

ENVIRONMENTAL IMPACT AND REGULATORY COMPLIANCE SPECIALIST**Experience Highlights:**

- ◆ Environmental project management
 - ◆ Environmental impact assessment
 - ◆ Environmental management systems
 - ◆ Contaminated site investigations
 - ◆ Exploration/environmental geochemistry
 - ◆ Environmental law, standards & policy
 - ◆ Environmental compliance auditing
 - ◆ Environmental due diligence
 - ◆ Environmental legal advisor
 - ◆ Environmental & geotechnical engineering
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Employment Record:

1987 to 2013 **Environmental Management Consultants International** – Senior Environmental Specialist and Director

EMC International has provided specialist environmental, legal and community issues management advisory services since 1982 to government and industry.

Since 1996, EMC has provided Environmental Consultancy services to Behre Dolbear Australia, providing the environmental and social impacts review role for numerous mining and mineral processing projects for technical due diligence and risk assessment purposes.

1981- 1987 **Esso Australia Ltd - Exploration Geoscientist**

1975- 1980 **NSW Roads and Traffic Authority - Engineering Geoscientist**

1973- 1975 **Anglo American Corp - Exploration Geochemist**

1973- 1973 **International Nickel of Canada - Exploration Geochemist**

Adrian Bret has over 35 years of experience variously located in SE Asia, Africa and Pacific; countries most recently worked in include Australia, China, Jordan, Indonesia, Papua New Guinea, Philippines, Thailand, Laos, Nigeria, Zambia, Fiji, New Zealand, Mongolia and Myanmar.

Adrian Brett is an environmental and legal specialist with extensive experience in environmental management and impact assessment, environmental regulation and sustainable development. He has worked as a consultant to numerous organisations which have included; United Nation's agencies (UNEP, UNDP, UNESCAP, UNCTAD, UNRFNRE, DDSMS), Government of Zambia - Ministry of Mines and Minerals Development/World Bank, Government of Nigeria - Ministry of Solid Minerals Development), Australian Government Agencies (Environment Protection Agency, National Rail), NSW State Government Agencies (Environment Protection Authority, Zoological Parks Board, City Rail, Pacific Power, Roads and Traffic Authority, and Mining Companies (BHP Coal, CRA/Kembla Coal and Coke, Springvale Coal JV, Sumitomo Coal Mining Co., Shell, NSW Mines Rescue Board, Camberwell Coal, Esso Australia)

Prior to 1987, he worked for: Esso Australia Ltd (1981-87), both in Australia and Papua New Guinea as a geoscientist (6 yrs), NSW Roads and Traffic Authority (1975-80) as an engineering geoscientist (5 yrs), with Anglo American Corp. (1973-74) in Fiji and PNG, and with International Nickel of Canada (1973) in Australia as an exploration geologist/geochemist (2 yrs).

Whilst working with Esso Australia, he held the position of General Manager for Esso Minerals' technical services and data technicians. The technical services included all geo-spatial mineral exploration and project development data (i.e. environmental, geotechnical, geochemical, geophysical), with technical facilities located across five localities in Australasia.

Australasian Experience:

- ◆ Environmental Strategic Planning, including the development of environmental management systems for numerous corporations and provision of environmental regulatory/legal advice, predominantly within the minerals industry.
 - ◆ Environmental risk assessment and technical review of mines and mineral processing plants for due diligence and risk assessment purposes.
 - ◆ Design and development of environmental management plans for numerous resource projects, including mine rehabilitation and closure plans.
 - ◆ Development of environmental and workplace procedures for major industrial facilities.
 - ◆ Preparation of annual environmental inventory reports for numerous resource projects.
 - ◆ Preparation of Environmental Impact Statements and reviews for project sectors including; minerals, chemical, and forestry, rail and other infrastructure developments.
 - ◆ Environmental auditing of numerous industrial facilities, including; power stations, mines, chemical and other industrial facilities.
 - ◆ Conducted numerous geotechnical investigations in association with an Australian geotechnical engineering firm (Jeffery & Katauskas – Sydney) as environmental projects manager, including; industrial sites for urban rezoning, industrial facilities for cleanup, government properties for sale, and mine site plant areas for decommissioning and closure.
 - ◆ Environmental Guidelines/Studies/Training material preparation and course presentations, including; Australian Government, Australian Mineral Foundation, Key Centre of Mines, and United Nations specialist agencies.
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International Experience (typical examples):

