6 Dec 2004
Newcastle
Pilot Plant
Upgrade
AUSTPAC
RESOURCES N.L.

Old Pilot Plant

Pilot Plant History

- In 1997, Austpac moved its equipment from Newcastle University into an existing process tower on Kooragang Island
- ERMS & LTR roasting, ERMS SR & EARS acid regeneration technologies have all evolved and been trialled here
- Most equipment now needs repair, is obsolete or is superfluous to our future requirements
- The existing facility is not integrated, and its capacity needs expanding to reduce the technology scale-up risk for a commercial ERMS SR plant

THE PLAN

We are establishing a fully integrated ERMS SR facility capable of producing 1,500 tpa of high grade synthetic rutile, including:

- Ilmenite roasters – up to 400 kg/h capacity
- Continuous leach vessel – up to 400 kg/h feed
- Filter/wash/calcine – up to 200 kg/h ERMS SR final product
- EARS acid regeneration – 900 L/h 25% HCl & 150 kg/h iron pellets
- Once commissioned, the plant will confirm essential process parameters for the 30,000 tpa commercial ERMS SR plant
- This is an essential precursor to the detailed feasibility study
- The scale-up factor to the commercial plant is only ~20:1, so the technology risk will be minimal

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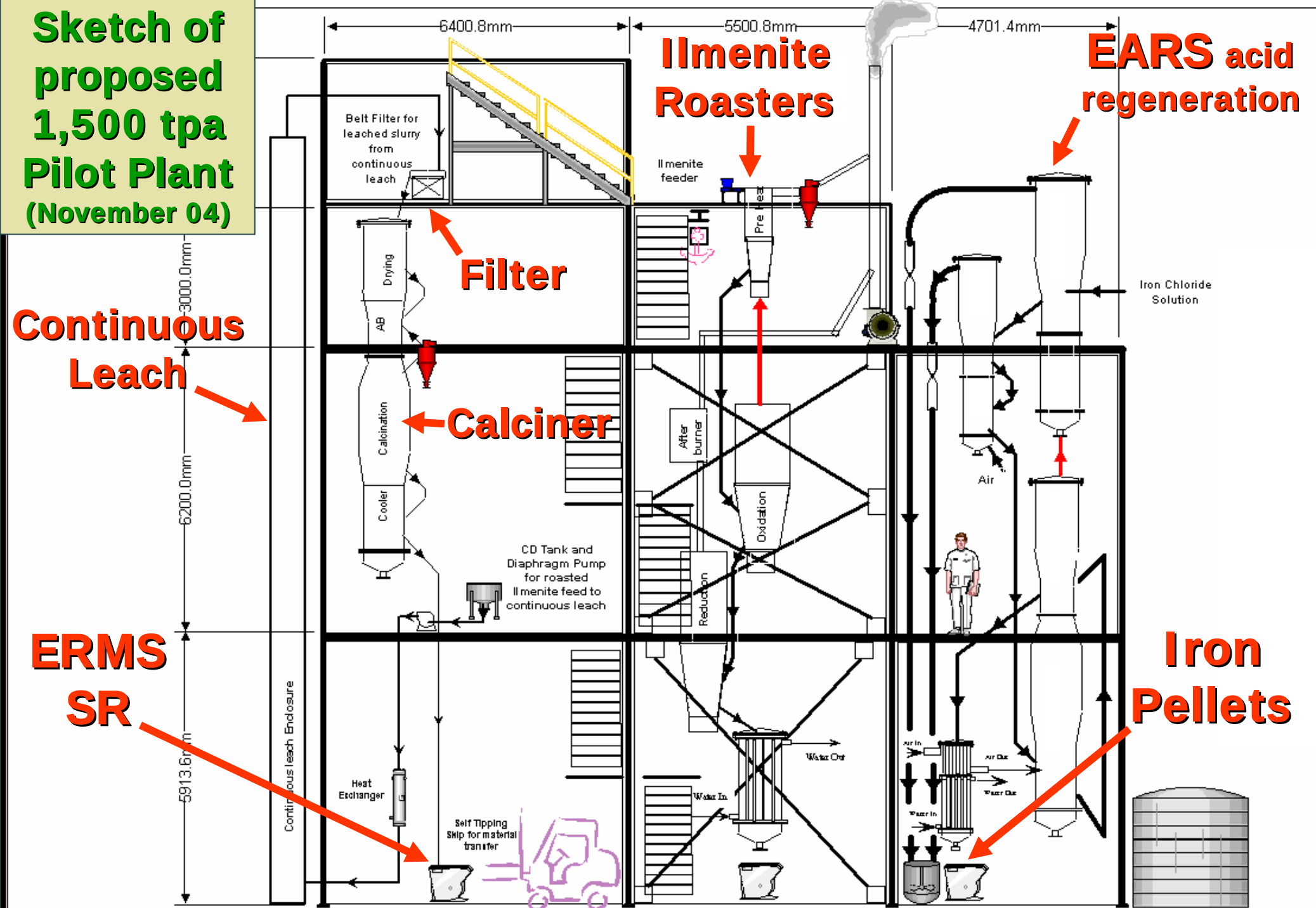
Sketch of proposed 1,500 tpa Pilot Plant (November 04)



