END-OF-COURSE PAPER WIRELINE EQUIPMENT 5

1. We are testing the braided line BOP with a test rod. We do not have a Pump-in Tee below the BOP. Which 'other' barriers must be closed when performing this test?

   a) The Swab Valve and Kill Wing Valve
   b) The Upper Master Valve, Swab Valve, and inner Flow Wing Valve
   c) The Upper Master Valve and inner Flow Wing Valve
   d) The Upper Master Valve and Down Hole Safety Valve

2. During a slick line job, we experience a failure of the hydraulic system. We are unable to use the hydraulic system to close the BOP. Which of the following statements is true if an attempt is made to manually operate the Shear/Seal Rams?

   a) The Shear/Seal Rams can be made to shear and seal
   b) The Shear/Seal Rams cannot be made to operate
   c) The Shear/Seal Rams can be moved and will shear, but not seal
   d) The Shear/Seal Rams can be moved and will seal, but not shear

3. The operating temperature of the BOP in the manufacturers' data is 250 °F. The temperature rating of the elastomers is 170 °F. What is the maximum well fluid temperature at which the BOPs should be used?

   a) 170 °F
   b) Unable to say. It also depends on the temperature on location
   c) 250 °F
   d) It only depends on the temperature on location

4. During e-line operations we use a Shear/Seal BOP. Which of the following statements is correct?
   TWO ANSWERS

   a) It will be able to cut 8 to 10 wires
   b) It will only cut a single wire
   c) It may not cut the tool string nor wireline tools
   d) It will cut the tool string, but not the wireline tools

5. While running a tractor in a horizontal we experience hanging-up of the tool. What would be the most appropriate action to take?

   a) Pull out of hole and make a number of runs to bail out the sand blockages
   b) Reverse clear of the blockage and evaluate the well conditions and nature of the blockage before making the next move
   c) Continue moving forward and try to work through the obstruction

6. We intend to use slickline to pull a wireline-set BPV from the Tubing Hanger. Where should the wireline BOPs be located?

a) At a height above the Xmas Tree, which would accommodate the entire tool string inside a riser, when we latch onto the BPV
b) As close to the Xmas Tree as practically possible
c) Removing a BPV is not a critical operation, so any height that is convenient for the crew is more important

7. A low and high pressure was conducted on a wireline lubricator. We observed a leak between the lubricator's lower sub and the quick union. The pressure leaked off at low pressure, but held at high pressure. What is the most probable cause?

a) The 'O' Ring may be split
b) The seal faces on the box end of the quick union may be worn or damaged
c) The 'O' Ring groove may have some scratches
d) The seal faces on the pin end of the quick union may be worn or damaged

8. The slickline tool string has become stuck and is located across the Xmas Tree and wireline BOP. As we are trying to free the tool string, the wire breaks and is blow out of the well. What barriers are now available to control well pressure?

a) By closing the DHSV we create a barrier
b) The plunger in the Stuffing Box will automatically seal off the well
c) The well must be killed and the kill brine will create a barrier
d) The packing of the Stuffing Box will seal off the well when the packing nut is tightened or the hydraulic pressure is increased

9. A Gate Valve is in a closed position with 3500 psi on one side and 0 psi on the other. Which of the following statements are true about opening this valve? TWO ANSWERS

a) The equalizing port in the gate ensures that the pressures are equalized across the valve the moment we start opening it
b) The sudden pressure surge can damage equipment downstream of the flow being released
c) All valves are designed to be opened with pressure on one side only
d) The mechanical force required to turn the valve handle can damage the stem and the gate
e) The high differential pressure assists the gate to move when opening it

10. We are rigging up for a braided line activity. The dual braided line BOP has a grease injection system that is connected between the rams. Which of the following statements is true?

a) The dual braided line rams can be considered as two barriers
b) The dual braided line rams can be considered as one barrier
c) The lower braided line ram can be considered as the tertiary barrier

