Swellpacker® System Provides Isolation of Liner Top

HALLIBURTON SAVES OPERATOR OVER $2 MILLION
DEEPWATER GULF OF MEXICO

OVERVIEW
A major operator in the Gulf of Mexico needed to set a liner in a parent casing with a very small clearance. Halliburton proposed using a hybrid Swellpacker® isolation system, which could be run in a synthetic-based mud (SBM) or freshwater environment. The operator saved two days of rig time, which equated to $2 million.

CHALLENGE
In this particular instance, there was no mechanical packoff to seal the top of the liner. Without any seal in the top of the liner, a top squeeze would be necessary, incurring risk along with the costs associated with rig time in +/- 8,000-foot (2,438-meter) water depth.

SOLUTION
Halliburton proposed using a hybrid-type Swellpacker isolation system for this application. Since the system was to be run in SBM with the additional possibility that a freshwater spacer could come in contact with it, the hybrid Swellpacker system was recommended. In the hybrid design, the SBM and/or its dilution would activate the packer, or the freshwater spacer would activate the water-swelling element in the system. The hybrid Swellpacker system was designed so that the run-in-hole OD was no larger than the outside diameter of the mechanical liner hanger. This prevented any issues with equivalent circulating density. The hybrid Swellpacker system was designed to create an effective seal in the parent casing in three to five days from being run in hole.

RESULT
The operator saved two days of rig time, which equated to $2 million. Pressure differential of 3,000 psi for the 9 3/8-in. liner was achieved, and no remedial work on the liner was needed.

RESULT
The unique hybrid solution saved a minimum of two days spread rig cost for the price of squeezing the top of the liner. With a deepwater spread cost in excess of $1 million per day, a savings of over $2 million per well was achieved. Additionally, the pressure differential of 3,000 psi for the 9 3/8-in. liner was achieved, and no remedial work on the liner was needed.