WIRELINE EQUIPMENT

EXERCISE WIRE LINE EQUIPMENT 1

1. Name the equipment that is used to act as a barrier for a slick line rig up with only a single wireline BOP: -

   Primary Barrier: _____

   Secondary Barrier: _____

   Tertiary Barrier: _____

2. When doing a wireline job on a live well, which of the following statements is true regarding the use of BOPs?

   a) There is no need for blowout preventers when doing wireline jobs, because we can close the Xmas Tree valve
   b) Wireline blowout preventers operate in a similar way as pipe rams
   c) The blowout preventer stack is supported by a telescoping gin pole
   d) Ram type preventers cannot be used because the rams do not form a good seal around a wire

3. How will the tension reading be affected if the angle between slick line and the slick line sheave pulley is more than 90 degrees?

   a) It wil show less (but tension at load cell will be more)
   b) It will show more (but tension at load cell will be less)

4. Which of the following component can never be part of a lubricator section?

   a) Pressure Gauge
   b) Quick Union 'O' ring seal
   c) Rope socket
   d) Bleed-off valve

5. What is the main purpose of having wireline BOPs installed on the well?

   a) To provide a much improved protection against well pressure over that of the stuffing box.
   b) To contain well pressure and enable to repair and change components if any connection above the BOPs should leak.
   c) To permit pressure testing of lubricator assembly and stuffing box.
   d) To provide a tool trap, preventing the tool string from dropping back into the well when they are pulled hard against the stuffing box

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6. Which one of the following statements is true regarding braided line Grease Injection Heads (GIH)?

   a) It is the applied hydraulic pressure that pushes up the pack-off which makes the seal around the braided line cable.
   b) It is the wellhead pressure that pushes up the pack-off which makes the seal around the braided line cable
   c) It is the grease that is pumped into the flow tube through the lower grease inlet which makes the seal around the braided line cable
   d) It is the grease, pumped into tubes through the upper grease inlet which makes the seal around the braided line cable

7. Which component is the primary barrier during a slick line operation?

   a) Wireline BOP
   b) Lubricator
   c) Stuffing box
   d) Upper Master Valve

8. In which case/situation should the Slick Line BOP always be closed? (TWO ANSWERS)

   a) When changing the tool string or running tool.
   b) When the wire has to be wiped cleaned when pulling out of hole.
   c) When the wire parts near surface and has fallen down into the well.
   d) When a broken wire has been successfully fished and then has to be reeled back onto the drum through the Stuffing Box.
   e) When a tool gets stuck in the hole and the Cutter Bar has to be dropped.

9. When using a braided line BOP, what is the main reason to install a lower ram upside down?

   a) It is standard design for ram preventers to hold pressure from below.
   b) It improves the overall weight balance of the braided line BOP.
   c) It allows a pressure test of the lubricator and GIH assembly.
   d) The lower ram will only function with grease pressure from above, not well pressure.

10. What are the advantages of installing a wireline BOP directly on top of the Xmas Tree? (THREE ANSWERS)

    a) Will have less potential leak paths between barriers
    b) Be able to maximize length of the lubricator above the wireline BOP
    c) It will minimize the potential of getting a tool stuck across the Xmas tree
    d) It will reduce the use of Xmas Tree valves to function as barriers
    e) Provide good handling access to the X/mas Tree and BOP

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11. What is the main purpose of having a Ball Check Valve or Safety Check Union installed below the Grease injection head when running the braided line?

    a) To clean the grease off the braided line while pulling out.
    b) To prevent both grease and well fluid from contaminating each other.
    c) To prevent escape of well bore fluids through the GIH in case the cable would part at surface.
    d) To prevent well bore fluids from entering the Chemical Injection line.

12. After closing the wireline BOP and before breaking out the lubricator, what action must be carried out before we can proceed? (THREE ANSWERS)

    a) Kill the well
    b) Inflow test the wireline BOP
    c) Pressure test the wireline BOP
    d) Lock the hydraulic rams by screwing in the manual stems
    e) Bleed off well pressure above the closed wireline BOP

13. What is the best description of 'Explosive Decompression' with regard to Wireline Seal elements?

    a) The damage that occurs to packing elastomeric elements when they impact with wireline tool strings just after shut in well with the wireline BOP.
    b) When trapped gas in micro pores of sealing elements rapidly expands due to a release of surrounding pressure causing damage to sealing elements such as tears, holes, blisters and cracks.
    c) The explosive damage that occurs when a wireline cable has been stripped through a closed wireline BOP due to excessive tool string weight.
    d) The damage that occurs when due to extreme temperatures of the wellbore fluids tool string seals compress/decompress and become rapidly torn up.

14. What is a safe and recommended practice when bleeding down pressure from pressure control equipment installed above a closed BOP (on land wells)?

    a) Bleed off pressure directly into the atmosphere in case of hazardous fluids in the well.
    b) Bleed off pressure by using a temporary flare stack in case of hazardous fluids in the well.
    c) Bleed off pressure through a buffer tank to allow for a controlled expansion.

15. The slick line has broken off near surface and the wire has dropped down the well. Meanwhile the remaining wire blew out of the stuffing box by well pressure. What is the primary barrier to prevent the well pressure from being released to atmosphere?

    a) Down-Hole Safety Valve
    b) Stuffing Box Plunger
    c) Lower Master Valve
    d) Swab Valve

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16. Referring to question no. 15, what is the secondary barrier?

a) Down-Hole Safety Valve
b) Stuffing Box Plunger
c) Lower Master Valve
d) Swab Valve

17. After a slick line parted and was lost down hole, a plan is made to fish the slick line out with braided line. What are recommended procedures in order to perform this operation safely? (TWO ANSWERS)

a) It is necessary to rig up both slick line and braided line BOPs before we can perform a fishing operation.
b) The lubricator must be changed out to one of higher rated working pressure.
c) Modify and redress the slick line BOP so that it can be used as single braided line BOP.
d) It is required to assess the need to pick up extra lubricator sections to accommodate both fishing tool string and fish of the slick line tool string.

18. If a Quick Union of a lubricator is made up by hand, could this cause a leak path?

a) No (as it designed to be made up by hand and still create an effective seal)
b) Yes

19. What are primary barriers of a completed well? (TWO ANSWERS)

a) Wellhead Side Outlet Valves
b) Production Packer
c) Production String (Tubing)
d) Completion Fluid

20. A wireline job has been scheduled on a well that is in production. Which of the following precautions must be taken to ensure the SCSSSV stays open during these wireline operations? (TWO ANSWERS)

a) Install a fusible plug on the hydro-pneumatic actuator
b) Monitor the pressure on the control line from the production control room
c) Install a needle valve on the tubing spool to lock-in the control line pressure
d) Run a straddle sleeve to ensure the SCSSSV stays open at all times

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WorkBook Wire Line Equipment – Answer Keys

Exercise Wire Line Equipment-1	
1.	Primary Barrier: Stuffing Box [including Plunger] + Lubricator Sections
	Secondary Barrier: Wire Line BOPs [Blind Rams]
	Tertiary Barrier: Upper Master Valve [provided it can cut the wire]
2.	b
3.	a
4.	c
5.	b
6.	c
7.	c
8.	d, e
9.	d
10.	a, b, e
11.	c
12.	b, d, e
13.	b
14.	b
15.	b
16.	d
17.	a, d
18.	a
19.	b, c
20.	a, c

Exercise Wire Line Equipment-2	
1.	b, d
2.	b
3.	c
4.	a, c, e
5.	c, d, f
6.	b
7.	a, c
8.	c
9.	b
10.	a

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