# Diversion with CARBOBALL results in more uniform stimulation across low pressure reservoir

CARBOBALL MT biodegradable perforation ball sealer achieves successful diversion in low pressure reservoir

### **Harrison County, Texas**

#### The challenge

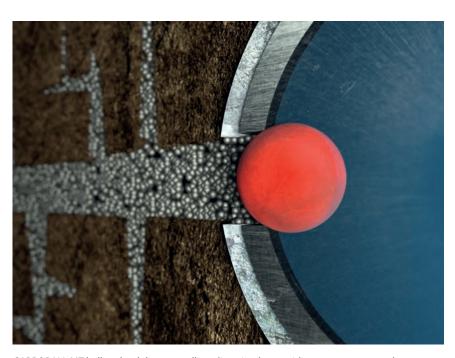
An independent E&P operator was seeking to increase proppant placement distribution over four clusters in a vertical completion by utilizing mechanical diversion to seal off perforations that were readily accepting stimulation fluids.

The objective was to redirect slurry flow during pumping operations to unstimulated perforations. The fracturing treatment was a low pressured reservoir in the Upper Cotton Valley formation in Harrison County, Texas.

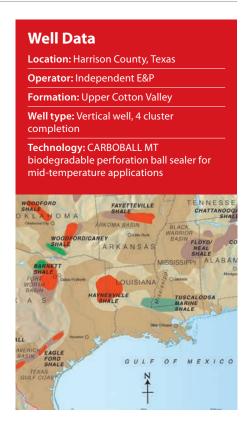
#### The solution

The cost-effective CARBOBALL™ MT biodegradable perforation ball sealer for mid temperature applications was successfully deployed after the first proppant sub stage.

The CARBOBALL MT ball sealer possesses a novel chemical formulation that delivers unique dissolution and softening characteristics upon contact with the treating fluid, delivering excellent diversion by providing a competent seal across the perforations.



CARBOBALL MT ball sealer delivers excellent diversion by providing a competent seal across the perforation



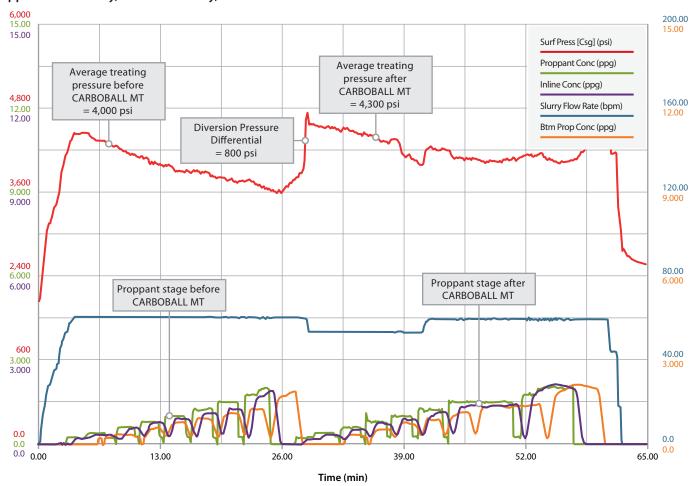


#### The results

A significant diversion treating pressure response was observed after the CARBOBALL MT biodegradable perforation sealer was deployed, indicating effective diversion at the perforations.

A diversion pressure differential of 800 psi was observed, leading to approximately 300 psi increase in average treating pressure between the first and second proppant sub stage.

## Mechanical diversion using CARBOBALL MT biodegradable perforation ball sealer, Upper Cotton Valley, Harrison County, Texas



Patent pending: CARBOBALL is covered by the following patent application: US 2017/0210976.

