### COMPLETIONS

### TR1P" SINGLE-TRIP COMPLETION SYSTEM

Overcoming deepwater challenges by combining upper and lower completions with remote activation technology



## **DISCOVER THE POWER OF ONE**

### The world's first and only remote-activated single-trip deepwater completion system delivers greater efficiency, flexibility, and reward.

High rig costs drive the need for reduced trips in hole, particularly in deepwater environments. The ability to perform multiple operations in less time and with fewer equipment and personnel requirements sets the stage for dramatic, tangible benefits.

The Weatherford TR1P single-trip completion system establishes a new precedent in completion installations. By enabling you to install the upper and lower completion in just one trip, the system simplifies your operations and reduces your completion installations times by up to 60 percent.

This game-changing deepwater solution overcomes the barriers to adopting single-trip systems by combining radio-frequency identification (RFID) technology and elements from our premium completions technologies into one. The result is a completion system that eliminates the need for control lines, wash pipe, wireline, coiled tubing, and workover rigs for a 100-percent interventionless operation that reduces deployment risks. The remote, intervention-free capability of the system further enables you to perform the operations demanded by your reservoir-rather than your budget-in both producer and injector wells.



# of field personnel Intervention-free

### Field-proven RFID

### **INCREASE EFFICIENCY TO REDUCE COSTS**

We help you to do more in less time. Compared to conventional mechanical or hydraulic completion equipment, the TR1P system delivers real savings to overall operational and rig spread costs.

Using RFID technology, the system lets you activate your tools an unlimited number of times—without requiring you to pull out of the hole—and can reduce completion installation times by as much as forty percent.

### ENHANCE OPERATIONAL FLEXIBILITY AND CONTROL

We bring the power of control and flexibility to your We help you to manage risk and maximize reward. By wellsite. The TR1P system lets you control multiple minimizing the number of trips in the hole, the TR1P RFID-enabled tools in a single string and selectively system reduces total operating hours and exposure target and actuate individual tools as needed. By using of field personnel. Although the system is fully RFID for activation, the TR1P system also eliminates interventionless, it retains mechanical contingencies control lines, wash pipe, wireline, coiled tubing, and to further manage risks. workover rigs.

The system will not interfere with wireline or coiled tubing operations. It also allows use with conventional mechanical or hydraulic tools-regardless of where they are placed.





control lines, washpipe, wireline, coiled tubing, workover rigs, wet-connects

reduction in rig-time savings

### THE FIRST AND ONLY PROVIDER OF RFID-ENABLED DOWNHOLE TECHNOLOGY

Weatherford is the sole provider of RFID-enabled downhole tools. We pioneered the use of this proven technology to expand your capabilities and deliver real business benefits in the oilfield, not only in drilling and cementing operations but also in completions. The TR1P system incorporates RFID completion tools with a decade of successful activations.

### MANAGE RISKS AND MAXIMIZE REWARD

The TR1P system eliminates major wellbore and through-tubing interventions, de-risks the installation operation, and improves well control. All of this means engineering and technological excellence throughout the well life cycle for a reduced total cost of ownership.

### THE SINGLE-TRIP COMPLETION SYSTEM AT A GLANCE

The TR1P system combines excellence in engineering and RFID-activated technology with our solutions-driven commitment to enhancing your operational capabilities.



**RFID inflow control device** provides interventionless uniform inflow and outflow distribution.



**RFID reservoir isolation valve** provides a cost-effective, debris-tolerant means to isolate the completion system.



**Optimax**<sup>™</sup> tubing-retrievable safety valve shuts in the well with a gas-tight seal in the event of uncontrolled flow.



**OptiPkr<sup>™</sup>** production packer delivers a gas-tight seal between the outside of the production tubing and the inside of the casing.



**RFID OptiROSS**<sup>™</sup> remotely operated sliding sleeve manages flow from individual production zones.



**Intelligent completion packoff element** enables zonal isolation for completions that require multiple-line bypass.



**RFID Optibarrier**<sup>™</sup> bidirectional ball valve controls wellbore flow as a reliable downhole barrier.



### THE SINGLE-TRIP **COMPLETION SYSTEM IN DETAIL**

### UPPER COMPLETION COMPONENTS

### **RFID OptiROSS<sup>™</sup> Remotely Operated Sliding Sleeve**

The RFID OptiROSS remotely operated sliding sleeve remotely manages flow from individual production zones, with no limit to the number of sleeves that can be installed in a single monobore completion. The tool is preprogrammed to operator-specific applications and is opened and closed by circulating RFID tags, frequency-moderated pressure signatures, timers, or a combination of these.



### **RFID Optibarrier<sup>™</sup> Ball Valve**

Our Optibarrier ball valve controls wellbore flow. The tubing-mounted, bidirectional ball valve is opened and closed remotely using RFID-enabled hydraulic control modules. It can also be opened mechanically using industrystandard shifting tools or a stinger module in the upper-completion system.



### **OptiPkr<sup>™</sup> Production Packer**

Our OptiPkr production packer combines the robust performance of a permanent packer with the flexibility of a retrievable packer. The packer provides a VØ-rated, gas-tight seal between the outside of the production tubing and the inside of the casing. The modular design adapts to most applications and wellbore conditions, and it lets you convert between hydraulic-, hydrostatic-, and RFID-setting modes.



#### Optimax<sup>™</sup> Tubing-Retrievable Safety Valve

With more than 200,000 cumulative years of service, our Optimax tubing-retrievable safety valve is backed by the highest reliability record in the industry. This rod-piston, curved-flapper type safety valve shuts in the well with a gas-tight seal in the event of uncontrolled flow caused by equipment failure or damage. A single hydraulic control line operates the valve: applying pressure opens it, and bleeding off pressure closes it.





### **RFID Inflow Control Device**

Our RFID inflow control device (ICD) evenly distributes inflow throughout a horizontal wellbore. The ICD also reduces water or gas production, improves reservoir drainage, and enhances sand control. The device is customizable to customer-specific applications and can be opened by either circulating RFID tags, using a frequency modulated pressure signature, timer or a combination of these.



completions in just one trip

### **Deepwater Field Trials, Offshore West Africa:**

Weatherford offers the world's first and only remote-activated installation system to deliver upper and lower completions in a single trip.



#### **Intelligent Completion Packoff Element**

Our intelligent completion packoff element is a retrievable and hydraulically set device that provides zonal isolation for completions that require line bypass. With a one-piece body, the packoff element makes it possible to feed multiple lines-for gauges, chemical injection, and other systems-through it in either a workshop or offshore environment.



#### **RFID Reservoir Isolation Valve**

barrier device that isolates the toe of the completion, which eliminates the need for a deep-set plug. Inside the valve, a patented fall-through-flapper provides a bidirectional barrier. When remotely opened, the flapper releases any debris, mud solids, and cement and leaves a flush bore. The tool also features a ceramic flapper option as applicable.

Our RFID reservoir isolation valve is an interventionless



By leveraging our reliable RFID technology and premium completion offerings, the TR1P single-trip system realizes the industry's vision for cost-effective and reduced-trip completion installations.

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