

# **A Raman Analysis of Rock Sample for Bull Trout Jade, LLC**

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## **Method and Equipment**

Sample was analyzed using a Raman spectrometer with a 532  $\mu\text{m}$  (green light) laser. The spectra were acquired at 1 second acquisition times, generally taken in a series of 10 acquisitions averaged together. The sample was a small block of blue to blue-gray color with a white area in the center.

Resulting spectra were compared to standards that are available from several sources at universities in the USA and Europe. At this time, about 65% of the known mineral species are represented by at least one Raman standard, but all mineral species normally found in the nephrite deposits are represented in these standards.

## **Source of Samples**

The samples were provided by Rodney Cook of Bull Trout, LLC.

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## Samples and results

BT8-1

Block of blue jade with variegated white zone in center.

Analyses

BT8-1a bright white zone = calcite

1b creamy white = calcite

1c translucent gray veinlet = calcite

1d white layer = calcite plus titanite

1e white to grayish glob = calcite plus titanite

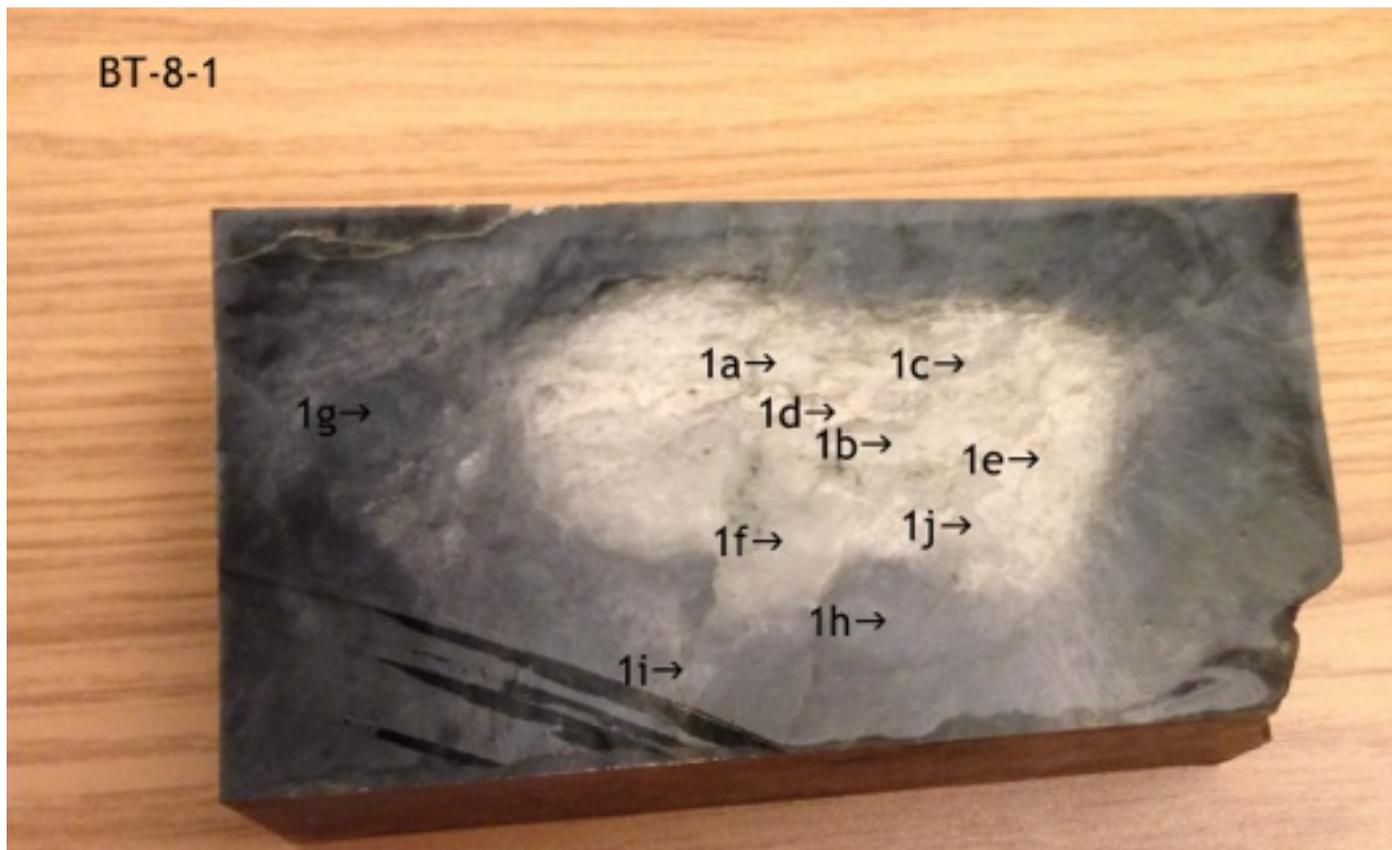
1f translucent gray zone = calcite

1g medium blue gray = tremolite

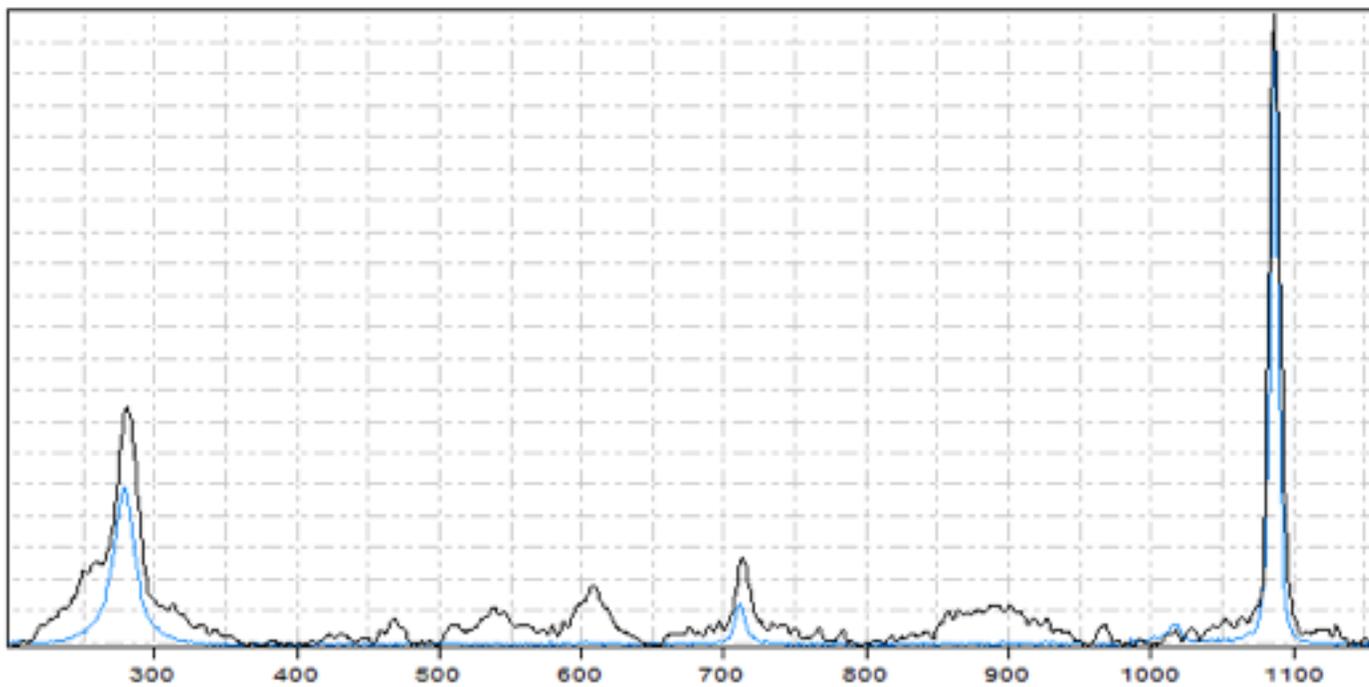
1h light blue gray = tremolite

1i light gray = titanite

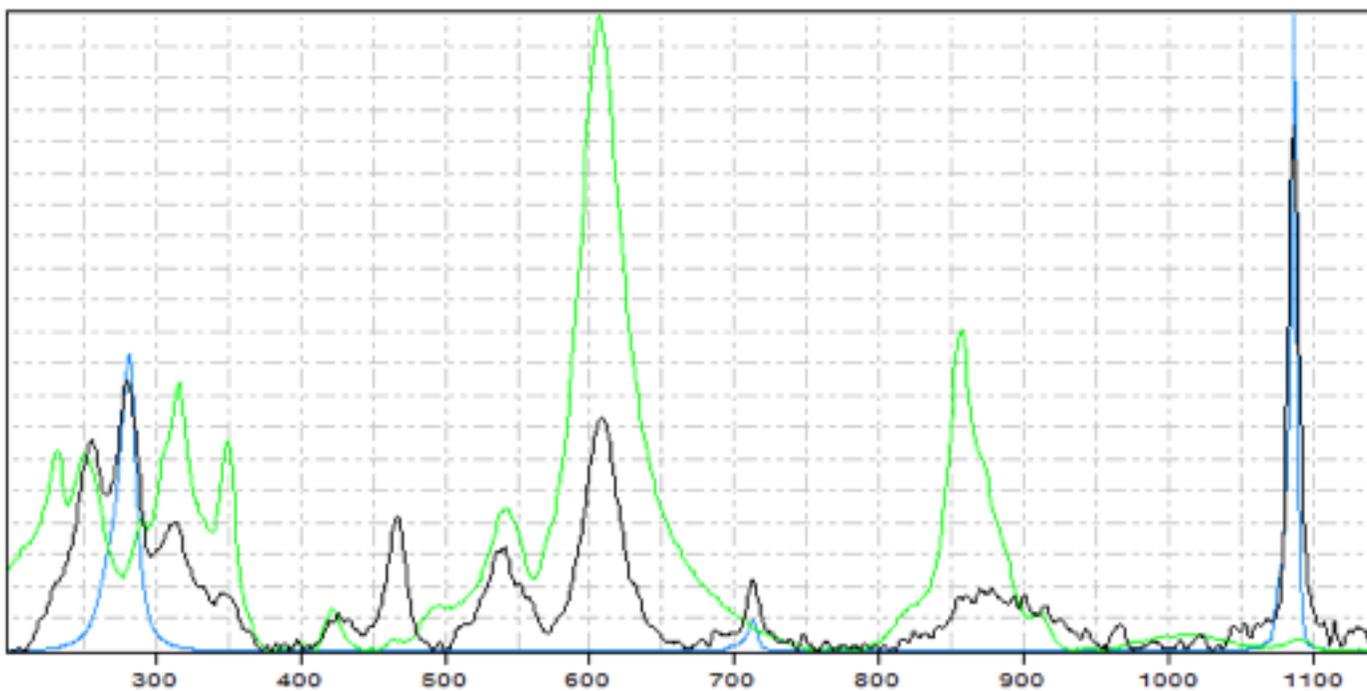
1j light gray in calcite mass = titanite plus calcite



