REPORT ON SEISMIC SURVEY
HIGHLAND VALLEY DISTRICT
BRITISH COLUMBIA
(50°, 121°, S.E.)
for
BRITMONT MINES LIMITED

REPORT ON

SEISMIC SURVEY

HIGHLAND VALLEY DISTRICT

BRITISH COLUMBIA

(50°, 121°, S. E.)

for

BRITMONT MINES LIMITED

by

HUNTING SURVEY CORPORATION LIMITED

Toronto, Canada

November, 1962

Canam-1962

24-21

#128 - 24.21

132 - 20.00

133 - 77.56

134 - 2.60

135 - 27.60

136 - 50.00

137 - 94.26

138 - 38.29

139 - 13.72

141 - 45.75

397.99 -

misc 2.01

400.00 for export tax in Calif.

INTRODUCTION

On November 5th, 1962 a seismic survey was carried out by Hunting Survey Corporation Limited on part of the Domino Group of Mineral Claims operated by Britmont Mines Limited. The property is located a few miles west of Merritt, in the Highland Valley District, British Columbia (50°, 121°, S.E.)

The survey was performed by a four-man crew. The geophysicist and technician-operator were E. L. Gregotski and F. H. Faulkner respectively of Hunting Survey Corporation Limited. Britmont Mines Limited provided L. Olson and A. G. Seale as assistants.

The geophysical survey was carried out along precut and chained picket lines. The lines were grouped into five areas, labelled A,B,C,D and E.

The seismograph used is the FS-2 produced by Ronka Geophysical Instruments Limited. Based on the use of dry electrosensitive (facsimile) paper, the FS-2 registers seismic events directly, permanently and without processing, on an accurate time base. Single recording channel operation allows geophone spacing to be varied as required. The distance between successive recordings on the chart is varied accordingly, producing a correctly scaled time-distance plot. An unique feature but standard on the FS-2 is the two complete input channels (geophones, amplifiers, filters, pulse shapers) and built-in coincidence circuitry. This feature makes the instrument directional and suppresses a good portion of the natural surface noises. The seismic energy is obtained by hitting a steel plate on the ground with a 10 lb. sledge hammer, or by detonating small quantities of dynamite and/or caps.

The field procedure consisted of setting up the geophones and equipment in a given spot and in obtaining time-distance plots for increasing distances from the geophone to the energy source. The maximum distance required will depend on the depth of overburden and/or the velocities encountered in the overburden and in the bedrock. In this survey, the maximum distance between energy source and geophone is 230 feet.

The results of the survey are shown in plan at their approximate locations on the accompanying interpretation map, scale 1" to 50 feet.

INTERPRETATION

The interpretation of the survey data consists of careful analysis of each set of seismic curves obtained. The results of this analysis are shown on the interpretation map accompanying this report.

A high degree of "scattering" was recorded on the seismic records. The "scattering" appears to be due to lateral variations in the intermediate layers and irregular surfaces in these layers and surface topography. The scattering from the bedrock surface indicates a very irregular bedrock surface. The presence of "scattering" prohibited the determination of accurate velocities and thus accurate depth determinations.

Due to the high complexity of the interpreted seismic results, no attempt was made to outline the various layers detected in the overburden. Instead the estimated thicknesses of the overburden are indicated on the interpretation map.

Estimated depths are shown in feet and it is believed that these depths are maximum distances that can be encountered within an accuracy of $\pm$ 3 feet. It is to be noted that these depths are distances from the surface to a high velocity layer which is considered to be bedrock and unrippable by a bulldozer. However, for practical purposes in obtaining indications of mineralization it may be possible to obtain adequate information from the weathered or rippable lower velocity material which may be present overlying the higher velocity bedrock material. As mentioned previously the high degree of "scattering" produced from the intermediate material and bedrock irregularities prohibited the accurate detection of this weathered layer.

It is also to be noted that these depths would be more properly called distances to the bedrock surface, said distances being measured in a plane perpendicular to the line and ground surface. This is due to the fact that the

seismic method records the travel time for the seismic energy to travel the shortest distance from the energy source to the refracting layer to the detectors. This is an important consideration in an area such as this which has very abrupt changes in topography.

The estimated depths to bedrock at the various locations are as follows:-

AREA A

This area is centered about Station 4 + 00 N on Line 8. A great degree of "scattering" present in the data hindered the determination of accurate velocities for the intermediate material and bedrock. The bedrock is highly irregular. However, the depth estimates obtained are considered the maximum depth to bedrock within a ± 3 foot accuracy.

