RapidXtreme
TAML 3, 4, or 5 large-bore multilateral junction
Industry's Only 10,000-psi Multilateral Junction

RapidXtreme* TAML 3, 4, or 5 large-bore multilateral junction is a robust, modular system. It is currently the only multilateral system in the industry that is rated to 10,000-psi differential pressure at the junction. A drilling diverter rated 5,000 psi facilitates drillout through 7-in cemented lateral liners.

The junction comprises three main assemblies:

- locating packer assembly, including a ceramic disc to isolate the main bore
- main-bore assembly
- lateral-bore assembly.

The system is fully stackable to support multiple laterals and is compatible with a wide range of completion options.

After the junction is installed, the selective lateral intervention completion (SLIC) system provides through-tubing selective intervention capability to ensure that all future interventions accurately target the correct lateral.

Applications

- Wells with TAML 3, 4, or 5 specifications
- Layered, compartmentalized, or faulted reservoirs

Advantages

- Fully stackable, with selective reentry into any lateral
- Up to 10,000-psi-rated Level 5 junction using Y-block dual-tubing completion module
- Predictable junction geometry and assured reentry because junction is constructed, not milled
- Junction geometry and reentry capability independent of window shape because casing window is not an integral part of junction
- Junction structural integrity achieved via metal parts, unaffected by cement quality
- Reliable conventional casing exit system with an extensive track record of success
- Installation in as few as two trips, among the fastest in the industry
- 5,000-psi-rated drilling diverter to enable cementing 7-in lateral liner above reservoir and subsequent drillout of 6½-in hole
- Ability to rotate and ream lateral liner
- Compatibility with a range of completions, such as intelligent completions; gravel packs; and multistage stimulation, including plug and perf
1. Drill and complete the main bore.

2. Run in and install the locating packer assembly—which includes a ceramic disc—and the whipstock assembly. MWD in the milling assembly helps orient the locating packer before installation. Once the locating packer assembly is set, the ceramic disc isolates the main bore, enabling drilling and completion of the lateral.
3. Shear off the milling assembly and mill a window and rathole; subsequently pull the milling assembly out of the hole.

4. Drill the 8.5-in upper section of the lateral and pull out of hole.
5. Retrieve the whipstock assembly by straight upward pull using a hook BHA.

6. Run in the lateral liner with the main-bore assembly attached to the bottom.
7. Land the main-bore assembly into the locating packer assembly. When the production latch at the bottom of the main-bore assembly encounters the locating packer's orienting profile, the main-bore assembly starts turning, aligning its precut window with the window in the 9%-in casing. Once the main-bore assembly is fully set in the locating packer, it latches, preventing accidental retrieval or position change.

8. Shear down the shear sub. As it starts moving along the main-bore assembly, the internal ramp of the main-bore assembly steers the shear sub through the window, ensuring that the liner enters the lateral.
9. Run the liner to depth following standard procedure, while rotating, reciprocating, and circulating as required to facilitate deployment. When the RapidXtreme system’s lateral-bore assembly reaches the top of the main-bore assembly, it starts turning and orients itself to form a junction. A precut window in the lateral-bore assembly faces down into the main bore, hence subsequent access is available into both the main and lateral bores.

10. Cement the lateral liner per standard procedure. After cementing is complete and the LTP V3 liner-top packer is set, pull out the running string from the lateral and run it into the main bore (assisted by gravity) to circulate out excess cement.
11. Install and pressure test the drilling diverter to 5,000 psi. The diverter provides pressure integrity to enable drilling and hydraulic fracturing (if required) of the lateral.

12. Drill the 6⅛-in lower section of the lateral.
13. Complete the lower section of the lateral.

14. Retrieve the drilling diverter.
15. Mechanically break out the ceramic disc, reestablishing communication with the main bore. Casing cleanout tools (e.g., scrapers, magnets, junk baskets) can be added to the BHA to prepare the casing for installation of the production packer.

16. For through-tubing selective interventions, install a SLIC system—which features a side opening—in the lateral-bore module, as part of the upper completion. When hydraulic isolation of the lateral is required, run an isolation sleeve—a tubular with external seals—into the SLIC module. The sleeve seals in polished bores above and below the module’s side opening, providing pressure integrity up to 10,000 psi to seal off the lateral. Access to and production from the main bore are available through the sleeve ID.
17. Alternatively, to steer intervention BHAs into the lateral, install a lateral deflector in the SLIC module.