

Appendix C
Study Team

STUDY TEAM

Exco Resources Limited

Geoff Laing (GM for Corporate and Project Development)

Geoff is a Chemical Engineer with 18 years experience in operations, engineering and project development and has an MBA from The University of Western Australia. He has been involved in local and international projects primarily in base and precious metal commodity lines. He has been involved in a broad range of projects for major clients through his engineering career with both Bateman Engineering and GRD Minproc, including refining projects for BHP, Anglo American, Norilsk Nickel and Phelps Dodge.

Project Role - Project Manager

Mike Dunbar (Resource Manager)

Mike is a Resource Manager and Senior Resource Geologist who has over 15 years experience in exploration, development and mining projects, including six years with LionOre Australia. Over the last 4 ½ years Mike has been involved in the resource estimations for a number of base metal and gold deposit projects for Mitchell River Group. Mike also acts as a competent person (as defined by the JORC code) for the reporting of mineral resources for a number of different mineral resources and deposit styles.

Project Role – Geology Manager and mining coordinator

Dale Tyson (Project Metallurgist)

Dale has experience in design and commissioning of gold and base metals projects and supervision of metallurgical testwork programs. Dale has worked for Roche Mining (JR) and for the past 3 years has been with Mitchell River Group and has been engaged in metallurgical development projects for Mirabella Nickel Ltd, Albidon Lts and Exco Resources Ltd. He was involved in project feasibility studies with all three companies and in the commissioning of the Munali Nickel Project processing facility in Zambia.

Project Role - Metallurgist

Bruce McLarty (GM Commercial)

Bruce holds degrees in Commerce and Economics from the University of Western Australia. He has 14 years experience in the mining industry. His experience includes financial and regulatory matters including economic evaluations, native title, aboriginal heritage, land tenure and permitting. His experience, prior to his involvement in the mining industry, includes stock broking, manufacturing and accounting.

Project Role – Client Advisor

Tim Luffman (GIS Administrator)

Tim has over 17 years professional experience developing GIS and other digital spatial databases and applications. Tim has experience working in Australia, England, Scotland and Papua New



Guinea. Particular expertise has been gained in the analysis of spatial data, GIS/GPS integration, map series production and aerial photography orthorectification.

Project Role - procurement, management and dissemination of spatial and spatially related information to interested parties as well as the creation of maps for the EIS report.

AustralAsian Resource Consultants

Andrew Pearce (Operations Manager and Principal Environmental Scientist)

Andrew has over seventeen years experience in environmental management for the mining (including Mount Isa copper and Blair Athol coal) and agricultural industries. His experience includes statutory approvals including preparation of environmental authorities, environmental approvals for Australian and overseas mining projects, rehabilitation programs (including monitoring), and the development, maintenance, and implementation of environmental management systems to ISO 14001. Andrew also has extensive environmental management systems and compliance auditing experience. He was intimately involved with the Environmental and Social Impact Assessment for the Phu Bia Project in Laos and the Ban Phuc Nickel Project in Vietnam. Andrew also recently oversaw the completion of the Universal Resources – Roseby Copper Project, and Oz Minerals – Dugald River Project.

Brendan Massy (Senior Environmental Scientist - Zoology)

Brendan is currently employed as a Senior Environmental Scientist with AARC. His role includes undertaking ecological studies, land suitability studies, surface and groundwater monitoring and establishing environmental monitoring programs. Brendan has experience in a wide range of zoological research projects, particularly biodiversity assessments throughout Australia. He has most recently conducted environmental assessments in the Mt Isa, Atherton Tablelands, Central and South-east Queensland and Cape York Peninsula regions. Previous to his employment at AARC, Brendan was employed as a Marine Scientist, where he designed and employed various coral reef ecology impact assessments, in addition to a Crown-of-Thorns Starfish control program on the Great Barrier Reef.

Brendan holds a Bachelor of Science degree from The University of Queensland, majoring in Marine Biology and Zoology. He has continued his studies to gain a Graduate Certificate in Environmental Management.

Gareth Bramston (Senior Environmental Scientist - Ecologist)

Gareth Bramston: Environmental Scientist - Gareth holds a Bachelor of Science (Honours) and has a background in environmental impact assessment. He has worked as a consultant with AARC for two years and is currently managing the Environmental Impact Statement for Northern Energy Corporation (a proposed coal mine in the Surat Basin, South-east Queensland) and the ongoing environmental works for Matrix Metals Limited (Copper heap leach operation in North-west Queensland). Gareth also plays an integral role in the environmental management of ongoing operations at Chatree Gold Mine, a CIL Gold mine in central Thailand.

Previous mining clients for which Gareth has worked include Jellinbah Resources, CopperCo, Copper Strike, Broadlea Coal, Stanwell Corporation, Coffey and Monto Minerals. Gareth is also an experienced ecologist and has completed a baseline vegetation assessment for a tourism resort in Vanuatu.



