Rio Tinto Kennecott

Utah, USA

SUPPORTED BY **MANAGED SERVICES**

The Bingham Canyon mine is the second largest copper producer in the United States that produces 300,000 tons of copper, approximately 400,000 ounces of gold, 4 million ounces of silver, 30 million pounds of molybdenum and a million tons of sulfuric acid annually.

2023
Business Improvement
Award Winner

PROBLEM

Rio Tinto Kennecott Copper Mine has been a long-time user of simulation. They have primarily focused on truck training for adverse weather, compliance training and green operator training. Site were recording high cycle times and machine events with their electric shovel operators and needed a solution to address these needs.

SOLUTION

Rio Tinto Kennecott Copper Mine engaged Immersive Technologies and Komatsu to run a 30-day Continuous Improvement Project targeting the lower quartile shovel operators. The key project goals included a reduction in cycle times and machine events such as swing impacts and boom jacks.

Immersive Technologies provided an Embedded Resource to deliver training for the project while Komatsu provided MineWare data from the shovels. An Immersive **PRO4 Simulator** with a **P&H 4100XPC Conversion Kit®** was used to track initial training results while MineWare data from the shovels was used to track in pit data. Pit data ranged 3 months prior to training to 3 months post training.

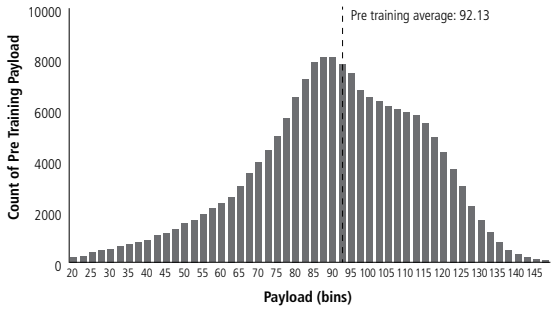
RESULTS

- 0.97% improvement in overall cycle time
- 3.78% increase in overall payload average
- 5.07% reduction in boom jacking events
- 4.97% reduction in stage 1 swing impacts
- 51.71% reduction in stage 2 swing impacts
- 93% fire event pass rate improvement

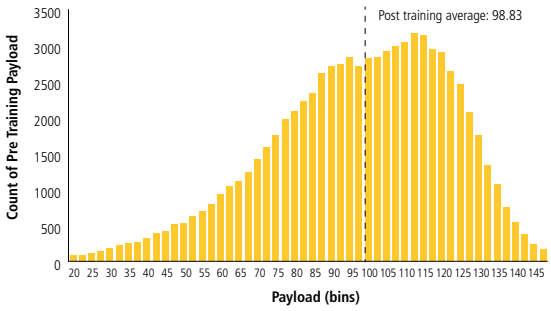
PRODUCTS IN USE

- PRO4-B Advanced Equipment Simulators
- Conversion Kit® for P&H 2800XPA, 4100XPB, 4100BOSS Rope Shovels
- Custom Mine Site
- SimMentor™
- Trainer***Advantage***™
- Targeted Professional Services

Pre Training Bucket Payload Distribution



Post Training Bucket Payload Distribution



"Our partnership with Immersive Technologies and the adoption of two PRO4-B Simulators has played a key role in our training program ... we saw very positive results in both productivity and a reduction in machine abuses, including over a 50% reduction in swing impact alarms."

Jason McNeill, Mine Operations Superintendent, Rio Tinto Kennecott