



capability





Gold
Silver
Copper
Vanadium
Nickel
Zinc

“

...a diverse and well-balanced
skill set... ...a 'can do' approach
to meet the challenges...

”

company overview

The PPM Global team comprises specialists in mineral processing, hydrometallurgy and operations management with a dedicated focus on providing support to new and existing plants in areas of commissioning, training, optimisation and troubleshooting.

We bring to each project a combined process experience in excess of 200 years.

We deliver a diverse and well-balanced skill set along with a 'can do' approach to meet the challenges that present themselves during the start-up and management of mineral processing plants.

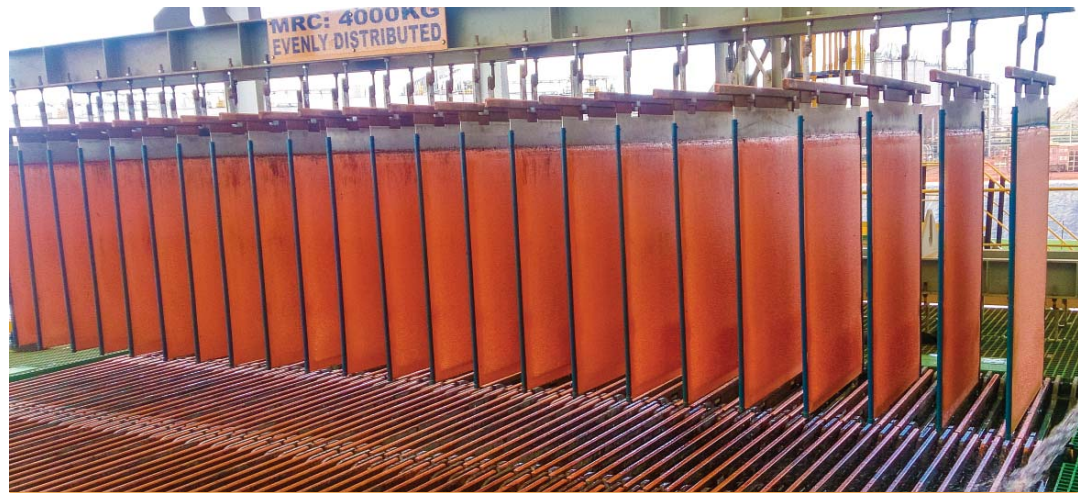
You can find a summary of the experience and skills background of the PPM team in the following pages.

Please do not hesitate to contact PPM Global for further information on how we can provide assistance and add value to your new or existing mineral processing operations.

Regards,

Steve Potter

Business Development Manager
PPM Global Pty Ltd.



Contact PPM Global Pty Ltd.

T: +61 8 9361 1971

M: +61 488 203 060

F: +61 8 9355 1017

E: spotter@ppmglobal.com.au

W: www.ppmglobal.net

22/8 Hurley Street Canning Vale WA 6155

ABN: 54 151 780 611

international experience

The PPM Global team travels the world providing integrated solutions for operations.
Here are some of our Past Projects.

AFRICA

- **Commissioning, operational training and optimisation** of First quantum minerals 55Mtpa Copper concentrate process plant. Sentinel project.
- **Mechanical engineering support** for both Sentinel and enterprise floatation process plants
- **Commissioning, operational training and optimisation** of First quantum minerals 55Mtpa Copper concentrate process plant. Sentinel project.
- **Mechanical engineering support** for both Sentinel and enterprise floatation process plants.
- **Commissioning supervision and operator training** at Weatherly PLC's 15 ktpa Tschudi copper SXEW project in Namibia.
- **Commissioning supervision and operator training** at Tiger Resources' 25 ktpa copper SXEW project in the Democratic Republic of the Congo (DRC).
- **Commissioning supervision** at First Quantum Minerals' Sentinel Project in Zambia.
- **Commissioning support** for expansion of the Kansanshi Mining Project in Zambia with First Quantum Minerals.
- **Commissioning management and plant optimisation** for Katanga Mining's 200,000 tpa copper SX/EW project at Kamoto Copper in Democratic Republic of the Congo (DRC).
- **Process commissioning and plant optimisation** of Mutanda Mining's MUMI Project in DRC.
- **Management of process commissioning** for Anvil Mining's 60 ktpa copper (agitated) leach SX/EW plant at Kinsevere in the Democratic Republic of the Congo (DRC).
- **Commissioning assistance** at 115,000 tpa copper (agitated) leach SX/EW plant at Tenke Fungurume in DRC.
- **Development of operating procedures** and the implementation of **operator training** at KCM's EW plant in Chingola, Zambia.
- **Commissioning** of the copper Agitated Leach/SX/EW plant at Kansanshi Project in Zambia.



INDONESIA

- **Technical support, construction supervision and commissioning assistance** at Finders Resources' Wetar Project in Indonesia.

