



SIKA AT WORK

BRUCEJACK, KING OF THE NORTH

HIGH GRADE GOLD MINING IN NORTHERN BRITISH COLUMBIA, CANADA

BUILDING TRUST



BRUCEJACK MINE, NORTHERN BRITISH COLUMBIA

PROJECT DESCRIPTION

The Brucejack Project, located in northwestern British Columbia (BC), is a 2,800 t/d, high grade, underground, gold mining operation. The life of mine stands currently at around 18-years. Ore is processed using a combination of conventional sulphide floatation and gravity concentration to recover gold and silver. The property is 100% owned by Pretium Resources Inc. and is situated 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and 21 km south-southeast of the Eskay Creek Mine. Gold mineralization is hosted in predominantly sub-vertical veins. The underground mine design is based on transverse and longitudinal long hole, open stoping using cemented paste backfill and modern, trackless mobile equipment. Mineralization is accessed via a main decline from a surface portal close to the concentrator. A second decline is dedicated to convey crushed ore directly to the concentrator via two conveyors with a combined length of 800 m. The mine reached design capacity in 2017 after a relatively short, two year construction period. Pre-construction capex was around US\$ 750m.

RAPID MINE DEVELOPMENT

The very remote location of the project and the challenging climatic conditions with a thick snow cover during the winter months poses special requirements to the supply of materials to the mine site. Sika is involved in the project through the special shotcrete contractor Multicrete Systems Inc. that was chosen by Pretium to execute the extensive shotcrete works at the project. Reducing the amount of dilution in the stopes is of utmost importance in order to keep the ore grade at the

designed level. Declines, drifts, undercuts and portals are selectively supported by a combination of installed screens and fiber reinforced shotcrete. Multicrete™* has chosen Sika as the supplier of the shotcrete accelerator and is a long standing partner of Sika Canada.

PROJECT REQUIREMENTS

- Rapid early strength development
- High final strength
- Low rebound
- Good yielding of the shotcrete liner
- A minimum dosage of accelerator
- Good performance also in cold conditions
- Reliable supply of materials to the mine site

SIKA SOLUTION

Multicrete™ is using the Sika Sigunit® L72 AF shotcrete accelerator at the Brucejack mine site. Due to the very harsh climatic conditions, Multicrete™ currently evaluates the use of Sigunit® P1 AF, that would be transported as a powder to the mine and diluted with water at the site. This would save substantial transport costs and the risk of freezing would be eliminated. The benefit of a product with a very long shelf life is also seen very favourable. Multicrete™ has designed a special dilution unit that allows the mixing of the high performance Sigunit® L53 AF out of Sigunit® P1 AF powder in a fast and efficient way in order to have the product ready when there is demand for it. The Sigunit® P1 AF system has proven very successful in many mining projects around the globe.



2



3



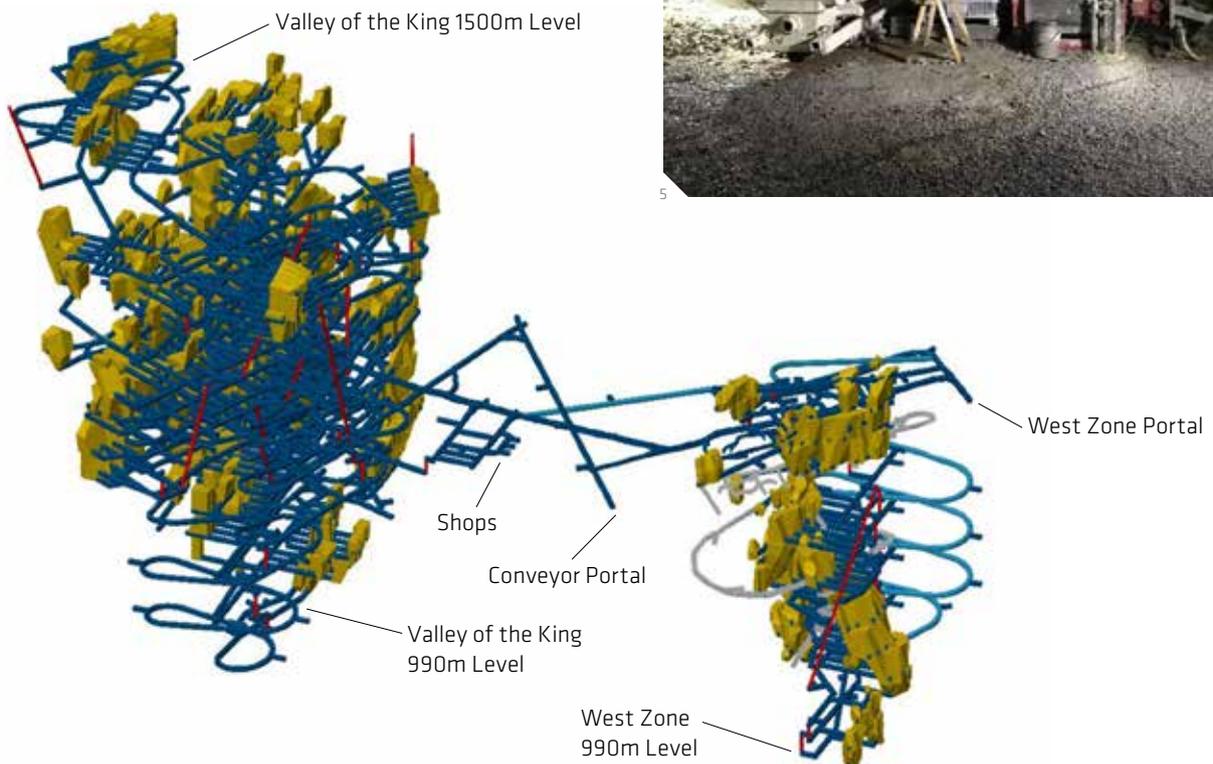
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- 1 Front: Overview processing facility of the Brucejack mine site (source: Pretium)
- 2 The mine site in February, housing compound in the foreground with the mill house in the background (source: Pretium)
- 3 Underground at Valley of the King in a shotcreted perimeter of the mine (source: Pretium)
- 4 Application of ready bagged shotcrete at the conveyor decline portal (source: Pretium)
- 5 Wet concrete piston pump and shotcrete accelerator tank underground
- 6 Life of mine infrastructure and stope layout of the Valley of the King ore bodies (source: Pretium)
- 7 Steel frame installation in the conveyor decline (source: Pretium)

* Multicrete™ is a trade mark of Multicrete Systems Inc.



6

BRUCEJACK MINE, NORTHERN BC



7

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