11. We are running braided line with a Grease Injection Head, but are unable to create a satisfactory seal, no matter what we try. What is the best action to take?

a) The only safe action to take is to kill the well. We can then repair and replace the Grease Injection Head or flow tubes
b) Activate the Shear/Seal. Then perform an inflow test. We can then repair or replace the Grease Injection Head or flow tubes. If okay, then fish and recover the wireline tools and wire.
c) Close the dual braided BOPs and pump grease between them. Then perform an inflow test. We can then repair or replace the Grease Injection Head or flow tubes.
d) This a problem that often occurs. Increase hydraulic pressure on the Stuffing Box and pull out of hole. We can then repair or replace the Grease Injection Head or flow tubes.

12. We are running slickline with a Memory Logging Tool as part of the tool string. The tool is now close to the bottom of the well. We observe that the control pressure on the TR-SSV has been lost and reads zero psi. What action should we take?

a) Re-establish control line pressure. If it can be maintained, then complete the logging run.
b) This should not be a problem. Continue with the job. If we have a problem with pulling the tool string past the TR-SSV, then pull out of the rope socket and retrieve the wire. We can then lock the TR-SSV open and fish for the tool string
c) Re-establish control line pressure. If it can be maintained, then pull out of hole and inspect the line that was across the TR-SSV. In addition to this, re-test the TR-SSV with an inflow test.
d) The flapper of the TR-SSV will always cut the slickline. Re-establishing control line pressure will not help. We can lock the TR-SSV open and fish for the remainder of the wire and the tool string

13. While pulling out of the hole with braided line, there is a sudden and unexpected increase in pulling weight. What is the most likely cause?

a) There is a weight indicator error and this can be ignored
b) There is not enough lubrication grease on the cable
c) There are hydrates forming at the Grease Injection Head
d) There are broken strands on the braided line and we are therefore experiencing birdnesting at the Grease Injection Head

14. Under which operational conditions would we have to close a slickline BOP? THREE ANSWERS

a) When a cutter bar has to be dropped
b) When a leaking stuffing box has to be repaired
c) When a tool string or running tools needs to be changed out between runs
d) When fished wire needs to be stripped and threaded through the stuffing box ready for recovery and spooling back on the slickline drum
e) When a leak is observed at the Adaptor Flange

15. A wireline bridge plug has been set in the completion string. Along with a BPV in the Tubing Hanger this will permit a repair on the Xmas Tree to be performed. However, the bridge plug fails the inflow test. What is the best action to take? TWO ANSWERS

a) If the leak is small, then continue as it will not affect the repair. We still have a BPV that is installed in the Tubing Hanger.
b) Set a second bridge plug above the first one and perform another inflow test. If successful, then continue with the operation as intended
c) Retrieve the bridge plug and repair or replace with a new one. Perform another inflow test. If successful, then continue with the operation as intended
d) Mill out the bridge plug. Then set a new bridge plug and perform another inflow test. If successful, then continue with the operation as intended

16. We are running braided line in a high pressure gas well. Between runs an inspection of the BOP seals reveals that the elastomer seals have small blisters. What is the most likely cause?

a) Ageing and fatigue of the elastomer
b) The wells' [high] temperature
c) Explosive decompression
d) Highly corrosive well fluids
e) Grease used for sealing the dual braided BOPs

17. We are preparing e-line to perforate a high pressure gas well in underbalanced mode. The well has a TVD of 10,750 ft. Tubing is filled with 9.5 ppg completion fluid. After detonation we expect a maximum surface pressure of 5080 psi. The Xmas Tree is rated to 10,000 psi and the braided line BOP is rated to 5000 psi. What should we do next?

a) Operations can go ahead. Immediately after perforating the zone, completion fluid will leak into the formation and pressures will drop well below 5000 psi
b) Operations can go ahead. We would only suspend the operations when the estimated surface pressure proves to be correct.
c) Operations can go ahead. The BOP is body tested to 10,000 psi. We therefore have a lot of margin left when comparing this to estimated surface pressure
d) Suspend operations and consult with the senior engineer in the office to plan the way forward