- ◆ **Jordanian Phosphate Mining Company Mines and Beneficiation Plants, Jordan.** Member of Behre Dolbear environmental and engineering specialists from Australia and the US conducted an extensive tour of the Jordanian Phosphate Mining Industry, including open-cut mines and beneficiation plants and chemical plants. Various technical reviews were conducted at each site, including environment, health and safety aspects, together with local community sustainability issues. The Behre Dolbear review team prepared a risk based assessment for HSBC as part of our Technical Advisory to the Company and the Government of Jordan on prospects for partial privatization of the Company. 2004
- ◆ **Zhaojin Mining Industry Co., Ltd, Gold Mines, China.** Member of Behre Dolbear Australia environmental and engineering specialists which conducted an extensive tour and reviewed the Zhaojin Mining Industry Co. underground gold mines located in Shandong Province. A significant component of this review involved an assessment of the environment, health and safety components of the individual environmental plans and recommended how these plans might be integrated into a Company-wide management system based on international management standards for E,OH&S. The Behre Dolbear team provided a wide ranging Technical Assessment of the Company's gold mines to support a proposed capital raising. 2004
- ◆ **Coal Mine, Shanxi Province, China.** Member of Behre Dolbear team which reviewed a proposed new underground coal mine development of approximately 6Mt of coal product per year. A significant component of this review has been an assessment of predicted mine subsidence, significant community resettlement issues and environmental mitigation measures. In conducting this review, various international standards have been utilized to compare the proposed environmental management plans with world's Best Practice. 2004
- ◆ UN ESCAP (Bangkok) advisory mission to Myanmar Ministry of Mines. The mission involved provision of advisory services to Ministry of Mines concerning the establishment of environmental standards for the mining sector of Myanmar, **United Nations Economic and Social Commission for Asia and the Pacific, Bangkok and Yangon** Jan/Feb 2003.
Task: Undertake on behalf of UNESCAP a series of field inspections of small to medium sized gold mines and artisanal mines and provide appropriate advice to the Ministry on establishing suitable environmental standards for the mining sector of **Myanmar**. Main issues were ambient air and water quality, mercury and other chemical health issues, alternative technologies, mine rehabilitation and appropriate environmental regulations for the sector.
- ◆ Consultant to ZCCM Investments Holdings Plc., Government of Zambia (GRZ)/World Bank funded 'Copperbelt Environment Project' to undertake an assessment and negotiations of ZCCM-IH/GRZ environmental liabilities. As the environmental legal advisor with NSR Environmental Consultants' team of specialists, with responsibility for reviewing privatisation agreements so as to establish which ongoing liabilities might remain with GRZ. **ZCCM-Investment Holdings Plc**, Aug-Sept 2002.
Tasks: Review new investor development agreements, establish which environmental liabilities remain with GRZ and provide a suitable methodology for assessing ongoing environmental risks associated with these remaining liabilities.
- ◆ Consultant to the Government of Zambia/World Bank ERIPTA privatization program to undertake a process of reviewing EIS reports submitted by ZCCM for the 11 projects being privatised and preparing operational procedures for ongoing EIS review and monitoring of obligations by mining companies under the government's new Mines and Minerals (Environmental) Regulations. **Government of Zambia**, May-Aug 1997.
Tasks: Develop relevant EIS regulatory review methodology and guidelines for undertaking the review of EIS reports, and undertake the actual EIS reviews with national staff.

