

## Paradigm Rebel® Assisting Hole Cleaning and Providing Durability in a Remote Location.

### Overview

An operator in the Ivory Coast had an ongoing development drilling program, with 17½" hole sections ranging 2200ft – 4900ft in length, with hole angle building from 20 degrees up to horizontal. The wells were drilled and completed horizontally with a 2700ft – 3300ft 12¼" hole reservoir section.

### Challenge

Previous drilling challenges included hole cleaning problems and running casing due to the build section and high hole angle in the 17½" section.

### Solution

In addition to adopting improved ERD drilling practices, Rebel® subs were to be introduced to provide additional mechanical agitation of the cutting beds while drilling.

### Result

- The Rebel® subs were custom designed and built to order, supplying both 6 5/8" and 5 7/8" tool sizes.
- A total of 25 tools were manufactured in a very short timescale, providing an excellent service to the client, matched with a competitive and efficient pricing structure for long-term rental requirements.
- The Rebel® subs were utilised for the remainder of the development project, 4 wells in total, in both 17½" and 12¼" hole sections.
- The Rebel® subs proved to be extremely durable and cost effective with no additional "surprise" redress or DBR charges.
- The total footage culminated at 21,510 feet.

### Value to Client

The remaining 4 development wells were successfully drilled and completed without further hole cleaning problems or major hole cleaning related non-productive time.

Furthermore the Rebel® run charges were invoiced as planned without any unexpected (hidden) repair or redress charges.



The Rebel® subs are designed to provide mechanical agitation and to enhance cuttings bed removal in high angle and horizontal wells.

### Main Features / Benefits

- Based on Paradigm patented Enhanced Performance Drill pipe
- Proven cuttings bed lifting capability
- Increased size of cuttings at surface (+14%)
- Enhanced gauge protection
- No measured increase in ECD's
- Reduced / eliminated wiper trips and back reaming

