Michael Westlund

Independent Project & Study Management

20 Myross Avenue Victoria Australia 3032 +61 400 818 983 michael@michaeljwestlund.com

SUMMARY

Years	Company	Position
2021-Ongoing	Bluestone Mines Tasmania JV	Study Manager Rentails (Part-Time Contract)
2021 - 2022	Glencore	Study Manager Mutanda Sulphides (Part-Time Contract)
2020 - 2021	Horizonte Minerals	Manager - EPCM & Furnace Procurement (Part-Time Contract)
2020 - 2020	Anglo American	Project Management Officer - Mine Planning (Part-Time Contract)
2019 - 2020	Anglo American	Debswana Client Support Representative (Part-Time Contract)
2014 - 2018	MMG Australia Ltd	Study Development Manager (Permanent)
2010 - 2014	Lycopodium Ltd	Senior Study Manager (Permanent)
2008 - 2009	Parsons Brinckerhoff	Major Projects Executive (Permanent)
2007 - 2008	Precious Metals Australia	Project Director Windimurra Vanadium (Permanent)
2006 - 2007	Kellogg Brown & Root (KBR)	Resource Group Leader, Project Director (Permanent)
2004 - 2006	PCT Engineers	Manager Projects, Manager Operations East (Permanent)
2003 - 2004	Simon Engineering	Manager Projects & Engineering WA (Permanent)
1997 - 2003	WMC Resources Ltd	Project Manager, Manager Engineering (Permanent)
1994 - 1997	Dames and Moore	Principal Engineer (Permanent)
1992 - 1993	Technip France	Specialist Engineer (Permanent)

ACHIEVEMENTS

Full scope concept study for sulphide ore mining and processing (flotation and hydrometallurgical or pyrometallurgical treatment of concentrate) at an existing copper / cobalt operation in the Democratic Republic of Congo. The project was unconditionally approved for prefeasibility and is progressing.

Feasibility study for a new mine to deliver high grade copper ore to an existing concentrator through surface mining, ultra-class truck haulage, crushing, and conveying at rates above 100,000 tonnes per day, and a concurrent prefeasibility study for plant expansion. The project is now in execution.

Prefeasibility study for hydrometallurgical processing of zinc tailings through pressure leaching, solvent extraction, and electrowinning at an existing zinc / lead / silver mine, and concurrent prefeasibility study for the conversion of the facility to phosphate processing. The study rejected both options, leading to the sale of the asset.

Prefeasibility study for a large copper-gold concentrator attached to an underground block-cave mine including the development and integration of a significant new pressure leaching technology to upgrade the concentrate. The project did not meet the owner's expectations leading to rescoping.

Prefeasibility, early feasibility, and project execution studies for a new green-fields nickel laterite mine, with on-site hydrometallurgical processing, waste management, infrastructure, transport, and logistics in East Africa. The project was uneconomic and therefore terminated.

Prefeasibility and feasibility studies for a new high-volume iron ore mining, processing, and export shipping operation in West Africa (two mines straddling the Cameroon/Congo border), 400 km railway, and new deep-water port with train unloading, stockyards, and ship loading facilities. The project remains suspended pending government approvals.

Establishment and management of a joint venture successfully delivering major infrastructure studies and projects for BHP Billiton's phased expansion of iron ore operations in the Pilbara region of Western Australia.

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PROFESSIONAL PROFILE

Mature leadership in project development, evaluation, execution planning, capital management, and delivery in the mining, minerals processing, oil & gas, petrochemicals, and infrastructure sectors.

Significant experience in project governance including a well-developed understanding of reporting requirements, ethics, environmental and social governance, and corporate legislation reflected in Fellowship of the AusIMM.

Strong values based on accountability, integrity, equality, and sustainability.

PROJECT HISTORY

2021-Ongoing BMTJV

Study Manager (Part-Time Contract)

Rentails Project, Tasmania

Engaged to plan and manage a feasibility study developing the basis for recovery and reprocessing of tin tailings through hydrometallurgical and pyrometallurgical processes to produce a high-grade tin fume at an existing operation.

