

Draft definitions for 35 Codes associated with the IADC Daily Drilling Report (DDR Plus)**1. RIG UP / TEAR DOWN / RIG MOVE**

Rig up is the on-site erection and connection of rig components in preparation for drilling or well servicing operations. Rig up begins when the first rig components have arrived at the wellsite, and ends when the rig is ready to spud the well. "Tear Down" is the act of dismantling a rig at the completion of a well and preparing it for moving to the next location. Tear Down begins when the first portion of the drilling rig is dismantled, and ends when the entire rig when the last rig component has left the wellsite. This section also includes all offshore rig movements and activities around rig movements.

2. DRILLING

Drilling is boring a hole into the earth with the purpose of finding and producing oil, natural gas, or other subsurface resource. Drilling can also be used for drilling out shoe tracks and dressing off cement plugs. Time starts once boring ("making new hole") begins, and time ends when boring ceases.

3. REAMING

Reaming refers to the operations of smoothing the wellbore, enlarging the hole to the desired size, straightening dog legs, or assisting in directional drilling. Reaming begins when the rig begins rotating and circulating for any of the purposes described in the first sentence.

Reaming ends when this rotation and circulation cease.

4. CORING

Coring is the extraction from the wellbore of a cylindrical sample for geological analysis. Coring begins when rotation begins for the purpose of capturing a cylindrical sample of rock. Coring ends when the process of capturing the cylindrical sample ceases.

5. CIRCULATE & CONDITION MUD

Conditioning is the process of preparing the drilling fluid ("mud") to modify fluid properties (such as weight, viscosity, etc) for use down hole, circulate means pumping the fluid through the drill pipe. Process begins when additives are blended into the drilling fluid. Process ends when circulation is complete, and pumps shut down.

6. TRIPS

Hoisting the drill string, including bit and BHA, to the surface, then returning it into the wellbore. Operation begins upon start of pulling the drill string, and ends when the entire string is back in the wellbore to the desired depth.

7. SERVICE/MAINTAIN RIG

Rig service/maintenance, whether planned, conditional, or unplanned, begins when the equipment is taken off line for remediation or correction, and ends when the equipment is back in service.

8. REPAIR RIG

Rig repair begins when the equipment fails, and ends when the equipment is back in service.

9. CUT OFF DRILLING LINE

Drill lines are cut to extend the life of the lines by moving areas of wear toward the drum to be cut off. This operation begins when the drilling line is cut, and ends when the new line is reattached or respoiled. It is important to observe proper safety precautions in this operation (<http://www.iadc.org/safety-meeting-topics/cutting-off-a-drilling-line-safe-procedures/>).

10. DEVIATION SURVEY

The deviation survey begins when the survey tool is run into the hole on wireline, and ends when the tool is fully retrieved.

11. WIRELINE LOGS

Wireline logging begins when the logging tool is run into the hole, and ends when the tool is fully retrieved.

12. RUN CASING & CEMENT

Running casing and cement properly is critical to obtaining sound well integrity. The operation includes all procedures necessary to run casing into the hole, make up the casing pipe, and pump cement around the pipe to secure the casing. Operation begins when the first casing string is pulled for preparation to run into the hole, and ceases when the last of the cement is properly placed in the hole.

13. WAIT ON CEMENT

Waiting on Cement (WOC) is the time during which drilling or completion operations are suspended so that the cement in a well can harden sufficiently. Begins when cement pumps are shut down, and ends following tests to determine that the cement has hardened sufficiently. Cement hardens through a chemical process called "hydration," in which the cement reacts with the water in the slurry. Cement hardening is not caused by "drying" out the cement.

14. RIG UP BOP

Rigging up the BOP refers to assembling the blowout preventer. It is also referred to as "nipping up." This process is begun when all BOP components are on site, and the crew begins assembling the unit. Rig up ceases when the complete BOP stack is ready for use or testing at the wellsite.

15. TEST BOP

BOP testing begins when pressure is exerted on the BOP, and ends after all relevant measurements are made.

