

Oakajee Offshore Geotechnical Investigation

Oakajee Port and Rail



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In 2007, Oakajee Port and Rail (OPR) proposed the development of a new port at Oakajee, 24 km north of Geraldton. The port design included the construction of a causeway and breakwater with a total length of 2.5 km, dredging of approximately 2.5 Mm³ of coastal limestone and the construction of facilities capable of exporting iron ore in Cape size vessels.

BMT JFA assisted OPR with all aspects of the port marine development through to the completion of a Bankable Feasibility Study (BFS) which included detailed design of all aspects of the port including dredging and reclamation, breakwaters and marine structures.

As part of these studies, an offshore geotechnical drilling investigation was undertaken to determine the characteristics of rock and sediment in the proposed port location. BMT JFA was responsible for organising and managing all aspects of the works, which were successfully completed under budget and to the satisfaction of the client.

The duration of the works was approximately 50 days, during which time a total of 20 boreholes were completed in extremely exposed sea state conditions.

The challenging metocean environment presented numerous challenges for the planning and management of the works and the early recognition of the importance of these factors was a key reason behind the success of the project.

BMT JFA Role

- Project management of offshore geotechnical investigation
- Determining the extent of additional geotechnical work required on the basis of previous geotechnical investigations and a seismic refraction survey
- Determining the extent of laboratory and on-site testing of recovered core
- Production of tender documentation for the jack-up platform, drilling and core logging services
- On-site project management of the Works.

Services & Expertise Provided

- Offshore geotechnical investigation management
- Commercial contract management
- Marine health and safety.



Location

Oakajee, Western Australia

Date

2008 - 2009