SLICKLINE OPERATOR WORKBOOK

IMPORTANT NOTE:

1. Your point of reference to complete this workbook may be obtained from the following
   - Training Manual and any other training materials provided together with this workbook
   - Your Trainer, Assessor (Slickline Operator), Verifier (FSM) or senior colleagues
   - SOP / Quality Procedures & Processors
2. The completion of this Workbook is a joint effort and responsibility between you and your assessor therefore you have the obligation to request from your assessor to be assessed upon your completion of each topic
3. The completion of this Workbook is part of the MANDATORY requirements which you must fulfill to qualify for a promotion
4. Your training program is mostly self-driven, including this Workbook. It requires individual initiatives, dedication and commitment to complete the process.

NAME	**MOHD YANI BIN MOHD AZMI**
DATE OF JOIN	**DECEMBER 2012**
CONTACT NO.	**011-39109091**
RECEIVED DATE	
DATE COMPLETED	**09/06/2024**

B.1 OPERATIONS

Legend: **C**-Competent, **NME**-Need More Exposure

Document No.	EXECUTE THE WELL SERVICES OPERATIONS	Assessment / Verification	Competency C	Competency NME	Assessment Date
Form B 2.1	**ENTER THE WELL BORE**				
	1. What do you understand by the term 'SSV' and 'SC-SSV'? Explain what do you do with the SSV and SC-SSV hydraulic system when you have to work on a well? Explain why you have to do so? * SSV – SURFACE SAFETY VALVE * SCSSV – SURFACE CONTROL SUBSURFACE SAFETY VALVE * The all valve need to open/close while perform slickline job.	Good	✓		10/06/24
	2. Why do you have to carry out pre-checks on the service tools prior to well entry? List down the possible consequences if the pre-checks are not done. * used wrong tool while RIH * Used wrong size of tool while RIH * Used wrong position tool assembly.	Good	✓		10/06/24
	3. Why do you have to 'zero' your toolstring every time you make a well entry? Where is your 'zero' reference point when you are working on: i. the rig floor – Rig floor / rotary Kalley bushing ii. a remote installation – tubing hanger	Good	✓		10/06/24

	4. How do you prepare your daily operation report? Give a copy of your daily report as a sample of your reporting format. Who should scrutinize your report and who is the final person to endorse your report when you are: i. on a production platform well service supervisor ii. on a drilling rig completion supervisor	Good	✓		10/06/24
Form B.2.2	**RUN AND MANIPULATE SURVEY AND NON-SETTING TOOL STRING**				
	1 How do you prepare a well for wireline entry, with respect to the platform Shutdown system? *(Answer in description form & bullet points)* *Check if well is flowing or closed-in. * Record FTHP/CITHP, CHP and control line pressure. * Check if pump of the wellhead control panel or "C.O.M." unit is stroking. Ensure control line isolating valve is open * Check for leaks in X-mas tree swab valve. * The actuated upper master valve shall be function-tested to ensure its full operability without any erratic movement. An erratic movement of the actuator shaft is an indication of problem springs which warrants immediate rectification before any wireline entry.	Good	✓		10/06/24
	2 Why is it important to do that? * To avoid any alarm, shutdown or effect to platform system.	Good	✓		10/06/24

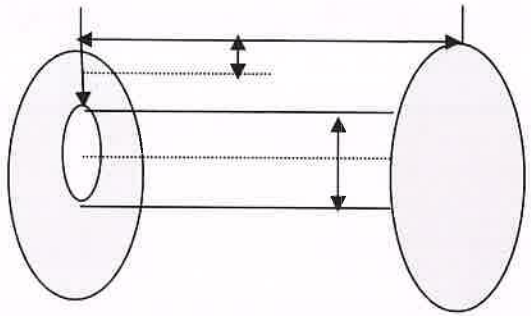
	3 For all wireline well entry work it is mandatory for the control of the SSV to be transferred to the Well Services SWCP. Besides the above, what other essential precaution should be taken when running sinkers and non-setting surveys? Explain why? *(Answer in bullet points)* * *Function test SWCP.* * *Check manifold, ESD.* * *Check any leaking at SWCP line.* * *Closely monitor pressure at SWCP.*	Good	✓		10/06/24

	4 When carry out a sand bailing operation using a pump bailer, describe the precautions to be taken, and the application of correct pumping technique to ensure that the bailer does not get stuck in the sand or buried by a potential sand bridge? i. Pre-operational checks *(Answer in bullet points)* * Ensure that the size of the bailer is compatible with the tubing size and Downhole accessories. * Check the travelling valve and piston for wear. If packing are used, replace Worn packings. * Ensure that the piston rod can make its full stroke freely. * Check sucking action of the bailer using water. * Ensure that all components are made up tight. When making up the top sub or bottom nose to the tube, do not over tighten as the gripping action of the pipe wrench on the tube will squeeze and deform the tube. * Ensure that enough length of lubricator is rigged up to accommodate the bailer with extended tube and its piston rod fully extended. ii. Sand bailing *(Answer in bullet points)* * Run in hole the sand bailer at moderate speed to about 20 feet above the top of the sand/debris as tagged by the wireline drift or LIB run. Check and record the pulling weight of the toolstring. * Lower the bailer slowly onto the sand/debris and record the hold-up depth. Pull back the sand bailer some 20 feet above the sand/debris to ensure it is not stuck, in case the sand is soft, or mud is encountered. Observe for any sign of overpull. * Repeat Step above a few times to confirm the sand bailer is free (i.e, no overpull). * When satisfied that the bailer is full, as indicated by the increase in hold-up depth and the play of only the link jar in the wireline toolstring, pull out of hole the bailer to surface and into the lubricator. Close the swab valve and depressurize the lubricator completely. * Remove bailer from the toolstring, taking care not to spill any liquid via the fluid exit hole at the top end of the bailer tube. Collect all liquid in a bucket or container.	Good	✓		10/06/24

	5. Explain why the integrity of the flowline valve is important during a wireline well entry work. The integrity of the flowline valve is important during a wireline well entry work because :- *(Answer in bullets points)* * To avoid back pressure from well entering the flowline and effect to the production system. * To avoid any leaks while RIH. How will a badly passing flowing valve jeopardize: **a. A non-setting survey job** * survey data not accurate **b. A setting survey job** * Survey data not accurate **c. A non-setting toolstring well entry work** * Cross flowing and toolstring may flowting/ blow out	Good	✓		10/06/24
	6. When would it be appropriate to run a hydrostatic bailer? State the conditions under which it could be effectively used to accomplish a work Objective. **(Answer in bullets points)** * When you get solid base to shear disc. * If the tool length is need to short. * If the sand pump bailer not available at site. * When the debris cannot be remove by sand pump bailer	Good	✓		10/06/24

	7. When pulling a 16 feet tool-string back into the tubing tail how do you estimate the whereabouts of the rope socket with respect to the wireline re-entry guide? *(Answer in description form)* * When you get indication at weight indicator. Let say the weight is 600 lbs when the rope socket hit the entry guide you will over pull until the rope socket release re entry guide and weight come back to normal.	GWL	✓		10/06/24

8. Describe the mathematical steps to estimate the length of the wire left or available on a wire-line reel skid.



Legends:-
A = Flange to core distance (cm) B = Drum core distance (cm)
C = Flange to Flange (cm) D = Flange to top of wire (cm)
d = diameter of wire (cm) Pi of a circle + 3.1416

