## 水平井钻井工具以及设备的合理选择

## 摘要

随着国民经济的快速发展,油田开采项目越来越受到重视,开采范围也越来越大,但由于地理环境的影响,部分油田的开发难度也是越来越大。为了有效地解决这些问题,所以将新的钻井技术应用于石油企业,以提高石油生产能力,保护周边环境。随着时代的发展,水平井钻井技术能够满足时代的需要。近年来水平井钻井技术的进展也是明显的,但是还是存在许多技术难点,比如说水平井井壁稳定性差,无法精确的控制井眼轨迹等。

本文主要从水平井钻井的技术难点,优化发展策略,使用的弯壳体造斜钻具和水平井当今在国内外对于油田上的应用问题进行了系统分析与研究。详细介绍了水平井的发展趋势、提高轨迹精度控制、减少钻柱摩擦阻力和扭矩、净化井眼的方法,以提高我们对水平井的认识。

关键字: 弯壳体造斜钻具; 摩擦阻力和扭矩; 井眼轨迹控制; 净化井眼。

## **Abstract**

With the rapid development of national economy, oilfield exploitation projects have been paid more and more attention, and the exploitation scope has become larger and larger. However, due to the influence of geographical environment, the development of some oilfields has become more and more difficult. In order to effectively solve these problems, new drilling techniques are applied to oil enterprises to improve oil production capacity and protect the surrounding environment. With the development of The Times, horizontal well drilling technology can meet the needs of The Times. In recent years, the development of horizontal well drilling technology is also obvious, but there are still many technical difficulties, such as the poor wellbore stability and the inability to accurately control the wellbore trajectory.

In this paper, the technical difficulties of horizontal well drilling, the optimization of development strategy, the application of curved shell drilling tools and horizontal Wells in oil fields at home and abroad are systematically analyzed and studied. In order to improve our understanding of horizontal Wells, the development trend of horizontal Wells, improvement of trajectory accuracy control, reduction of drillstring frictional resistance and torque, and methods of hole cleaning are introduced in detail.

**Keywords:** Bent shell beveling drilling tool; Frictional resistance and torque; Wellbore trajectory control; Clean hole.

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