摘 要

射孔液是一种现代油田开采开发过程中不可缺少的工作液，对石油的开采发挥着重要的作用。但射孔液体系的性质是否与地层相匹配将直接决定储层的伤害率的高低。油气藏在开发过程中使用与地层相配伍的射孔液能有效降低油气藏的损害，提升油气井产量。

本文通过查阅相关资料，在充分了解吉林油田让字井区块低渗透、高温、高压油气藏特性的同时，对该区块的敏感性进行分析，针对研究区块的储层特点对加重剂、增粘剂和降滤失剂进行优选，设计出适合本区块使用的射孔液体系，使射孔液体系达到低伤害甚至无伤害的要求，并对其与地层流体的配伍性、岩心渗透性的伤害率以及射孔液的抗高温性能加以评价。

关键词：保护油气层技术；射孔液；高密度；抗高温；低伤害

Abstract

Perforation fluid is an indispensable working fluid in the process of modern oil field exploitation and plays an important role in oil exploitation. However, whether the properties of the perforating fluid system match with the formation will directly determine the damage rate of the reservoir. In the process of development of oil and gas reservoirs, the use of perforating fluid matching with the formation can effectively reduce the damage of oil and gas reservoirs and increase the production of oil and gas Wells. This article through access to relevant data, Wells in jilin oilfield to fully understand the word block of low permeability, high temperature and high pressure gas reservoirs at the same time, the characteristic of sensitivity analysis, in this block, according to the characteristics of the research block reservoir of weighting agent, viscosifier and fluid loss agent selection, design of perforating fluid system for use in this block, the perforating fluid system reached the requirements of low damage even without damage, and its compatibility with formation fluid, core permeability damage rate as well as evaluate perforating fluid temperature resistance.

Key words: echnology for protecting oil and gas reservoirs; Perforating fluid; High density; High temperature resistance; Low injury

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