16. DRILL STEM TEST

Drill stem tests are designed to collect data on the productive capacity, pressure, permeability or extent (or a combination of these) of a formation before installing casing in a well. The drill stem test begins with the insertion of temporary packers to isolate the zone of interest and is isolated with temporary packers. The test ends when all tools are fully tripped out of the hole.

17. PLUG BACK

Plugging back refers to sealing off the bottom section of a wellbore to prevent the inflow of fluid from that portion of the hole. The procedure begins with the plug being run into the hole, and ends when the cement is sufficiently hardened.

18. SQUEEZE CEMENT

Squeeze cementing is the process by which cement is forced into the casing-hole annulus, usually due to channeling in the primary cement job. Such channeling is most often caused by drilling mud that has been bypassed during the primary cement job. Squeeze cementing begins when the pumps are started to pump the cement downhole, and ends when the cement is deemed satisfactorily hardened.

19. FISHING Fishing is the retrieval of sections of pipe, casing, drilling tools, or other items that have become stuck or inadvertently dropped into the wellbore ("fish"). Fishing begins

when the leading edge of the fishing assembly enters the wellbore, and ceases when the fishing assembly and fish have been returned to the surface.

20. DIRECTIONAL WORK

Directional drilling is the science of controlling a wellbore along a predetermined trajectory to one or more underground targets. Directional work begins when the drill bit and assembly begin deviating from the vertical. This occurs at a subterranean location called the "kick-off point." Directional work ceases when the directional assembly and drill bit have been returned to the surface.

21. RUN/RETRIEVE RISER EQUIP.

A riser is a long tubular structure typically made of steel that connects a subsea well to an offshore vessel or platform. Marine drilling risers provide conduits through which drilling equipment and materials are passed from the rig to the well. These materials can include fluids, drilling BHA and drill pipe, and various external lines. Running riser begins with the movement of the first marine riser joint from the riser storage area to the well center. Retrieving riser equipment ceases when the last riser joint is returned to the riser storage area.

22. SURFACE TESTING

23. OTHER

24. NON-PRODUCTIVE TIME

Non-productive (NPT) time occurs when no operations are conducted due to a failure of equipment, shortage of materials, or similar cause. NPT begins when operations cease, and ends when operations resume.

25. OPERATING STATUS

26. SAFETY Safe operating procedures should underpin every rigsite operation. Tactics to sustain safe operations include safety talks, training, cleaning, Job Safety Analyses and Drills.

27. WELL CONTROL

Well control is the prevention of uncontrolled releases of hydrocarbons, and their containment when prevention efforts are ineffective.

28. COILED TUBING

Coiled tubing is a continuous spool of flexible conduit contained on a large spool. Coiled tubing is, in the right application, an important tool for drilling, completion, or well servicing. Coiled-tubing operations begin when the equipment is brought to the wellsite, and ceases when all coiled tubing is returned to the spool.

29. MISC

30. PERFORATING

Perforating is the process of creating holes in casing and cement in a productive formation to create a pathway for hydrocarbons to flow into the wellbore. Normally, guns or explosives are used to perforate the well. Perforating begins when the leading edge of the perforating gun/assembly are lowered into the wellbore, and ceases when all tools have been returned to the surface.

31. TUBING TRIPS

Tubing trips refers to running production tubing into a well prior to bringing the well on production. The process begins with the movement of the first length of tubing to the rig floor, and ceases when the last length of tubing is permanently installed in the well.

32. TREATING**33. SWABBING**

Swabbing is the process of bringing well fluids to the surface when the well does not flow naturally. This can be achieved either with a lifting device run into the hole on wireline or by lowering the hydrostatic pressure in the hole through the upward movement of pipe or tools. For the wireline-run method, the operation begins with the insertion of the leading edge of the lifting device into the hole, and ceases when the last tool is returned to the surface. For the pressure-reduction method, the operation begins when the pipe/tools begin their upward notion, and ceases with the removal of the last of the tool assembly from the hole.