

# MODELING THE RESPONSE OF THE GEOTHERMAL SYSTEM AT LIHIR ISLAND, PAPUA NEW GUINEA TO MINE DEWATERING

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**ABSTRACT**

Lihir Gold, Ltd., with RTZ Corporation, Niugini Mining Ltd. And the Government of Papua New Guinea as major shareholders, plans to mine two contiguous gold orebodies (Leinetz and Minifie) located in the Luise Caldera, Lihir Island, Papua New Guinea.

Computer simulations of a conceptual dewatering and geothermal management strategy indicate that it will be possible to construct and safely operate the proposed open cut pit in the Luise Caldera geothermal system at Lihir Island in Papua New Guinea.

The studies have shown that rock pre-cooling will not be necessary to allow safe mining, and that the required geothermal management, pit dewatering and seawater interception can all be accomplished with installations outside the actively working pit area, an important consideration for mine operation.

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