

Mine tailings storage facility bottom liner system

The Goldstrike mine is located about 60 kilometers northwest of Elko, Nevada. The Barrick Goldstrike tailings bottom liner system consisted of an 80 mil HDPE textured geomembrane overlaying BENTOMAT DN GCL. The GCL was used as a replacement for the 1 ft of 1×10^{-6} cm/sec permeability compacted clay liner. The site was constructed from July through October 2012.



PROJECT DETAILS

Barrick Goldstrike Gold Mine

LOCATION

Elko, Nevada, USA

PRODUCTS USED

BENTOMAT® DN GCL

The Goldstrike mine is located about 60 kilometers northwest of Elko, Nevada.

CHALLENGE:

Regulations demanded 1 ft compacted clay layer which was scarcely available. Additionally, stringent tailings facility slope stability requirements were specified by the design engineer.

SOLUTION:

BENTOMAT DN GCL provided a cost effective replacement for the regulatory 1 ft compacted clay layer in addition to greatly expediting the project construction schedule. CETCO provided a modified roll length of 200ft per roll to aid in installation time. The product also met the interface shear strength requirements as a result of heavy needle-punch reinforcement.

RESULT:

The Barrick Goldstrike Phase 3 Tailings Storage Facility is scheduled to be put into service in early 2013. The last phase of the current North Block TSF, pictured above on the right side of TSF Phase 3, was also lined with BENTOMAT DN GCL and included a 2,200,000 sq ft tailings dam raise successfully completed in October 2011.

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