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The Seven Pillars of Well Integrity Management

Abstract

Today and industry wide, management of well integrity is a common issue, and relates to both old and new producing fields. It is apparent that many fields were not designed with the concept of ‘well lifecycle management’; and were probably constructed for a life of about 15 - 20 years. A producing well that is 30 years old is quite common (e.g. North Sea production started in 1975) and for wells in locations such as the Middle East some fields are more than 40 or 50 years old.

In line with its expansion and transition to becoming a major independent oil company through its recent discoveries of very large oilfields in Ghana and Uganda, Tullow Oil needed to broaden its existing well integrity policy and practices. This is to fit with a projected 4 to 5 fold increase in oil production in the next few years and increase its well count to over 500 wells.

In order to evaluate the processes in-place, the “Seven Pillars of Well Integrity Management” were defined as the fundamental requirements of an ideal system. These were used to identify gaps in existing practices which were systematically and thoroughly addressed by Tullow.

Tullow now has one centralized well integrity management process that is described in detail through a company policy. This incorporates a software system to collect and manage key construction and operational data from all operated wells. Though monitored and audited from a corporate perspective, the integrity system is run by each asset to suit local operational demands and requirements.

This paper documents the learning process that was experienced by Tullow in their path to deliver a company wide system that would suit varying production scenarios in four different operating environments, with a broad range of cultures and technical challenges and ultimately be expandable to suit the growth of the company.