Formula for length of Wire in the Drum when neatly spooled is

$$\frac{A-D}{d} \times \frac{C}{d} \times Pi\,((A-D)+B)$$

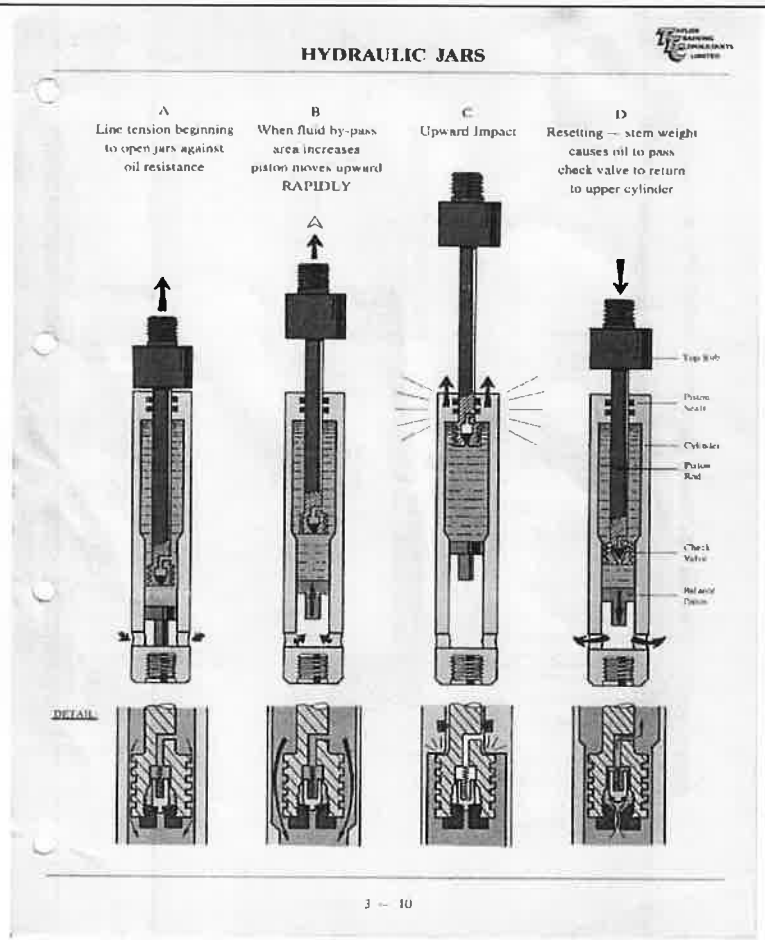
ANSWERS

A=18 CM
B=20 CM
C=120 CM
D=12 CM
d=0.3175 cm
π=3.1416

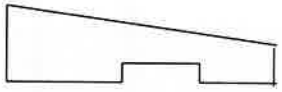
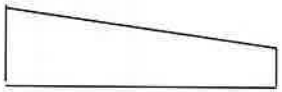
Good ✓ 10/6/24

	18-12 x 120 x 3.1416 (18-12) + 20 0.3175 0.3175 = 583546.79 cm	Good	✓		10/06/24
	9. Why is it important to establish correlation of tubing accessories depth with well diagram depth during well entry work? * To know the actual depth (slickline depth) Describe how you could achieve this by wireline means? * During RIH check every accessories and compare to the well schematic.	Good	✓		10/06/24
Form B.2.3	**INSTALL AND RETRIEVE DOWNHOLE ASSEMBLIES**				
	1. What are the checks that should be carried out prior to running an 'XX' or 'PR' (XN or RN) lock mandrel? Name five. *(Answer in bullets points)* ** Key type* ** Size* ** Shear pin size* ** Type of shear pin to use* ** O-ring facing*	Good	✓		10/06/24

	2. Describe, with the aid of a diagram, how a hydraulic jar works. Please see the attachment on the next page. Answer: * When upward jarring is required, Increase the power pack engine RPM to at least half throttle and switch to high gear on the wireline winch. * Lower the toolstring down to close both the mechanical link and hydraulic jars. * Adjust the 4-way valve control to control the wire tension on the toolstring to pre-determined pulling weight as required. Repeat step above. * Pull in the 4-way valve lever completely to reel in the wireline at full speed of the winch to accelerate and open the link jar to produce the first upward impact. * As soon as the pre-determined tension is reached, maintain this tension in the line until the hydraulic jar is activated; this is indicated by a sudden deflection of the weight indicator gauge pointer. * Repeat the jarring-up action by performing Steps 2 through 5 until the job is accomplished.	Gwd	✓		10/08/24

		Good	✓		10/06/24

HYDRAULIC JARS
A
Line tension beginning to open jars against oil resistance
B
When fluid by-pass area increases piston moves upward RAPIDLY
C
Upward Impact
D
Resetting — stem weight causes oil to pass check valve to return to upper cylinder
DETAIL
3 — 10

	3. What is the difference between the overloaded type (A) and the plain type (B) slips used in conjunction with the 3/16" slip type braided line rope socket? Overloaded type (A) slip  * The OVERLOAD RELEASE TYPE is designed to cause the line to break under severe loading at a specific percentage of the full strength of the line. A range of five breaking strength slips is available: 50%, 60%, 70%, 80% and 90% of line strength. Plain type (B) slip  * The PLAIN type is designed without the overload release feature. Experience indicates that the line will usually break near the top end of these slips at approximately 90% of the breaking strength of the line. How many types of breaking strength slips are available and what are they? * Tear drop * The knot type *The no knot type	Good	✓		10/08/24

	4. What are the essential checks that should be carried out before assembling a wireline toolstring? Name six. (Answer in bullets points) * Inspect the rope socket for burrs around the wire hole which could damage the wire inspect all box and pin threads for damage and loose connections. * Inspect all quick connectors for damage to the locking profiles and check that the integrity of the locking mechanism is intact. * Inspect fishing neck profiles for burrs and wrench damage. * Inspect mechanical jars for buckling, bending, bowing, and check for smooth operation. * Check integrity of roll pins in knuckle joints, freedom of movements of ball in socket. Rectify any faults found, before assembling the tool string. * Ensure the pin and box threads are properly fitted before screwing them together. Continue to make up the connection by hand until the pin and box ends are shouldered up. DO NOT use wrenches to make up the components together until the connections have shouldered up. * Tighten the connections with wrenches using "Snapping" action, but do not exert body weight on the wrenches by jumping on them. This will damage and weaken the threads of the components.	Gwd	V		10/06/24

	5. Describe how to make up, run, set and test a WR SCSSV. You can choose the type and either oil well or gas well. Also highlight the telltale signs in terms of tool, wireline and pressure indications to confirm that the valve has been properly set and installed. Type of WR SCSSV: CAMCO B7 to install in an oil well Pre-operational B7 valve checks *(Answer in bullets points)* * Ensure that fishing neck is in good condition, i.e. not burred or worn. * Ensure that V-packing stacks and O-rings are in good condition. Torn or worn packings and swollen O-rings may be replaced on site. * Check to confirm that all connections are tight. * Ensure that the flapper housing does not sustain any damage or deformation due to impact. Preparation for running the B7 valve *(Answer in bullets points)* * Valves returned from the Workshop after redress Check that the No-Go ring has been correctly pinned in the lower (running) position with aluminum shear pins. * Valves retrieved from the well to be re-run Knock out the remains of the shear pins from the No-Go ring and the grooves in the No-Go retainer. Pin the No-Go ring in the lower (running) position with ready-cut to length aluminum pins. Replace V-packings and O-rings as necessary. * Make up the running equalizing prong to the 3" D1T running tool and tighten all connections. * Pin the tell-tale ring in the lower position with a new 1/4" brass shear pin. * Insert the running tool with prong into the B7 valve until the skirt of the running tool sits against the top shoulder on the No-Go retainer of the lock mandrel of the valve. Check and ensure the flapper is held open by the equalizing prong. * Pin the D1T running tool to the B7 valve with 2 pieces of ready-cut to length brass pins through the holes in the bottom of the skirt and the matching grooves on the No-Go retainer. * Apply hydraulic oil on the V-packings on the B7 valve.	Good	✓		10/06/24

