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Knight Inlet
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WARNOCK HERSEY INTERNATIONAL LIMITED

CHEMICAL AND LABORATORY TESTING



WARNOCK HERSEY
INTERNATIONAL LIMITED

PROFESSIONAL SERVICES DIVISION

125 East 4th Ave., Vancouver 10, B. C. Phone 876-4111 — Telex 04-50353

REPORT OF: **Chemical Testing**
AT **Vancouver Laboratory**
PROJECT: **Hardness Testing**
REPORTED TO: **Knight Inset Resources**
1800 - 1055 West Hastings Street
Vancouver, B.C.

FILE NO: **460-Q-10302**
DATE **January 19, 1970**
REPORT NO:
ORDER NO:

ATTENTION: Mr. Eichhorst

We have tested the sample of Marble submitted by you on January 16 and report as hereunder:

TEST RESULTS

The sample was found to have a hardness of 4 on the Moh scale of hardness.

For your information the scale is reproduced below as follows:

- | | |
|-------------|---------------|
| 1. Talc | 6. Orthoclase |
| 2. Gypsum | 7. Quartz |
| 3. Calcite | 8. Topaz |
| 4. Fluorite | 9. Corundum |
| 5. Agatite | 10. Diamond |

WARNOCK HERSEY

G. Cochrane
SUPERVISOR, GENERAL LABORATORY



REPORT OF: **Laboratory Testing**
AT: **Vancouver**
PROJECT: **Marble - Evaluation**
REPORTED TO: **Mr. Peter Auxier,
864 West 8th Avenue,
Vancouver, B.C.**

FILE NO: **480-086-A.2**
DATE: **January 6, 1969**
REPORT NO: **1/69**
ORDER NO: **047-480**

I INTRODUCTION

We were requested to determine the physical and chemical properties of samples of marble submitted for testing December 13, 1968. Our Client stated the marble was blasted from a tunnel face with high velocity powder, and could possibly be fractured as a result of the blasting.

II TESTING PROCEDURES

The submitted samples were tested for the following properties:

- (a) Water Absorption ASTM C97
- (b) Compression Strength ASTM C170
- (c) Chemical Analysis

III TEST RESULTS

a) Absorption

<u>Cube No.</u>	<u>% Absorption (by weight)</u>	<u>Remarks</u>
1	0.189	1 rough face, 5 cut faces
2	0.270	1 rough face, 5 cut faces
3	0.170	6 cut faces
4	0.122	6 cut faces

Note: These specimens were smaller than specified in ASTM C97 due to insufficient size of sample. Results will be on high side.

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COAST ELDRIDGE

PROFESSIONAL SERVICES DIVISION
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Mr. Peter Auxier

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January 6, 1969

b) Compression Strength

<u>Cube No.</u>	<u>Compression Strength</u>	<u>Remarks</u>
1	5,170 p.s.i.	Loading parallel to bedding planes
2	4,210 p.s.i.	Loading parallel to bedding planes
3	5,210 p.s.i.	Loading perpendicular to bedding planes
4	5,570 p.s.i.	Loading perpendicular to bedding planes

Note: Due to insufficient sample the above cubes were smaller than specified in ASTM. Results will be slightly on the low side.

c) Chemical Analysis

Acid Insolubles	- 1.82%
Iron Oxide (Fe_2O_3)	- 0.13%
Calcium Oxide (CaO)	- 53.06%
Magnesium Oxide (MgO)	- 0.32%
Loss on Ignition	- 43.57%
Aluminum Oxide	- 0.45%

COAST ELDRIDGE



P. T. Seabrook, P. Eng.,
Materials Engineer.

BS/nb