



test ltd.

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REPORTED TO BROWN, ERDMAN & ASSOCIATES LTD.
1409 BEWICKE AVENUE
NORTH VANCOUVER, B.C.

W/O NO. W-801204-002
DATE JANUARY 7, 1981
FILE NO: 9185D

ATTENTION MR. RICHARD VOGWILL
SAMPLE TYPE WATER

We have tested the sample of water submitted by you on Dec. 3, 1980
and report as follows:

SAMPLE IDENTIFICATION:

The sample was submitted in a plastic bottles labelled:

WESTERN MINES
80 - 190

R-190 End of Test
12:50 Nov. 24/80
5°C Pump Off 13:07

METHOD OF TESTING:

The analyses were carried out in accordance with procedures described in
"Standard Methods for the Examination of Water and Wastewater (14th
Edition)" published by the American Public Health Association, 1975.

RESULTS OF TESTING:

(on the following page)

REMARKS:

(on the following pages)

CAN TEST LTD.

Judi M. Mitchell, B.Sc.,
Chemist

/cs

SAMPLE #
CLIENT SAMPLE I.D.1
WESTERN MINES

PHYSICAL TESTS

| | | |
|-----------------------------|--|-------|
| pH | | 7.85 |
| Conductivity (micromhos/cm) | | 3400. |
| Colour (Pt-Co scale) (CU) | | 15. |
| Turbidity (JTU) | | 7.3 |
| Hardness (mg/L) | | 1950. |

SOLIDS (mg/L)

| | | |
|-----------------|--|-------|
| Total Suspended | | < 0.5 |
| Total Dissolved | | 3140. |

DISSOLVED ANIONS (mg/L)

| | | |
|-------------------------|-------|---------|
| Alkalinity: Bicarbonate | HCO3 | 382. |
| Alkalinity: Carbonate | CO3 | Nil |
| Alkalinity: Hydroxide | OH | Nil |
| Chlorides | Cl | 46.0 |
| Sulfates | SO4 | 1780. |
| Nitrates and Nitrites | N | < 0.002 |
| Ortho Phosphates | O-PO4 | < 0.03 |
| Fluorides | F | 1.25 |

DISSOLVED METALS (mg/L)

| | | |
|------------|------|---------|
| Arsenic | As | < 0.001 |
| Cadmium | Cd | < 0.001 |
| Calcium | Ca | 520. |
| Copper | Cu | < 0.001 |
| Iron | Fe | < 0.030 |
| Lead | Pb | < 0.001 |
| Magnesium | Mg | 159. |
| Manganese | Mn | 0.006 |
| Molybdenum | Mo | 0.006 |
| Nickel | Ni | < 0.005 |
| Potassium | K | 4.54 |
| Silicon | SiO2 | 9.75 |
| Sodium | Na | 79.8 |
| Zinc | Zn | 0.016 |

TOTAL METALS (mg/L)

| | | |
|-----------|----|---------|
| Iron | Fe | < 0.030 |
| Manganese | Mn | 0.007 |
| Mercury | Hg | 0.00007 |

POLLUTANT TESTS (mg/L)

| | | |
|----------------------|-----|------|
| Total Organic Carbon | C | 5. |
| Total Phosphate | PO4 | 0.18 |
| Sulfides | S | 66. |

mg/L - milligrams per liter

REMARKS:

The water represented by the sample submitted can be characterized as a very hard water, also very high in dissolved mineralization.

For the parameters tested, the sample met the limit set by "Guidelines for Canadian Drinking Water Quality, 1978", published by authority of Health and Welfare, Canada, with the exception of turbidity (limit = 5.0 J.T.U.) total dissolved solids (limit = 500 mg/L), sulfates (limit = 500 mg/L) and sulfide (limit = 0.05 mg/L). The sample was also noted to be borderline with respect to color, to be approaching the limit for fluoride (1.5 mg/L) and to be high in calcium, magnesium and hardness.

Examination of these test results would indicate that the water represented by this sample is not acceptable as potable water.