	* Record the valve identification number for the daily report; this must be personally checked by the Well Intervention supervisor. *Setting the B7 valve* (Answer in bullets points) * Make up the lubricator onto the riser and open swab valve slowly to pressurize the lubricator assembly. * When pressure in the lubricator is same as the well's CITHP, open the swab valve fully. Run in hole the B7/FXE valve slowly and stop at 10 feet above the BP-6 /XXO landing nipple. Check pulling weight. * Open the bleed-off valve on the control line manifold on the wellhead and commence flushing the control line using the Single Well Control Panel. * After flushing at least 1 litre of hydraulic oil into the control line, slow down the pump rate to 3 to 5 strokes per minute. * Lower down the B7/FXE valve until it stands up. Tap the valve into the landing nipple. * As soon as the pump stops pumping (indicating the B7/FXE valve packing stacks are across the seals bores of the landing nipple and sealing), stop the pump and bleed off the control line pressure to equal that of the CITHP. * Continue tapping down on the valve until a solid sound is heard. * Pressurize the control line to 3600 psig using the single well control unit and observe for no pressure drop for 5 minutes with the pump stops operating. * Jar up to shear and release the running tool from the valve, while closely observing the control line pressure for any sudden drop. If there is any sudden decrease in the control line pressure, lower down the toolstring and repeat step 7 and 8. * If no decrease is observed in the control line pressure after shearing off the running tool, pull out of hole the wireline toolstring and close the Xmas tree swab valve. * Depressurize the lubricator assembly and remove the running tool from the toolstring. * Once the B7/FXE valve is confirmed locked in place, bleed off the control line pressure and re-pressurize again to 3600 psig. Repeat this cycle at least twice to check the integrity of the V-packings and internal seals of the B7FXE valve. * Pressurize the control line to 3600 psig and close the bleed-off valve on the control line manifold at the wellhead. Bleed off pressure in the supply line from the Single Well Control Unit Pump and disconnect the supply line from the bleed-off valve.	Good	✓		10/06/24

	Differential pressure test on B7 valve *(Answer in bullets points)* * Once the B7/FXE valve has been installed into the Landing Nipple successfully a functional and differential pressure test shall be conducted to ensure functionality and pressure integrity of the valve. * Record CITHP, close isolating valve on the control line manifold on the well and bleed off control line pressure while collecting hydraulic fluid return in a measuring container until no more return is observed. Take note of the volume of hydraulic oil return and compare it to the valve manufacturer"s data to confirm consistency. * Once it is confirmed that the valve is in the closed position, depressurize above the B7/FXE valve in stages to the flowline pressure. At each stage of the depressurization process, monitor the pressure above the valve and the control line return closely for leaks or indication that the valve has been unseated. * Once the CITHP is equal that of the flowline pressure, close in the flowline valve and monitor for 15 minutes any pressure increase above the B7/FXE valve and in parallel, any return from the control line. * If no pressure build up above the B7/FXE valve is observed and no return from the control line is seen, close back the control line bleed-off valve and connect back the hydraulic pressure supply line from the Single Well Control Unit Pump. With the well still shut in, open the bleed-off valve on the control line manifold at the wellhead and slowly increase control line pressure until the CITHP begins to increase. Close the bleed-off valve and record the opening pressure of the B7/FXE valve. When the CITHP stabilizes, open back the bleed-off valve and continue to allow control line pressure to increase to its preset pressure of 3600 psig. At this juncture, it is essential to observe the pump pressure profile (signature) to confirm that the B7/FXE valve is going through its opening stages until it is fully opened. When the control line pressure reaches its set pressure of 3600 psig, monitor for pump stroking. If no stroking of the pump is observed and the control line pressure is holding, the operational integrity on the B7/FXE valve is confirm. * Open up flowline valve to bring well into production, allowing sufficient time for stabilization of flow (stable FTHP) before conducting the SC-SSV closure test under flowing condition.	Good	✓		10/06/24

	Slam test on B7 valve (Answer in bullets points) * Disconnect the hydraulic pressure supply line from the Single Well Control Unit from the bleed-off valve on the control line manifold on the wellhead. Bleed off control line pressure to zero. Note time elapsed after triggering control line pressure until a reduction in the THP is observed (valve closure time). Record this information in the daily operation report. * When THP has decreased to the flowline pressure, close in the flowline valve and observed for any pressure increase in the THP and in parallel check for any control line returns for 15 minutes. * Repeat step no 5 * Cycle the B7/FXE valve twice. If satisfactory valve performance from control line pressure profile (signature) / hydraulic oil volume return / operating time intervals are observed, the B7/FXE valve is considered operation. * Close the bleed-off valve on the control line manifold at the wellhead. Bleed off pressure in the supply line from the Single Well Control Unit Pump and disconnect the supply line from the bleed-off valve. * Open the isolating valve on the supply line from the platform's control panel/"C.O.M." unit to re-instate the platform's automatic safety shut-down system.	Good	✓		10/06/24

	6. Describe how to make up, set and test a downhole plug. You can choose the type and either an oil well or gas well. Also highlight the telltale signs in terms of tool, wireline and pressure indications to confirm that the plug has been properly set and installed. Type of downhole plug: <u>"XX" plug to install in an oil well</u> a) <u>Preparation for the Lock Mandrels</u> *(Answer in bullets points)* * Ensure all threads are in good condition, and all connections on the running tool are tight. * Ensure all retaining pins in the running tool are intact. * Place the running tool in the control position and check that the core can slide freely in the mandrel sub-assembly. * Make up the appropriate running equalizing prong for the subsurface control to be run (if required) to the bottom of the running tool core and tighten the connection. * Check all threaded connections on the "X" or "XN" lock mandrel are tight. * Ensure that all locking keys in the lock mandrel are the same and in good condition. * Fully extend the fishing neck of the lock mandrel to collapse the locking keys. Hold the lock mandrel horizontally and check that none of the keys will drop out towards the locked position. * Place the lock mandrel in the "control" position and check that all the locking keys are expanded outwards fully, but can be collapsed fully inwards when pressed against by hand. If any one key does not expand out properly, the key spring on that key must be replaced. * Fully collapse the fishing neck in the lock mandrel ready for assembly to the running tool. Place the lock mandrel and subsurface control in a vise, gripping on an appropriate part of the body of the subsurface control.	Good	✓		10/06/24

