WPG Resources Ltd

COMO ENGINEERS

Port Augusta Transhipment Port

Engineering Design for 8mtpa Iron Ore Transhipment Port Project

Project

Port Augusta Transhipment Port

Location

Port Augusta, South Australia

Client

Western Plains Resources Ltd, Sydney NSW

Commencement Date

May 2010

Existing Rail Loop

Project Site Survey

Description

Western Plains Ltd (WPG) requested Como Engineers Pty Ltd (Como) to prepare a feasibility study to estimate the capital cost (Capex) of the design, procurement, construction and commissioning of a multi user bulk iron ore port that provides train unloading, stockpiling, reclaiming and barge loading transhipment port facility.

This facility was proposed be constructed at the proposed Point Paterson Port to be located adjacent to the Port Augusta Power Station complex at Port Augusta, South Australia.

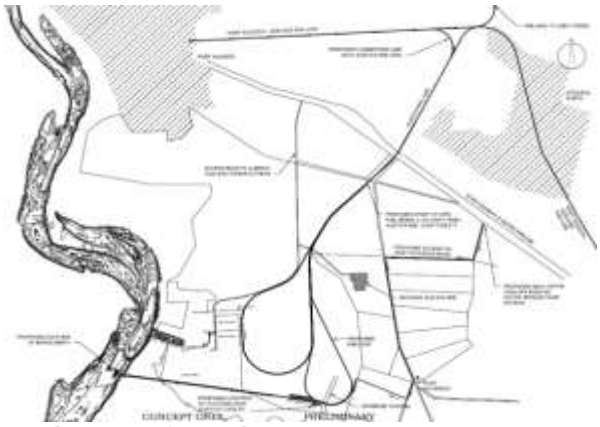
The proposed capacity of the Port was initially 2.7mtpa with provision for 8mtpa total capacity.

Trains will use the existing rail line to deliver product to the Point Paterson Port located South of Port Augusta.

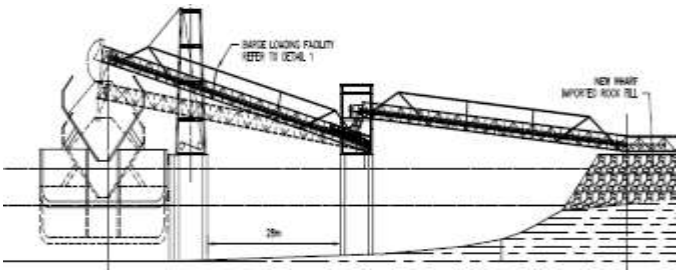
A new rail connection loop would be constructed to join the Darwin to Adelaide ARTC line to the existing Leigh Creek to Port Augusta Power Station coal rail line.

HEAD OFFICE - PERTH
130 Stirling Highway
North Fremantle
WA 6159, AUSTRALIA
t: +61 8 9432 0100

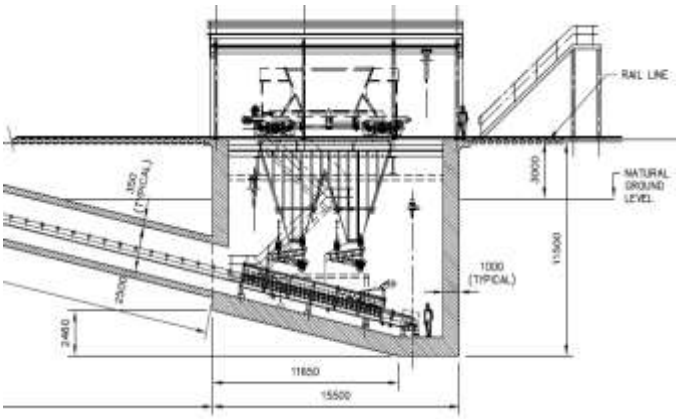
www.comoeng.com.au



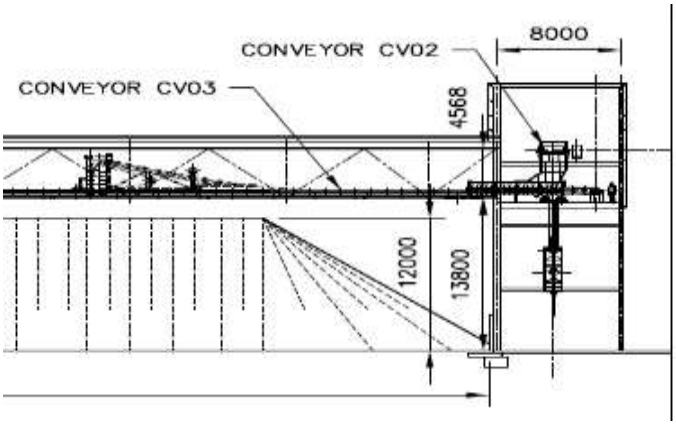
Proposed Layout for Point Paterson Port



Proposed Barge Mooring Layout



Train Unloading



Stockpiles Facility

In addition, a new rail loop would be constructed at the Port to allow 2 off 1.8 km long trains (one loaded and one empty) to be parked on the loop without interfering with the Leigh Creek coal operations.

A train unloading facility would be built to allow the bottom dump bulk iron ore wagons to be discharged into a surge bin sized to contain 4 loaded rail hoppers.

Product from the surge bin would be reclaimed using 2 off vibrating feeders each sized to move 2,000 t/hr of product.

The feeders would discharge onto a belt conveying system to transport the product to the stockpile tripper conveyor at the average rate of 2,000 t/hr.

The stockpile area has provision to create 4 off 143,000 t capacity stockpiles.

Initially only one stockpile system will be constructed for WPG's requirements, with the remaining three stockpiles available for other port users.

Product would be reclaimed from stockpiles using Cat 992 front end loaders and loaded via rail mounted hopper/feeders onto the overland conveyor at the rate of 2,000 t/hr.

The ground mounted overland conveyor would transport product to the barge loading facility located on the Upper Spencer Gulf just South of the cooling water channels for the Port Augusta power Station.

A fixed conveyor would receive product from the overland conveyor and transport it to the barges located at the barge berth in the Spencers Gulf.

A Self Unloading Barge (SUB) of 12,500 DWT capacity would be used to transhipment the product from the Transhipment Port to the Cape Sized OGV located at an anchorage in the Upper Spencer Gulf some 28 nautical miles from the Port.

The SUB will initially be loaded to 9,750 DWT due to the channel depth limitations.

For the higher transhipment rates it is proposed to dredge the channel to allow the SUB to be loaded to full capacity and in addition, additional SUB's will be mobilized to cater for the increase Port throughput.

Project Director

Tom Van Loon

Project Manager

Grant Blakeman