2021 - 2022

Glencore Copper

Study Manager (Part-Time Contract)

Mutanda Sulphides Project, DRC

Engaged to manage a full scope concept study for the development of sulphide ore mining (open pit and underground) and processing at the existing copper / cobalt oxide operation. Mutanda produces up to 200 kt/a of copper cathode from SX/EW, and 30 kt/a of cobalt in hydroxide.

2020 - 2021

Horizonte Minerals PLC

EPCM & Furnace Manager (Part-Time Contract)

Ferro-Nickel Project, Brazil

Prepared the EPCM scope of services and extensive contract documentation, tendered, and managed the EPCM contractor engagement process.

Prepared standard contract and scope of supply documentation for the procurement of all major equipment process-island packages.

Led the procurement team responsible for the preparation, tendering, and award of the ferro-nickel electric arc furnace supply contract.

2019 - 2020

Anglo-American

Client Support Representative (Part-Time Contract)

Diamond Mines, Botswana

Client representative acting on behalf of Anglo-American on integrated production planning and development studies for Debswana's large long-life diamond assets in Botswana. Debswana is a joint venture between Anglo-American's majority owned De Beers diamond unit and the Government of Botswana. It is now planning for imminent transition from open pit to underground mining.

2018 - 2019

Glencore Copper

Project Manager (Part-Time Contract)

Copper / Cobalt Mines, Democratic Republic of Congo (DRC)

Feasibility level reporting to government for Kamoto Copper Company (KCC) and Mutanda Mining (MUMI) in response to changes to the DRC mining code. KCC has recently commissioned its new whole of ore leaching project and is ramping-up production, whilst MUMI is transitioning to care and maintenance pending a major study on conversion of the operation to underground mining and sulphide processing.

2014 - 2018

MMG Australia Ltd

Study Development Manager

Copper Mine, Democratic Republic of Congo (DRC)

Feasibility level reporting to government and strategic project planning for MMG Kinsevere in response to changes to the DRC mining code and the transition from oxide to primary ore. Kinsevere is considering the addition of a sulphide concentrator, on-site acid production, and associated metallurgical changes.

Copper Mine, Peru

Manager (commuting between Melbourne, Lima, and Las Bambas) leading a diverse team of specialists accountable for plant expansion studies and the development of a new high volume mine. The work included plant optimisation, resource definition, mine design and mine planning, metallurgy, engineering, infrastructure, permitting, social / community engagement, and management of all aspects of the business case.

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Zinc Mine, Queensland

Manager leading a complex multi-discipline study examining options for extending the life of operations of the Century mine in northwest Queensland. Strategic options under examination included other regional primary ore deposits, zinc tailings retreatment, processing of low-grade stockpiles, the production of intermediate products, or conversion of existing operations to mine and treat Georgina Basin phosphate reserves.

<u>2010 – 2014 Lycopodium Minerals Senior Study Manager</u>

Copper-Gold Mine, South Australia

Manager – Processing; responsible for a prefeasibility study for a copper-gold concentrator associated with a new block-caving mine, including assessment of geo-metallurgical models, resource evaluation, test work, and the development and integration of a significant new high-pressure leaching technology to remove deleterious elements and produce a high-grade concentrate.

Gold Mine, Central Africa

Study Manager responsible for operational and strategic project development review of a medium size gold mine in Burkina Faso. This included assessment of geology, resource definition, mine planning, processing, and metallurgical operations.

Nickel Mine, East Africa

Manager responsible for a definitive feasibility study on a new green-fields nickel mine, with processing, waste management, transport, and logistics in East Africa. This included integrating with social and environmental impact assessment, low impact surface mining, establishment of government facilitation and permitting arrangements, definition of upgrades to state-owned port, rail, and road transport networks across two countries, with off-site limestone recovery, on-site processing, and infrastructure.

Iron Ore Mines, West Africa

Manager responsible for prefeasibility and feasibility studies on a new iron ore mining, processing and export shipping operation in West Africa, based around two high volume mines straddling the Cameroon / Congo border, a new deepwater port with stockpiles, blending and ship-loading facilities, interconnecting heavy-haul railway, and associated remote area infrastructure.