The following estimates are considered within this accuracy+-

STATION 1 + 00 W of 5 + 00 N, Line 8.....24 feet

STATION 1 + 00 E of 5 + 00 N, Line 8.....20 feet

STATION 1 + 00 E of 3 + 00 N, Line 8.....22 feet

STATION 3 +- 00 N, Line 8.....19 feet

STATION 3 + 90 N, Line 8.....17 feet

STATION 5 + 00 N, Line 8.....20 feet

The following intermediate depth estimates between 1 + 00 W and 1 + 00 E of Station 5 + 00 N on Line 8 and between Stations 5 + 00 N and 3 + 00 N of Line 8 are considered less accurate due to the uncertain velocity data obtained, but gives a general indication of the irregularities in the bedrock surface:-

WEST OF STATION 5 + 00 N, LINE 8

0 + 10 W.....24 feet

0 + 20 W.....24 feet

0 + 30 W.....24 feet

0 + 40 W.....22 feet

0 + 50 W.....28 feet

0 + 60 W.....25 feet

EAST OF STATION 5 + 00 W, LINE 8

0 + 10 E.....22 feet

0 + 20 E.....21 feet

0 + 30 E.....22 feet

0 + 40 E.....22 feet

0 + 50 E.....23 feet

0 + 60 E.....24 feet

NORTH OF STATION 3 + 00 N, LINE 8

3 + 50 N.....24 feet

3 + 60 N.....28 feet

3 + 70 N.....24 feet

3 + 80 N.....18 feet

4 + 00 N.....30 feet

4 + 10 N.....26 feet

4 + 20 N.....20 feet

4 + 30 N.....21 feet

4 + 40 N.....20 feet

4 + 50 N.....20 feet

4 + 60 N.....22 feet

AREA B

This area consists of depth estimates between 8 + 60 N of Line 8 and 2 + 00 E; and between 10 + 00 N of Line 8 and 1 + 50 E.

The following depth estimates are considered to be within ± 3 foot accuracies:-

STATION 8 + 60 N, Line 8.....34 feet

staTION 1 + 50 E of 8 + 60 N, Line 8.....32 feet

STATION 2 + 00 E of 8 + 60 N, Line 8.....37 feet

STATION 10 + 00 N, Line 8.....16 feet

STATION + 50 E of 10 + 00 N, Line 8.....19 feet

The following intermediate depth estimates appear less accurate:- Between8+ 60 N, Line 8 and 1 + 50 E of 8 + 60 N, Line 8, a very high degree of "scattering" due to the irregularities from in overburden material and bedrock surface, 0 + 60 E and 0,+ 80 E give indications of being greater than 34 feet in depth.

AREA C

This area consists of depth estimates west of 12 + 64Non Line 8 at Stations 12 + 64 N on Line 8, 0 + 75 W, 1 + 50 W and 2 + 00 W.

The following results were obtained:-

12 + 64 N .....27 feet
0 + 75 W .....30 feet
1 + 50 W.....33 feet
2 + 00 W.....33 feet

AREA D

This area consists of four depth estimates. Two being taken on the trench floor at 14 + 75 N of Line 7 and at Station 7 A. This latter station is not presented in plan since its location is doubtful. The other two are at Station 1 + 00 E of 14 + 75 N, Line 7 and Station 2 + 00 E, of 14 + 75 N of Line 7.

The following are the results:

STATION 1 + 00 E of 14 + 75 N, Line 7.....26 feet
STATION 2 + 00 E of 14 + 75 N, Line 7.....21 feet
STATION 14 + 75 N, Line 7.....18 feet

At Station 7A an accurate depth estimate could not be obtained as the depth of overburden is so thin that the travel time is above the recording sensitivity of the equipment. However, from a second-cycle interpretation a maximum thickness of 5 feet was determined.

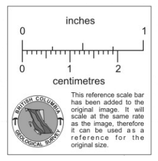
AREA E

This area consists of a depth estimate of 9 feet at a Station 35 feet east of 2 + 70 N, Line 7, located on a trench floor.

E.L.Gregotski, Hunting Survey Corporation Limited

BRITMONT MINES LIMITED
DOMINO GROUP of MINERAL CLAIMS
Seismic Survey
Interpretation

Scale: 1inch = 50 feet



LEGEND

- I.P Station ..... 3+00N
- Seismic Station .....
- Depth Estimate in feet(± 3 feet) 20
- Break in Plan .....
- Seismic Hammer Line .....
- Area Investigated ..... (A)
- Trench .....

HUNTING SURVEY CORPORATION LIMITED, TORONTO, CANADA - NOVEMBER 1962.