

Boron-Carbide Treated Couplings Improve Rod Lift Efficiency in South Texas Wells

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Abstract:

This study explores the application of boron-carbide (B4C) treated steel couplings in sucker rod pump (SRP) wells, as a solution to the challenges posed by modern-day drilling and completions practices. These practices often result in sandy, corrosive, and highly deviated wellbores, leading to increased wear, frequent interventions, and downtime in rod lift systems. The paper presents an evaluation conducted by Chesapeake Energy Corporation and Endurance Lift Solutions on twenty SRP wells in South Texas. The evaluation aimed to assess the benefits of using low friction B4C couplings in the sucker rod string, focusing on wells with more than fifty B4C couplings installed. The results showed improved lifting efficiency, increased production, and decreased peak polish rod loads in the majority of the evaluated wells. The paper further discusses the importance of lifting efficiency in rod lift systems and the potential of B4C treatment technology in enhancing the performance and longevity of various artificial lift equipment.