<u>2008 – 2009</u> Parsons Brinckerhoff Major Projects Executive

Iron Ore Mines, Western Australia (KBR/PB Joint Venture)

As Project Executive, was responsible for strategic assessment of the infrastructure required to support a significant long-term phased expansion of Pilbara iron ore mining and processing capacity.

<u>2007 – 2008</u> Kellogg Brown & Root Resource Group Leader, Project Director

Iron Ore Mines, Western Australia (KBR/PB Joint Venture)

As Project Director, was responsible for the establishment and management of a significant joint venture for delivery of infrastructure supporting BHP Billiton's Pilbara growth projects.

2006 – 2007 Precious Metals Australia Project Director

Vanadium Mine, Western Australia

Project Director accountable for all aspects of mine and process plant redevelopment including environmental approvals, geology, mine planning, front-end engineering studies and transition of the project from feasibility to implementation, establishment of management plans, execution strategy, risk management, project delivery strategy, appointment of main contractors, project controls, board reporting, and procurement of major long lead items.

<u>2004 – 2006</u> PCT Engineers Manager Projects, Manager East Coast

Operations Manager, Queensland

Managed all aspects of east coast operations including financial accountability, board reporting, strategic direction, risk management, business development, marketing, project delivery, engineering and quality assurance, people, revenue, direct and indirect costs.

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Iron Ore Mines, Western Australia

Engineering Manager responsible for new projects, operational engineering support, and upgrades to existing iron ore mining, ore-transport, and processing facilities in the Pilbara region.

1997 – 2003

WMC Resources Ltd

Project Manager, Manager Engineering

Gold/Nickel/Copper/Uranium/Mineral Sands, Global

Group Manager accountable for global engineering such as the provision of high-level technical oversight, asset utilisation, maintenance strategy, project engineering, and study development. Significant responsibilities and achievements included the integration of geoscience into the engineering group, management of tailings dam risks, the development of corporate engineering and hazard management standards, technical risk assessments, operational management of hazards, risks, and controls associated with major hazard facilities.

Nickel Mines, Western Australia

Senior Project Manager responsible for programme management and for the definition and implementation of growth and improvement projects associated with surface and underground mining and processing facilities in conjunction with the WMC technical process improvement and operations teams.

Talc Mine, Three Springs, Western Australia

Project Manager responsible for the definition and implementation of a new high technology mining and processing facility for the industrial minerals business. This included review and documentation of best practices at similar European operations, followed by management of the EPC contractor, operational readiness, and the incorporation of selected best practices and equipment into the new facility.

1994 – 1997

Dames and Moore

Principal Engineer

Underground Copper / Uranium Mine, South Australia

Principal Engineer responsible for conceptual design and feasibility study on a new underground rail haulage and ore handling system.

Underground Tin Mine, Tasmania

Principal Engineer responsible for discipline design, procurement, construction, and commissioning of a new underground crushing and ore handing system including a new haulage shaft and automated rope-winder.

<u> 1992 – 1994</u>

Technip, France

Specialist Enginee

Petroleum Refinery, Germany

Specialist Engineer responsible, in association with European contractors, for the preparation of basic engineering, cost estimates, and implementation strategies associated with power supply, switchgear station, power distribution, and control for a new multibillion-dollar petroleum and petrochemical complex in the ex. East Germany.

Petrochemical Complex, Iran

Specialist Engineer responsible for refurbishment and recommissioning of all electrical systems, including a 240 MW gas turbine power station needing turbine overhaul, new turbine control systems, grid load-flow control, new generator transformers, 66kV switchgear, and distribution systems.

QUALIFICATIONS & EDUCATION

Certificate in ESG and Social Responsibility, Australasian Institute of Mining and Metallurgy (AusIMM)

Certificate in Strategic Project Leadership, Oxford University / Said Business School

Specialist Certificate in Leadership, Melbourne Business School

Corporate Governance & Corporations Law, Governance Institute of Australia

Graduate Diploma in Management, Australian Graduate School of Management (executive MBA programme)

Graduate Diploma in Terotechnology (Life Cycle Management), Monash University)

Bachelor of Engineering, Western Australian Institute of Technology (now Curtin University)

PROFESSIONAL RECOGNITION

Fellow, AusIMM

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