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RapidXtreme TAML 3, 4, or 5 large-bore multilateral junction

Aligned with United Nations Sustainable Development Goals:
12—Responsible consumption and production,
13—Climate action

Robust, configurable access to reserves for new large-bore developments or retrofit applications

Emissions Avoided:
1,500–18,500 t† of embodied CO_2e
and 500–3,500 t‡ of generated CO_2e

Casing Sizes:
9⅝ in

Pressure Rating: :
up to 5,000 psi [34,500 kPa]

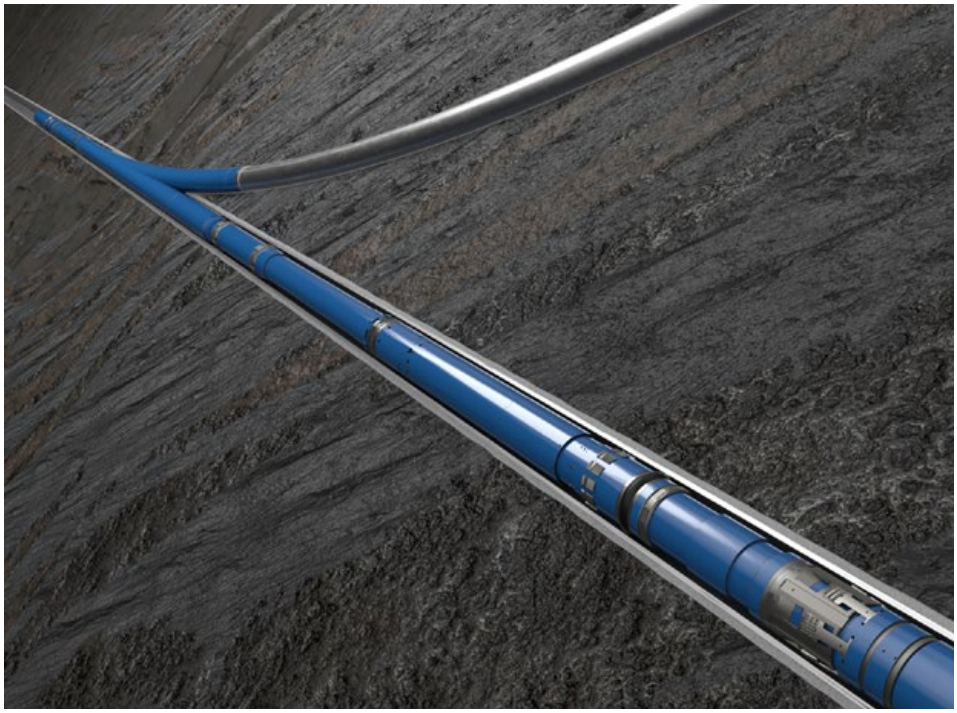
Applications

- New oil and gas development producer or injector wells
- Retrofit laterals for existing producing or injection wells

How RapidXtreme junctions improve oil and gas field development

RapidXtreme* TAML 3, 4, or 5 large-bore multilateral junction delivers maximum reservoir contact, faster time to production, and more configurability for your applications as compared with conventional single-bore well development or sidetracks after plug and abandonment (P&A). Its simpler installation, 5,000-psi pressure rating, and robust, field-proven technology reduce operator risk, and its large bore enables higher production rates and more completion flexibility as compared with conventional multilateral systems, especially in retrofit applications.

Benefits of multilateral technology can be enormous. Field development plans define well counts required to drain the reservoir—often with significant technical constraints and uncertainty. Multilateral well completions maximize reservoir contact per well, reducing the number of wells required. Having fewer wells simplifies surface and subsea infrastructure designs and reduces field development costs.



RapidXtreme large-bore multilateral junction is robust enough to rotate while running and cementing and enables completion flexibility.

As fields mature, reservoir certainty increases, and near-field exploration offers additional opportunities to target accretive reserves; however, the production infrastructure is often slot limited. Meanwhile, if regulators or economics encourage operators to P&A dead or underperforming wells, they become an enticing target for sidetracking—even if they are not optimally positioned to reach the new reserves without complicated trajectories.

With retrofit multilaterals using RapidXtreme multilateral junctions, operators can select optimally positioned candidate wells to intersect accretive resource targets, with lateral initiation from intermediate or production casing—greatly reducing infill drilling and completion complexity and maintaining the production from the existing main bore.

