A s the number of wellbores completed in North America continues to increase, plug-and-perf remains the preferred treatment. Drilling and completing these wellbores rarely lacks challenges, and one of the biggest is a casing with restricted inside diameter — a condition that can greatly hinder wellbore completion.

Several methods might be used to complete wells with restricted ID, like the “pump-and-pray” technique using diverter agents. However, this approach does not guarantee zonal isolation and could lead to lost production. Helping to ensure zonal isolation requires a frac plug that can pass through the restricted section yet still be set in the nominal casing ID. This can be achieved with redesigned composite frac plugs of a long-range or high-expansion design.

Unlike standard plug-and-perf applications, when running a composite high-expansion frac plug a restriction is present between the milling tool and the plug requiring removal. Traditionally, the only way to remove the device is by using an undersized or exotic mill. This can add risk to the plug-and-perf approach and may result in downtime and suboptimal production.

To address these challenges, Halliburton created the Illusion® High-Expansion frac plug.

“We understood what the industry drivers were, and challenged ourselves to come up with a leading solution for our customer.”
—Terry Sailors, Senior Strategic Business Manager, Halliburton

“...”

Illusion® High-Expansion frac plug as it passes through a restricted ID and sets in nominal casing ID, enabling wellbores with restricted IDs to be completed.