Tail-in with CARBOAIR improves reservoir contact, increases production by 20%

CARBOAIR high-transport, ultra low-density ceramic proppant technology increases production from Eagle Ford horizontal well

South Texas

The challenge

An E&P company operating in the Eagle Ford had plans to drill two parallel offset horizontal wells and was searching for alternatives to increase stimulated reservoir area in their acreage.

The solution

CARBO recommended the use of a new high-transport, ultra low-density ceramic proppant, CARBOAIR®, which has lower settling rates compared with sand (2.0 ASG vs 2.65 ASG for typical sands). Slot flow tests verified that CARBOAIR had superior far-field fracture height contact compared with natural sands due to better proppant transport and deposition characteristics in slickwater fracturing fluid systems. Fracture and reservoir modeling predicted significant production rate and EUR increases by substituting a portion of the sand volume with CARBOAIR.

Two different well stimulation designs were developed and compared. The first—Well A—employed the operator's typical completion design comprised of 100-mesh and 40/70-mesh sand, while the second—Well B—used a modified design that replaced 20% of the final proppant of each stage with 40/70-mesh CARBOAIR.

Well Data

Operator: Major E&P

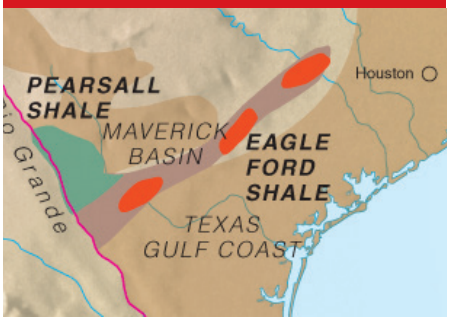
Location: South Texas

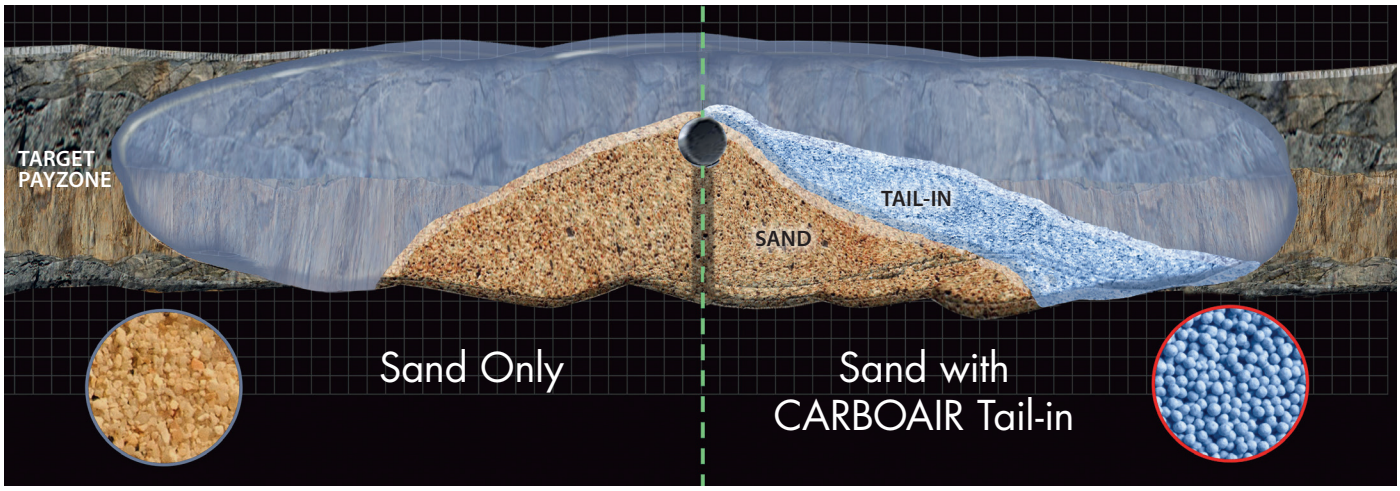
Formation: Eagle Ford

Well Type: Horizontal offset

Reservoir: Gas

Proppant: 100-mesh and 40/70-mesh sand and CARBOAIR 40/70





As a tail-in to any existing proppant, CARBOAIR can provide increased propped fracture length and height, covering more of the pay zone and increasing production and drainage of the reservoir.