18. We are inspecting the braided wireline BOP and find that there is a serious cut on the upper end of the upper ram inner seal? What is the correct action to take?

a) Replace the inner seal and pressure test the rams against a test rod
b) Cuts are very common. As long as there have been no leaks, continue with the operations
c) Pressure test the rams against a test rod. If okay, proceed as normal
d) Invert the ram so that the cut is on the lower end. This usually works well.

19. During a slickline job, the wire has parted and is blown out of the well. If the 'plunger' does not stop the leak, what would be the best closable barrier to use?

a) Upper Master Gate Valve
b) Down Hole Safety Valve
c) Lower Master Gate Valve
d) Swab Valve
e) BOPs

20. On a wireline rig-up we find that the angle on the Hay Pulley, to which the weight sensor is connected, is 120° instead of 90°. Which of the following statements is correct about the weight indicator reading?

a) It will read a higher value than the actual tension on the wire
b) It will read the same value than the actual tension on the wire
c) It will read a lower value than the actual tension on the wire

21. A slickline lubricator is fitted with a test sub. Which of the following statements is correct?

a) A test sub can be used for retesting after a tool change, without testing the whole PCE rig-up, provided that only one connection above the BOP is broken for this tool change
b) A test sub eliminates the need to test the whole PCE rig up, when performing the initial test on this PCE
c) A test sub is not useful, because the lubricator is always tested against well pressure after a tool change
d) A test sub is commonly used as a barrier when the stuffing box requires a change of packing

22. During which type of wireline operations is a Safety Check Union used?

a) Operations with slick wireline
b) Operations with braided wireline
c) Only in operations where a stuffing box is used

23. We are performing e-line work, but do not have a wire-cutting valve in the Xmas Tree. What should therefore be installed to provide a second closable barrier in case of a failure of the dual rams BOP, while there is e-line in the well?

a) The dual rams BOP already functions as a double barrier
b) An additional BOP, dressed with Shear Rams
c) And additional dual rams BOP
d) An additional BOP, dressed with Shear/Seal Rams

24. A slickline BOP has been closed under pressure and with the tool string still in the well. The stuffing box needs to be repaired. What should be done before starting the repair work?

a) Close the locking stems on the BOPs, bleed off the pressure above the BOPs and perform an inflow test
b) Bleed off the pressure above the BOPs and perform an inflow test
c) Connect to the test sub and pressure test the BOPs from above
d) Close the locking stems on the BOPs and bleed off the pressure above the BOPs
e) Connect to the pump-in sub and test the BOPs from below. Bleed off the pressure above the BOPs and perform an inflow test.

25. We intend to change over from slickline to braided line in order to perform a fishing job on parted slickline. What changes or additions to PCE are required?
THREE ANSWERS

a) Add extra lubricator sections
b) Kill the well before doing making changes or adding PCE
c) Add a dual rams BOP and Grease Injector Head to the existing slickline BOP
d) Replace the rams in the slickline BOP with braided line rams
e) Add a Shear/Seal BOP or Shear/Seal Ball Valve, capable of cutting braided line

26. A deep-set positive plug has been set prior work on a well. However, it fails to hold pressure during an inflow test. Which of the following actions could be taken?
TWO ANSWERS

a) Rig up a coiled tubing unit and set a cement plug above the positive plug
b) Pull the positive plug. Then redress and rerun, followed by an inflow test
c) Run a back-up positive plug in a nipple higher up, provided the nipple is still below packer depth
d) If the leak during the inflow test is relatively small, then it is acceptable to proceed with the job in hand
e) Pressure test the positive plug from above. If the plug holds pressure, then it is acceptable to proceed with the job in hand

