

SLICKLINE CONNECT
Slickline Topics
Slickline Operations Safety Practices

1. The Crew, consisting of a minimum of three men shall be present at all times throughout the well site operation, unless otherwise specifically instructed by Client.
2. A Tool Box Meeting (TBM) shall be performed at the start of every job and the start of every shift in the case of long duration jobs requiring two crews. The TBM shall be used to review the current status of the job, the client's program, risk assessments and the upcoming program. All personnel, including 3rd party contractors must be present at the TBM.
3. All members of the crew must fully understand the job to be performed and the hazards of the job. All personnel are empowered to **Stop the Job** under all circumstances. If in doubt about ask the job supervisor.
4. In jobs with H2S, a pre-job safety meeting must be held with the Client. This meeting must address all the safety concerns with H2S operations, covering working practices, alarms, muster points, emergency procedures, safety equipment, monitors, BA and escape sets, as well as assigning roles and responsibilities
5. A MOC procedure must be used if there are changes in the planned program or if the job circumstances change, e.g. well conditions, failed equipment, broken wire etc..
6. It is the Slickline Supervisors responsibility to communicate with the Base Supervisor daily with job progress updates or whenever there is an issue at the wellsite
7. Company issued PPE **ONLY** must be worn during well site operations, including safety hats, safety shoes and gloves, eye protection, hearing protection, and when required working at height protection, H2S monitors, escape masks and life jackets during boat movements. PPE must **ONLY** be worn or used if it is good condition.
8. Only PCE with a current valid certification (< 12 months) and with the correct pressure and service rating to meet expected well conditions shall be eligible for operations
9. All lifting equipment and lifting accessories must have current and valid certificates of examination (< 6 months) and the correct colour code shall be eligible for operations
10. Copies of all equipment certifications must be available at the well site for inspection and verification by the client, to include certification for zone 2 equipment
11. For every set of Wireline equipment in the field it must have a current inventory available, with a complete listing of all equipment, tools and spares
12. On first arrival on location (onshore or offshore) carry out a visual check of the work site, check the site and report any issues to the client and supervisor both verbally and on the daily worksheet.

13. The work area must be clear of debris and any obstructions and should be clearly marked with tape or plastic chain with signs posted to warn un-involved personnel to stay clear
14. The Wireline unit should be positioned upwind and positioned far enough away from the lower sheave to ensure spooling is not compromised. Rule of thumb - as a minimum the winch distance from the Christmas tree, 25 x drum width. The operator should have line of site of at least one wind sock or wind direction indicator
15. The winch shall be spotted on a flat stable surface and securely anchored using certified chains and shackles or wheel chocks (onshore)
16. The winch shall be spotted with the wire running from the centre of the drum directly to the lower sheave where the drum centre line is perpendicular to the line of the wire as it leaves the drum. From the winch operating position the operator must have a clear line of site of the lower sheave and the stuffing box
17. The winch, powerpack and truck (onshore) should be grounded
18. All PCE hydraulic control lines shall be long enough to reach their correct connection point on the PCE from their respective control panel, at no point in the operation can a critical PCE function not be connected to the appropriate pump
19. Wireline equipment must comply with zone rules, offshore zone 2, onshore rig-safe or zone 2. A zone is defined as distance from a potential ignition source. In the case of zone 2 equipment electrical systems must be explosion proof
20. Night work is not recommended, but if required to do so, there must be adequate and sufficient lighting covering all of the work site
21. Offshore Wireline operations on unmanned production jackets must cease before dark. The Christmas tree must be secured and Wireline equipment rigged down and stacked on one side of the helideck in a position where helicopter landings are not impeded
22. Always respect pressure, never take any shortcuts or make assumptions where pressure is concerned
23. If the well is on-line (on production) and prior to closing in the well record all well pressures tubing (WHFP), casing (CP), flow line (FLP). Verify the pressures with the Client, also confirm the expected closed in well head pressure (WHCIP)
24. The lower master valve must never be used and should remain open at all times, it would only be closed in an emergency and when instructed to do so by the client
25. Prior to starting the rig up, verify the following valves are closed on the Christmas tree, swab valve, upper master valve, flow line valve and kill wing valve. If in doubt about a valve's status, open it fully and close it, always count the number of turns to open and to close a gate valve, make a note of the number.

26. Scaffolding should be installed in situations where it requires personnel to work 6ft above ground level. Scaffolding must **ONLY** be installed by competent and trained scaffolders. In all cases working above 6ft requires working at height safety equipment.
27. During rigging up there shall be two active barriers between well pressure / fluids and the environment, e.g. the swab valve and upper master valve must be closed
28. When assembling the PCE, check the condition of the quick union o’rings and change if required
29. Prior to installing the well head adapter, pressure must be bled to zero from under the Christmas tree cap
30. The needle valve on the tree cap shall not be used for lifting or pulling on the tree cap
31. When installing a flanged wellhead adapter a new ring gasket should be used. Flange bolts should to be torqued up (refer to the API 6, Annex D, Flange Torque Tables) in the correct order, quick union or acme connections should be made up by hand and a new o’ring shall be used for every rig up.
32. A full PCE rig-up pre-job pressure test must be performed every rig up
33. Tag lines must be used on all lifts.
34. Never stand under a suspended load, e.g. the lubricator or tool string
35. The Wireline clamp shall only be tied off with a chain or wire strop suitable for the expected loads, rope must not be used
36. The wire history card must be kept as accurately, all run and wire testing information added after each event.
37. Wire tests must be made every two days or at the start of each new operation. Wire test results must be recorded on the wire history card
38. When handling wire care must be taken at every step, the loose end of the wire must be restrained at all times. When cutting wire ensure both ends of the wire cannot fly loose, hold the wire as near the end as possible.
39. The tension device load cell gap must be checked before running in the well and in the course of the operation
40. Make a new zero every run
41. A Z-Chart must be used every run when the wire ($\geq 0.125''$) is smooth spooled
42. Do not exceed the recommending running and pulling speeds, 300 fpm in clear tubing, 50 fpm through the Christmas tree and completion jewellery
43. Spring or hydraulic jars should be included in the tool string for every run below 1000ft
44. Jarring procedures must be used during extended jarring

45. From 50ft below the SSSV to surface is the danger zone and special procedures should be used very time when pulling out of the well, for instance, low engine revs, low power settings and low speeds and one member of the crew feeding the tool string into the lubricator
46. When pulling the tool string back into the lubricator assembly, a double check must be made that rope socket is at the stuffing box, then close the swab and upper master valves counting the turns
47. Pressure from the lubricator must be bled down through a high pressure hose. Wind direction will be taken into a count when bleeding down. The hose must be connected and the end secured before opening the needle valve. Never stand in front of a gate valve or needle valve when opening them
48. Bleeding off oil must be done into a vessel or tank or into the facilities drainage system, never allow oil to be released into the atmosphere
49. A pressure gauge must be installed in the lubricator manifold to monitor pressure when bleeding down. Work the needle valve to ensure it is not blocked and that there is no retained pressure in the lubricator
50. Never hammer on any vessel that is under pressure
51. Never place a hand or any part of the body in front of a needle valve while pressure is being bled off.
52. Careful hand placement must be observed at all times, avoid placing hands below the lubricator assembly as the lubricator and tool string could drop un-expectedly
53. When rigging down and cutting the wire from the tool string, hold the wire securely with one hand approximately six inches from the end of the rope socket.
54. Always cut off a minimum of 20ft of wire at the end of the job. After the wire has been cut, care must be taken that the wire is under control as the end is pulled back onto the winch