672867
Jordan River

Principles of Engineering, Geology and Geotechnics - Krynine & Judd

Glossary of Geology and Related Sciences

16/10/70

DR DOLMAGE:

ATTACHED IS A COPY (WHICH YOU MAY KEEP) OF THE ROCK TESTING PROGRAM. THE COMPRESSIVE STRENGTH OF THE GABBRO IS LOW BECAUSE OF FAILURE ALONG HAIRLINE CRACKS IN THE SAMPLE NOT NOTICED BEFORE TESTING. THE RESULTS OF T3 & T4 (ALSO LOW) WERE EXPECTED

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I CAN PROBABLY LOCATE THE FAILED SAMPLES IF YOU WISH.

the above books returned to Dr. Dolmage, at his request, Oct. 22/70,

WARNOCK HERSEY INTERNATIONAL LIMITED
COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION
125 East 4th Ave., Vancouver 10, B.C. Phone 876-4111 — Telex 04-50353

REPORT OF: Laboratory Tests
FILE NO. C.2-J.1-68
AT Vancouver
DATE July 31, 1968
PROJECT: Jordan River
REPORT NO. 3/68
REPORTED TO: International Power & Engineering Consultants Ltd., Jordan River, B.C. ATTN: Mr. A. Imrie.
International Power & Engineering Consultants Ltd., Vancouver, ATTN: Mr. F. Siudut.
ORDER NO.

# TESTING OF ROCK CORES

## I PROGRAM

The Client has submitted a number of samples of rock cores for testing. The samples were received July 8, 1968.

Evaluations to be conducted included:

Compressive Strength
Molulus of Elasticity
Unit Weight as received

## II SAMPLE IDENTIFICATION

Samples were marked by the Client. A total of five samples were tested and these were numbered T1 to T5 inclusive.

## III PROCEDURES

Cores were end-trimmed with a diamond saw.

The unit weight of the rock was determined by simple weighing and measuring of the core volume.

Compressive strength was determined on the sample cut to approximate length: diameter ratio of 2.0. Procedures were generally in accordance with the requirements of A.S.T.M. C42 where applicable.

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The modulus elasticity in compression was determined using a compressometer coupled to an automatic stress-strain recorder. The structure of the compressometer was similar to that detailed in A.S.T.M. C469. For the purposes of these tests it is assumed that the tangent modulus would be the most suitable.(Note)

## IV RESULTS

The results are presented in the attached tabulation.

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Note: For most cores, the stress-strain relationship was virtually linear and the selection of the type of modulus would not be significant.

COAST ELDRIDGE

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

PTS/aj

Jordan River
File No. C.2-J.1-68
July 31, 1968

| Sample No. | DDH | Footage | Rock Type | Core ∅ ins. | Core Length ins. | Core Weight gms. | Core Density lbs/cu.ft. | Compression Load lbs. | Compressive Strength p.s.i. | Compression Modulus of Elasticity p.s.i. |
|---|---|---|---|---|---|---|---|---|---|---|
| T1 | PH3 | 50/50.8 | Fine grained gabbro | 2.150" | 4.250 | 769.0 | 189.8 | 47,950 | 13,200 | $12.75 \times 10^6$ |
| T2 | E4 | 35/36.3 | Flow breccia (volcanic) | 2.135" | 4.260 | 742.2 | 185.6 | 71,500 | 20,000 | $11.56 \times 10^6$ |
| T3 | E4A | 45.8/46.9 | Flow breccia (volcanis) | 2.145" | 4.250 | 749.5 | 186.0 | 30,250 | 8,370 | $9.23 \times 10^6$ |
| T4 | E4A | 65.5/66.5 | Massive basalt | 2.15" | 4.285 | 765.7 | 187.6 | 101,000 | 27,820 | $11.25 \times 10^6$ |
| T5 | E7 | 77.6/78.6 | Epidotized basalt | 2.145" | 4.285 | 764.3 | 188.4 | 21,900 | 6,060 | $11.02 \times 10^6$ |

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