

### 2008 PROJECTS

#### Major Project

- **APEX Minerals** - Project Management and Construction Management of the Wiluna Gold Mine and Processing Plant up-grade. Included: Mechanical, structural and electrical design and construction, procurement, environmental surveys and reports, plant inspections, source and provide professional, trade and non-skilled contract staff for FIFO project, ( 60 persons). Refurbish and increase capacity of process plant. Development of P&ID's and PFD's. Provide "AS Built" and new drawings to current Australian Standards. Develop a drawings database.

#### Overseas Projects

- **Avalon Minerals, Sweden** - Providing Mining Engineering consultancy services ascertaining the feasibility of re-opening exploration tenements surrounding the Viscaria mine. Previous Rapallo experience gained directly through Mining Engineering and Mine Management works for the Boliden Limited mining company as well as for contract mining company Bergteamet and equipment supplier Jama Mining Equipment.
- **Kumtor Gold Mine, Kyrgyzstan** - Provide NATA accredited NDT training to Kumtor personnel on site.

#### Mechanical Engineering

- **FMG** - Mechanical engineering and design of minor projects at Cloudbreak Minesite WA, (16 projects).
- **BHPBilliton KNS** - Turbine Dump Valve Replacement
- **BHPBilliton - KNS** - Hook, Bridle, Ladle Assessment & Redesign
- **Goldfields Agnew Mine** - Full time secondment of Mech Engineer undertaking Project Management of Agnew Mine site projects.
- **Goldfields - Agnew** - Cyanide Line Upgrade and Code Compliance
- **GoldFields - Agnew** - Packaged work heap leach
- **GoldFields - Agnew** - Shutdown Planning
- **GoldFields - Agnew** - Leach Tank Cone Replacement. Engineering support to identify cause of failure and engineering design and installation management of solution.
- **GoldFields - Agnew** - Mill Water Supply Project. Provision of engineering support and project management for upgrade to plant process water supply.

- **GoldFields – Agnew** - Mill Dust Control Project. Engineering feasibility study for stockpile cover to assist with dust control management onsite.
- **GoldFields – Agnew** – Engineering support for Regen burner replacement.
- **GoldFields - St Ives** - Cyclone underflow upgrade
- **GoldFields - St Ives** - Leach Tank Dart Valves Upgrade
- **Tierney Contracting** - Kanowna Belle Mill Upgrade
- **GME Resources** - Heap Leach Feasibility project
- **GME Resources** - Hepi Heap Leach Project
- **Avalon to Black Swan** – Borefields and pumping stations
- **Heron Resources** - Jump Up Dam Heap Leach
- **Jubilee - Cosmos Mine** - Head Frame and Vent Doors
- **Barrick Kanowna Belle** - Primary & Secondary Crusher Chute Design/Detail
- **BIS** - Acid Storage Design
- **BIS** - Heron Jump Up
- **Hercules Cranes** - RH340 & RH240 Lift study's

#### Civil/Structural Engineering

- **Kalgoorlie Auto Service** - Workshop
- **Norilsk Nickel Cawse** - Orion Workshop
- **Silverlake Resources** - Cyclone, Trash Screens, supporting structure & Bund Walls
- **FMG** - Access Staircase & Crusher Access Platforms

#### Electrical Engineering

- **Wiluna Gold Project** - Replacement of 4 substations including the design to provide a more modern and a more automated interface with existing plant and field devices. Installation of new plant and equipment.
- **BHP Flash Butt Crane Lifting Project** - Provide engineering Specifications and drafting to BHP Standards for the construction of a specialized rail track lifting system incorporating 22 monorail cranes in synchronous operation.
- **Mount Newman BHP Whaleback Operation** - Examination of existing Isolations procedure documentation. Field investigations for the purpose of reviewing isolation documentation with regard to technical content plus the inclusion of data to enhance the overall quality of each document.