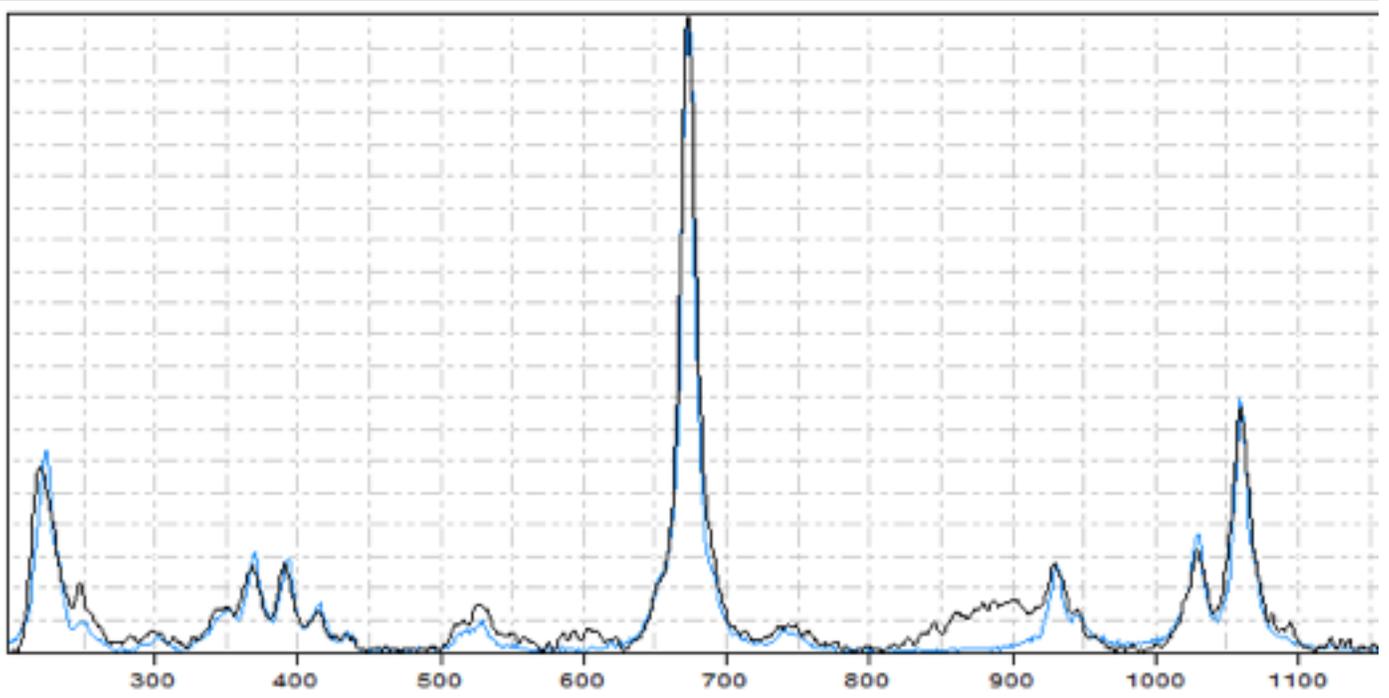
Analysis map of sample BT8-1.



BT8-1a spectrum, black is sample, blue is a calcite standard



BT8-1d spectrum, black is sample, blue is a calcite standard green is a titanite standard



BT8-1g spectrum, black is sample, blue is a tremolite standard