



## HydroMet 2006

### Company Profile

## Hydromet Profile 2006

The Hydromet group comprises :

- Two fully licenced operating facilities in NSW.
  - Hydromet Operations (Southern) Limited situated at Unanderra NSW employing 21 personnel and conducting 3 recycling activities.
  - Minmet Operations Limited situated at Tomago (Newcastle) NSW employing 13 personnel and conducting 3 major metal recovery activities.
  - A Cobalt mining lease in the Northern Territory.
- Total staff complement including Corporate activities is 42 people.

## HydroMet Profile 2006

- Revenue streams.
  - Historically driven by treatment fees to process residues containing hazardous contaminants for safe disposal.
  - Today a balanced mix of treatment fees and sales revenue for value added products generated from waste streams processed at Unanderra and Tomago eg Zinc, Copper, Selenium and now Lead products.
  - Future revenues will be derived more from value adding than from fees through production of Selenium chemicals, other Zinc products and the prospect of smelting lead product from the battery recycling project.
  - Move to revenues based on premiums for metals recovered rather than discounts for intermediate products.

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### Operating facilities :

#### Unanderra NSW

- Situated on 10 acre site 5 kms from Wollongong.
- Onsite laboratory facility for project development and quality control.
- Electric Arc Furnace (EAF) dust treatment to recover and value add the zinc content and chemically immobilize the residual contaminants for environmentally safe disposal to landfill under NSW Department of Environment and Conservation specific approval.
  - The plant can process up to 30,000 tonnes per annum.
  - Total arisings from Steel Mini Mills in Australia is 22,000 to 24,000 tonnes per annum.
- Zinc Sulphate production from zinc extracted from EAF dust.
  - The plant can produce up to 5,000 tonnes per annum with potential to expand to 10,000 tonnes per annum over two product grades.

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- **Used Lead Acid Battery Recycling**
  - Battery breaking and product upgrading plant commissioned November 2006.
  - Plant capacity 30,000 tonnes of used batteries pa.
  - Recoverable lead 17,000 tonnes pa.
  - 90,000 tonnes of ULAB's generated pa in Australia
  - ULAB recycling was carried out under a monopoly until HMC's entry.
  - Expansion considerations include smelting the lead to produce lead metals and production of lead chemicals.
- **Other industrial waste immobilisation**
  - Using HMC developed immobilisation technology to treat and dispose of hazardous industrial wastes.
- Site fully occupied with construction of battery recycling plant in 2006.
- Staff complement 21.

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#### Tomago NSW

- Situated on 11 acre site 15 kms north of Newcastle.
- Extensive laboratory facilities on site for project development and quality control.
- Recovery of Selenium from Copper/Nickel smelter residues.
  - Involves the separation of Selenium from the precious metals also bound up in the residues.
  - Separation technology developed by Hydromet, a world first.
  - Precious metals returned to client Selenium retained by HMC for upgrading/conversion to Se chemicals and sold into the world wide market.
  - Clients from countries worldwide including Norway, USA, Mexico, Canada, South Africa with potential to develop further.
  - Currently processing up to 150 tonnes pa selenium with objective to increase to 300 tonnes pa which would represent 10% of world market for Se.
  - Process by product benefits include Copper and Tellurium both metals of considerable value.
  - Able to produce selenium chemicals onsite.
  - Up to 4 acres available for future expansion.
  - Staff complement of 13.

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- Stanton Prospect.
  - A 115 square km cobalt/copper mining lease in the gulf country of the Northern Territory.
  - Reserves approximately 900,000 tonnes containing cobalt up to 0.18%, Nickel up to 0.08%, Copper up to 0.15%.
  - Sale Option entered into November 2006.
  - Cobalt offtake agreement to access Cobalt ore for conversion to Cobalt chemicals.

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- Personnel.
  - Technical team comprises :
    - Three PhD qualified Chemical and Metallurgical Engineers headed by Dr Lakshman Jayaweera.
    - Five senior industry qualified operations personnel who manage the processing/production and project management activities within the group.
    - Laboratory and marketing support.
    - Combined experience in excess of 150 years.
  - Corporate management and support.
  - A strong loyal and dedicated team with one in three employees having worked for Hydromet in excess of 10 years.

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### Major Clients include :

- |                              |                              |
|------------------------------|------------------------------|
| – Onesteel.                  | – Falconbridge Europe.       |
| – Smorgon Steel.             | – Rio Tinto.                 |
| – Caltex.                    | – NSW RTA.                   |
| – Kennecott Copper Utah USA. | – Queensland Nickel.         |
| – Inco Canada.               | – BHP.                       |
| – Port Kembla Copper.        | – Australian Metal Recovery. |
| – Exide Technologies.        | – Australian Magnesium.      |
| – Shell.                     | – Zimifex.                   |
| – Caltex.                    | – Pasmenco.                  |

## HydroMet Profile 2006

### • Unanderra



## HydroMet Profile 2006

### • Tomago



## HydroMet Profile 2006

- Capabilities.
  - Processed over 150,000 tonnes of industrial wastes over the past 10 years.
  - Unique hazardous waste immobilisation technologies with over 30 Specific Immobilisation Approvals issued by NSW DEC.
  - Zinc chemical production from steel mill EAF dusts.
  - Selenium production from smelter precious metal/selenium bearing residues from around the world.
  - Lead product and recyclable plastic and acid recovered from used lead battery project.

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### Capabilities cont'd

- The ability to produce Zinc, Copper, Cobalt, Manganese, Selenium, Lead chemicals from a range of mining and industrial residues.
- Technical knowledge and experience to deal with difficult hazardous industrial wastes to recover valuable components and safely dispose of process residues.
- Established track record with over 30 specific immobilisation approvals granted by NSW DEC.
- Commonwealth Department of Environment and Heritage approved importer of specialised precious metal/selenium bearing smelter residues.

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### Capabilities cont'd

- AusIndustry support awarded covering a number of projects conducted over the past 12 years.
- Ability to conduct business on a global scale with increasing awareness of Hydromet's capabilities..
- The Hydromet brand is now well developed in Australia and around the world with a number of successful offshore projects conducted and continuing.

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Battery Recycling Plant November 2006



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The battery recycling plant at Unanderra.

