

## CONVERSION OF PRONY RESOURCES' GORO PLANT TO NICKEL HYDROXIDE CONCENTRATE PRODUCTION

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### ABSTRACT

The rapid move in the nickel market to more battery-focused intermediate materials, such as nickel hydroxide presented an opportunity for Prony Resources New Caledonia (formerly Vale Nouvelle-Calédonie) to debottleneck the existing small mixed hydroxide plant and close the complex nickel oxide refinery. This paper presents the drivers, solutions and challenges of the project so far. The upgraded facility is slated for commissioning later this year.

Prony Resources ceased nickel oxide production in mid-2020 and ramped-up the operation of the nickel hydroxide concentrate (NHC) plant to take all the pregnant leach solution from the HPAL area. A combination of existing and re-purposed equipment has been used to maximise current NHC production. In parallel, a debottlenecking project has been undertaken to increase NHC product quality with a second scavenging stage and improve plant reliability and availability. This project is nearing mechanical completion.

*Keywords: Prony, Goro, mixed hydroxide product, nickel hydroxide concentrate, debottlenecking,*

This paper will discuss the following points:

- Overall strategy of conversion to NHC (reduces costs, improve reliability of production)
- Change in NHC specification
- Short term measures to maximise NHC production:
  - DWP1 use, cross country pipeline for NHC slurry to DWP1
- Debottlenecking of Area 242
  - Additional reactor trains
  - Filtration and bagging capacity
  - Logistics
- Adding NHC2 scavenging stage to improve efficiency and quality;
  - Conversion of part of 285 ALN for second stage
  - Operational integration
- Summary