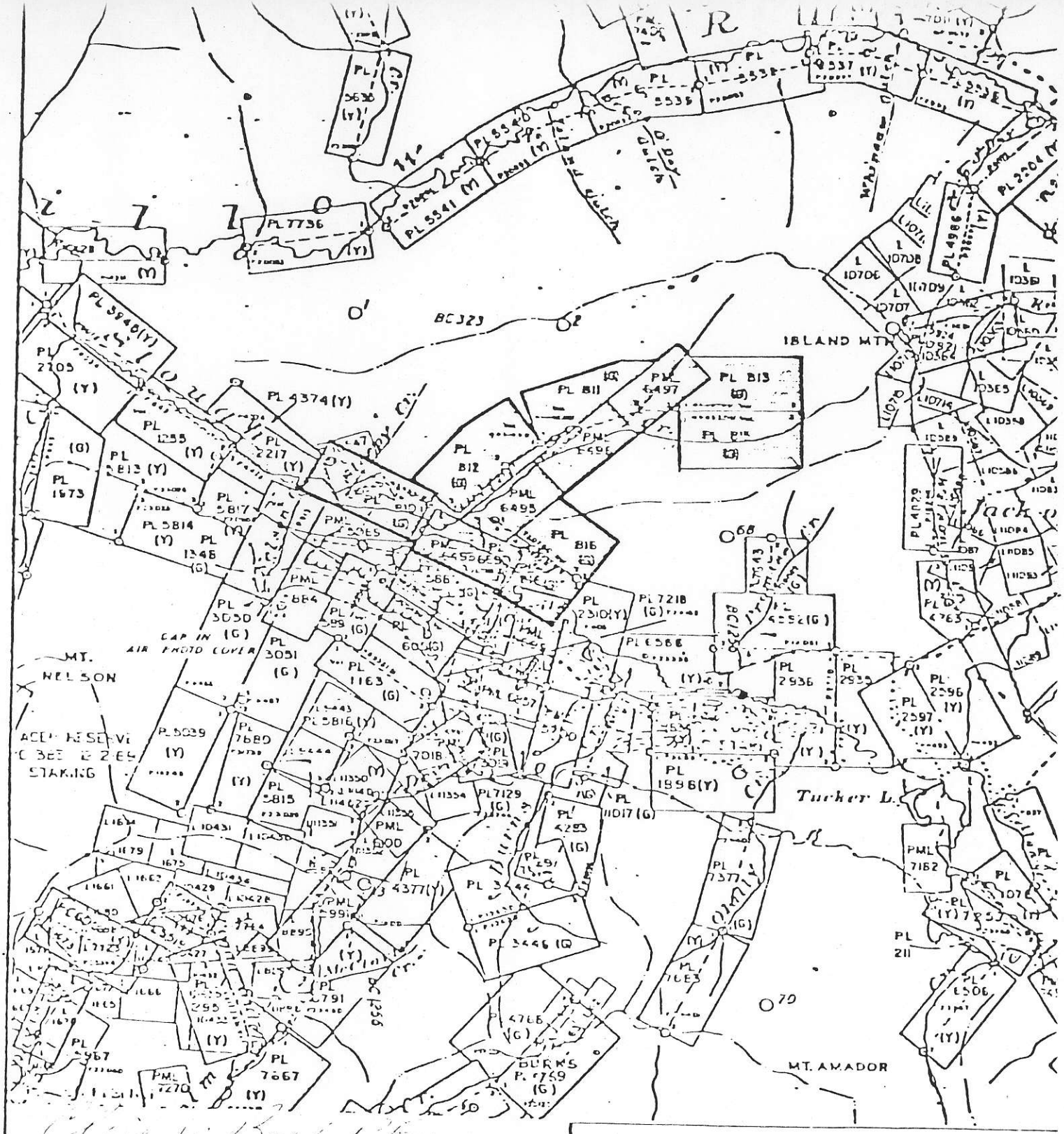

### Unpublished Reports


1. Preliminary Geological Report Coulter Creek Placer Property for Fleurmont Placer Development Ltd. by W.M. Sharp, P.Eng., Vancouver, B.C., 16 June, 1964.

2. Interim Report - Exploration-Development Program, Coulter Creek Placer Property for Fleurmont Placer Development Ltd. by W.M.Sharp, P.Eng., Vancouver, B.C., 15 October 1964.

3. Interim Report No. 2 - Exploration-Development Program, Coulter Creek Placer Property for Fleurmont Placer Development Ltd. by W.M. Sharp, P.Eng., Vancouver, B.C., 24 January 1966.

