

# Operator Saves More Than USD 1 Billion in Field Development Costs by Using Multilaterals

RapidX TAML Level 5 junctions connect 31 laterals to only 13 wellheads, maximizing reservoir contact while reducing opex and capex

## CHALLENGE

Maximize reservoir contact and recovery in large, unconsolidated offshore formation while reducing capital expenditure.

## SOLUTION

Use RapidX\* TAML 5 interlocking-rail, stackable multilateral junction to access more reservoir with a smaller surface footprint while reducing risks, time, and costs.

## RESULTS

Saved more than USD 1 billion in drilling and completion field costs while providing enhanced reservoir contact with smaller surface footprint.



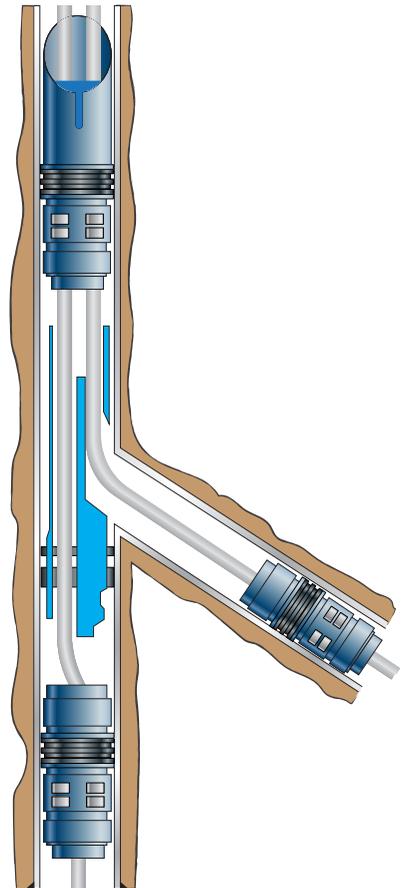
## Maximize reservoir contact while lowering costs

An oilfield offshore Western Australia in more than 1,200 ft [380 m] of water was characterized by unconsolidated sand, a relatively complex oil column, and highly viscous oil. This combination complicated the operator's recovery planning and called for maximizing reservoir contact by using multiple horizontal wells.

## Develop field with multilateral wells and RapidX junctions

Schlumberger recommended the use of horizontal, extended-reach multilateral completions as a fit-for-purpose and economical solution. Historically, multilateral completions drilled horizontally have been considered high risk and costly, particularly for wells with multiple zones, but multilaterals have evolved over the years, becoming simpler, more reliable, and less costly. Moreover, they produce a smaller footprint.

After assessing the formation architecture and the operator's objectives, Schlumberger identified its RapidX TAML 5 interlocking-rail, stackable multilateral junction as the most suitable. The junction is simple to install and operate. It enables extended-reach completions to be run in laterals independently of the junction, and it has a hydraulic seal that is testable when installed. The highly unconsolidated reservoir made testing critical—any sand produced through the junction could jeopardize the subsea pumping system and production. Because the junction had to be sand tight, the testable, hydraulically tight RapidX junction was deemed the best choice.



*The RapidX LEVEL 5 junction connects to the main bore through an interlocking rail system that stabilizes the milled casing and prevents formation migration into the wellbore during pressure isolation and production.*

## CASE STUDY: Multilateral wells with RapidX TAML 5 junctions save Woodside more than USD 1 billion in field development costs

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The RapidX TAML 5 junction provides pressure isolation to 2,500 psi [17,237 kPa] and formation stability at the casing windows. It connects the lateral to the main bore through an interlocking system, stabilizing the milled casing and preventing formation migration into the wellbore during pressure isolation and production in multizone wells. The specially designed seal and continually interlocking rail system create one of the strongest Level 5 junctions in the industry and therefore one of the most reliable. Reliability was especially important because of the long projected life of the wells and the complexity and risks of interventions in the subsea location.

Developing the field with multilaterals enabled the operator to drill fewer wells, which reduced the number of upper completions and subsea trees. Eight wells were installed—five trilaterals and eight bilaterals—for a total of 31 wellbores. For these 31 laterals, only 13 upper completions and 13 subsea trees were required. Because all of the laterals were approximately the same length as their associated main bore, each multilateral that was added to a single wellbore almost doubled reservoir contact.

### **Cut completion and subsea tree costs, saving USD 1 billion**

Adding lateral wellbores onto existing wells rather than drilling new wells enabled the operator to limit drilling and completion capital and operational expenditures (capex and opex) to an incremental 30% per lateral. As a result, field development costs were reduced dramatically—by more than USD 1 billion.

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