

## **IMPLEMENTATION OF JETTI'S CATALYTIC TECHNOLOGY AT PINTO VALLEY MINE TO ENABLE LEACHING OF LOW-GRADE CHALCOPYRITE**

By

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### **ABSTRACT**

Low-grade chalcopyrite ore represents 70% of the remaining world-known copper reserves but remains inaccessible using conventional leaching technology due to the generation of a passivation layer, which inhibits further leaching. Jetti Resources has developed a catalytic technology that disrupts existing passivation layers and prevents them from forming, thus extending the leaching reaction.

Test work conducted using a sample from the Dump leach pad at Pinto Valley Mine began in April of 2017, focusing on demonstrating Jetti's technology performance, determining optimum leaching parameters using column tests, and identifying any effect of the catalyst on downstream processes. Upon successful results of the leach testing campaign, a catalyst addition facility was built and integrated seamlessly into the existing Pinto Valley SX-EW operation.

Copper production per unit area irrigated has increased more than 2-fold since the implementation began in May 2019. Results from Pinto Valley between May 2019 to June 2020 were analysed independently by Worley. The objective of this assessment was to determine if the observed increase in production could be attributed to Jetti's technology. An array of contributing factors was considered in the analysis, and it was concluded that Jetti's technology was responsible for the increase in production achieved at Pinto Valley.

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