

AlphaST™ Single-Trip Openhole Cement and Sidetrack System

Sets a reliable, cost-effective whipstock for a successful sidetrack

Applications

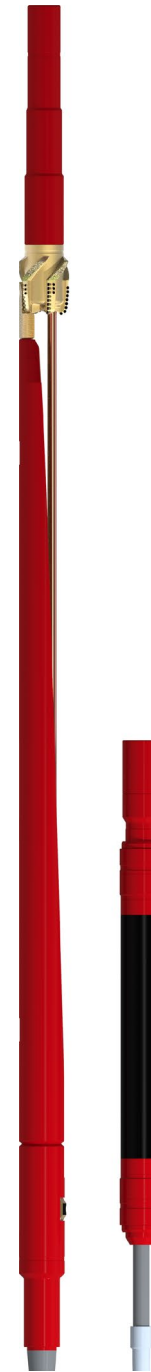
- Initiating efficient and reliable lateral departures in openhole wellbores
- Kicking off in hard, highly compressive formations where standard drilling methods are ineffective
- Increasing reservoir exposure through extended-reach drilling

Features and Benefits

- The AlphaST single-trip openhole sidetrack system can set, cement, and drill off in the same run.
- The IPP® injection production packer provides a full 360° of contact against the formation to securely anchor the whipstock system.
- The IPP packer has a high-strength elastomer element and a slim diameter—smaller than the concave or milling bottomhole assembly (BHA)—for drifting through borehole restrictions. An optional high-temperature elastomer can be used to enhance IPP performance in extreme environments.
- A copper flow tube within the whipstock concave facilitates pumping cement below the whipstock.
- Two mills on the drilloff BHA facilitate a quick departure from the original wellbore.
- The whipstock concave uses a single 3° angle for a smooth transition into the sidetrack without steps or ledges, which enables operators to run drilling BHAs that use short-tooth or polycrystalline-diamond-compact (PDC) style bits immediately after initial whipstock installation.

Tool Description

The Weatherford AlphaST single-trip openhole sidetrack system increases operator flexibility, eliminates multiple trips, and avoids costly cementing operations. The system consists of an IPP injection production packer anchor, a low-angle whipstock, and a twin-mill drilloff BHA. The IPP anchor enables the operator to position the lateral departure in the openhole wellbore without need of a false bottom or cement barrier. The single-angle 3° whipstock creates a smooth transition to eliminate BHA geometry issues on subsequent trips. A lead mill and flex mill initiate the kickoff. This reliable, field-proven openhole whipstock, anchor, and milling system enables operators to access the pay zone in the shortest possible route.



The AlphaST single-trip openhole sidetrack system can help operators to avoid the costs of setting a cement plug, waiting on cement, and timed drilling.

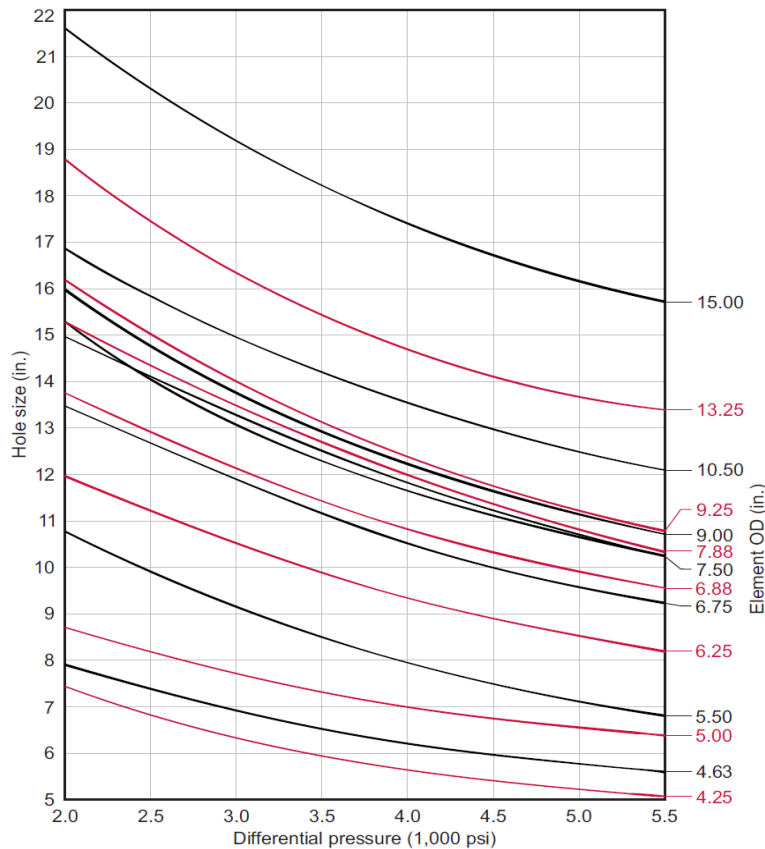


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Specifications

Whipstock outside diameter	Concave face angle	Concave pin connection	Drilling tool outside diameter	Drilling tool box connection	Shear stud shear strength	IPP cable element packer H4	
						OD	Temp. rating
6 in. (152.4 mm)	3°	3-1/2 IF	6.50 in. (165.10 mm)	3-1/2 in. IF	40,000 lb (18,181 kg)	5.5 in. (139.7 mm)	300°F (149°C)
			6.75 in. (171.45 mm)				
8 in. (203.2 mm)	3°	4-1/2 XH	8.50 in. (215.90 mm)	4-1/2 in. IF	59,000 lb (36,761 kg)	7.5 in. (190.5 mm)	300°F (149°C)
			8.75 in. (222.25 mm)				
11.5 in. (203.2 mm)	3.88°	4-1/2 XH	12.25 in. (311.15 mm)	4-1/2 in. IF	59,000 lb (36,761 kg)	9.25 in. (234.9 mm)	300°F (149°C)

IPP Element Performance Chart



Options

- Optional flow control sub allows whipstock orientation with measurement while drilling.
- PDC version available for improved drilling performance in hard formations.