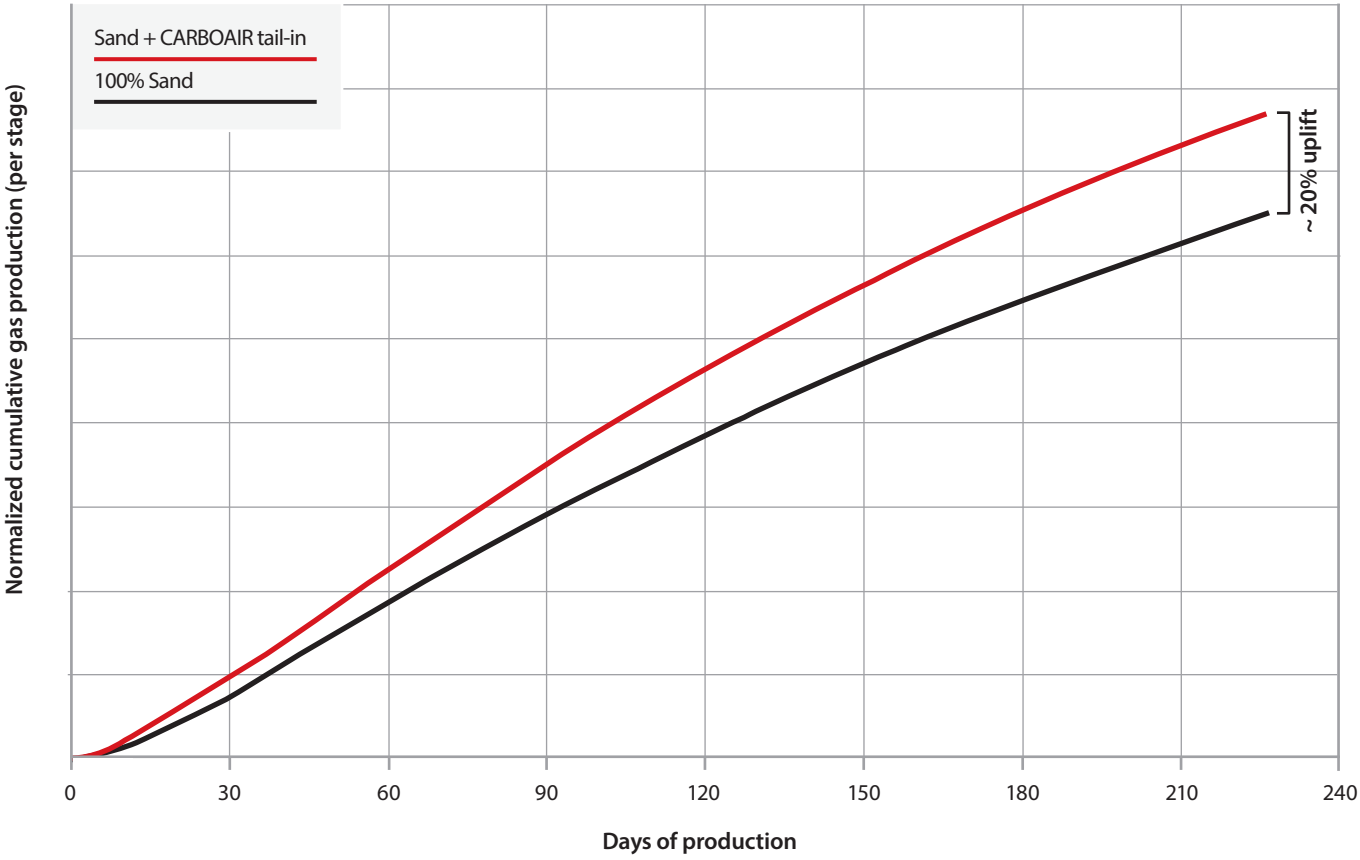
CARBO

Production. Enhanced.

The results

The production data from both wells showed that the well containing CARBOAIR experienced a 20% cumulative production increase compared to its sand-only completion design offset. These results confirmed that the new high-transport, ultra low-density ceramic proppant was successful in improving reservoir contact and materially increasing ultimate recovery.

Normalized cumulative production



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