

Compact Wellheads Minimize Environmental Impact and Save USD 500,000 per Well, Kenya

SSMC wellhead system reduces rig time and HSE risks in Amboseli National Park

CHALLENGE

Optimize efficiency during oil exploration in an environmentally sensitive area.

SOLUTION

Use SSMC standard snap-ring modular compact wellhead systems to save time, reduce footprint, and mitigate HSE risks.

RESULTS

Saved two days and USD 500,000 per well while minimizing environmental impact.



Oil exploration in national park presented significant environmental challenges

An independent operator in Kenya planned approximately 40 wells for the exploration phase and 400–600 wells for the development phase of a project located in the environmentally sensitive Amboseli National Park. It was important to both optimize operations and reduce the environmental footprint and risk. The operator partnered with Cameron for its immediate response capability and innovative wellhead technology.

Compact, split wellhead system reduced rig time and environmental risk

Cameron recommended the SSMC wellhead system, rated for 5,000- and 10,000-psi working pressures and temperature classes U to U+X service. The casing hanger lockdown rings are internally biased, which provides the advantage of more positive lockdown. The top connection is a FastLock* wellhead connector that can be made up in approximately 20 minutes. This connector and fewer BOP connections, wellhead penetrations, and through BOP and diverter operations result in typical rig time savings of over 50% and limit the exposure to potential openhole and lost-time incidents, enabling the operator to minimize environmental risk.

The SSMC wellhead system was configured as a compact, split system for exploration and appraisal and can be adapted for future development operations. It is fitted with Model M valves and FLS-S* 10,000-psi valves with expanding gates. The split system features a wellhead housing supplied with all annulus equipment installed below ground and tested, an emergency casing hanger installed without internal casing cutting, and annular seals. The wellhead housing can be replaced or repaired without disturbing the casing for ease of maintenance. The split system and expanding gate were recommended to mitigate any slow gas buildup.

Operator saved USD 500,000 per well while minimizing impact on wildlife

The compact wellheads saved two days in installation time per well or approximately USD 500,000. Today, the wellheads are operating below ground in cellars, minimizing their footprint and causing no disruption to wildlife nearby. Together the operator and Cameron have increased the feasibility of accessing significant hydrocarbon reserves in the South Lokichar basin.

CASE STUDY: Modular compact wellheads reduce rig time and HSE risk, Kenya



The fast rig-up capability of the SSMC wellhead system enables a more than 50% reduction in rig time.

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