

## “TARGET ZERO FACILITIES” WELLHEAD PLATFORM CONCEPT STUDY AND FEED

Offshore Malaysia

A Malaysian energy company was seeking to develop their next-generation low-cost wellhead platforms. The design is planned to be used on multiple future locations in different water depths and well counts for their gas expansion programme.

The engineering focused on developing a minimum facilities platform design that could be installed using either a jack up drilling rig or conventional derrick barge.

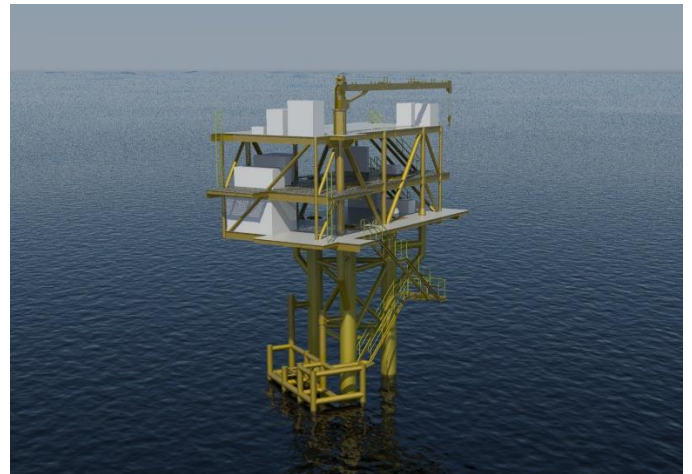
As such, it was imperative to ensure that the footprint of the jacket and topsides was within the installable envelope of the rig.



90 m Substructure Configuration for four well field development.

### “Target Zero Facilities” philosophy

ICON worked closely with the client to define a Facilities Basis of Design that started with the philosophy of “Target Zero Facilities.” Therefore, all potential facilities to be included on the platform were challenged to ensure they complied with the target zero facilities philosophy.



“Target Zero Facilities” Wellhead Platform, pictured here populated with ancillary processing and logistics equipment.

Once the extent of the topsides facilities was finalised, the topsides layout was developed to be installable by Jack-up drill rigs typically used by the client, and available in south-East Asia.

After finalising/freezing the topsides basis of design and layout with the client personnel (comprising facilities, wells and operations representatives) the topsides size and weight were determined and fed into the substructure design.

The substructure design was based around use of proven, optimised designs developed by ICON for the region, given the site specifics of water depth, met-ocean criteria, geotechnical conditions, personnel transfer philosophy and production well design.

The resulting platform (topside and substructure) design met all the client’s required criteria and is now being used as the template for their forward field development programme.

### Platform Data:

Well Count	2-6 wells
Water Depth	50-90m
Jacket Weight (excl. piles)	360-650 mT
Topsides Weight	180-260mT