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## **Implementing a New Single Trip Multi Zone Frac Packing System with Integral Zone Isolation and Selective Production Capabilities**

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### **Abstract**

The Frac Pack completion of multiple zones in a single wellbore can be a complex and expensive operation. Effectively performing Frac Pack treatments while still providing 100% zone selectivity can be critical to the mechanical and commercial success of the well. Conventional techniques involve completing each zone separately requiring a minimum of 2 trips per zone to perforate and install the Frac pack equipment.. Depending on the number of zones and well depth, the multiple trips required to run the completion equipment in and out of the well can account for 25 to over 60% of the time required to complete the well. Presented are the results of utilizing a new completion tool system designed to allow Frac packing of multiple zones in a single trip while providing complete zone isolation prior to and immediately after treating operations. Use of this system allows selective treatment tailored to each reservoir's individual characteristics along with the capability to selectively open or close zones as needed to optimize well production. Economic benefits of this system realized include reduced rig time, ancillary costs such as equipment mobilization, demobilization charges and standby time, rental and service charges, etc.. Depending on the number of zones being treated, well depth and rig considerations, cost savings were estimated to be between 25 C\_ - 50 % over conventional multi-trip completion methods. Well productivity and production capabilities are enhanced by reducing formation exposure time during the completion and providing the ability to selectively produce zones as needed. The economic advantages also allowed the completion of smaller marginal zones which may not have been economically viable with conventional completion techniques. This paper will outline the system and its operations and review results from field applications. Lessons learned as well as process improvement opportunities are also addressed.