

GRAND JUNCTION GEOLOGICAL SOCIETY

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FEBRUARY MEETING

WEDNESDAY, FEBRUARY 17, 2021

7:30 PM

Joint meeting with the CMU Geology Students

**Due to the pandemic, the meeting will be conducted in Zoom
(Zoom instructions on next page)**

**Mr. Ben Haveman
Agapito Associates, Inc.
Grand Junction**

Will Speak On

**“Measurement of Horizontal Principal Stresses & Stress
Gradient Determination at New Afton Block Cave Mine
Kamloops, British Columbia”**

**Guests Are Always Welcome
Abstract on Next Page**

Measurement of Horizontal Principal Stresses & Stress Gradient Determination at New Afton Block Cave Mine Kamloops, British Columbia Ben Haveman

Abstract: Knowledge regarding the variability of stress magnitude and orientation at depth is vital to the successful design of large underground excavations. A series of accurate in-situ stress measurements can reveal zones of heightened risk and instability, allowing mine operators to plan for and implement appropriate control measures. In October 2018, New Gold, Inc. commissioned Agapito Associates, Inc. (AAI) to perform downhole in-situ stress testing at their New Afton Mine located near Kamloops, British Columbia, Canada. AAI used the Sibra In-situ Stress Tool (IST); a displacement measurement overcoring technique developed by Sibra, Pty. of Brisbane, Australia. The test hole was collared approximately 706 meters (m) below ground surface and drilled to a depth of 451 m with 17 stress measurements evenly distributed to the total depth (TD). The campaign objective was to measure the horizontal stress field below current mining operations and determine a stress gradient down to the future planned mine level. Measurements obtained ultimately contributed to the long term geotechnical mine design at the New Afton Mine. This paper serves as a case study for the application of stress measurement methods when employed in succession down a vertical hole and the resultant implications regarding the local stress gradient.

Zoom invitation

GJGS Feb meeting

Time: Feb 17, 2021 07:00 PM Mountain Time (US and Canada)

Join Zoom Meeting

<https://coloradomesa.zoom.us/j/99474802903?pwd=aGZYOWZpZVlxWCtwaFo3NOo5UWwwQT09>

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