Fast-tracking Bald Hill Lithium: Integrated Design-Construct-Operate Strategies

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ABSTRACT

The importance of this study is to challenge accepted best practices for integrated project execution, design, construction, and ongoing plant operation within the mineral processing industry. An industry where cases of cost, schedule, and ramp-up underperformance are commonplace. In contrast, case studies of overperformance (i.e. on-budget, fast-tracked project execution followed by ramp-up) offer rare opportunities for industry learning. The Bald Hill lithium processing plant is a case study exemplifying project outcomes that exceed industry benchmarks for project execution and ramp-up.

This paper chronicles the innovative and integrated design, construction, and contractor-operator strategies employed to enable a fast-track schedule from resource definition to full production at the Bald Hill lithium processing plant. The success of the project is benchmarked on a McNulty curve basis where plant ramp-up is demonstrated to have exceeded even the most rapid McNulty mineral processing plant ramp-up benchmark. The risk profiles of various project execution strategies are explored to underscore how an integrated design-construct-operate (EPC+O) execution model contributed to a fast-track outcome while striking a more balanced risk distribution between owner and contractor, relative to other traditional execution models such as EPC and EPCM.

By using innovative and integrated strategies industry best practice can be reshaped. The story of the Bald Hill lithium plant presents an opportunity to redefine historical definitions of success.