	b) <u>Assembling the lock Mandrel to the "X" running tool</u> (Answer in bullets points) * Insert the "X" running tool core end into the fishing neck end (top) of the lock mandrel until the boss shoulder on the core of the running tool seats against the top shoulder of the packing mandrel in the lock. * Rotate the running tool as necessary until the releasing shear pin hole in the core is aligned with the releasing shear pin hole in the packing mandrel. * Insert a 5/16" brass pin into this set of releasing shear pin holes until the end of the pin is about half way in. Tap on the side of the pin until it is slightly bent. Continue to drive the pin through the holes until the end is just flush with the O.D. of the packing mandrel on the opposite side. * Cut off the shear pin at the side of the shear pin hole such that it will be flush with the O.D. of the packing mandrel. Flare the ends of the shear pin with a center punch. * Insert a 1/4" pin punch into the other shear pin hole in the packing mandrel and punch on the releasing shear pin through the hole in the core to bend the pin such that the remains of the shear pin will not drop out from the running tool core when the pin is sheared and the running tool is being pulled out from the well. * Extend the fishing neck of the lock mandrel until the retainer pin at the top of the running tool mandrel sub-assembly shoulders up on the bottom of the slot. The running tool and lock mandrel are now in the "control" (non- selective) position. * Press down on all the lock mandrel keys to ensure that they can collapse inward fully and flush with the O.D. of the key retainer sleeve, yet spring out again when released. Also check that the keys do not wobble. * Insert a slightly bent 1/4" steel pin into the upper shear pin hole of the running tool. This pins the core to the mandrel sub-assembly. Flare the ends of the shear pin to prevent them from dropping out after shearing. * Place a flat screwdriver blade in the gap between the bottom of the top sub on the main mandrel and the spring housing of the running tool. Pry the top sub and the spring housing further apart; this relieves the spring load on the tripping dogs. Grasp the heel of the dogs with the thumb and forefinger, and press to expand the dogs. Remove the screwdriver, this allows the spring housing to snap back against the top sub on the mandrel subassembly. The lock mandrel and running tool are now in the "selective" position.	Good	✓		10/06/2

	* Ensure proper operation of both the running tool and lock mandrel assembly c) *Setting the 3" Otis XX plug* (Answer in 14 steps) * After setting the "zero" reference depth, make up the X-running tool attached With the "XX" plug choke to the wireline toolstring. * Pull toolstring assembly into lubricator and make up quick union. Pressurize the lubricator to full CITHP slowly and open Xmas tree swab valve fully. * Run in hole the "XX" plug at moderate speed and stop at 30 feet above the uppermost "X" profile accessory (an Otis "X" landing nipple or SSD). Check pulling weight of the toolstring assembly. * Continue to lower the "XX" plug until hold-up at the "X" profile seal bore. Note the wireline depth of this accessory for depth correlation and control later on. *Tap the "XX" plug through the seal bores until the depth of the accessory where the plug is to be set. * Check pulling weight of the toolstring just above the depth of the "X" nipple profile where the plug is to be set. Then, lower down and tap the plug through this "X" nipple profile (in the case of an SSD, it will be the top seal bore only). * Pull back the plug slowly until the tripping dogs locate the bottom of the seal bore in the nipple; this is indicated by an overpull, as well as the depth reading corresponding to the depth of the accessory. * Apply an overpull of 300 to 400 lbs to trip the running tool and bring the "XX" plug lock mandrel into the "Control" position. Alternatively, the plug may be lowered to some 10 feet below the nipple (in the case of an SSD, lower the plug until hold-up at the bottom seal bore) and then run up fast into the nipple seal bore, thereby creating a jarring action which has the same effect as an overpull to trip the running tool. Continue to pull the plug until it is just pass the "X" profile accessory and note the pulling weight. * Lower the plug slowly into the landing nipple. Tap down on the plug slowly to get the V-packings into the seal bore, and the lock mandrel keys locate into the landing nipple recess. Tap down at least 20 times to be sure. * Apply downward jarring to shear the setting pin in the running tool and move the lock mandrel expander sleeve behind the keys to lock them in the expanded position. When this is done, the plug is set in the nipple. Make at least 20 downward jars.	Good	✓		10/06/24

	* Check to confirm the plug is fully locked in the nipple by applying a 200 to 350 lbs overpull. When confirmation is positive, jar up to shear the releasing pin attaching the running tool core to the plug and free the running tool. * Once the running tool is free, check pulling weight to be sure that the plug is not attached to the running tool. When confirmed that the plug has been left set in the nipple, pull out the toolstring to surface and into the lubricator. * Close Xmas tree swab valve and depressurize the lubricator completely. Break open lubricator and remove the "X" running tool. Check that the running equalizing prong is still attached to the bottom of the running tool core, and that all shear pins have sheared. * Carry out an inflow test (if all other accessories in the tubing string are closed, e.g. SSD's) by bleeding down at least 50% of the CITHP and observing for no pressure build-up over 1/2 hour to confirm the plug holding.	Good	✓		10/06/24
	7. In a vertical well, you are to equalise and pull a 3" plug at 7656 ft. Reservoir pressure = 2800 psig. Liquid level is detected at 1867 ft. Liquid gradient of well = 0.28 ppf. CITHP = 980 psig. Ignoring pressure exerted by gas column and assuming that the liquid level remains unchanged, calculates the final CITHP after you have RIH and have properly equalised the plug. Show the mathematical steps on how you arrived at your answer. Data: Fluid level: 1867 ft. Plug to be pulled: 7656 ft. Expected reservoir pressure: 2800 psig *Surface THP: 980 psig* **ANSWER :** Final THP = (7656-1867) X 0.28 +980 = 5789 X 0.28 +980 = 2601 PSI = 2800 psi – 2601 psi = 199 psi	Good	✓		10/06/24

	8. What is the most appropriate instrument you can use to monitor pressures during a plug equalization process, and state the advantages over a conventionnel pressure gauge? (Answer in bullets points) * The pressure gauge at the lubricator will not register an immediate change in pressure once the equalizing sleeve is opened due to the volume of the tubing. Hence, the initial indication that the equalizing sleeve is opened is the weight loss experienced on the toolstring.	Good	✓		10/06/24
	9. How do you confirm that a WR SCSSV is proper set or installed in its landing nipple with respect to tool, wire line and pressure indication?	Good	✓		10/06/24

No	Tool indications	Wireline indications	Pressure indications
01	Continue tapping down on the valve until a solid sound is heard.	As soon as the pump stops pumping (indicating the B7/FXE valve packing stacks are across the seals bores of the landing nipple and sealing), stop the pump and bleed off the control line pressure to equal that of the CITHP.	Pressurize the control line to 3600 psig using the single well control unit and observe for no pressure drop for 5 minutes with the pump stops operating.
02			
03			
04			

10 How do you confirm that a downhole plug is properly set or installed in its landing nipple with respect to tool, wire line and pressures indication?

No	Tool indications	Wireline indications	Pressure indications
01	Pull back the plug slowly until the tripping dogs locate the bottom of the seal bore in the nipple; this is indicated by an overpull, as well as the depth reading corresponding to the depth of the accessory.	Check to confirm the plug is fully locked in the nipple by applying a 200 to 350 lbs overpull. When confirmation is positive, jar up to shear the releasing pin attaching the running tool core to the plug and free the running tool.	Carry out an inflow test (if all other accessories in the tubing string are closed, e.g. SSD's) by bleeding down at least 50% of the CITHP and observing for no pressure build-up over 1/2 hour to confirm the plug holding.
02	Apply downward jarring to shear the setting pin in the running tool and move the lock mandrel expander sleeve behind the keys to lock them in the expanded position. When this is done, the plug is set in	Once the running tool is free, check pulling weight to be sure that the plug is not attached to the running tool. When confirmed that the plug has been left set in the nipple, pull out the toolstring to surface and into the lubricator.	