- ◆ Consultant to the Government of Zambia/World Bank ERIPTA privatization program to: i) facilitate the development of the “Environmental Management Policy for Mining in Zambia” to support recently introduced environmental regulations in the mining sector and ii) develop and conduct an “Environmental Management Systems and Auditing” training program in Zambia for Govt and private sectors (Kitwe) Jan-Mar 2000. **Government of Zambia/Ministry of Mines and Minerals Development**, Jan-Mar 2000.
Tasks: (i) Facilitate the development of a policy for handling environmental management within the mining sector of Zambia, including the introduction of the concept of independent environmental auditors and ii) Develop and present a 12 day intensive training course to environmental Govt. inspectors, private sector consultants, educators, NGOs and mining company officers.
- ◆ Nigerian NIMAMOP project - mineral assessment and economic feasibility appraisal program, including technical advisor to the social and environmental impact assessment and legal teams. **Government of Nigeria/Behre Dolbear International**, Jan/Feb/Mar 1998.
Tasks: Participate as an international environmental regulatory expert to a nationally executed project on mineral assessment and economic feasibility appraisal program. International advisor on the new mining code and environmental regulations, and participated on national environmental impact assessment field teams.
- ◆ UNDP Project Evaluation and Formulation for nationally executed assistance projects within Lao PDR, Ministry of Industry and Handicrafts, Dept. of Geology and Mines/DGM, **United Nations Development Programme, Vientiane, Laos** Jan/Feb/Mar 1997.
Task: Undertake on behalf of the UNDP/UNDDSMS both a project evaluation (4 wks) and a follow-on project formulation (4 wks) for Laos nationally executed assistance project within the Laos Dept. of Geology.
- ◆ "Training on Environmental Management for the Mining Sector - EMSD/DENR/MGB, **United Nations Development Programme, Manila, Philippines**. Nov 1996.
Task: Develop and present three modules of a one week regulators training course at both Baguio and Surigao cities (70 participants) as part of the UNDP funded Philippine Integrated Environmental Management for Sustainable Development Programme. The training modules presented included; Environmental Risk Assessment Methodologies, Environmental Quality Monitoring and Environmental Audit, Abandonment and Rehabilitation of Mining Sites.
- ◆ "Environmental Policies and Managerial Practices in Asia and the Pacific Region, **United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok, Thailand**. 1997.
Task: Undertake a regional study exploring the current status of environmental policies and managerial practices in natural resources development in the ESCAP region in the light of prevailing standards in other regions of the world.
- ◆ "Mineral Recovery, Recycling and Waste Prevention" study of the Asia Pacific Region, **United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok, Thailand**. May 1995.
Task: Undertake a study exploring the resources and opportunities which exist in the ESCAP region to further exploit use of mineral wastes through use of cleaner production and recovery technologies now becoming available. The study is also concerned with the sustainable use of mineral resources within the region, how this resource is currently managed and what will be its potential impact upon future growth and sustainable development in the region.

- ◆ "Environmental Management of Mine Sites -Training Manual", designed and compiled for publication United Nations Department for Development Support and Management Services (DDSMS), and United Nations Environment Programme (UNEP). **United Nations, New York, NY 10017 USA.** Sept 1994.

Task: Design, compile and print a training manual which covers the issues of environmental management in mining. The document is prepared from the many source materials and presentations delivered during an interregional workshop held in Zambia in 1993, together with additional resource materials from numerous sources.

- ◆ "Environmental Protection Guidelines" United Nations Revolving Fund for Natural Resources Exploration Guideline, edited for publication. **United Nations, New York, NY 10017 USA.** Oct 1993.

Task: Edit and enhance for publication this document originally prepared by SINTEF (Norway). The guidelines in this document are the Revolving Fund's approach to environment protection during mineral exploration and development.

- ◆ "Mineral Development and Environment Protection in Developing Countries" United Nations Centre for Transnational Corporations Guideline, edited for publication. **United Nations, New York, NY 10017 USA.** Oct 1993.

Task: Edit for future publication this study report prepared for UNCTC.

Education:

- ◆ B.Sc.(Hons), University of New England, Australia, 1972
- ◆ M.Sc. Macquarie University, Australia, 1980
- ◆ M. Environmental & Local Government Law, Macquarie University, Australia, 1995

Membership in professional societies:

- ◆ Member of Australasian Institute of Mining & Metallurgy.

Date of birth: 5 August 1949