

Volume to First Response and Frac Hit Trackers

Volume to First Response Trackers

Output Options

Advanced

VOLUME TO FIRST RESPONSE TRACKERS ?

	Injection well ?	Observation well ?	
1	Well_High Noon ▾	Well_Sunset ▾	☰
2	Well_High Noon ▾	Well_Sunrise ▾	☰

New Row Resize Table

This parameter allows you to track 'volume to first response' from frac hits in different stages. Specify the 'injection well' and the 'observation well'.

For each stage of injection into the injection well, the code identifies the volume of fluid injected into that stage prior to the first frac hit at the observation well. A curve called 'Volume to First Response' will be outputted in the line plots (sim_track file in the results folder).

The VFR will display as "nan" whenever the selected 'injection well' is inactive and prior to any fracture crossings while injecting. VFR will only become a number once a fracture has crossed the 'observation well'. When the 'injection well' stops pumping, the VFR will reset to "nan".

Be observant to early VFRs. As with a real well, the code does not filter for only fractures on azimuth. So, if there is substantial post-pumping propagation, a fracture from a prior stage may cross the 'observation well' while the next stage on the 'injection well' is pumping, resulting in a seemingly early/low VFR.

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FRAC HIT TRACKERS ?

	Injection well ?	Observation well ?	
1	Well_High Noon ▾	Well_Sunset ▾	☰
2	Well_High Noon ▾	Well_Sunrise ▾	☰

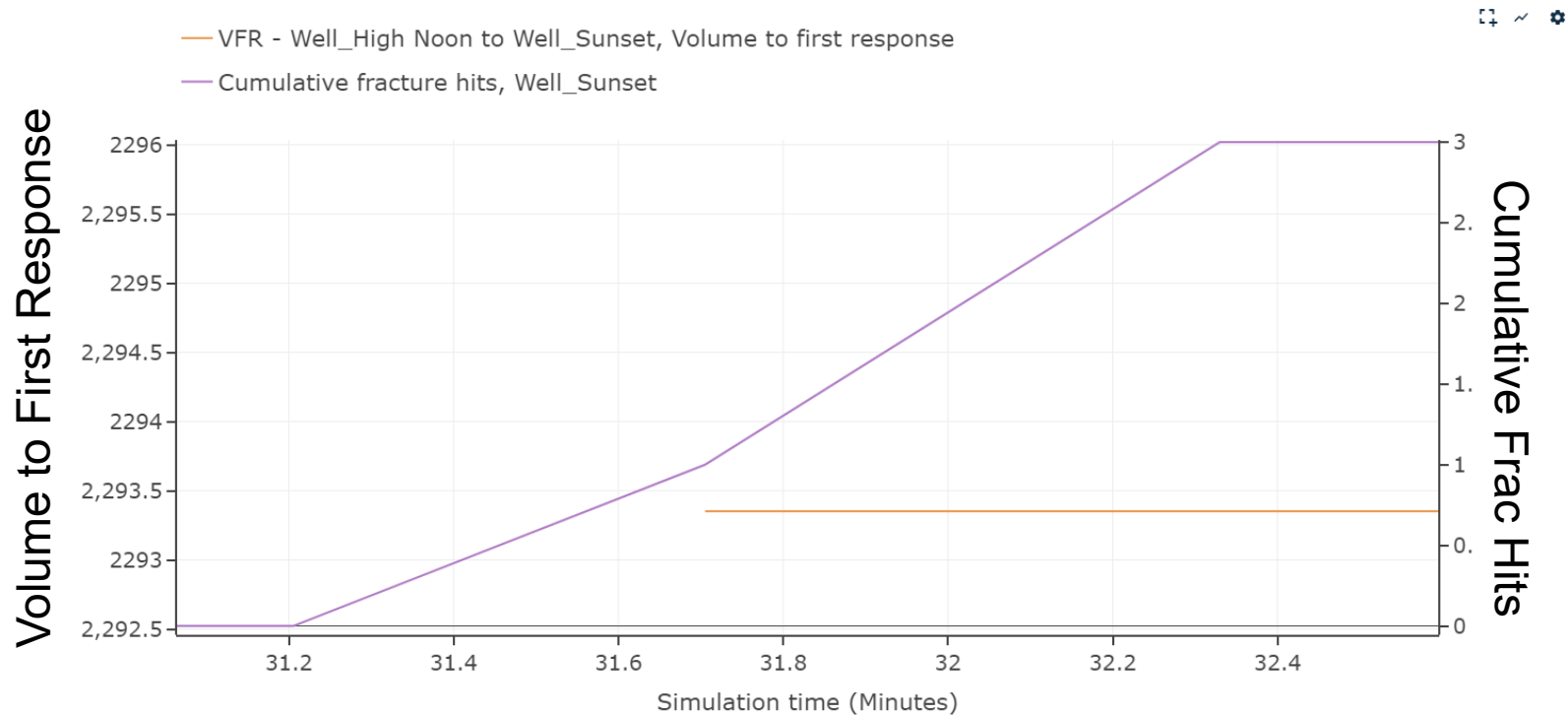
New Row Resize Table

This parameter allows you to track 'the number of frac hits' at an observation well that occur during the fracturing of an offset well. Specify the 'injection well' and the 'observation well'. For each stage of injection into the injection well, the code keeps track of the number of frac hits at the observation well. These numbers are then printed as columns in the tracking file.

Importantly, note that reopening of preexisting hydraulic fractures is NOT included in the frac hit count.

The frac hit tracker column in the tracking file will display “-1” when the selected ‘injection well’ is inactive. During each active pumping period the frac hit tracker displays “0” until the first fracture crossing on the ‘observation well’, after which the frac hit tracker will increment by 1 for each fracture that crosses the ‘observation well’ during that stage. At the end of the stage, the frac hit tracker column resets to “-1” until the beginning of the next stage on the ‘injection well’.

Volume to First Response - Viewing in the Builder



The volume to first response is output as soon as the fracture crosses an adjacent wellbore. The output continues until the well that is fracturing is shut in and then the curve disappears.

The frac hits curve is also output with the cumulative number of frac hits. Note that the reopening of fractures is not counted towards the total number.



Thank you!

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