Good ✓ 10/06/24

			the nipple. Make at least 20 downward jars.		Good	✓		10/06/24
Form B.2.4	**INSTALL RETRIEVE AND MANIPULATE CIRCULATING AND COMMUNICATION DEVICES.**							
	1. What are the checks should be carried out on a 142BO positioning tool prior to running it into the well? Pre-operational checks *(Answer in bullets points)* * Ensure the appropriate size of 142BO positioning tool is available. * Check and ensure the positioning tool keys are in good condition, i.e. shifting shoulders not worn out or rounded, and the key springs are strong. * Check and ensure the tripping dogs are in good condition, and will retract easily when pushed upwards with the tool set in the selective position. * Check and ensure all connections in the tool are tight, and the top connecting threads and fishing neck are in good condition.				Good	✓		10/06/24
	2. What features and components on the 42XO positioning tool allows it to reciprocate between selective and non selective position? Explain how is this achieve? *(Answer in bullets points)* * The Otis "42XO" positioning tool has an indexing feature which alternates the tool into the engaging and non-engaging mode.				Good	✓		10/06/24
	3. When opening a SSD why it is not recommended to open the link jar fully? * This is to prevent premature tripping of the positioning tool.				Good	✓		10/06/24

	4. When installing a GLV, are the two sets of tangential shear pins installed on the Camco "GA-2" running tool jar up to shear or vice versa? * The Camco GA-2 running tool is a jar-down-to-shear and release running tool. Any upward jarring applied to release the running tool will result in improper setting of the 1" valve or dummy.	Good	✓		10/06/24
	5. After installing/setting a GLV in the SPM is it necessary to shear off the locating finger's pin on KOT to enable release from the particular SPM and also passing through other while POOH. Explain. * To ensure KOT not engage with other SPM or well eccessories.	Good	✓		10/06/24

	6 Describe how to install/set a BKR-5 in the first SPM. You are to include tool-string configuration, services tools selection, type/size of shear pins, pressures checking, running & pulling speed and confirmation of proper installation. 1) <u>To install a BKR-5 in the first SPM</u> a) <u>Tool-string configuration from top to bottom</u> (Answer in bullets points) * Rope socket * Swivel joint * Normal Stem * Knuckle joint * Spank jar * Kick over tool * JK-1 b) <u>Serviced Tools selection</u> (Answer in bullets points) * Kick over tool * JK-1 c) <u>*Type & Size of Shear pins*</u> (Answer in bullets points) * 2/16" brass shear pin * 3/16" brass shear pin * 4/16" brass shear pin d) <u>Pressure checking</u> * Check SITCP before and after d) <u>Running and Pulling speed</u> * Arround 100ft/min	Good	✓		10/06/24

	f) Confirmation of proper installation * Conduct pull test g) To install BKR-5 in the first SPM * Pass thru the SPM * Pick up running tool * Record weight * Locate and seat at SPM. * Jar down for some time to set 2) To retrieve a BK-R 5 from the first SPM. a) Tool-string configuration from top to bottom. * Rope socket * Swivel joint * Normal stem * Knuckle Joint * Spank Jar * KOT * 1-1/4" JDC b) Serviced Tools selection * KOT * 1-1/4" JDC c) Type & Size of Shear pins * Brass pin 3/16" d) Pressure checking * Before and after pulling * Calculate hydrostatic pressure before pulling	Gwd	✓		10/06/24

	e) Running and Pulling speed. * Record RW / PW before pulling f) Confirmation of proper installation * Pressure either increase, decrease or maintain. * Keep monitoring pressure. g) Mode of retrieving BKR-5 valve from first SPM * Locate, sit, latch BKR-5 and jar up to pull.	Good	✓		10/06/24

	7. Describe how to close a 3.5" SSD using a 42XO positioning tool. You are to include Tool-string configuration, size of bottom cap, function testing of tool, maximum allowable line extension, how to accomplish effective and productive jarring and confirmation of SSD fully closed. a) Tool-string Configuration from top to bottom. * Rope socket * Swivel joint * Normal stem * Knuckle joint * Spank jar * 42XO b) Serviced Tools selection * 42XO c) Pressure checking * No differential pressure d) Function test of the tool. * Check spring * Check fishing neck * Check dog * Check shear pin e) Maximum allowable line tension * less than 1250 lbs f) To accomplish effective and productive jarring and confirmation of SSD fully closed. * Reciprocate * Check pin on surface 42XO * If pin shear need to Re RIH	Good	✓		10/06/24

	8 Describe how to open a 2.7/8" SSD using a 142BO positioning tool. You are to include Tool-string configuration, function testing of tool, pressure differential issue, manipulation of the tool-string, precautions during jarring operations and proper monitoring of tubing pressure. To open a 2.7/8" SSD using a 142BO positioning tool. a) Tool-string Configuration from top to bottom * Rope socket * swivel joint * Normal stem * Knuckle joint * Spank jar * 142bo b) Serviced Tools selection * 142bo c) Pressure differential issues Yes. Have a differential pressure d) Pre-check and Function test of the tool * Check spring * Check fishing neck * Check dog * Check bottom thread e) Mode of opening the 2.7/8" SSD	Good	✓		10/06/24

	* Record pickup weight before pass thru * Running with selective mode * locate * control the selective * Jardown until pass thru. * monitor pressure * Reciprocate to confirm fully open.	Good	✓		10/06/24
Form B.2.5	**PERFORM FISHING OPERATIONS**				
	1. For a wireline fish which already been established to have clear fishing neck, what initial pulling tool would you use for: Note: Disregard the size of the fishing neck and the tool to be run for this question. Give your reasons. a. a fish with an external fishing neck. * RB * JDC * FRC b. a fish with an internal fishing neck. * GS * GR	Good	✓		10/06/24

	2. What is the important factor you have to consider prior to the selection of lubricator / BOP configuration for a wireline fishing operation, and what are the consequences of not using the correct length? * you need to consider fish length * not enough space to recover fish tool + current tool	Good	✓		10/06/24
	3. What should the minimum recommended diameter be for the measuring wheel, hay pulley and stuffing box sheave used in conjunction with:	Good	✓		10/06/24

No	Wireline	Measuring Wheel	Hay Pulley	Stuffing Box sheave
A	0.092" slick line	11.25"	11.25"	16"
B	0.108" slick line	13"	13"	16"
C	0.125" slick line	15"	15"	16"
D	3/16" braided line	12"	12"	N/A

	4. After rigging up and prior to running in hole, to what pressure should the lubricator / BOP assembly be tested to and for what duration? * 5/10 mintues pressure tested. *	Good	✓		10/06/24
	5 How and where is the pressure normally introduced into the lubricator/BOP assembly? * Open the swab valve slowly until pressure is heard to enter the lubricator assembly.	Good	✓		10/06/24
	6. A tubular jar is normally used in place of a mechanical jar (link jar) when fishing for wire. Explain the reason behind this philosophy? * To prevent from wire slip inside mechanical link jar.	Good	✓		10/06/24

Wireline Pressure Control Equipment	Time (Days)	LP Test (Psig)	HP Test/Subsequent (Psig)
• Lubricator • Dual Rams BOP • Stuffing Box • Riser • Tool Catcher • Tool Trap • Injection Sub • X-over or Adapter	• Every time before leaving the w/shop • After repair	250-500	100% SWP or WH whichever is lower
	• Before first operation on location • Before operation on subsequent well		110% MASP or lowest rated item in the system
• Dual Rams BOP	• Before operations • Every 7 days or after repair	250-500	110% MASP or lowest rated item in the system
• BOP Control System	• Before operations • Every 7 days or after repair	Operating pressure for the BOP	

	7. How and when do we record the weight reference of the fishing toolstring prior to latching onto the fish? * Before catch the fish. * Check pickup weight every 500 ft while TCC.	Good	✓		10/06/24
	8. In checking the static weight of the tool-string state whether any difference would be encountered when checking the weight during the upward pull and downward run. Can both weight references be used and explain under what condition are each applicable? * Yes. When entering new well for the first tubing clearance check. * To know the weight of the tool string at actual depth. * For weight comparison after setting tool. * detected obstruction or fluid inside the well.	Good	✓		10/06/24

9 What is the maximum line pull allowable for the following wires used in SSB/SSPC, and state their minimum-breaking load

Answer:

No	Wireline	Max. Line Pull	Min. Breaking Load
A	0.092" Bridon U.H.T Bright	1230 lbs	2050 lbs
B	0.108" Bridon U.H.T Bright	1638 lbs	2730 lbs
C	0.108" Bridon Supa 70	930 lbs	1550 lbs
D	0.108" Bridon Supa 75	1278 lbs	2129 lbs
E	0.125" Bridon U.H.T.3	2199 lbs	3665 lbs
f	3/16" Bridon Dyform 1 x 19 (9x9x1)	33.12 kn	55.2 kn

Good ✓ 10/06/24

10 Give five circumstances under which it becomes necessary to employ a wire cutter for the purpose of cutting the wire-line in the well?

