

CONFIDENTIAL CLIENT TWO WELLHEAD PLATFORMS

WHP Concepts, FEED, Transport & Installations, Execution, Offshore SE Asia

ICON Engineering was engaged by a Supermajor to conduct Concept, FEED engineering and Transport and Installation scopes for two wellhead platforms in the same Basin. The concept engineering focused on developing a platform that could be efficiently installed using a Jackup Rig, ensuring the footprint of the jacket and topsides was within the cantilever and drilling envelope of the rig.

The WHP1 facility represents the first platform the Client has installed using this method and the first time using a Jack-up Rig as the offshore lift vessel. The projects represented the first successful development and installation of 'low-cost development' (LCD) unmanned platforms in the country. ICON executed the Transport and Installation (T&I) of both platforms within 12 months.

In the Concept stage, ICON provided a low-cost, minimal facilities Wellhead Platform concept from its existing portfolio of designs, capable of being installed using the Jackup Rig.

In the FEED stage, ICON investigated the various methods of Transporting and Installing (T&I) the platform to offer BSP the lowest technical cost to install, considering operability to minimise Rig time.



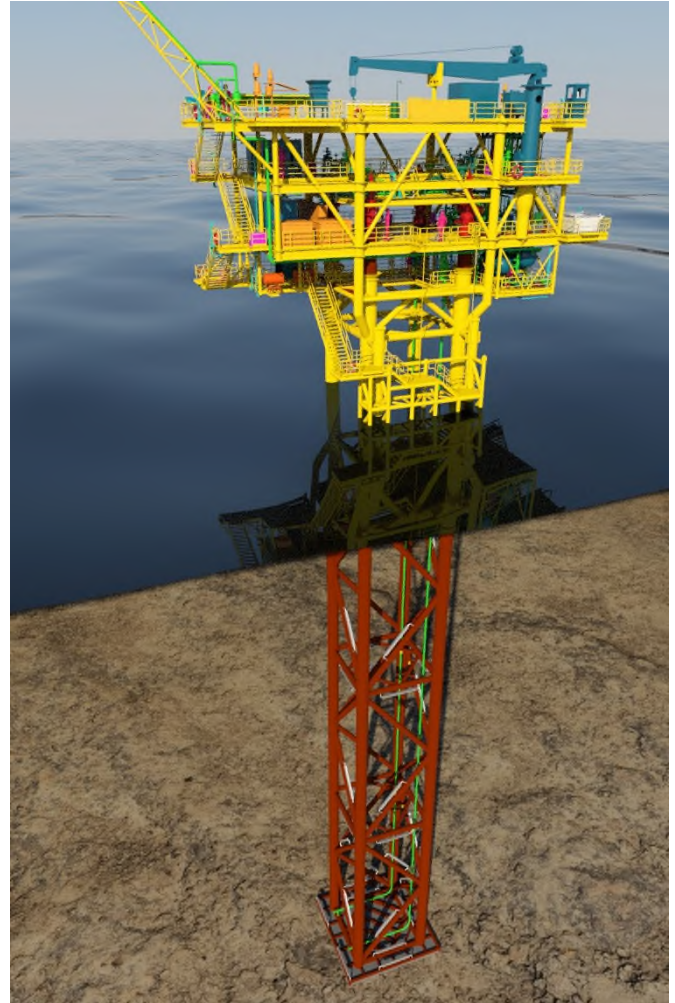
WHP1 being installed using the Jackup Rig

The FEED study proposed to transport the Jacket and Topsides on a single Transport Barge with integrated spread mooring system. On site, the Jackup Rig would lift and upend the Jacket, drive Conductor Piles through the four legs, and then lift the Topsides and installed onto the Jacket.

The most significant cost savings with this T&I method is the elimination of high-cost construction vessels from the Project, by utilising the assets that are already infield.

Minimising the number of lifts required and performing more onshore fabrication and pre-commissioning to complete the installation leads to reductions of on-critical rig path time.

ICON Engineering, as industry leaders in low-cost offshore solutions, was proud to guide the Client through the process to cost effective and practical solutions.



Rendered Model of WHP1.

Platform Data	WHP1	WHP2
Water depth	61m	65m
Jacket Weight	440MT	540MT
Topsides Weight	310MT	365MT
Legs/wells	4 legs / 4 wells	4 legs / 4 wells