

WPP

Wireline perforating platform

APPLICATIONS

- Sand prevention
- Multiple completion string detection
- Establishment of over- or underbalance before perforating
- Measurement of formation pressure buildup or drawdown
- Temperature survey
- Hydraulic fracturing
- Whipstock setting

FEATURES

- Combinable with Schlumberger TuffTRAC* cased hole services tractor and MaxTRAC* downhole wireline tractor system
- Exclusively used with Schlumberger Secure2* radio-frequency- (RF-) safe electronic detonator
- Combinable with the ASFS* addressable-switch firing system
- Compatible with guns up to 2 $\frac{1}{8}$ -in diameter

The WPP* wireline perforating platform integrates a rugged arsenal of sensors and actuators for optimizing well operations while perforating. Using the WPP platform maximizes flexibility in positioning perforating guns and enables real-time downhole monitoring of critical wellbore parameters. The platform's intelligent control of the downhole power supply supports safer, more reliable perforating results.

The WPP wireline perforating platform is a modular system:

- Telemetry module—interface to the logging cable that provides casing collar locator (CCL), tool relative bearing, and deviation measurements.
- Pressure and temperature module—measurements recorded while perforating.
- Gamma ray module—depth correlation.
- Motor module—centralization and rotation of the toolstring and guns for directional perforating.
- Completion mapper module—detection of other completion strings along the wellbore.
- Shooting module—intelligent measurements while perforating and selective perforating.

The WPP platform is used exclusively with the Secure2 RF-safe electronic detonator. Up to 20 guns can be connected to the bottom of the tool for selective firing through the use of addressable-switch technology.

Oriented perforating using the WPP platform provides single-trip conveyance and orientation of perforating guns on wireline, tractor, and coiled tubing. In wells deviated more than 2°, tool repeatability is $\pm 3^\circ$. The motor module rotates the guns into firing position to optimize perforations for sand control and hydraulic fracturing and to avoid completion components.



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The completion mapper configuration of the WPP platform is used to intelligently perforate wells with complex multiple-tubing completions. This configuration generates a metal-proximity profile that is used to direct the motor module to position the perforating guns away from auxiliary tubing strings and other completion components. By mapping completions for production access to reservoirs, operations do not have to involve a costly and time-consuming workover.

Borehole temperature and pressure data can be acquired by the WPP platform before, during, and after perforating. Interpretation of these real-time data provides a good indication of the formation pressure and reservoir parameters (permeability and skin effect) to guide operations. Data acquisition is maintained throughout the shooting procedure.

Specifications

	Telemetry Module	Pressure and Temperature Module	Gamma Ray Module	Antirotation Centralizer	Motor Module	Completion Mapper Module	Shooting Module
Temperature rating, degF	300	300	350	392	300	300	300
Pressure rating, psi	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Outside diameter, in	1.69	1.69	1.718	1.69	1.69	1.69	1.69
Make-up length, in	70.7	44.57	40.3	33	63.3	51.3	34.5
Weight, lbm	24	21	18	12.5	29	24	18
Tensile strength (75% min. yield), lbf	39,000	23,000	39,000	14,200	23,000	39,000	39,000
Module-specific features			Min. tubing size: 2 $\frac{3}{8}$ -in	Operating diameter: 2 $\frac{7}{8}$ -in tubing to 9 $\frac{5}{8}$ -in casing	Rotation speed: 0–2 rpm		Min. tubing size: 2 $\frac{3}{8}$ -in