

## A Method to Identify Areas for Hydraulic Fracturing by Using Production Logging Tools

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**Abstract :** Hydraulic fracturing, especially multi-stage hydraulic fracturing, is a practical solution for wells with uneconomic production. The wide range of applications is appraised appropriately to have a stable well-production. Production logging tool, which is known as PLT in the oil and gas industry, is counted as one of the most reliable methods to evaluate the efficiency of fractures jobs. This tool has a number of benefits and can be used to prevent subsequent production failure. It also distinguishes different problems that occurred during well-production. In this study, the effectiveness of hydraulic fracturing jobs is examined by using the PLT in various cases and situations. The performance of hydraulically fractured wells is investigated. Then, the PLT is employed to give more information about the properties of different layers. The PLT is also used to selecting an optimum fracturing design. The results show that one fracture and three-stage fractures behave differently. In general, the one-stage fracture should be created in high-quality areas of the reservoir to have better performance, and conversely, in three-stage fractures, low-quality areas are a better candidate for fracturing

**Keywords :** multi-stage fracturing, horizontal well, PLT, fracture length, number of stages

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