

The Auplata Modular Gold Recovery Plant

D Auerswald¹, N Van Niekerk², C Hutamo³ and S Moses⁴

1.
Process Manager, SGS Bateman, South Africa. Derrin.Auerswald@sgs.com:
2.
Manager: Modular Plants, SGS Bateman, South Africa. Neels.VanNiekerk@sgs.com:
3.
Senior Process Engineer, SGS Bateman, South Africa. Caril.Hutamo@sgs.com:
4.
Process Manger, SGS Bateman, South Africa. Simon.Moses@sgs.com

ABSTRACT

The Auplata modular gold plant project entails establishing a processing facility for the recovery of gold from tailings produced by historical mining activity in French Guiana, and forms a key component of Auplata's strategy of deploying cyanidation plants to develop the gold industry in the region. The historic tailings were the result of earlier workings from treatment via gravity separation processes only, and hence contain significant quantities of unrecovered gold.

The Auplata site, in the North-eastern region of South America, is surrounded by tropical forests and can be accessed by light aircraft or via road after crossing the lake by barge. The process plant is specifically designed for easy installation at a remote site, and allows scope for future expansion, by using a pre-fabricated modular approach. The circuit includes screening, thickening, pre-leach, carbon in leach (CIL), carbon recovery and cyanide detox, including all ancillaries and utilities, with a provision for the future inclusion of a grinding circuit. Metallurgical testwork, circuit modelling, feasibility studies, plant design and construction supervision were all conducted by SGS Bateman on behalf of Auplata. SGS Bateman cold and hot commissioned the gold plant and was responsible for the supervision of the operations for the initial start-up period.

This paper describes the key features of the process development and construction philosophy applied to this distinctive project. The selection of the final processing circuit, the practical considerations taking both capital expenditure and ease of operation is also described in this paper. This paper also highlights the journey through the commissioning phases and the initial operational period.

Keywords

CIL, modular, design, operations