

GOLDSCHMIDT2008
FIELD TRIP #7

BRITANNIA MINE REMEDIATION

LEADERS:

Gerry O'Hara, P.Eng. Golder Associates (GOHara@golder.com)

Terry Johnson, P.Eng. Britannia Mine Manager

WHERE: Vancouver→Brittania Beach

WHEN: July 13, 2008. Day trip, pre-conference.

COST: \$60 CAD

- Includes transportation/museum fees **Participants are required to pay for their own lunch

MINIMUM PARTICIPANTS: 20

MAXIMUM PARTICIPANTS: 40

GEAR: N/A

SUMMARY:

A field trip is offered to the Britannia Mine located on the picturesque 'Sea-to-Sky' Highway heading north out of Vancouver towards Whistler, the site of the 2010 Winter Olympics. The Britannia Mine is located in the coast crystalline tectonic belt and the local geology of this area can be divided into two major components: older volcanic and sedimentary rocks belonging to the Lower Cretaceous Gambier Group and younger plutonic rocks of the Coast Plutonic Complex. The Britannia orebodies are classified as volcanogenic massive sulphide deposits of the Kuroko type. The orebodies comprise a heterogeneous mixture of sulphides, remnant altered host rocks and discreet mineralized veins and were worked both underground in open pits and glory holes. The mine operated from 1904 to 1974 and in its heyday was the largest producer of copper in the British Empire. During its working life and since its closure, the mine has generated large volumes of acid rock drainage (ARD) that discharged to Howe Sound and local freshwater courses. Since 2001, the Province of BC has been implementing an environmental remediation program at the mine. This field trip includes an introductory presentation of the mine history, environmental issues and remediation efforts, a look into part of the recently rehabilitated mine workings, a tour of the water treatment plant, micro-hydro plant and the novel ground water management system. Included in the tour is a visit the BC Museum of Mining, located at the mine site. This will include a short underground rain journey, the newly-rehabilitated iconic Mill #3, gold panning, many artifacts relating to the mine during its operational life and an opportunity to visit the museum gift shop.

DETAILED ITINERARY:

Sunday July 13th

- 8:00am: Leave UBC
- 9:30am: Introductory presentation of the Britannia Mine Remediation Project providing:
 - History of Britannia Mine
 - Environmental Problems
 - The Province's remediation concept and closure plan
 - Plan implementation, current status and future plans
 - Impacts of the environmental remediation on the local community
 - Opportunity for questions and answers by Gerry O'Hara (Britannia Mine Remediation Project Manager) and Terry Johnson (current Mine Manager and former Mine Superintendent during the mines operational years)
- 10:30am: BC Mine Museum Tour including:
 - A guided tour through the underground mining tunnel dating from 1912
 - Mining demonstrations and activities about fossils, minerals and building mines
 - Gold panning: You keep the REAL GOLD that you find!
 - Visit to the museum gift shop
- 12:00pm: Lunch at Sea to Sky Grill (Furry Creek Golf Club)
- 2:00pm: Tour of the Britannia Mine Remediation Work including:
 - Acid Rock Drainage Water Treatment Plant
 - Mine-head micro-hydro system
 - Groundwater Management System
- 4:00pm: Leave BC Mine Museum
- ~5:30pm: Return to UBC

