EXERCISE WIRE LINE EQUIPMENT 2

1. What are the main purposes of having a BOP? (TWO ANSWERS)

   a) To provide better protection and pressure control than provided by a Stuffing Box
   b) To perform the job safely and to contain well pressure
   c) To clean the wire when pulling out of hole so that we save time
   d) To enable the repair of any connection or pressure control equipment above the BOPs, that may start to leak

2. Which of the following statements is correct if a single BOP is used?

   a) The single Ram BOP holds pressure from both above and below
   b) The single Ram BOP only holds pressure from below
   c) The single Ram BOP only holds pressure from above

3. In which situation should a wireline BOP be used?

   a) When we want to clean the wire during pulling out of the hole
   b) When we need to lay down or make up a wireline tool string
   c) When we want to replace or energize the packing unit in the stuffing box
   d) When we to catch the tools string if the wire would unexpectedly break

4. Which of the following are advantages of setting a wireline BOP directly on top of the X/mas tree? (THREE ANSWERS)

   a) It provides a more direct access to the X/mas tree and well head.
   b) It allows the running of full bore tools without any obstructions.
   c) There are less potential leak paths between the barriers.
   d) It allows retrieval of a full bore tool in case it gets stuck in the Xmas tree.
   e) It allows a maximum lubricator and riser length to accommodate longer tools.

5. Before exposing the riser or lubricator to the well pressure (i.e. before opening a Swab Valve), what has to be checked? (THREE ANSWERS)

   a) We have to check that the hydraulic pump is connected.
   b) We have to ensure that the lubricator is in a vertical position.
   c) We have to check that the seal faces and 'O' rings are in good condition.
   d) We have to check that the pressure rating is equal to or greater than the maximum operating pressure.
   e) We have to pressure test the lubricator to at least 3000 psi.
   f) We have to pressure test the riser or lubricator, as a part of the rig up, to at least the minimum SITHP.

6. In which situation would you have to rig up for an additional wireline?

   a. When operating in a high angle hole or horizontal well.
   b. When we have to perform a fishing operation.
   c. When we have to make the lubricator longer
   d. If a leak develops in the primary BOPs

7. Which of the following statements are true when rigging up slick line on a well? (TWO ANSWERS)

   a) A damaged lubricator needle valve or gauge connection may cause a lubricator nt to hold pressure
   b) If the BOP stems are not screwed in all the way, they may cause a leak in the BOP
   c) A damaged quick union 'O' ring and/or seal surfaces may cause a leak at the union
   d) A quick union only made up hand tight may cause a leak at that union

8. Where is the Safety Check Union installed?

   a) Below Lubricator and above BOP
   b) Below Stuffing Box
   c) Below the Grease Injection Head (GIH)
   d) Immediate above X/mas tree

9. Are inner seals of a Ram the same for Slick line and Braided line?

   a) YES
   b) NO

10. Can a Tee-Gate valve [e.g. a wellhead or Xmas Tree valve] on a wireline rig up be a primary barrier?

    a) YES
    b) NO

11. During a casing cement job, we observe to have significant losses. Which one of the following statements is correct?

    a) Run cement bond log (CBL) to check cement integrity. We may need to perform a cement squeeze job
    b) Do nothing. The casing is strong enough, in term of capability and integrity
    c) Drill out the casing shoe and perform a leak-off test. If okay, continue operations.
    d) Determine additional cement volume required to make up for the observed losses

12. During wireline operations, hydrates have formed at stuffing box. Which one of the following statements is correct?

    a) It is formed because of a leakage at the stuffing box
    b) It is formed because of the cold weather
    c) It is formed because of the wireline hanging up inside lubricator
    d) It is formed because the wireline is jammed inside stuffing box

13. There are cracks, holes and blisters on the seal elements of the ram assembly. What is the likely cause of this?

    a) Elastomeric Expansion
    b) Explosive Decompression
    c) Sealing Element Explosion
    d) Sealing Element Ageing

14. Does well pressure increase the sealing capability of the GIH when running a braided line cable during fishing or logging job?

