Client: Port of Townsville Limited

Background:

The original berth of the Townsville Port (later named Berth 6) was built in 1911 from pre-cast square concrete piles and a cast in-situ concrete deck. It was the primary berth for North Queensland and housed large storage sheds (later removed) and integrated rail lines for train carriage access. In the 1960s the berth was extended and widened (later call Berth7) and a new bulk handling conveyor and ship loader erected. As Berth 6 approached 100 years old it was condemned and only the Berth 7 extension was operational. In 2013, as the Berth 7 ship loader was reaching the end of its useful life, Port of Townsville Limited (PoTL) awarded the Berth 6/7 Removal Project to Pacific Marine Group (PMG) as a Lump Sum Contract.

Project Brief:

Remove all of Berth 6/7, including all super-structures on, and piles below the berth. Dredge the remaining sea floor to the current swing-basin depth.
Case Study

Description of Works by PMG:
- In-house Design and Fabrication of project specific equipment including ‘rubble pontoons’ for debris collection and a specially designed ‘pile tipper frame’ to allow for the safe and rapid movement of concrete piles.
- Establishment and stability design for heavy mobile plant on flat top barges including 2 x 30t demolition excavators, 1 x 70t crawler crane and 1 x 150t crawler crane.
- Mobilisation to Site and Hydrographic Survey of the work site to determine potential obstructions and dredge volumes.
- Removal and disposal of the entire Conveyor System including Ship Loader, ensuring no loads were transferred to any part of the condemned berth structure.
- Pulverising of 15,000t of concrete into floating rubble barges by way of demo excavators from flat top barge.
- Extraction of 580 concrete piles.
- Crushing of all concrete with mobile crush unit to road base for the PoTL to use in future projects.
- Dredging of the seafloor (130,000t) under the old berth footprint down to -12.7 LAT. All dredge spoil was transported to PMG’s own barge ramp and taken to the Port’s reclaim area. No material was dumped at sea.

Project duration: March 2015-May 2016
Contract Value: $15M
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