## sherritt

## Nickel Laterite Acid Leach Process

The high temperature (~250°C) acid pressure leaching of nickeliferous laterite ore has been practised commercially since the late 1950's. In recent process development for fully integrated refineries, producing nickel and cobalt metal. Sherritt has utilized

proven process steps in order to assure operability. The acid pressure leach solution is treated using hydrogen sulphide to **Prepared** Water produce a high grade sulphide containing at least 50% nickel. This Ore mixed sulphide is then pressure leached to give a high purity concentrated nickel-cobalt solution, suitable for efficient solvent extraction to separate the valuable metals. The nickel and cobalt **Neutralization** Leach are separately reduced to metal products. Slurry Leach **Pressure** Liquor Limestone Leach Sulphide Precipitation CCD Wash H<sub>2</sub>S Steam **Tailings Sulphuric Acid Barren Gypsum Slurry** Liquor To Waste Mixed  $H_2$ Sulphides Ni, Co Cobalt Liquor Solution Purification Solvent Residue Extraction Oxygen **Powder** Drying **Sulphide Leach** Nickel **Cobalt Briquettes** Solution H2 **Cobalt Reduction** SHERRITT INTERNATIONAL CORPORATION **Powder Technologies Division** P.O. Box 3388. 10101 - 114 Street **Drying** Fort Saskatchewan AB, Canada, T8L 2T3 **Nickel Reduction Nickel Briquettes** Tel: (780) 992-7000 • Fax: (780) 992-7070 • Email: info@sherritt.com