With its modular design and large bore, the RapidXtreme junction enables flexibility in completion design, accommodating solutions including gravel pack, frac pack, and stand-alone screen completions for sand management; intelligent completions with in-lateral control; and conventional cemented perforated liners.

† Sources of embodied carbon include but are not limited to steel and cement used to construct wells and associated production infrastructure. Quarried rock used to protect subsea infrastructure in the case of offshore subsea field developments where required represents a significant source of embodied carbon.

‡ Sources of generated carbon include but are not limited to the energy sources used to operate drilling rigs, operational support vessels, and specialized vessels used to construct and install subsea production systems (SPS) and subsea umbilicals, risers, and flowlines (SURF).

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How RapidXtreme multilateral junctions support industry carbon intensity reduction goals

Multilateral well construction and completions reduce generated and embodied carbon during field development. Drilling rigs that are used to drill the boreholes represent sources of generated carbon of varying intensity based on their power source and consumption. Steel casing and cement that are used to construct wells represent sources of embodied carbon of varying intensity based on their source of origination.

By targeting accretive reserves with a RapidXtreme junction versus drilling a new well or sidetracking a poorly placed well, operators avoid carbon-generating activities by eliminating rig time—in some cases, 10 days or more. Operators reduce embodied carbon sources by eliminating procurement and installation of multiple steel casing strings and cement to surface, instead initiating the multilateral junction casing exit deep in the producing well. Operators further reduce embodied and generated carbon sources in the subsea environment by eliminating procurement and installation of additional subsea production system components, including SURF that require specialized subsea construction vessels.

The carbon savings equates to 5 to 55 million miles [8 to 89 million km] driven by an average passenger vehicle.[§]

What else should I know about the RapidXtreme junction?

RapidXtreme multilateral junctions provide pressure isolation to 5,000 psi [34.5 MPa] using the TAML 5-rated Y-block dual-tubing completion module. This efficient, configurable, and robust technology combines simple installation using standard liner hanger technology with large-bore completion flexibility. The RapidXtreme junction is upgradable across TAML 3, 4, and 5 levels, which reduces inventory variability and operational complexity.

The junction features a 5,000-psi-rated drilling diverter for safer drillout through 7-in cemented lateral liners. Ideal for extended-reach applications or complex trajectories, the junction enables rotating and reaming lateral liners to bottom and rotating liners during cementing, helping to ensure wellbore stability and zonal isolation.

The selective lateral intervention completion (SLIC) module enables thru-tubing selective intervention in all RapidXtreme junctions to accurately target the intended lateral for interventions such as stimulation or sand cleanouts.

The junction is fully stackable to support multiple laterals and is compatible with a wide range of completion systems. It stabilizes the formation at the casing exit and is well suited for unstable or caprock applications.

RapidXtreme Junction Specifications	
Casing size, in	**9⅝**
Casing weight, lbm/ft	40–43.5 47–53.5
Main bore ID deflector (ramp), in [mm]	6.560 [166.62]
Lateral bore deflector ID, in [mm]	6.125 [155.57]
Level 5 Y-block completion differential pressure rating, psi [MPa]	5,000 [68.9]
Drilling diverter drillout differential pressure rating, psi [MPa]	5,000 [34.5]
Drilling diverter ID, in [mm]	6.20 [157.48]
Window type	Milled casing exit
TAML level	3, 4, or 5
Y-Block TAML 5 Specifications	
Dual-tubing size, in [mm]	3.5 [88.9]
Dual-tubing ID, in [mm]	2.992 [76]
Dual-tubing locating assembly (DTLA) max. OD, in [mm]	8.40 [213.36]
Y-block selective lateral intervention min. ID, in [mm]	2.75 [69.85]
Control lines bypass	4 lines
Intelligent valves compatibility	Yes
Gravel pack compatibility	Yes
Intervention capability	Yes

All specifications are subject to change without notice.

How can I monitor and control reservoir flow contribution?

The large ID accommodates high flow rates and multilateral intelligent completions, allowing for junction or in-lateral control of flow using hydraulic, electrohydraulic, and all-electric intelligent completion systems.

Where can I learn more about multilateral wells?

For more information, read The Defining Series: Multilateral Wells

[§] From https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

slb.com/multilaterals

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