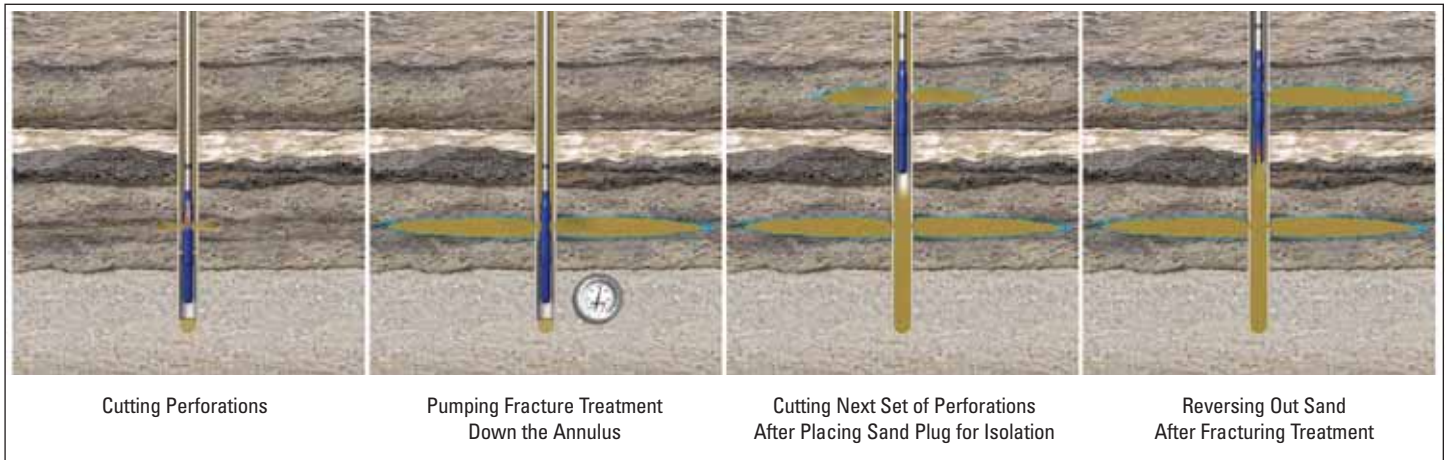


AbrasiFRAC Stimulation Service

Perforate and stimulate in a single field operation



The AbrasiFRAC* service allows perforating and stimulation in a single field operation.

STIMULATION

The AbrasiFRAC stimulation service is part of a portfolio of services to maximize reservoir contact. An economic, efficient solution, the AbrasiFRAC service perforates and stimulates multiple well intervals in a single field operation, offering access in cased and openhole completions in less time. The technique enables accurate placement of fracturing treatments down the casing or the CT-casing annulus, and reduces near-wellbore pressure drop from the wellbore to the reservoir, which reduces the frequency of near-wellbore screenouts.

Slurry containing abrasive solids is pumped at high differential pressures through a specially designed ABRASIJET* hydraulic pipe-cutting and perforating service gun conveyed on a CT workstring. The resulting high-velocity fluid stream perforates tubulars and any surrounding cement sheath. Abrasive fluid cutting is widely used in tubing or casing cutting applications. This tool can also be used reliably in openhole applications. The abrasive material is typically 20/40 or 100 mesh fracturing sand, which is compatible with the specially engineered jet guns. Even in harsh environments, the jet guns will perform efficiently for several hours under downhole conditions.

For multiple-stage treatments, sand plugs or bridge plugs can be used for zonal isolation between the fracturing treatment stages. The jet guns, which are available in various sizing and phasing configurations, also can be used with a retrievable or millable bridge plug.

ADDITIONAL SYSTEM FEATURES

Additional options can be used to enhance the performance of the AbrasiFRAC service.

AbrasiFRAC service can be combined with downhole tools that use fiber-optic technology developed by Schlumberger to provide accurate real-time depth, bottomhole pressure, and bottomhole temperature measurements via nonobstructive fiber-optic cables. These measurements are useful in various ways; for example, distributed temperature survey measurements offer a qualitative guide to fluid migration and monitoring of the interval flow profile before and just after the stimulation treatment.

A reverse check valve allows sand to be removed from the wellbore by reverse circulation between fracturing treatment stages to dress off the top of the sand plug placed for isolation.





AbrasiFRAC Stimulation Service

APPLICATIONS

- Perforation cutting through casing and cement sheath to provide access for stimulation treatments

BENEFITS

- Reduces cycle time by perforating and stimulating multiple intervals in a single field operation
- Improves well productivity through accurate placement of stimulation treatments
- Minimizes frequency of near-wellbore screenout
- Saves costs because of reduced equipment requirements owing to reduced fracture initiation pressure

FEATURES

- Accurately places stimulation treatments
- Eliminates need for wireline perforation

Specifications

Casing size, mm [in]	114.3 [4½]	139.7 [5½]	177.8 [7]
ABRASIJET tool OD, mm [in]	76.2 [3]	101.6 [4]	101.6 [4]
Typical BHA length, m [ft]	1.43 [4.7]	1.43 [4.7]	1.43 [4.7]
Optimum nozzle design differential pressure, MPa [psi]	17.3 [2,500]	17.3 [2,500]	17.3 [2,500]
Max. temperature, degC [degF]	177 [350]	177 [350]	177 [350]
Coiled tubing size	(any, but based on required flow rate)		

ABOUT THE CONTACT FAMILY

AbrasiFRAC technology is part of the intervention category of the Contact* four-category portfolio of staged fracturing and completion services. These technologies maximize reservoir contact by offering the most efficient and effective services for each well. The Contact intervention category enables multiple stages to be perforated/jetted, fractured, and isolated in one intervention. Contact services can be enhanced with real-time measurement options.

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