## 2008 PROJECTS continued

### Drafting

- **SHM** - IT Work Basket Design/Detail
- **Galtee Engineering** - IT Work Basket Design/Detail
- **GBF Underground** - IT Work Basket & Fan Attachment Design/Detail
- **Monadelphous Engineering** - Emulsion Tank Design/Detail
- **BHPBilliton KNS** - Sampler Crusher Detail Design

### Environmental Science Services

- **Spitfire Oil** - Level 2 Fauna Survey, Salmon Gums Region, WA.
- **Spitfire Oil** - Level 2 fauna (vertebrate and SRE invertebrate) survey undertaken in the Salmon Gums region of Western Australia. Activities included site selection, trap establishment, survey logistics, pit clearing, foraging, species identification, bird surveys, use of anabat recorder, report compilation.
- **Spitfire Oil** - Level 1 Fauna Survey, Salmon Gums Region, WA. - Reconnaissance fauna survey undertaken in the Salmon Gums region of Western Australia.
- **PMI** - Level 1 Fauna Survey, Balfour Downs, Pilbara, WA.- Reconnaissance fauna survey undertaken in the Balfour Downs (Eastern Pibara) region of Western Australia.
- **GME Resources Limited** - Level 1 and 2 Fauna Surveys, Leonora Region, WA.- Vertebrate and invertebrate (SREs and troglofauna) fauna surveys undertaken in the Leonora region in the Goldfields of Western Australia. Activities included site selection, trap establishment, survey logistics, pit clearing, foraging, species identification, bird surveys, use of anabat recorder, report compilation.

### Asset Management

- **Classified plant audits** - Contracts to provide 3rd party Certified Plant Inspections with BHP Iron Ore, BHP Nickel west, BHP Olympic Dam, Iluka resources and Apache Energy. Inspections completed for Water Corporation, Rio Tinto and various other major companies.
- **BHPBIO Safety Audit of Critical Maintenance Plant** - Documentation support for the Integrity assessment of a Tyre Handler. Support included inspection, repair and test plan associated with the critical maintenance equipment. Witnessing of key disassembly/assembly activities and functional testing. Non-destructive testing of all critical areas.
- **Water Corporation, Kununurra Diversion Dam, Major Crane Inspection** - Onsite inspection & assessment of 20ton Gantry crane. Identification of interim remedial works together with submission of cost estimates associated with Crane Refurbishment versus total Crane Replacement.

- **Water Corporation, Wungong Dam Crane Assessment** - Onsite inspection of all cranes & OSH compliance assessment. Provision of cost estimates to restore functionality and establish compliance of all cranes.
- **Water Corporation, Kununurra Dam Man Riding Hoist** - Third Party Technical support/assessment for the provision of Man Riding Hoist capability at the Kununurra Diversion Dam.
- **Water Corporation, Serpentine Dam Inlet Tower Hoists** - Onsite inspection & assessment of all hoists. Identification of remedial works. Liaison with Water Corporation Sub-contractors to conduct/expedite the remedial works.
- **Water Corporation, Kununurra Diversion Dam, Detailed Cost Estimate comparison** - Submission of proposal to identify detailed costs of Gantry Crane Refurbishment versus Replacement. Acceptance of proposal will mean significant work activity for 2009.
- **BHPB Iron Ore/Nickel, KONE Crane Commissioning** - Onsite commissioning and inspection of several KONE cranes. Witnessing of deflection tests. Has potential to generate further onsite commissioning activity in 2009.
- **Iluka Resources Ltd, Third Party Inspection & Audit of Economiser Installation** - Onsite inspections and audit of sub-contractor documentation encompassing welding & fabrication companies, Hydro Testing and NDT companies. Assessment of Monorail Installation activities. Provision of Classified Plant Record Book statement.
- **Apex Minerals, Classified Plant Inspections and Site Audit** - carried out full site audit of the Wiluna Gold Mine and developed all the individual files and reports to allow compliance with the MSIR-1995 and AS3788-2006. This job also entailed sourcing documents for file population from the UK, USA, Australia and using Freedom of Information to source documents from various government agencies.
- **Incident investigations related to machinery and pressure vessels** - Various investigations undertaken for major companies.
- **NDT** - Various work undertaken in the Perth metro, Kalgoorlie, NorthWest and South West of Western Australia for drilling operations, mining operations, rail road equipment and small aircraft components. UT C-Scan imaging of tanks and vessels.