    a) YES
    b) NO

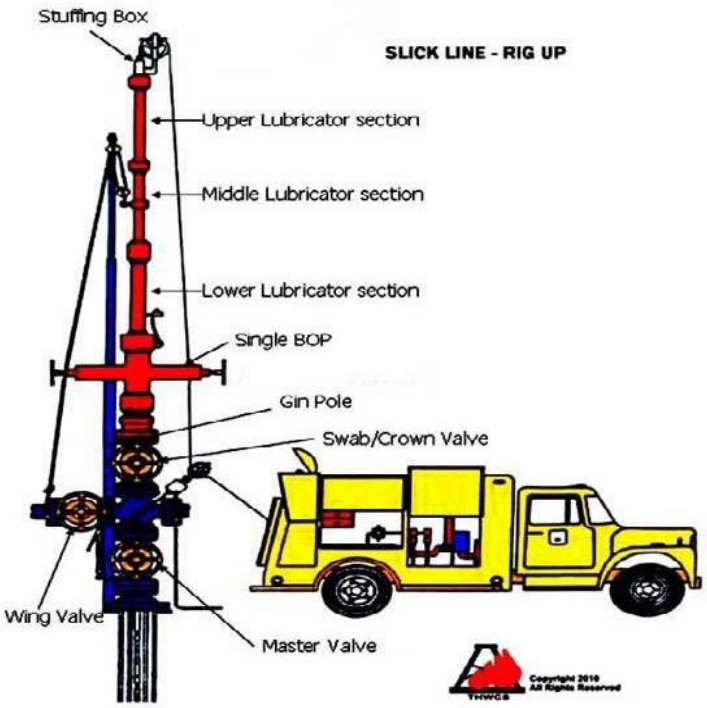
15. During which situation do we need to pick up extra lubricator sections and rig up with braided line pressure control equipment?

    a) Before we can start with a wireline fishing operation
    b) When we have to run braided line into high pressure gas well
    c) When the stuffing box needs to have a back-up for pressure containment
    d) When the wireline has to be cut down hole

16. The Ball Check Valve (Safety Check Union) does not seal well pressure when tested. Do we need to change this Ball Check Valve before running the braided line operation?

    a) YES
    b) NO

17. Identify the Barrier Group of this rig up?



a) Primary Barrier:

_____

_____

b) Secondary Barrier:

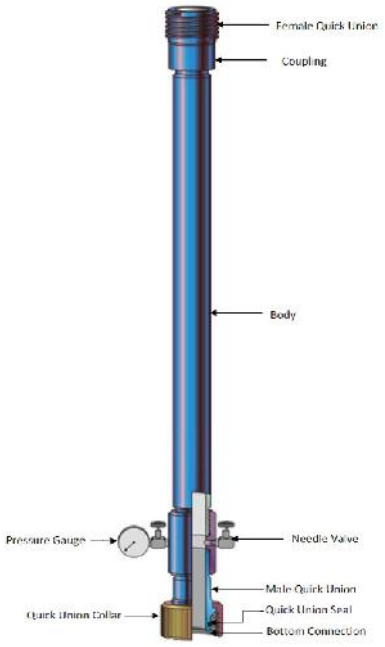
_____

c) Tertiary Barrier:

_____

18. Control Equipment (PCE) is rigged up on well and the pressure test is taking place by applying low pressure first and then the full well pressure.

The quick union between the lower and the middle section of the lubricator starts to leak at low pressure, but not at a high test pressure.



What is the likely cause of this problem?

