

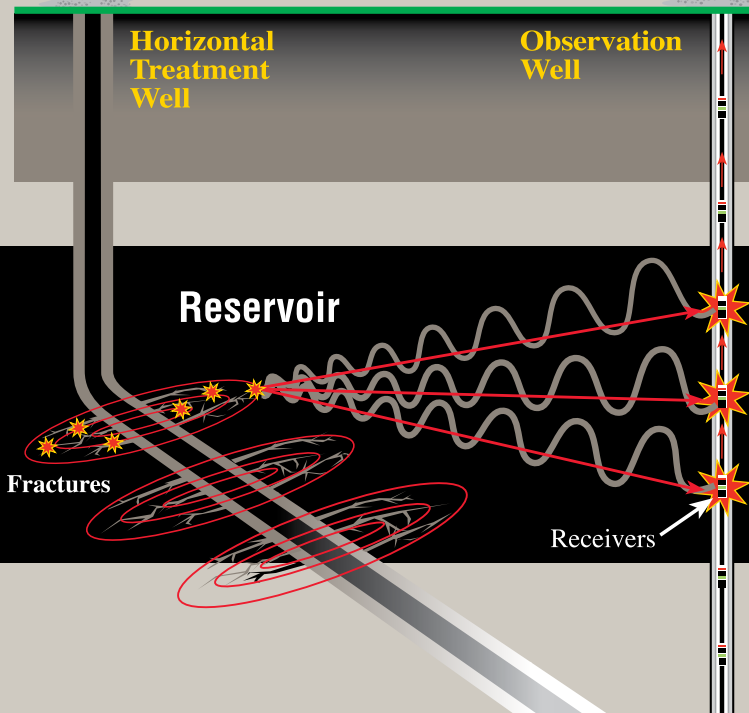
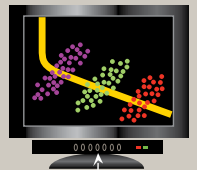


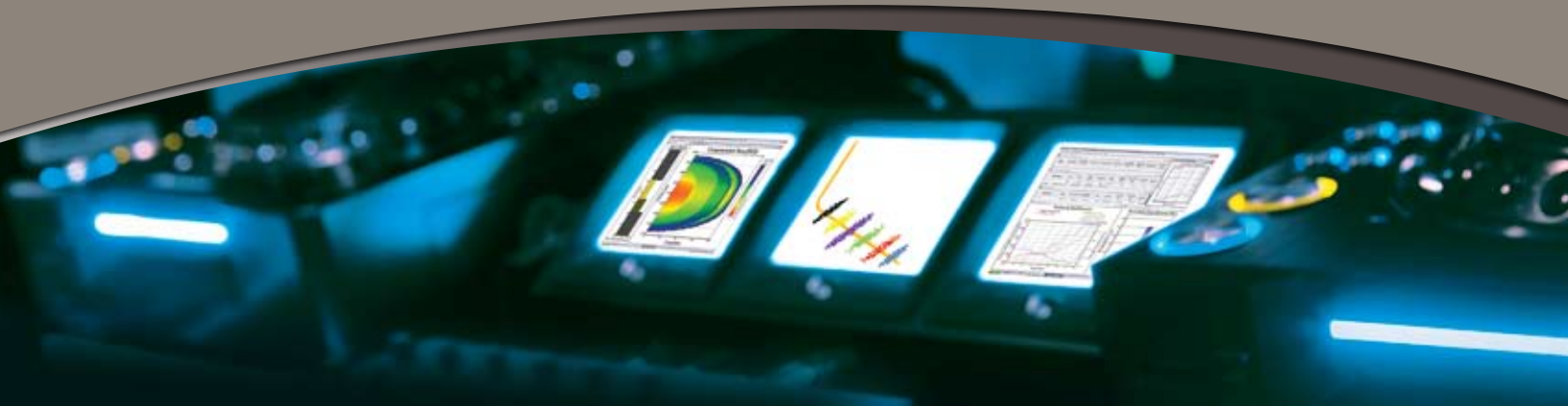
# Microseismic Fracture Mapping

Unconventional resource developers know how important it is to leverage data from earlier wells to increase output from subsequent wells. In fact, understanding how your wells respond to given stimulation techniques can greatly improve your production return and reduce completion costs.

Trican Well Service's microseismic monitoring can help you see what's happening in your well during stimulation activities and extrapolate how to optimize future fracturing treatments, leading to greater recovery of resources in each fracture stage in a well, over the entire wellbore, and by extension, the entire field.

Fracture Map





## Microseismic Fracture Mapping

Microseismic fracture mapping involves measuring the geometry of a fracture by passively monitoring the seismic events induced by the treatment being pumped. Monitoring is done through multiple receivers deployed via wire-line in one or several neighbouring wellbores. These seismic events are then used to create an image of the fracturing treatment, displaying the geometrical attributes created by the fracture. These attributes, along with other data, suggest how to pump subsequent fractures in subsequent wells. These attributes include:

- Fracture Azimuth
- Fracture Length
- Fracture Height
- Fracture Complexity
- Stimulated Reservoir Volume (SRV)

Microseismic technology has proven its value in the increasing development of unconventional shale and tight gas reservoirs throughout North America, and Trican Well Service is uniquely positioned to help you maximize reservoir production. Trican's team has an unmatched depth of experience in microseismic engineering as well as in-house geophysical expertise. Trican also has the advantage of being able to optimize its microseismic activities with expertise in wellbore stimulation, and also to leverage microseismic activities to improve its delivery of pressure pumping services.

Trican has developed fit-for-purpose software to integrate microseismic data into a reservoir simulator, offering 3-D visualization and real-time understanding of subsequent stages in well exploitation over an entire field.