* A wire cutter is required when a slickline wire must cut in the well.
* Tool stuck inside the well. Need to cut a wire.
* Lost jar action.
* Tool mulfuction. Example : unable to shear pin.
*

Good ✓ 10/06/24

	11. List out three conditions whereby it is necessary to use an overshot to grip down-hole tools in a fishing situation. * When to catch fish without fishing net. * Suitable to catch any size in range of slip range *	Good	✓		10/06/24
	12. With respect to safety and procedure what type of pulling tool should be used in conjunction with the non-releasable overshot when running it into the well? * Tandem (RB/SB + ROPE SOCKET)	Good	✓		10/06/24.

Assessed By:		Verified By	
Name	Sahriza Bin Sapari	Name	AIMAN BIN HASSAN Field Service Manager DIMENSION BID (M) SDN BHD
Position	SGSO	Position	
Date	10/06/2024.	Date	10/6/24

SLICKLINE OPERATOR WORKBOOK

IMPORTANT NOTE:

1. Your point of reference to complete this workbook may be obtained from the following
   - Training Manual and any other training materials provided together with this workbook
   - Your Trainer, Assessor (Slickline Operator), Verifier (FSM) or senior colleagues
   - SOP / Quality Procedures & Processors
2. The completion of this Workbook is a joint effort and responsibility between you and your assessor therefore you have the obligation to request from your assessor to be assessed upon your completion of each topic
3. The completion of this Workbook is part of the MANDATORY requirements which you must fulfill to qualify for a promotion
4. Your training program is mostly self-driven, including this Workbook. It requires individual initiatives, dedication and commitment to complete the process.

NAME	**MOHD YANI BIN MOHD AZMI**
DATE OF JOIN	**DECEMBER 2012**
CONTACT NO.	**011-39109091**
RECEIVED DATE	
DATE COMPLETED	**26 JUNE 2024**

B.1 OPERATIONS

Legend: **C**-Competent, **NME**-Need More Exposure

Document No.	EXECUTE THE WELL SERVICES OPERATIONS	Assessment / Verification	Competency		Assessment Date
			C	NME	
Form B 2.1	**ENTER THE WELL BORE**				
	1. What do you understand by the term 'SSV' and 'SC-SSV'? Explain what do you do with the SSV and SC-SSV hydraulic system when you have to work on a well? Explain why you have to do so? * SSV – Surface safety valve. * SCSSV – Surface control subsurface safety valve. * The all valve need to open/close while perform slickline job. SSV we control at well head area. SCSSV need to connect to control panel to open and close the SCSSV.		✓		01/07
	2. Why do you have to carry out pre-checks on the service tools prior to well entry? List down the possible consequences if the pre-checks are not done. * Equipment Failure: Tools that have not been checked may malfunction during operation, potentially causing injury to personnel involved in the well intervention. * Operational Errors: Faulty tools could lead to unexpected behaviors during well operations, posing safety risks such as sudden releases of pressure or unexpected movements. * Improperly functioning tools could damage other well equipment, such as casing, tubing, or downhole components, resulting in costly repairs or remedial actions.		✓		01/07

	3. Why do you have to 'zero' your toolstring every time you make a well entry? Where is your 'zero' reference point when you are working on: i. the rig floor – Rig floor / rotary Kalley bushing ii. a remote installation – tubing hanger		✓		01/07
	4. How do you prepare your daily operation report? Give a copy of your daily report as a sample of your reporting format. Who should scrutinize your report and who is the final person to endorse your report when you are: i. on a production platform well service supervisor (WSS) ii. on a drilling rig Completion / Drilling supervisor (DSV)		✓		01/07
Form B.2.2	**RUN AND MANIPULATE SURVEY AND NON-SETTING TOOL STRING**				

	1 How do you prepare a well for wireline entry, with respect to the platform Shutdown system? *(Answer in description form & bullet points)* * Before starting any preparation activities, review and understand the platform shutdown system procedures specific to wireline operations. This includes understanding how the system operates, its emergency shutdown capabilities, and any interlocks with other safety systems. * Coordinate with platform personnel, including the control room operator and platform supervisor, to ensure everyone is aware of the wireline entry preparations and the status of the shutdown system. * Identify and isolate all relevant safety systems and equipment that could be affected by wireline operations, such as the platform shutdown system components. Ensure that isolation valves are closed and locked out as per safety procedures. Use appropriate tagging to indicate isolation status. * Depressurize any systems or equipment that require it before wireline operations begin. This prevents accidental release of fluids or pressure during intervention. * Verify the functionality of the platform shutdown system components, including emergency shutdown valves, safety interlocks, and control systems. * Perform a comprehensive safety check to ensure that all equipment, including the platform shutdown system, is in good working condition and ready for wireline entry. Verify that all personnel involved are briefed on emergency procedures and the use of the shutdown system in case of an incident. * Obtain authorization from the platform supervisor or designated authority before proceeding with wireline entry.		✓		01/07
	2 Why is it important to do that? * ensure that the well is properly prepared for wireline entry with due consideration given to the platform shutdown system and other safety measures. This approach helps maintain safety, operational efficiency, and regulatory compliance during wireline interventions.		✓		01/07

	3 For all wireline well entry work it is mandatory for the control of the SSV to be transferred to the Well Services SWCP. Besides the above, what other essential precaution should be taken when running sinkers and non-setting surveys? Explain why? *(Answer in bullet points)* * Isolation and Tagging: Ensure all relevant safety systems, including the SSV and any other critical well control equipment, are isolated, locked out, and tagged according to safety procedures. * Verification of Downhole Conditions: Before running sinkers or non-setting surveys, verify downhole conditions such as pressure, temperature, and fluid properties to assess potential risks and plan accordingly. * Tool Integrity: Inspect all tools and equipment to be used for the operation to ensure they are in good working condition and suitable for the specific tasks. * Function Testing: Conduct function tests on all tools and instruments to verify proper operation and calibration. * Procedure Review: Review and follow established procedures for running sinkers and conducting non-setting surveys. These procedures should include step-by-step instructions, safety precautions, and contingency plans.		✓		10/10

