

TECH REPORT

SOUTH CHINA SEA
OFFSHORE BRUNEI

Sections Completed with Rhino* Integrated Borehole Enlargement System

Pilot hole size	16½ in × 18 in (cement)
by Rhino system	16½ in × 20 in
opening size	14½ in × 16 in
	12¼ in × 13 in
	12¼ in × 15 in
	10⅝ in × 12¼ in
	8½ in × 9½ in
	6 in × 7 in
TD	12,000 ft

Background

Shell needed to conduct a detailed drilling and contingency program to perform managed pressure drilling (MPD) of the HPHT Rapong offshore exploration well. Planned mud weight was 17.8 lbm/galUS [2,133 kg/m³].

Technologies

- Rhino XS2* full-cycle expandable reamer
- Rhino XC* on-demand hydraulically actuated reamer

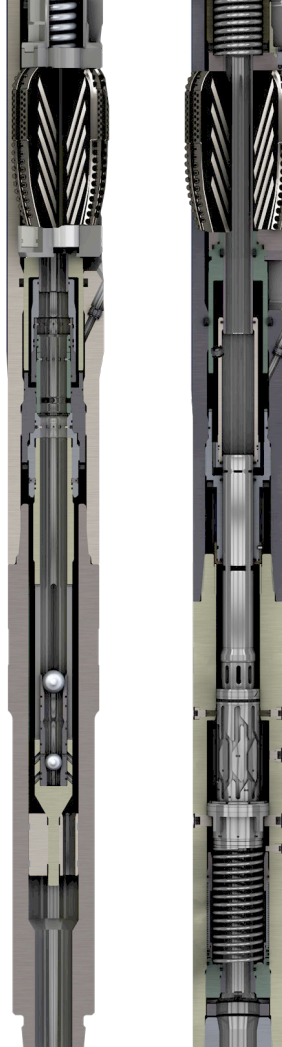
*Mark of Schlumberger
Other company, product, and service names are the properties of their respective owners.
Copyright © 2020 Schlumberger. All rights reserved. 19-BDT-676537

Schlumberger

Shell Eliminates Need for Extra Cleanout Run in MPD Well, South China Sea

Rhino XC and Rhino XS2 reamers reduce rathole length by 83% and drill 12,000 ft in HPHT well

Cutaway view shows the Rhino XS2 full-cycle expandable reamer (left) and the Rhino XC on-demand hydraulically actuated reamer (right). Both had a deactivation option that enables full circulation rates without block deployment while in casing or pulling out of hole. These reamers enabled Shell to drill and enlarge the wellbore by backreaming out of hole while reducing rathole length by 83%—eliminating the need for an extra cleanout run. The well was delivered with zero service-quality incidents involving the Rhino XS2 and XC reamers.



Rhino XS2 reamer.

Rhino XC reamer.

slb.com/Rhino