Amy Creighton (Senior Environmental Scientist)

Since joining AARC Amy has undertaken several large scale ecological surveys including the Broadlea Coal Project, Einasleigh Copper Project, and Conquest Mount Carlton Project sites. In addition to ecological surveying, Amy has undertaken land suitability studies, and surface and groundwater surveys. Amy also has experience in Project Management of local projects, preparing documents such as Environmental Management Plans, Plan of Operations, Environmental Monitoring Manuals, and ecological survey reports for mining and exploration sites in Queensland.

Amy holds a Bachelor of Science majoring in Zoology and Marine Biology. After graduating Amy worked as an Environmental Scientist at Phosphate Hill in North-west Queensland, where she was responsible for the environmental training of staff, National Pollutant Inventory reporting for the site, and the monitoring and reporting of ecological impacts of the mine dewatering project.

Connor Ryan (Ecologist – Botany)

Connor holds a Bachelor of Science (Resource & Environmental Management) from the Australian National University and has been involved in ecological research projects throughout Australia and the Pacific. He has experience conducting flora and fauna assessments in a variety of terrestrial environments and has contributed to large scale ecological studies funded by Land & Water Australia and the Department of Environment, Water, Heritage and the Arts.

Since joining AARC he has conducted numerous ecological surveys on mining projects in North West Queensland including baseline and species specific studies. Connor has also worked for the Department of Agriculture, Fisheries and Forestry where he was investigating the potential for genetically modified crops to assist the agricultural sector to adapt to climate change.

Julie Byrd (Environmental Scientist)

Julie holds a masters degree in Natural Resource Management from James Cook University. Prior to her employment with AARC, Julie worked for a number of universities conducting ecological assessments along the east coast of Australia. Since joining the AARC team, Julie has undertaken ecological surveys and environmental audits at a number of exploratory mine sites, including Einasleigh Copper Project, Agate Creek Gold Project, Kalman Exploratory Project and Cloncurry Copper Project.

Her specialties include ecological assessments, predominantly flora and fauna. Julie's work has included monitoring the effects of a flying fox relocation programme in Gladstone, creating comprehensive vegetative maps on Heron Island and undertaking aquatic and terrestrial surveys in Northern Queensland. Julie has also been involved in an invasive flora species removal programme in the United States and has closely monitored the site's rehabilitation.

Steven Portelli (Environmental Scientist)

Steven holds a Bachelor of Science degree from the University of New South Wales (honours), majoring in Biological Science and Marine Biology. His experience includes a wide range of biological research and spatial monitoring programs throughout NSW and Queensland. Steven has played an integral part in the management of a number of large-scale Environmental Impact Assessments at AARC, chiefly BHP Billiton's Cannington Life Extension Project and Hancock Prospecting's Alpha Coal Project.



Steven has been involved with a number of mining clients, including Exco Resources, Copper Strike, Zinifex Australia, Conquest Mining and Glengarry Resources mines. His experience includes social impact, transportation, land suitability and ecological assessments.

AustralAsian Resource Consultants – Mine Planning and Development

Rodger Bonney (General Manager)

Rodger is AARC's General Manager of mine planning and development; he has over 20 years experience in engineering, senior mine site management and construction management positions on mining and major civil projects both within Australia and around the South East Asian region. Rodger is responsible for the management of the mine planning and development services group and for the co-ordination of the network of experienced consultants that form the AARC Independent Consultants Group. The Mine Planning and Development group includes AARC Green House Gas consultant's services group.

Holding a Bachelors degree in Civil Engineering and a Graduate diploma in Technology management, Rodger's extensive experience both within the mining and minerals processing sector and the South East Asian region area, brings to AARC an ability to focus on the sustainable development of mining projects with a particular emphasis on the integration of environmental considerations into the overall mine site development and construction processes.

AMC Consultants

Jodi Wright (Senior Mining Engineer)

Jodi has more than nine years experience in open pit mining gained within Australia and overseas. She has expertise in open pit optimisation, design, scheduling, equipment selection and capital and operating cost. These skills were gained from previous consulting work on feasibility, pre-feasibility and scoping studies. Jodi's experience within the mining industry includes detailed mine planning, strategic planning and mine production.

Project Role - design engineer and consultant Project Manager for the Mining Study

James Stoddart (Principal Mining Engineer)

James's primary expertise is in business and operational analysis, valuation and organisational development and management of feasibility and mine optimisation projects. He has over 20 years experience in the mining industry covering operational management roles, technical design, mergers and acquisitions and organisational improvement projects.

Project Role – consultant technical advisor for the Mining Study.

Converge Heritage and Community

Karen Townrow (Project Manager and Archaeologist)



Karen joined the Converge Cairns office in 2008, utilising her extensive experience in cultural heritage and native title. Karen's experience encompasses historic and indigenous cultural heritage surveys, heritage assessments, historic research and salvage excavations. Karen has also implemented an archiving program for a Western Australian private school and been involved in eco and cultural tourism in the sub-Antarctic and a 12 month program of excavations on sub-Antarctic Macquarie Island. Karen's expertise is reflected in her impressive publication record, including several monographs and, in various archaeological journals and by the Tasmanian Royal Society.