	4 When carry out a sand bailing operation using a pump bailer, describe the precautions to be taken, and the application of correct pumping technique to ensure that the bailer does not get stuck in the sand or buried by a potential sand bridge? i. Pre-operational checks *(Answer in bullet points)* * Ensure that the size of the bailer is compatible with the tubing size and Downhole accessories. * Check the travelling valve and piston for wear. If packing are used, replace Worn packings. * Ensure that the piston rod can make its full stroke freely. * Check sucking action of the bailer using water. * Ensure that all components are made up tight. When making up the top sub or bottom nose to the tube, do not over tighten as the gripping action of the pipe wrench on the tube will squeeze and deform the tube. * Ensure that enough length of lubricator is rigged up to accommodate the bailer with extended tube and its piston rod fully extended. ii. Sand bailing *(Answer in bullet points)* * Run in hole the sand bailer at moderate speed to about 20 feet above the top of the sand/debris as tagged by the wireline drift or LIB run. Check and record the pulling weight of the toolstring. * Lower the bailer slowly onto the sand/debris and record the hold-up depth. Pull back the sand bailer some 20 feet above the sand/debris to ensure it is not stuck, in case the sand is soft, or mud is encountered. Observe for any sign of overpull. * Repeat Step above a few times to confirm the sand bailer is free (i.e, no overpull). * When satisfied that the bailer is full, as indicated by the increase in hold-up depth and the play of only the link jar in the wireline toolstring, pull out of hole the bailer to surface and into the lubricator. Close the swab valve and depressurize the lubricator completely. * Remove bailer from the toolstring, taking care not to spill any liquid via the fluid exit hole at the top end of the bailer tube. Collect all liquid in a bucket or container.		✓		01/07

5. Explain why the integrity of the flowline valve is important during a wireline well entry work.

The integrity of the flowline valve is important during a wireline well entry work because :- *(Answer in bullets points)*

* Well Control and Safety: The flowline valve acts as a primary barrier to control the flow of fluids from the well. It ensures that pressure within the well can be controlled, preventing uncontrolled releases of hydrocarbons or other fluids. This is crucial for maintaining well control and preventing potential blowouts or environmental incidents.
* Isolation of Wellbore: During wireline operations, especially when tools or instruments are being deployed into the well, the flowline valve isolates the wellbore from the production flow. This isolation prevents unwanted fluids from entering the wellbore and interfering with wireline tools or operations.
* Protection of Personnel and Equipment: By maintaining the integrity of the flowline valve, operators protect personnel and equipment from potential hazards associated with high-pressure fluids. Proper functioning of the valve ensures that pressures are safely contained within the wellhead and flowline system.

How will a badly passing flowing valve jeopardize:

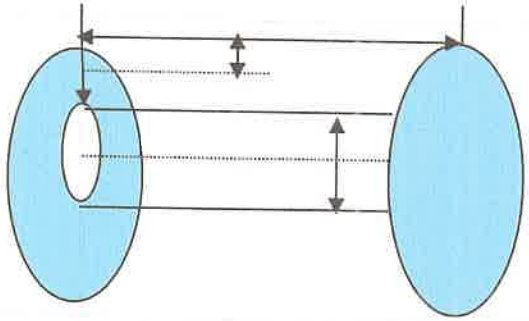
a. **A non-setting survey job**
   * Pressure Control Issues: If the flowline valve is leaking or not sealing properly, it can result in inadequate pressure control at the wellhead. This is crucial during non-setting surveys where precise pressure conditions are needed to accurately measure downhole parameters. A leaking valve could lead to inaccurate readings or fluctuations in pressure that affect the reliability of the survey data.

b. **A setting survey job**
   * Risk of Premature Tool Activation: In a setting survey, downhole tools are often activated by pressure differentials or hydraulic mechanisms. A leaking flowline valve can disrupt these pressure differentials, potentially causing premature activation of tools before they are properly positioned or set. This premature activation may require re-running the tools, leading to operational delays and additional costs.

✓ 01/07

	c. A non-setting toolstring well entry work * Toolstring Integrity: Non-setting toolstring operations often involve deploying sensitive instruments or sensors into the wellbore. A badly passing flowline valve can compromise the integrity of the toolstring by exposing it to unexpected pressures or fluid conditions. This exposure may damage or impair the functionality of the tools, requiring costly repairs or replacements and potentially disrupting the entire operation.				
	6. When would it be appropriate to run a hydrostatic bailer? State the conditions under which it could be effectively used to accomplish a work Objective. **(Answer in bullets points)** * When you get solid base to shear disc. * If the tool length is need to short. * If the sand pump bailer not available at site. * When the debris cannot be remove by sand pump bailer		✓		01/07
	7. When pulling a 16 feet tool-string back into the tubing tail how do you estimate the whereabouts of the rope socket with respect to the wireline re-entry guide? *(Answer in description form)* *.Before pulling the tool-string, visually inspect the length of the tool-string and identify any marks or indicators (such as colored tapes or markings) that indicate the position of the rope socket relative to the wireline re-entry guide. * Measure the total length of the tool-string, which is 16 feet in this case. This measurement includes the length of the tools, the rope socket, and any additional components. Calculate or estimate the approximate position of the rope socket within the tool-string length. For instance, if the rope socket is typically positioned at a specific distance from the end of the tools, subtract this distance from the total length to estimate its location.		✓		01/07

8. Describe the mathematical steps to estimate the length of the wire left or available on a wire-line reel skid.



Legends:-
A = Flange to core distance (cm) B = Drum core distance (cm)
C = Flange to Flange (cm) D = Flange to top of wire (cm)
d = diameter of wire (cm) Pi of a circle + 3.1416

