



BASE METALS (HYDROMET)

Independent Metallurgical Operations Pty Ltd (IMO) has extensive expertise in the development of process flowsheets for a wide range of oxide and sulphide base metal deposits. Our team has significant relevant experience in Pressure Leaching, Solvent Extraction, Counter Current Decantation and Electrowinning.



Our scope of services ranges from sample selection, ore characterisation and mineralogy, through to management of metallurgical testwork, process aspects of scoping and feasibility studies and client representation onto plant commissioning, ramp up and process plant optimisation.

PROJECT	CLIENT	OUR WORK
Ni West Nickel Cobalt Project, USA	Alliance Nickel	Heap leach feasibility study testwork program including locked cycle and variability testing.
Mt Thirsty Nickel, Western Australia	Barra Resources Ltd & Fission Energy Ltd	Conducted process development study including testwork confirming amenability of the laterites to atmospheric leaching forming the basis of the PFS.
Oyu Tolgoi, Mongolia	Ivanhoe	Designed, constructed and operated a bacterial column leach facility in Ulaanbaatar.
Murrin Murrin, Western Australia	Minara	Heap leach development testwork including 2 x 5 tonne columns.
Nickel Laterite, Western Australia	Vale	Designed, constructed and commissioned a column leach testwork facility.
Dutwa Nickel, Tanzania	Red Hill Nickel Limited	Testwork program design on fresh core samples. Completion of scrubbing and comminution, thickening, acid leaching, precipitation, neutralisation, liquid: solid separation testwork and tailings deposition.
Border Lead/Zinc Project, Namibia	Sabre Resources	Interpretation of metallurgical testwork data to develop a conceptual flowsheet. This included generating a block flow diagram and producing a preliminary design criteria.
Canegrass Nickel Cobalt Project, Western Australia	Nickelore Ltd	Scoping Project evaluation for multiple element extraction, utilising bacterial oxidation.
Metallurgical Design, Kazakhstan	Confidential Client	Management of copper cementation and recovery system and process design.
Halls Creek, Western Australia	Cazaly Resources	Completion of a pre-scoping study & scoping study for a copper/zinc deposit using acid leaching and flotation upgrade.

► Please contact us for more details on how we can provide you with assistance and support to your project.

www.indmetops.com.au

IMO Consulting & Operations

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BASE METALS (HYDROMET) continued

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Confidential Project	Squadron Resources	Nickel concentrate refinery process review with the aim of generating a saleable nickel sulphate product.
Avondale Project, New South Wales	Rimfire Pacific Mining	Literature review: Technical literature review of relevant nickel, cobalt, scandium processing options, with particular focus on High Pressure Acid Leaching (HPAL) vs atmospheric leaching (AL) to determine optimum processing route. Flowsheet development and metallurgical beneficiation and leach testwork.
Julimar PGE-Nickel-Copper-Cobalt Project, Western Australia	WSP Golder	Independent hydrometallurgical review of scoping study of the company's Gonneville project including metallurgical testwork, process flowsheet, marketability of concentrate, as well as operating and capital cost.

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