4. Report on Seismic Refraction Survey, Coulter Creek Placer Property, Wells Area, B.C., for Fleurmont Placer Development Ltd. by Huntec Limited, Toronto, Ontario, August 1966.




GOLD MOUNTAIN EXPLORATIONS LTD.
VANCOUVER, BC.

# PLACER LEASES

## PML. 6495-6498 & PL. 810-816

SCALE 1:50,000

0 2 KM.
0 1 MILE

Part of Placer Titles Reference Map 93H/4E
Dept of Mines and Petroleum Resources, Victoria, BC.

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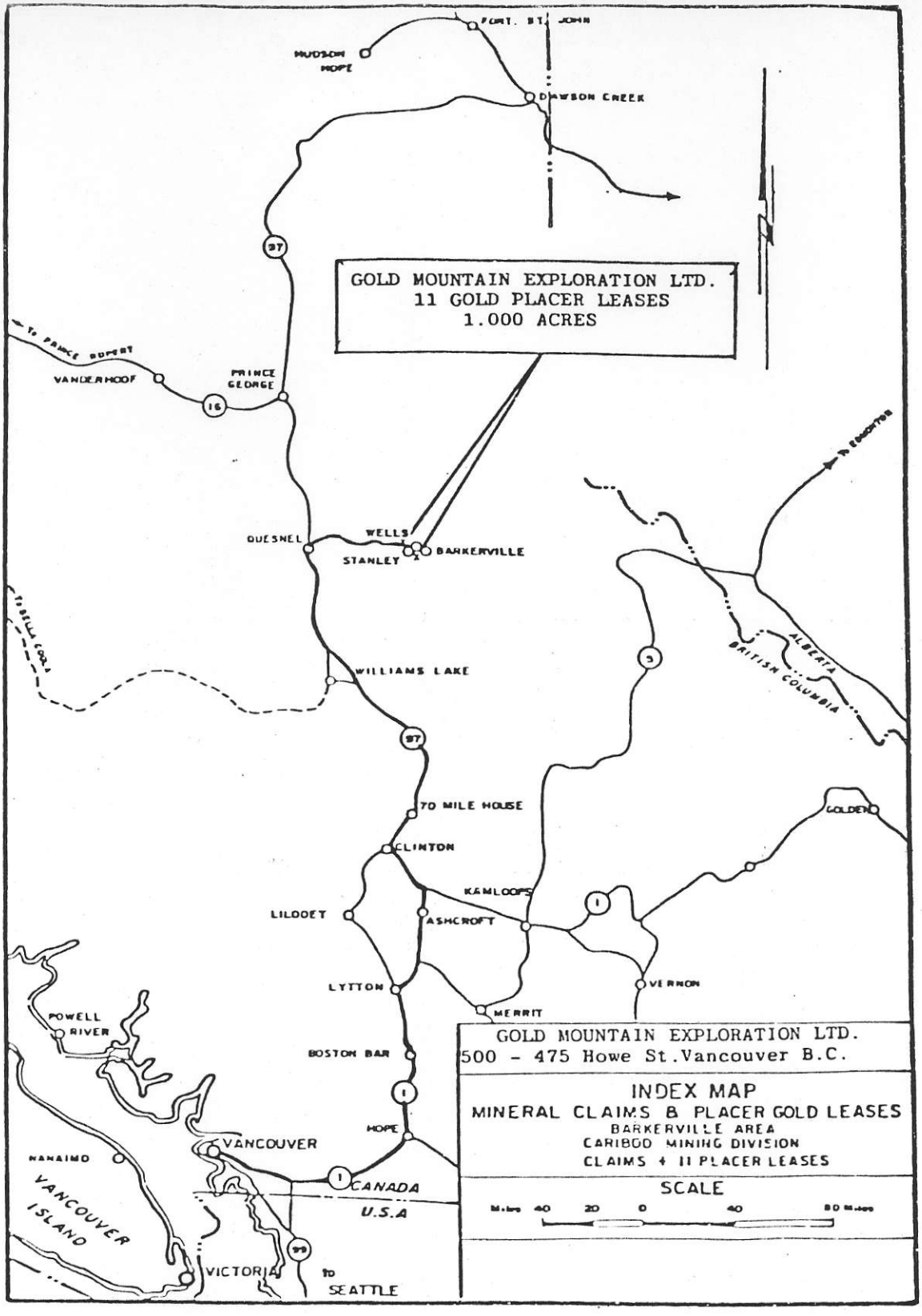
|---|---|
| DRAWN BY: C. BALL | N.T.S. : 93H/4E |
| DATE: OCT 27, 1982 | FIGURE Nº. 2 |





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