ZoneSelect® i-ball® Multizone Stimulation Sleeves
Isolate and Fracture More Than 45 Lower Horizontal Openhole Sections in Bakken Shale

The ZoneSelect i-ball multizone stimulation sleeve, a unique full-bore post-fracturing system, enabled the operator to fracture individually isolated zones in one trip without the need for intervention between fractures or the need to mill out ball seats or packers post-fracture. The operator experienced no pressure-drop downhole and no excessive hydraulic horsepower at the surface.

Objectives
• Complete multiple fracture stages in a field trial using the ZoneSelect i-ball multizone stimulation sleeve.
• Perform continuous, high-pressure fractures in a consistent manner with 3 1/2-in., full-bore, post-fracture, inside diameter.
• Eliminate the need for intervention between fractures and reduce nonproductive time.
• Operate all i-ball stimulation sleeves using the same 3.31-in. (84.07-cm) diameter balls.

Results
• Weatherford installed a toe sleeve to gain access to the formation for the first fracture and to establish a circulation path in the well for dropping and pumping down the 3.31-in. (84.07-cm) ball to open the i-ball sleeves.
• Each i-ball sleeve was opened with the same ball size, which eliminated excessive backpressure or pressure drop across ball seats. Each fracture was performed in a consistent manner with reference to pressure, rate, and sand volumes pumped.
• All balls were free to flow back to surface, if the well performance allowed, or to remain at the toe shoe.
• All fractures were performed back-to-back, were completed with no intervention required between fractures, and left a 3.5-in. (88.9-mm) unimpeded, post-fracture bore that eliminated the requirement to mill out seats.
Value to Client

- Using the ZoneSelect i-ball multizone stimulation sleeves enabled the operator to achieve consistent fractures from toe to heel because of the full-bore nature of the system and the minimal pressure drop through the lower string.
- With no requirement for intervention between fractures, the operator saved as much as 3-1/2 hours per targeted zone.
- The reduction in rig time and associated costs improved overall well economics.
- The fractures were all performed in a series, which enabled the effective use of all personnel on site and reduced nonproductive time.