Geo-Pilot® System Sets
New Gulf of Mexico
Longest Run Record
Location: Gulf of Mexico

Operator’s Challenge
On a well in the Gulf of Mexico, Unocal chose to employ a tight-clearance casing program to maximize the size of production pipe without increasing surface casing size. The wellplan called for drilling a complex 3-D profile with a 10,000+ foot open hole section, then running 7-5/8-inch casing in the 9-7/8-inch hole. The weight of the casing string would make it extremely difficult to pull out of the hole once it was run, making it absolutely necessary to achieve superior hole quality with minimal spiralling and drag.

Halliburton’s Solution
Sperry Drilling Services utilized the Geo-Pilot rotary steerable system, equipped with an FMF3653 FullDrift® extended-gauge bit from Security DBS. The extended gauge bit ensures the borehole is drilled on a straight trajectory and makes spiralling virtually impossible. The 9-7/8-inch hole was drilled at a record pace of 243 ft/hr, setting a new single-day footage record for this hole size of 5,843 feet. The Geo-Pilot system drilled the entire 10,107-foot interval in one run in less than three days, building from 0° to 48°, while turning the well 118° in azimuth.

Economic Value Created
The challenging casing design was accomplished with zero incidents and with no time spent on conditioning runs. The confidence created by the Geo-Pilot system and Security DBS drill bit matched concept allowed Unocal to pursue other projects employing the lean-casing concept which resulted in tremendous casing cost savings.