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MPP- A Powerful Alternative to Conventional Pilot Plants

Canadian Process Technologies' Mini Pilot Plant (MPP) has demonstrated significant inherent advantages over conventional piloting methods including smaller sample size requirements, reduced operating time to steady state and the ability to perform variability analysis



Reduce the Risk

Investors of all persuasions make fundamental financial investment decisions on the basis of perceived risk. The level of risk can be reduced substantially when it can be confidently demonstrated how the ore will react in the milling and concentration process. Reducing the risk and removing uncertainty are important outcomes of an effective piloting program. However, that process becomes even more beneficial when it is timely, widespread and at a reasonable cost.

Timely

Investment dollars are sought after by many competing projects. Once an ore deposit is identified it becomes important to prove its economic viability quickly, firstly to attract those investment funds and secondly to reduce the time to take the end product to market. Conventional pilot plants require a finite period of time, i.e. build the pilot plant; sink the shaft and acquire the ore sample.

The MPP is a completely operational self-contained modular unit which uses only drill core samples, already acquired, for a complete detailed engineering analysis.

Widespread Variability Analysis

It is not unusual for the ore deposit to be spread out over a large expanse of land area. Clearly the majority of ore deposits are not homogenous, that is the ore varies over the geographical



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spread of the deposit. It then becomes important to either assess the ore for differing variabilities, or to make calculated assumptions based a single large shaft.

However, during the exploration phase drill core samples are generally extracted over the expanse of the deposit. Therefore instead of assuming ore variability, a MPP is able to process those same drill core samples taken from many different locations within the deposit and to provide engineering data that incorporates ore variability qualitatively.

Reasonable Costs

Assessing the concentration process, with confidence, to obtain the engineering data necessary to develop a final process flow sheet, can be costly using a conventional full scale pilot plant.

The cost to build a full scale pilot plant is not insignificant and can range from one to several million dollars. Personnel required operating and maintaining the facility will add more costs. Also significant are the costs to acquire a sufficient volume of sample, 10,000 kilograms or more for a complete detailed ore analysis. Obtaining and transporting that much sample ore is very costly.

Contrast that to a self-contained MPP, which for less \$US 0.5 million and using already acquired drill core samples, is able to provide the same high level of engineering data and analysis.

Major Miners Embrace the MPP

Brazilian producer, Companhia Vale Do Rio Doce (CVRD) chose to use the MPP approach to acquire critical operational information from core samples on its Salobo and Sossego properties. Backing up Canadian Process Technologies' claims for the MPP, CVRD has reported that test work using the MPP to replicate a conventional pilot plant was performed more quickly, and less expensively, and resulted in better information and better decisions earlier in the evaluation of the deposits.

In Canada, the Xstrata Technology Centre (XTC) has articulated their requirements for an alternative to the conventional pilot plant, which could, at a suitably high confidence level, simulate existing operations flow sheets or new flow sheets using smaller more representative ore samples.

XTC recently acquired two MPP systems and has been conducting extensive testing to support its process development and optimization efforts. In particular XTC used the MPP systems on a copper-nickel sulphide ore at their Raglan operation to validate the existing flow sheet. According to XTC the MPP units produced results that are consistent with the Raglan plant performance, and overall, that plant grade and recovery performance can be reproduced in the MPP.

In summary the key to making informed processing or project decisions is the acquisition of reliable, reproducible flotation data from a representative ore sample. Further to do so rapidly, economically and using only drill core ore body samples to characterize the mineral resource.

As the MPP fulfils those key requirements, from evaluative ore analysis to optimized processing plant design it has become an essential alternative to conventional pilot plants.

For more information please contact:

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