

3.3 Shut-in Whilst Drilling

The Fast Shut-in Method shall be used as detailed in Volumes 1 and 2.

Once the well is shut in, commence recording drillpipe and annulus pressures every 30 seconds for Horner plot. Compare to fingerprinting tests and be mindful of pressures trapped in the wellbore due to system dynamics.

- (1) If the casing pressure is less than 1000psi
and the average heave is <4ft (max heave <7ft) and is expected to remain at these levels during the course of kill operations
and partial losses >20bbl/hr have **not** been occurring
remain closed in on the annular if pipe movement is required. After confirming the annular is holding well pressure, reduce the closing pressure to the minimum required to hold well pressure. You may slowly reciprocate the drillstring.
- (2) If the casing pressure is greater than 1000psi
and/or the average heave is >4ft (max heave >7 ft) or is likely to become that during the course of kill operations
and/or partial losses >20bbl/hr have been occurring
it is recommended to install kill assembly using rig specific procedures.

Use of Kill Assembly

In the event that the casing pressure is above 1000psi (or the other conditions noted above exist), close the Full Opening Safety Valve (FOSV) above the rotary table. Confirm pressure integrity by bleeding off above the FOSV and monitoring for any flow or pressure buildup. Break out the remainder of the stand above the FOSV and install and test the kill assembly between the top drive and the drillstring. Use the mudpump to pressure up above the FOSV to the last recorded drillpipe pressure before closing the top drive Inside Blowout Preventer (IBOP). Open the FOSV. Line up to check the drillpipe pressure via the side outlet to ensure it is less than 3500psi (the maximum pressure at which the FOSV can be easily operated manually) before opening up the topdrive IBOPs and exposing the hose and standpipe to well pressure.

During subsequent operations, if drillpipe pressure approaches 3500psi (ie the pressure at which the FOSVs can still be operated manually), then isolate the topdrive with the IBOPs and conduct the kill operation through the high pressure line and cement manifold. Also monitor the annulus pressure in relation to calculated drillpipe collapse pressure.

