



SIKA AT WORK

OYU TOLGOI

STRIKING RICH ON TURQUOISE HILL

BUILDING TRUST



OYU TOLGOI

PROJECT DESCRIPTION

The Oyu Tolgoi copper and gold project is located in the Southern Gobi region of Mongolia and is being developed by Oyu Tolgoi LLC a company held by Rio Tinto and the Government of Mongolia. The project consists of a series of deposits containing copper, gold, silver and molybdenum, located along a structural corridor that is over 26 km long. The deposits stretch from the Hugo North deposit in the north through the adjacent Hugo South, down to the Southern Oyu deposit and extending to the Heruga deposit in the south as shown in Figure 2. Sika Mongolia was inaugurated in 2011 with the goal of participating in this world class mining projects that will contain more than 200km of aggregated lateral underground development. Sika Mongolia offers unique underground construction solutions to this challenging project that have proven very successful in similar block caving projects around the globe. Today, Sika is a well established partner of the Oyu Tolgoi project team, offering a full range of construction products, advice and solutions, ranging from shotcrete and concrete admixtures, waterproofing and sealing solutions to a wide range of refurbishment, structural strengthening and maintenance products.

RAPID MINE DEVELOPMENT

Following the commissioning of the OT southern pits, the installation of the Hugo North Lift 1 is currently under full development to eventually provide a mill feed of 50 million tons or ore per year from the block caving operation over a more than

40 years life of mine. First draw bell production is planned for 2020. After the completion of two main shafts, lateral development will gradually increase until peaking at a rate of around 17.000m per year, once developing the footprint including the extraction level, apex- and undercut level and associated infrastructures. In order to keep up with the ambitious construction schedule, efficient underground support designs are needed that allow short mine cycles and a rapid footprint development to source draw-point ore in time.

SIKA SOLUTION

In order to cope with the very harsh climatic conditions and very long supply routes to the project, Sika has chosen the proven "on-site, on-demand" shotcrete and concrete admixture solutions. Products are transported in flake or powder form and diluted within the vicinity of the project. Sika also supplies a wide product range of refurbishment products to keep the extensive ore handling and processing infrastructure well maintained. Sika remains the only local admixture producer in Mongolia and strongly believes that only through a strong local presence, a long term, reliable supply and a close partnership with the OT Team can be maintained and real efficiency gains for the mine be realised. Sika retains a 95% local workforce in Mongolia and is strongly committed to contribute to the growth and development of Mongolia for many years to come.



SELECTION OF SIKA PRODUCTS

- Sika® ViscoCrete® Superplastcizer
- Sika ViscoFlow® Slump retainer
- SikaTard®-930 Consistency stabilizer
- Sigunit® L53 AF Alkali-free, high performance shotcrete accelerator

- Sika Fiber® Polypropylene macro-fiber
- SikaFlex® PU sealants
- Sika Firerate PU Fire rated joint sealant
- SikaBoom® PU foam
- Sika AnchoFix® High performance anchoring resins
- SikaWrap® Structural CFRP strengthening
- Sika Carbodur® Structural strengthening profiles
- Sika Carboshear® Structural strengthening profiles
- SikaDur®/SikaGrout® Engineered grouts
- Sika Abraroc® Abrasion resistant mortar
- Sika Unitherm® Fire retarding mortar
- Sika Permacor® Anti-corrosion epoxy coating
- Sikafloor® Many Sika flooring products including Sikafloor® CureHard 24

- Sika® EpoCem® Epoxi-cementious mortar
- SikaSwell® Swellable waterstop strips
- SikaProof® Waterproofing membranes
- SikaFix® PU injection resins
- Sika TopSeal 300 Waterproofing mortar
- Many other Sika construction products

- 1 View from Head Frame, shaft Nr.2 over the processing plant
- 2 Overview Oyu Tolgoi deposits and infrastructure (source: Turquoise Hill)
- 3 Shotcrete testing on site using Sika Aliva shotcrete machinery
- 4 Shotcrete testing for rapid early strength development
- 5 Box cut and portal of conveyor decline to access Hugo South underground
- 6 Headframe of shaft Nr. 2
- 7 Concrete slick line exit at the bottom of shaft Nr.1
- 8 Haul trucks



OYU TOLGOI



PROJECT PARTICIPANTS

Owner: Oyu Tolgoi LLC

Sika Organization: Sika Mongolia

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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