

The DataFRAC* fracture data determination service identifies values of parameters specific to the formation and the well that are critical to optimal fracture treatment design. Estimated or inaccurate values can result in:

- premature screenout and reduced fracture penetration because of pad fluid depletion
- unpropped fractures, damaged proppant-pack conductivity, and increased treatment costs because of excessive pad volume.

The service typically consists of two tests:

- The closure test determines closure pressure or the minimum in situ rock stress, which is essential for all fracture analysis.
- The calibration test is an injection/shut-in/decline procedure. A viscosified fluid without proppant is pumped into the well at a rate proposed for the fracturing treatment. The well is then shut in and pressure decline is monitored and analyzed using FracCADE fracturing design and evaluation software.

The DataFRAC service uses the G-function plot for complete and consistent analysis. The G-function plot replaces the curve-matching method and can highlight nonideal fracture behavior such as unrestrained height growth and extension after shut-in and closure. Analysis results from the DataFRAC module in FracCADE software automatically update the fracture geometry simulator.

### Effect of fluid loss coefficient on required fluid volume.

![Graph showing the effect of fluid loss coefficient on required fluid volume.](image)
Effect of proppant-pack damage and fracture length on fracture net present value.

Typical DataFRAC service pumping procedure.