AUSTRALIA

- **Process Commissioning support** for the HPAL laterite process plant at Ravensthorpe Nickel Operation in Western Australia for First Quantum Minerals.
- **Management of plant refurbishment and commissioning activities** for Leigh Creek Copper Project in South Australia.
- **Management of commissioning** for brownfields expansion of the copper HL/SX/EW plant at Lady Annie Operation for CopperCo in north west Queensland.
- **Management of commissioning** for brownfields expansion of copper HL/SX/EW plant at Leichhardt Operation for Matrix Metals in north west Queensland.
- **Process optimisation and production ramp-up** at Compass Resources' Browns Oxide plant in the Northern Territory.
- **Commissioning** of copper Agitated Leach/SX/EW plant at the Brown's Oxide plant for Compass Resources in the Northern Territory.
- **Commissioning** of complex hydromet plant for leaching and electrowinning of antimony metal at Hillgrove for Straits Resources in New South Wales.
- **Commissioning** of a copper HL/SX/EW plant at Leichhardt Operation for Matrix Metals in north west Queensland.
- **Development and implementation of operator training package** at the 10 ktpa copper SXEW Leichhardt Operation in north west Queensland.
- **Commissioning** of the copper HL/SX/EW plant at the Lady Annie Operation for CopperCo in north west Queensland.
- **Management of operator training** at the Lady Annie Operation in north west Queensland.
- **Development of training manuals** for the copper Agitated Leach/SX/EW plant at Brown's Oxide Plant for Compass Resources in the Northern Territory.
- **Development and implementation of an operator training system** at the Whim Creek Copper Mine in Western Australia for Straits Resources.

KAZAKHSTAN NORTHERN CENTRAL ASIA AND EASTERN EUROPE

- Central Asia Metals (Client) Project name was Kounrad (near the town of Balkhash), capacity 10 ktpa, dump leach SXEW, **commissioning and training provided**.
- KAZ Minerals (Client)– Aktogay Operations **commissioning and optimisation** capacity 25ktpa copper SX EW.

SOUTH AMERICA

- **Commissioning and operational support** for Cleveland Mining's Premier Gold Project in Brazil.

NORTHERN EUROPE

- **Management of process commissioning** for First Quantum Minerals at the Kevitsa Project in Finland.



ppm global disciplines

PPM Global can provide you with a team of highly experienced specialists in mineral processing, hydrometallurgy and operations management.

Team members include:

- Commissioning Manager
- Metallurgists
- Process Engineers
- Process Specialists
- Mechanical Engineers
- Electrical engineers
- QA/QC Construction Supervisors.

Detailed resumes for all personnel can be provided on request. Please contact us.

commissioning services

Our objective is a safe, efficient and timely commissioning process. To facilitate this PPM Global provides a wide range of services.

We can:

- supply a Commissioning Management team which includes all disciplines from construction supervision through to Commissioning Manager
- provide, or assist with the development of, procedures and permits required to ensure that the commissioning process is carried out with the utmost regard for safety and in accordance with the client's site safety policies
- prior to commissioning, develop detailed training packages and implement operator training on process operating principles for your particular type of processing plant
- inspect the progress of plant construction and develop a detailed commissioning plan incorporating mechanical completion dates from the construction engineer
- commence preparation work that will assist the commissioning process including the sourcing of minor equipment items and commissioning consumables
- water test all vessels, pumps and lines in accordance with marked up process identifiers (PIDs) for each plant section as it reaches mechanical completion stage

safe, efficient
and timely
commissioning

- establish continuous operation of process 'loops' and testing of instrumentation and control equipment whilst the plant is in the water-commissioning phase
- provide the mechanical expertise to check, troubleshoot and commission equipment
- carry out the 'first fill' of process reagents and solutions and establish continuous operation throughout the various process loops during the process commissioning phase
- integrate process loops, commence continuous process operation and provide support as the plant ramps up to full production.

an integrated solution

PPM Global offers you an integrated solution to the start-up and ongoing development of mineral processing operations, with all services supported by a safe and practical approach to process engineering and plant management.

Safe and efficient production staff

Throughout the entire commissioning process, our focus is on training operations and technical personnel and the passing on of knowledge. This approach provides a solid foundation from which the operation can successfully ramp-up and achieve safety and production targets. PPM Global will formalise the process of knowledge transfer by developing training documentation and systems that will streamline the transition of your project from the commissioning phase to the operational phase.

Specific training and documentation services

- The updating and revision of the client's existing operator training systems or the development of new operator training systems and manuals to suit your specific requirements. This includes the development of standard operating procedures covering all aspects of the day-to-day operations of a mineral processing plant.
- The development and implementation of plant-wide and area specific induction systems to educate your personnel in the general safety requirements and specific hazards associated with each of the process areas.
- The provision of tailored one-on-one or group training for your technical and operating personnel as required.
- The development of plant ramp-up plans and associated KPIs.
- The updating and revision of your flowsheets, PIDs, control philosophy and other process documentation to 'As Built' status as required.
- Process engineering design and support.
- Mechanical commissioning and maintenance training support.

Call us today

T: +61 8 9361 1971

E: spotter@ppmglobal.com.au



a safe and
practical
approach





“

PPM Global offers you an integrated solution to the start-up and ongoing development of mineral processing operations.

”

ppm

global

PROJECT AND PROCESS
METALLURGY SOLUTIONS

Contact us on:

T: +61 8 9361 1971

M: +61 488 203 060

F: +61 8 9355 1017

E: spotter@ppmglobal.com.au

W: www.ppmglobal.net

22/8 Hurley Street Canning Vale WA 6155