Karen's work as a Case Manager with the National Native Title Tribunal has given her valuable experience in native title matters in the Far North Queensland/Cape York region. In this role, her skills as a project manager/facilitator and her knowledge of Aboriginal culture have significantly contributed to her broad based and extensive expertise in cultural heritage matters.

Most recently Karen has managed and undertaken a wide range of heritage projects for Converge including indigenous and non-indigenous cultural heritage surveys and assessments, the preparation of conservation management plans and the preparation of agreements under the Aboriginal Cultural Heritage Act.

ASK Consulting Engineers

Matthew Goodfellow (Senior Engineer)

Matthew Goodfellow is a Senior Engineer at ASK Consulting Engineers and has gained significant experience over the past 7 years as an Environmental Engineer in the specialist fields of Acoustics & Air Quality.

Matthew has worked on a broad range of acoustic projects including health buildings, shopping complexes, educational buildings, residential developments, office developments, transportation noise (encompassing road, rail and aircraft), industrial projects, extractive industries, treatment plants, and processing facilities.

Australasian Groundwater and Environmental Consultants Pty Ltd

Errol Briese (Principal Hydrogeologist)

Errol has had 30 years experience in hydrogeology/groundwater engineering throughout Australia, South East Asia and the Pacific region, working with governments and consulting engineers at all stages of project work; feasibility studies, design, construction, planning and management. Much of his work has been related to mine development: water supplies, dewatering, environmental impact and monitoring. He has worked on numerous, coal, base metal, gold, mineral sand and magnesite mines throughout Australia and in Argentina. Errol has had extensive experience appearing as an expert witness in the Planning and Environment Court in Queensland and the Land and Environment Court in NSW.

Project Role - consultant Project Manager and Principal Hydrologist for the Groundwater Studies.

Andrew Durick (Senior Hydrologist/Groundwater Modeller)



Andrew is a Senior Groundwater Hydrologist who specialises in numerical groundwater modelling. Andrew has over 12 years experience in groundwater conceptualisation and numerical modelling, focusing on impact studies from water allocation and dewatering situations. Prior to working with AGE Andrew was with the Queensland Department of Natural Resources and Water (NRW) for almost 11 years, where his focus was on the numerical simulation of groundwater for water allocation and planning purposes.

Project Role - numerical flow and impact modelling for the Groundwater Studies.

Duncan Irvine (Senior Hydrogeologist)

Duncan has a Masters of Applied Science Degree and is a Consulting Geoscientist/Hydrogeologist with over 20 years experience which has included environmental studies and management, groundwater supply development, engineering geology and exploration geology for a range of mining and infrastructure projects. Participation in these projects has ranged from field supervision to technical team participation and overall project management.

Project Role - responsible for the analysis of field data, development of the conceptual groundwater model and reporting.

Australian Tailings Consultants

Phillip Soden (Senior Geotechnical Engineer)

Phillip is a Senior Geotechnical Engineer who has over 12 years experience in consulting geotechnical engineering and primarily has experience in the areas of mine tailings and water management, water dams and retaining structures.

Project role - consultant Project Manager and design engineer for the Tailings study.

Steven Murphy (Senior Geotechnical Engineer)

Steven is a senior Geotechnical Engineer who has worked in the field of geotechnical engineering since 1980. Steven has worked on numerous tailings storage facilities and water storage dams, with his involvement including site investigations, engineering analysis and design, documentation and technical supervision. Steven has extensive experience with respect to design, documentation and management of tailings storage facilities in the northern Australia, including Century, Ranger, The Granites, Tanami and Union Reefs.

Project role - provide technical assistance for the Tailings study.

Keith Seddon (Principal Engineer)

Keith is currently the Technical Director at ATC Williams and is responsible for planning, investigation, design, construction and surveillance of tailings and water dams, geotechnical engineering, hydrogeology. Keith has more than 33 years' experience in geotechnical and civil engineering, with particular emphasis on tailings storage assessment and design, earthworks and excavations. Specialist areas also include dams and hydraulic structures, foundation investigation and design, investigation for civil engineering projects, groundwater and seepage investigations and slope stability assessment.



Keith's role in the Project was [Technical Review of Design](#).

Alan Watson Associates

Allan Watson (Principal Engineer)

Allan Watson is a qualified civil engineer, possessing over 25 years professional consulting experience, predominantly in the waste and water management fields. His background is in the practice of geotechnical engineering focusing on materials behaviour, slope stability assessment and earthworks design and construction. He has been involved in around 50 tailings and mine water management projects throughout Australia, Indonesia, the Pacific region and Europe.

Project role – consultant Project Manager and design engineer for the surface water management study.