27. During slickline operations and pulling on the line with 90% of line tension rating, the stuffing box starts to leak, which over time is getting worse and eventually becoming unacceptable. The hydraulic packing is not reacting to changes in hydraulic pressure. What is the best action to take?

a) Back-off tension and close the slickline BOPs. Bleed off the pressure above the BOPs and perform an inflow test. Then repair the stuffing box.
b) Pull the slickline out of the rope socket, pull the wire out of the well and then prepare to repair the stuffing box
c) Continue to pull out of the well and then prepare to repair the stuffing box
d) Ask permission to bullhead kill the well. Once done, prepare to repair the stuffing box.
e) Close the Upper Master Gate Valve to cut the wire. Pull back the parted wire and prepare to repair the stuffing box.

28. During a slickline job, what 'immediate' action should be taken if a small leak occurs in the hydraulically operated stuffing box and with a tool string in the well?

a) Stop wire movement, then close the wireline BOP
b) Continue with the operations and meanwhile notify the supervisor
c) Stop wire movement, then close the shear ram, shear/seal or wire-cutting valve on the Xmas Tree
d) Increase sealing pressure to the hydraulically operated stuffing box

29. Which of the following circumstances would require the well to be killed, while running braided line?

a) Tool string stuck across the Xmas Tree valves
b) A leak in the Grease Injection Head
c) A leak below the wire-cutting valve
d) A leak between the Grease Injection Head and the wireline BOPs
e) If we experience significant overpull which would limit any further pull on the braided line

30. While running braided line, the grease pump fails, grease pressure is lost and as a consequence gas leaks past the wire and stuffing box. The back-up grease pump is not functioning either. What is the best 'immediate' action to take?

a) Close the dual ram BOPs and repair the grease supply system
b) Cut the braided wire with the Shear/Seal Ram, then shut in on the Tree and repair the grease supply system
c) Pull out of the well while controlling the leak at the stuffing box, then shut in on the Tree and repair the grease supply system
d) Stop wire movement, increase pressure on the stuffing box to control the leak, then close the dual ram BOPs and repair the grease supply system

31. You have noticed that the certification for the wireline BOPs will expire the following day. You have planned for a 5-day wireline operation. What should you do?

a) Start with the operations, because the wireline BOP will only expire the following day
b) Start and complete the operations, if the wireline BOP can be tested successfully
c) Suspend the work. Arrange for another set of wireline BOPs with a certification valid throughout the operations
d) Start with the operations, provided we pressure test the wireline BOP on a daily basis
e) Work can be started, but arrange for another set of wireline BOPs with a certification valid throughout the operations. In this manner we can guarantee redundancy

32. What is the reason for a Mule Shoe Guide or Bell Guide to be tapered and bevelled?

a) To hang off a wireline tool
b) To permit entry of tools into the PBR of a Liner
c) To minimize friction when a wireline tool is run in a deviated well
d) To avoid wireline tools getting stuck when they enter the tubing, as some wireline tools may may have a square shoulder

33. The completion string has multiple packers and multiple production zones. To selectively produce from the various individual zones, how should you place the SSDs with respect to opening the sliding sleeve?

a) The 2 top SSD are to be in a jar-up position and the bottom SSD to be in a jar-down position
b) All SSDs are to be in a jar-down position
c) All SSDs are to be in a jar-up position
d) The 2 top SSD are to be in a jar-down position and the bottom SSD to be in a jar-up position

34. Dual slickline BOPs are being used on a job. After some runs made in the well you notice some severe cuts on the packer element of the upper BOP. What should you do?

a) Continue operations, you still have the lower slickline BOP.
b) Pressure test the dual slickline BOPs; if successful, then continue operations
c) Suspend the work. Redress the upper slickline BOP with a new packer element. Pressure test and if successful, continue operations.
d) Replace the upper BOP rams with those of the lower BOP rams. Only then can we continue the operations, because we must always use the upper BOPs first