Equipment Removal

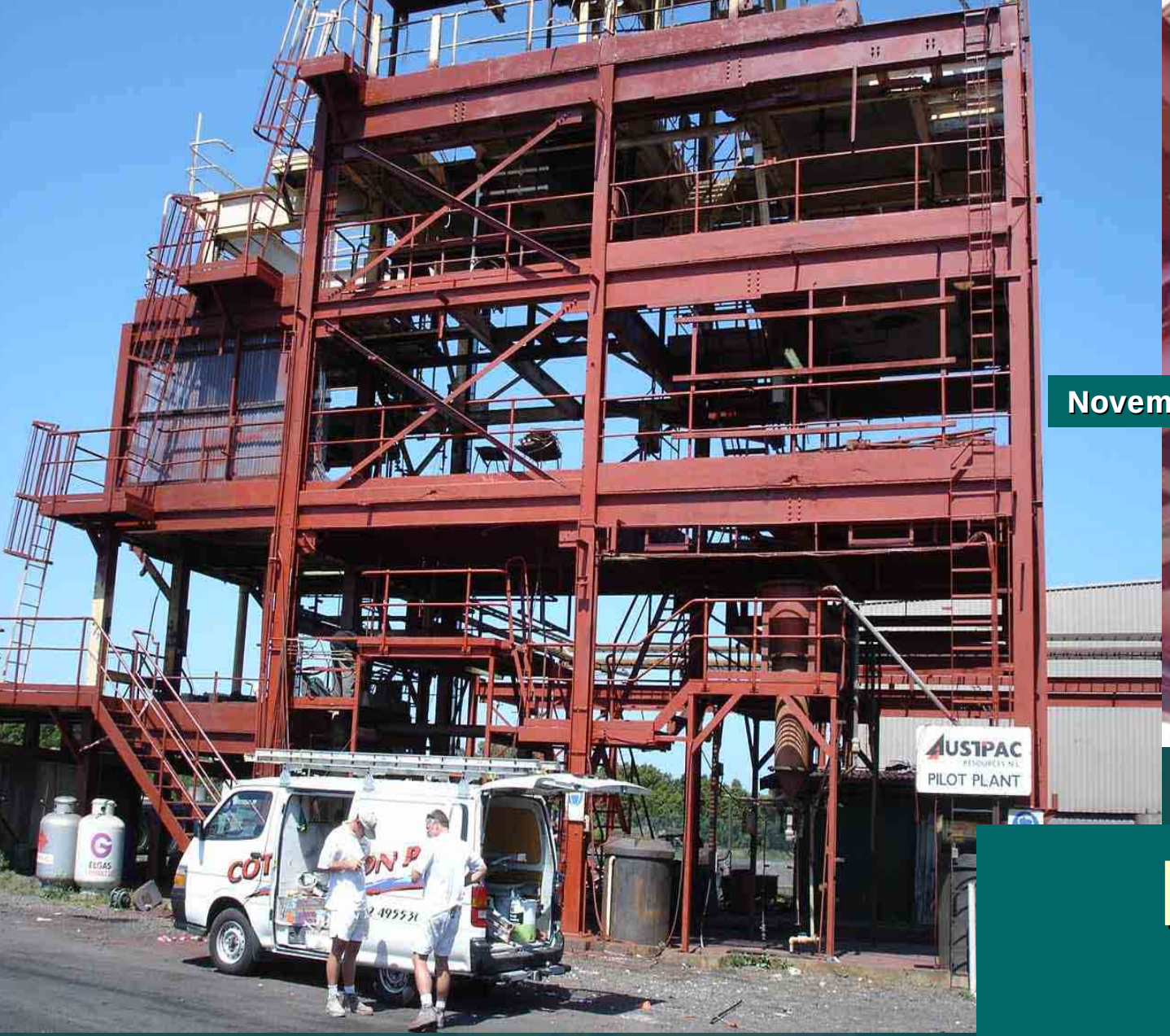
November 2004

November 2004

Obsolete Equipment

November 2004

Old Fluid Bed Roasters



November 2004

Process Tower Refurbishment

Reduction Roaster Construction

November 2004

November 2004

Completed Reduction Roaster

New Services Building

Upgrade Progress (6 Dec 2004)

ITEM	ACTIVITY	COMPLETE
Process Tower	Old/obsolete equipment removed, repairs & painting well advanced	60%
Ilmenite Roasters	Reduction roaster complete, oxidation roaster in construction, preheater & cooler in design	20%
Continuous Leach Reactor	Fluid flow modeling complete, design underway	5%
Filter/Calciner	Filter sourced (hire), calciner in design	5%
EARS section	Mass & energy balance complete, design underway	5%
Ancillary/Services	Services building complete, boiler installation underway	20%

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Austpac's Objective:

30,000 tpa ERMS SR Plant