MINING 101 FOR NON-MINERS BY GOLDER ASSOCIATES LTD.

Golder Associates Ltd. is presenting a one day short course on the topic of “Mining 101 for non-Miners”. The six hour course is designed to provide information on a number of topics for participants who want to have a better understanding of how exploration projects become a mine. The course is outlined as a number of concurrent sessions that will be presented by experienced geologists and mining engineers. The following is the proposed course outline.

- General introduction and overview of the course (9:00 am – 9:10 am)
- Mineral Resource Evaluation and NI 43-101 (9:10 am – 10:10 am)
  - exploration and geology definitions
  - development of mineral geometries
  - development of block models
  - resource estimation and classifications
  - discussion on NI 43-101 Technical Reporting and reporting requirements
  - definition of “Qualified Person(s)”
- Break (10:10 am - 10:20 am)
- Mining Studies (10:20 am- 10:50 am)
  - preliminary economic assessments
  - preliminary feasibility (Pre-Feas) study
  - trade-off studies
  - feasibility study
  - due diligence study
  - audits
- Mining Methods and Selection (10:50 am – 12:00 pm)
  - mining method selection and definitions
  - break (10 minutes)
  - open pit
  - underground mining
  - rock mechanics – general principles
- Lunch (12:00 pm – 1:00 pm)
Mine Design 1 (1:00 pm – 1:30 pm)
- mine planning and scheduling
- dilution and recovery
- material handling

Mine Design 2 (1:30 pm – 2:10 pm)
- equipment selection
- mine services
  - infrastructure, power, water
- break (10 minutes)
- mineral process (heap leach) and metallurgy

Mine Economics (2:10 pm – 2:40 pm)
- capital and operating costs
- cut-off grades
- project cash flow

Other Related Topics (2:40 pm – 3:20 pm)
- environmental studies
- mine closure and permits
- public consultation
- new releases

Summary and Wrap-Up (3:20 pm – 3:30 pm)

The course presenters include Paul Palmer, P. Geo., P. Eng., Christine Ballard, P. Eng., and David Brown, P. Geo., of Golder Associates Ltd.

Paul Palmer has over 18 years of experience working at mines and on mineral projects in Canada and internationally in the areas of mineral resource evaluation, mining rock mechanics and mine closure on exploration to active and closed mines. Paul has authored over 12 National Instrument 43-101 technical reports as a Qualified Person.

Christine Ballard has over 8 years of experience working at gold mines and on mineral projects in Canada in the areas of mine design, ore evaluation following National Instrument 43-101, dewatering designs and ventilation designs. Christine has both soft rock and hard rock mine planning experience.
David Brown has over 20 years of experience working on mining projects in Canada and internationally in the areas of geochemical and environmental assessments, mine permitting, site rehabilitation and mine closure. David has been involved in a number of large mine permitting projects in Northern Canada.

As a global, employee-owned organisation with over 50 years of experience, Golder Associates Ltd. is driven by its purpose to engineer earth’s development while preserving earth’s integrity. From more than 180 offices worldwide, our over 8,000 employees deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

Over the years, Golder Associates Ltd. has grown to know the mining business by providing integrated technical expertise at the different stages of the mine life cycle: exploration, project evaluation, development, construction and operations, and mine closure and reclamation. We are committed to finding innovative approaches to the development of reliable, sustainable and cost-effective solutions for our clients.

Golder Associates Ltd., our Canadian operation, has more than 3,700 employees in over 45 offices including St. John’s, NL and Halifax, NS. We achieved Platinum Club member status with Canada’s 50 Best Managed Companies program by retaining the Best Managed designation for more than 13 years. We strive to provide our professionals with the tools and opportunities to excel. This has helped us earn recognition as one of Canada’s 50 Best Employers since 2002.

If you have questions regarding the short course, please contact Paul Palmer (Paul_Palmer@golder.com) or Christine Ballard (Christine_Ballard@golder.com).