

## **Re-Entry Wells: a New Life to Aging Fields**

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### **Abstract**

Over the last decade, new technologies and economic strategies have enabled operators to give new life to mature fields and old platforms. Production and economic optimization are main goals of reentry campaigns. With time, the industry has seen growing opportunities for reentry wells as mature fields and platforms are becoming older and less productive.

Fully utilizing reentry technological capabilities and achieving successful operations require effective well planning and execution. Cutting and pulling of old completions and casings, wellbore cleanouts, plug and abandonment operations, section milling, mud systems, well integrity, cased-hole and open hole sidetracks, whipstocks, cutting/swarf handling, surveying tools, well collisions, and existing rig capabilities on platforms are the major challenges to the growth of reentry business. However, development of rotary steerable systems, logging while drilling, modern surveying tools, and under-reaming technologies have given impetus to the reentry well drilling market.

From the concept phase of plug and abandonment to well delivery and production, seamless planning and communication is required among all the stakeholders. Modern surveying tools such as continuous north-seeking gyros and gyro while drilling have revolutionized the surveying industry in high magnetic interference environments, giving ease to planning sidetracks and accurate wellbore positioning in high well-density environments. Drilling close to the motherbores is becoming a common and attractive way of exploiting the reserves as no detailed logging and characterization is required. This has resulted in complexities of directional drilling and well collision risks. Risk of well collisions with producing wells is one of the biggest challenge in reentry wells.