

## Wellsite Geology Cloud-Based Operations

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### ABSTRACT

For decades, wellsite geology operation has been based on manual work using paper striplog records. Recently, this work has been transformed to a next generation interpretations workflow, by deploying a digital striplog and interpretation application with remote visualization technology. This innovation enables wellsite geologist on rig sites to digitally perform robust exploration striplogs and well correlations with offset wells, via a secure remote access. Results and analyses are collaborated in real time with experts in operational headquarters to accelerate the decision-making process. The new workflow significantly enhances result accuracy and reduces human errors. This major transformation also triggered the establishment of a wellsite operation center. By integrating the new workflow with real time drilling data, geologists at headquarters, many miles away from the rig location, can remotely determine shallow casing points for multiple wells, without the need of being physically present at the wellsite. This centralized approach has helped to achieve higher levels of productivity and manpower optimization. It has also promoted safety by reducing the amount of travel to rig sites. A digital striplog & interpretation software is deployed on an integrated, but physically separated layers of services. First, the application layer is installed on local users' workstations at operational headquarters, and also on a visualization terminal accessible by remote users. Second, a data manager software, connected to the application layer, is deployed centrally to provide a data-centric solution allowing real-time collaboration among local and remote users. Third, data storage is mirrored for higher availability. Finally, a triad-based license solution with centrally floating licenses on three dedicated servers provides services to all users. All service layers are designed with business continuity in mind, to provide wellsite users with a reliable and high availability service. The innovation provides a digitized workflow solution for the wellsite. It is scalable and provides business continuity via integrated multi-service layers. In addition, the utilization of a remote visualization technology enables rig users to securely perform their duties from any location.