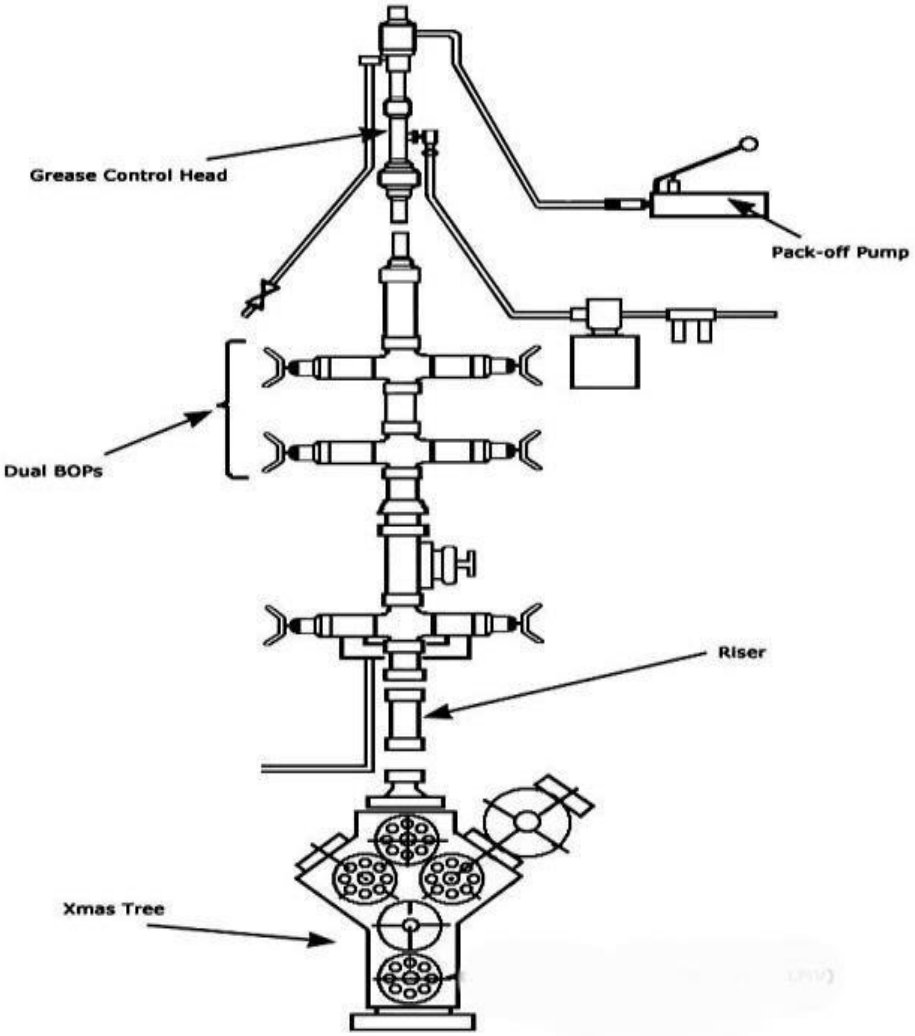
a) The 'O'-ring groove at the leaking connection is somewhat worn

b) The 'O'-ring has split or has a cut

c) The Female Internal Bore at the leaking connection has a worn surface

d) The [Male] Box ACME connection at the leaking connection shows handling damage in some places

19. Indentify the barrier group of this rig up: -



a) Primary Barrier: _____

b) Secondary Barrier: _____

c) Tertiary Barrier: _____

20. When the slick line cable breaks off from the rope socket and the wire is blown out from the Stuffing Box, what is then the closable barrier that comes into effect and acts as a primary barrier?

    a) Stuffing Box Plunger (internal BOP)
    b) DHSV
    c) Swab valve
    d) Ball Check valve
    e) BOP

21. A dual BOP with a lower inverted ram is installed on the well. There is no Shear/Seal or other type of wire cutter rigged up on top of the X/mas tree valve. To get Double Barrier Protection, which of the following is correct?

    a) A Dual Ram BOP can be supplemented by a 2nd identical Dual Ram BOP.
    b) A Dual Ram BOP can be supplemented by a Shear/Seal BOP.
    c) A Dual Ram BOP can be supplemented by a 2nd Single Ram BOP.
    d) A Dual Ram BOP is sufficient.

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

11.	a
12.	a
13.	b
14.	b
15.	a
16.	a
17a.	Primary Barrier: Stuffing Box [including Plunger] + Lubricator Sections
17b.	Secondary Barrier: Wire Line BOPs [Blind Rams]
17c.	Tertiary Barrier: Upper Master Valve [provided it can cut the wire]
18.	c
19a.	Primary Barrier: Grease Injection Head [GIH]
19b.	Secondary Barrier: Dual BOPs with Inverted Rams [for Braided/e-Line]
19c.	Tertiary Barrier: Shear/Seal BOPs [as a Single BOP above Xmas Tree]
20.	a
21.	a

EXERCISE WIRE LINE EQUIPMENT-3	
1.	b
2.	c, d, f
3.	d, e
4.	c
5.	b
6.	b
7.	b, e
8.	c
9.	a, c
10.	a
11.	b, c