

# CoilFRAC

## Maximize reservoir contact—stimulate multiple zones in a single run

### APPLICATIONS

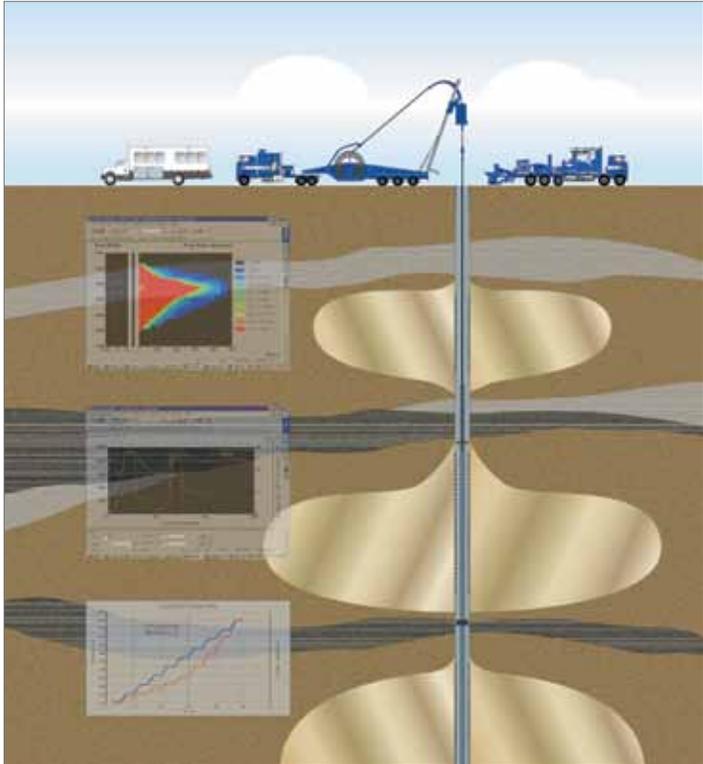
- Gas, oil, and coalbed methane completions in new or newly perforated intervals
- Selective stimulation of multizone wells
- Refracturing of select intervals
- Depleted wells with low reservoir pressure and permeability
- Wells requiring underbalanced operations

### BENEFITS

- Reduces operating time
- Reduces completion costs
- Increases production

### FEATURES

- Enables treatment of multiple zones in a single trip
- Selectively stimulates each zone to maximize reservoir contact
- Reduces formation exposure to completion fluids
- Eliminates bridge plugs (running and milling)
- Enables tapping historically bypassed pay zones
- Offers flexibility in fracture design and placement



The CoilFRAC stimulation service offers flexibility in fracture design and placement by taking into account varying formation characteristics such as stress contrast, permeability, porosity, and fracture gradient.

### CONVENTIONAL STIMULATION TREATMENTS

Multiple stacked zones in vertical wells are conventionally completed by one of two methods. The first method requires perforating, stimulating, and isolating each zone separately using composite bridge plugs. This method provides optimum stimulation for each zone, but many runs into the wellbore involve significant time and risk. The second method is limited entry, in which multiple zones are opened at once and stimulated at high rates. This method relies on perforation friction pressure for diversion. Limited entry reduces time and risk, but it can sacrifice production and reserves because multiple zones are stimulated simultaneously.

### STIMULATION THROUGH COILED TUBING

The CoilFRAC\* service combines coiled tubing (CT) and selective fracturing technology to enable the treatment of multiple zones in one trip. In new wells, each zone is perforated conventionally in one wellsite visit. CT is then deployed into the wellbore with a straddle tool BHA. The bottom zone is straddled, and the fracture stimulation is pumped through the CT string. Residual proppant is reverse-circulated out of the wellbore, and the straddle tool is moved to the next zone, where the process is repeated. Through this process, each layer is individually stimulated, and only one run into the wellbore is required.

The CoilFRAC service allows customizing the fracture stimulation for each targeted zone, accounting for varying stress contrast, porosity, permeability, and fracture gradients. This customization allows for optimum production while maximizing recoverable reserves from each zone. In addition, decoupling the fracturing operation from the perforating operation streamlines the completion process with fewer trips to the wellsite, saving time and money.





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## REFRACTURING BYPASSED ZONES

The CoilFRAC service can also be used to access bypassed zones or to refracture previously completed zones. In this application, low pressure and suspect casing can be protected from the treatment fluids and pressure by the CT string. Compared with a conventional workover rig, the CoilFRAC process is faster, and it minimizes fluid damage to existing layers because the well does not have to be killed.

## FIELD-PROVEN TECHNOLOGY

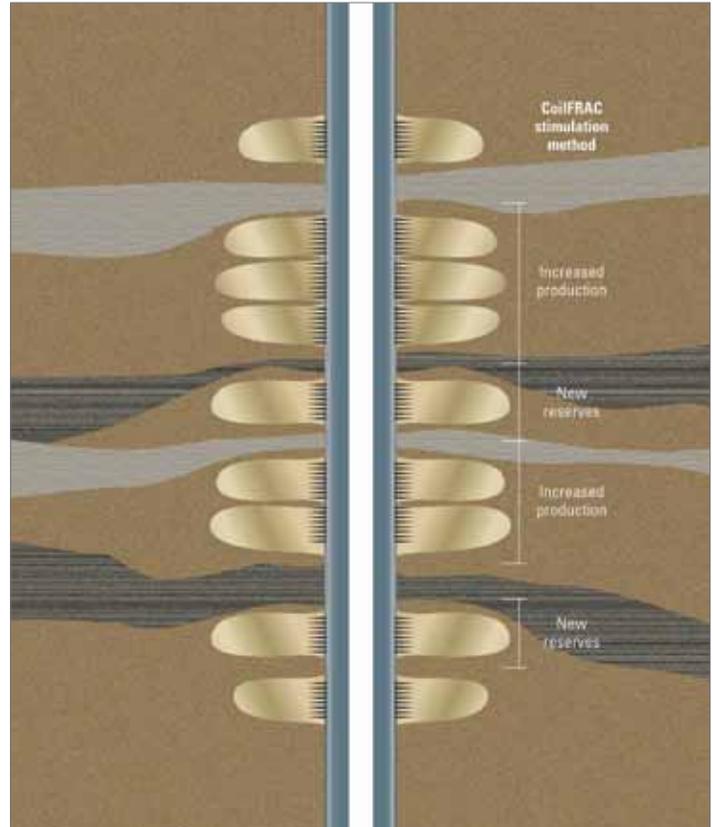
An operator in southern Alberta used the CoilFRAC stimulation service on its shallow gas wells to individually fracture and stimulate multiple zones faster using less equipment. The objective was to find a more cost-effective method for shallow gas fracturing for better economic results. With the CoilFRAC service, completion time was reduced from 16 days to 4 (on average), and well flowback times were cut by half, resulting in payout in less time.

## STAGED FRACTURING AND COMPLETIONS FAMILY

CoilFRAC 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.

### CoilFRAC Candidate Selection

Casing/liner size	4½ and 5½ in
Bottomhole temperature (BHT)	250 degF
MD	6,000 ft



*The CoilFRAC service permits smaller, efficient treatments targeting individual zones.*

[www.slb.com/contact](http://www.slb.com/contact)

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