

WELL CONTROL QUICK REFERENCE

Understanding the Basics Help Sheet

Drill Pipe Pressure Gauge: **Blue**Casing Pressure Gauge: **Red**Circulating Information: **Green**

Steps: Drillers Method 1st Circulation

1. Brings Pump up to selected Kill Rate in stages, while holding **Casing Pressure Constant** on Casing Gauge
2. Once at selected Kill Rate hold **Drill Pipe Pressure Gauge** Constant for entire 1st Circulation (**FCP**)
3. Once the gas bubble has been circulated out of the well. Shut down pump in stages holding **Casing Pressure Constant** on Casing Gauge
4. If circulation was done correctly. The Shut in **Casing Pressure** and **Drill Pipe Pressure** gauges will be equal. Do not perform a flow check (well is not dead, only circulated clean of influx). If possible, bleed Pressures back to **Original Shut in Drill Pipe Pressure**
5. Prepare for 2nd Circulation using the Kill Sheet

Steps: Drillers Method 2nd Circulation

1. Bring pump up to selected kill rate holding **Casing Pressure Gauge** constant
2. Once at kill rate look at the **Drill Pipe Pressure Gauge** this should be at or around **Initial Circulating Pressure (ICP)**
3. Follow **Pressure Drop Chart** from **Initial Circulating Pressure (ICP)** to **Final Circulating Pressure (FCP)** only on the **Drill Pipe Pressure Gauge** (adjust choke to maintain pressure in accordance with strokes)
4. Hold Final Circulating Pressure on **Drill Pipe Pressure Gauge** as Kill Mud is circulated to the surface. Once Kill Mud is back at the surface, stage pumps to off while holding **Casing Pressure Constant**. Once pumps are off, do a flow check. (Well should not flow, well is Dead at this point)

Steps: Wait and Weight Method

1. Stage a pump up to a selected Kill rate holding **Casing Pressure Constant** on Gauge. (Choke adjustments are necessary)
2. Once at selected Kill rate hold **Drill Pipe Pressure** Constant on gauge. This pressure should be around the **Initial Circulating Pressure (ICP)**.
3. Follow the pressure reduction chart from **Initial Circulating Pressure** to the **Final Circulating Pressure (FCP)** This is done all on the **Drill Pipe Pressure Gauge** (Stroke=PSI) choke adjustments can be made to maintain **Drill Pipe Pressure**
4. Once kill mud has been circulated out of the bit into the annulus, **Final Circulating Pressure (FCP)** must be held on the **Drill Pipe Gauge**, until Kill Mud has been returned back to the surface
5. Once Kill Mud is observed on the surface, stage the pump down holding **Casing Pressure Constant** until the pumps are switch off. **Drill Pipe** and **Casing Pressure** should read zero. The well is dead, perform a flow check to verify. If well does flow Kill Circulation was not done properly and well has a influx in it. Shut in the well immediately

SHUT-IN & FLOW CHECK QUICK REFERENCE

Understanding the Basics Help Sheet

Soft Shut in Procedure: 1. Remote choke is open position while drilling 2. Stop drilling and space out 3. Flow check 4. If positive flow, open side outlet valve (HCR) 5. Close the BOP 6. Slowly close the choke 7. Check for leaks across BOP, record pressures. (if needed bumping float must be done before recording pressures)	Flow Check Procedures: Drilling on Bottom: 1. Alert Crew with BOP Caydence 2. Stop Rotating, pick up and space out 3. Shut down pumps 4. Check well for flow 5. Shut in BOP if it is flowing Tripping: 1. Alert crew with BOP Caydence 2. Pick up and space out 3. Stop pipe movement 4. Install FOSV (TIW) 5. Check for well flow 6. Shut in BOP if it is flowing	Hard Shut in Procedure: 1. Remote choke is closed while drilling 2. Stop drilling and space out 3. Flow check 4. If positive flow, open side outlet valve (HCR) 5. Close the BOP 6. Check for leaks across BOP, record pressures. (if needed bumping float must be done before recording pressures)
--	--	---