Safe Completion Running System (SCRS) Improves Well Control While Running Sand Control Completions

To improve well safety, a rig-based Safe Completion Running System (SCRS) was designed to enable the safe release of two or more strings of pipe and screen in the event of a well control situation. Once activated, the SCRS release table opens in less than 10 seconds to allow the pipe and screen in the rotary table to drop and the BOP to be cleared. The system also provides remote actuation to control the system from a safe distance during rig floor evacuation. The main objective of the SCRS is to facilitate safe, controlled and rapid clearing of the BOP in a well control situation.

Halliburton has a market leading track record of running single-trip multizone completion systems. With these applications, including some conventional lower completion systems, there are often several strings of pipe across the BOP at one time and for extended periods during the lower completion system assembly and running process. If during this time there is a pressure surge from the formation, the arduous process of securing the well with the BOP closed and pumping operations are initiated.

Typical BOP shear rams cannot reliably close and seal in this situation and run the risk of damage due to the multiple strings of pipe in place. Thus, personnel working on the rig floor are potentially in an unsafe condition when trying to either drop pipe or control the pumping operation. In these conditions, SCRS provides the ability to quickly and safely clear the BOP to initiate standard well control procedures.

The SCRS has a unique control system also used for running blank pipe, screen, and wash pipe—often with as many as three strings of pipe inside each other. The SCRS is comprised of three primary units that include: 1) the SCRS release table, which supports a completion string of up to 100 tons. In case of emergencies, the release table can be opened, allowing the pipe to clear the BOP; 2) an autonomous hydraulic power unit (HPU), which is the main control module; and 3) a release control panel which enables emergency activation of the system from the driller house without rig-floor personnel intervention.

With its unique safety enhancing capabilities, Halliburton’s proprietary SCRS has become a prerequisite in some lower completion systems installations.
Features

**SCRS Release Table:**
- Spider plate with four tubing support dogs
  - Inserts for 3.5-7.0-in. OD pipe
  - Retracts to provide full 11-in. thru-bore
- Hydraulic cylinders to activate support dogs
  - Safely supports up to 220,000 lbs (100 MT) of assembly weight and has been load tested to 375,000 lbs
  - Safety system ensures table cannot be inadvertently actuated from rig floor with weight on rams, but only from the remotely located emergency release panel
- Table can split apart for safe removal and installation over the well center with pipe through the rotary table

**Hydraulic Power Unit (HPU):**
- Self-contained, autonomous power unit
- Fully redundant critical components
- 2 x 3000 psi pneumatic hydraulic pumps
- 3 x 10 gallon hydraulic fluid reservoirs
- 3000 psi accumulator bottles to enable autonomous system actuation even with complete loss of external power source

**Emergency Release Control Panel:**
- Integrated lockout system - safe activation of system in less than 10 seconds
- Positioned in a safe area for activation away from the rig floor (e.g. drillers cabin)
- Master control functionality even when supporting completion assembly loads

Benefits

- Interfaces with standard drilling unit rotary table
- Functions independently if rig power is lost
- Enhances safety and saves rig time by eliminating need to rig up additional working platforms for running multiple strings of pipe inside other strings of pipe
- Table provides convenient working platform for reduced tubing makeup at heights

For more information on the Safe Completion Running System (SCRS), please call your local Halliburton representative or email us at sandcontrol@halliburton.com.

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