Formula for length of Wire in the Drum when neatly spooled is

$$\frac{A-D}{d} \times \frac{C}{d} \times Pi\,((A-D)+B)$$

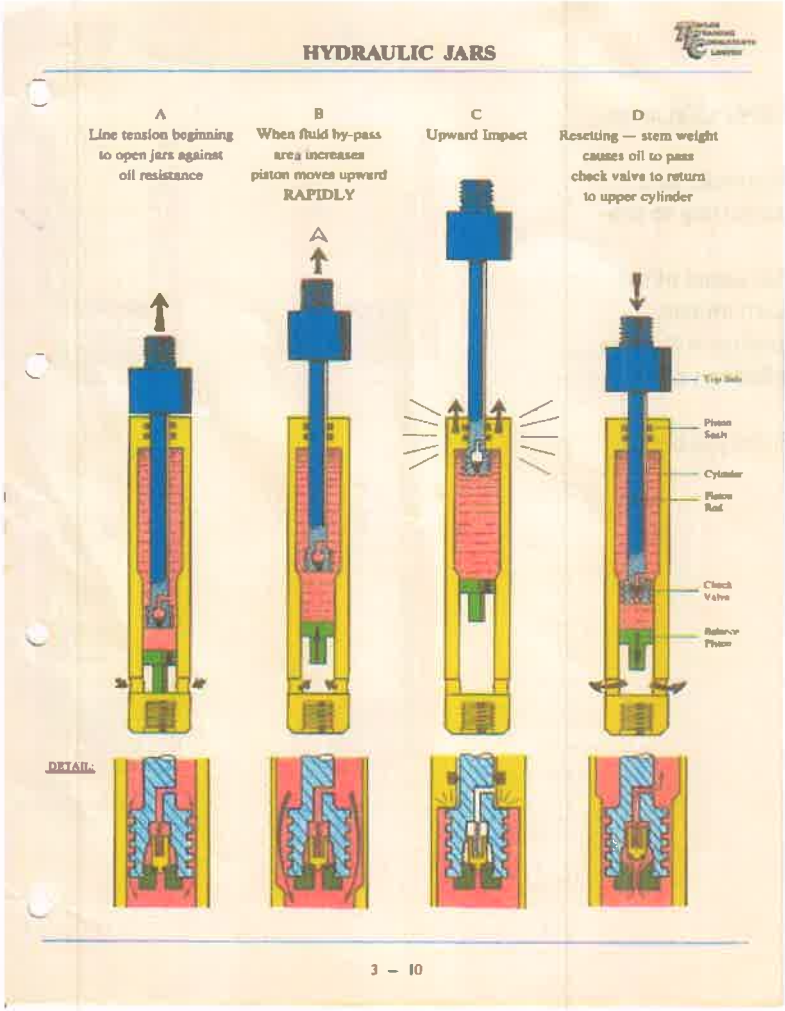
ANSWERS

A=18 CM
B=20 CM
C=120 CM
D=12 CM
d=0.3175 cm
π=3.1416

✓ 01/07

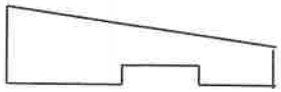
	18-12 x 120 x 3.1416 (18-12) + 20 0.3175 0.3175 = 583546.79 cm				
	9. Why is it important to establish correlation of tubing accessories depth with well diagram depth during well entry work? * To know the actual depth (slickline depth) Describe how you could achieve this by wireline means? * During RIH check every accessories and compare to the well schematic.		✓		01/07
Form B.2.3	**INSTALL AND RETRIEVE DOWNHOLE ASSEMBLIES**				
	1. What are the checks that should be carried out prior to running an 'XX' or 'PR' (XN or RN) lock mandrel? Name five. *(Answer in bullets points)* * Inspect the lock mandrel for any visible damage, such as dents, cracks, or signs of corrosion. * Check for cleanliness and ensure there are no obstructions that could hinder proper functioning. * Verify the dimensions of the lock mandrel to ensure compatibility with the wellbore and other downhole equipment. * Check that the mandrel's outer diameter (OD) matches the specifications required for the well completion. * Perform functional tests to ensure that the lock mandrel operates correctly. This includes checking the locking mechanism to verify that it engages and disengages smoothly.		✓		01/07

	2. Describe, with the aid of a diagram, how a hydraulic jar works. Please see the attachment on the next page. Answer: * When upward jarring is required, Increase the power pack engine RPM to at least half throttle and switch to high gear on the wireline winch. * Lower the toolstring down to close both the mechanical link and hydraulic jars. * Adjust the 4-way valve control to control the wire tension on the toolstring to pre-determined pulling weight as required. Repeat step above. * Pull in the 4-way valve lever completely to reel in the wireline at full speed of the winch to accelerate and open the link jar to produce the first upward impact. * As soon as the pre-determined tension is reached, maintain this tension in the line until the hydraulic jar is activated; this is indicated by a sudden deflection of the weight indicator gauge pointer. * Repeat the jarring-up action by performing Steps 2 through 5 until the job is accomplished.		✓		01/07


HYDRAULIC JARS
A
Line tension beginning to open jars against oil resistance
B
When fluid by-pass area increases piston moves upward RAPIDLY
C
Upward Impact
D
Resetting — stem weight causes oil to pass check valve to return to upper cylinder
DETAIL:
3 – 10

3. What is the difference between the overloaded type (A) and the plain type (B) slips used in conjunction with the 3/16" slip type braided line rope socket?

Overloaded type (A) slip

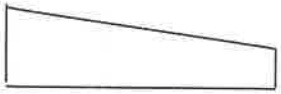


* Overloaded type (A) slips are designed with serrated edges or teeth that grip the wireline braided line more aggressively.
* These slips are intended for use when higher grip strength is needed to securely hold the wireline during operations, especially in situations where there may be heavier loads or greater tension on the line.

✓

01/07

Plain type (B) slip



* Plain type (B) slips have a smooth surface without serrations or teeth.
* These slips provide a gentler grip on the wireline braided line, suitable for situations where less grip strength is required.

How many types of breaking strength slips are available and what are they?

* Tear drop
* The knot type
*The no knot type

	4. What are the essential checks that should be carried out before assembling a wireline toolstring? Name six. (Answer in bullets points) * Inspect the rope socket for burrs around the wire hole which could damage the wire inspect all box and pin threads for damage and loose connections. * Inspect all quick connectors for damage to the locking profiles and check that the integrity of the locking mechanism is intact. * Inspect fishing neck profiles for burrs and wrench damage. * Inspect mechanical jars for buckling, bending, bowing, and check for smooth operation. * Check integrity of roll pins in knuckle joints, freedom of movements of ball in socket. Rectify any faults found, before assembling the tool string. * Ensure the pin and box threads are properly fitted before screwing them together. Continue to make up the connection by hand until the pin and box ends are shouldered up. DO NOT use wrenches to make up the components together until the connections have shouldered up. * Tighten the connections with wrenches using "Snapping" action, but do not exert body weight on the wrenches by jumping on them. This will damage and weaken the threads of the components.		✓		01/07

	5. Describe how to make up, run, set and test a WR SCSSV. You can choose the type and either oil well or gas well. Also highlight the telltale signs in terms of tool, wireline and pressure indications to confirm that the valve has been properly set and installed. Type of WR SCSSV: CAMCO B7 to install in an oil well Pre-operational B7 valve checks *(Answer in bullets points)* * Ensure that fishing neck is in good condition, i.e. not burred or worn. * Ensure that V-packing stacks and O-rings are in good condition. Torn or worn packings and swollen O-rings may be replaced on site. * Check to confirm that all connections are tight. * Ensure that the flapper housing does not sustain any damage or deformation due to impact. Preparation for running the B7 valve *(Answer in bullets points)* * Valves returned from the Workshop after redress Check that the No-Go ring has been correctly pinned in the lower (running) position with aluminum shear pins. * Valves retrieved from the well to be re-run Knock out the remains of the shear pins from the No-Go ring and the grooves in the No-Go retainer. Pin the No-Go ring in the lower (running) position with ready-cut to length aluminum pins. Replace V-packings and O-rings as necessary. * Make up the running equalizing prong to the 3" D1T running tool and tighten all connections. * Pin the tell-tale ring in the lower position with a new 1/4" brass shear pin. * Insert the running tool with prong into the B7 valve until the skirt of the running tool sits against the top shoulder on the No-Go retainer of the lock mandrel of the valve. Check and ensure the flapper is held open by the equalizing prong. * Pin the D1T running tool to the B7 valve with 2 pieces of ready-cut to length brass pins through the holes in the bottom of the skirt and the matching grooves on the No-Go retainer. * Apply hydraulic oil on the V-packings on the B7 valve.		✓		01/07

	* Record the valve identification number for the daily report; this must be personally checked by the Well Intervention supervisor. *Setting the B7 valve* (Answer in bullets points) * Make up the lubricator onto the riser and open swab valve slowly to pressurize the lubricator assembly. * When pressure in the lubricator is same as the well's CITHP, open the swab valve fully. Run in hole the B7/FXE valve slowly and stop at 10 feet above the BP-6 /XXO landing nipple. Check pulling weight. * Open the bleed-off valve on the control line manifold on the wellhead and commence flushing the control line using the Single Well Control Panel. * After flushing at least 1 litre of hydraulic oil into the control line, slow down the pump rate to 3 to 5 strokes per minute. * Lower down the B7/FXE valve until it stands up. Tap the valve into the landing nipple. * As soon as the pump stops pumping (indicating the B7/FXE valve packing stacks are across the seals bores of the landing nipple and sealing), stop the pump and bleed off the control line pressure to equal that of the CITHP. * Continue tapping down on the valve until a solid sound is heard. * Pressurize the control line to 3600 psig using the single well control unit and observe for no pressure drop for 5 minutes with the pump stops operating. * Jar up to shear and release the running tool from the valve, while closely observing the control line pressure for any sudden drop. If there is any sudden decrease in the control line pressure, lower down the toolstring and repeat step 7 and 8. * If no decrease is observed in the control line pressure after shearing off the running tool, pull out of hole the wireline toolstring and close the Xmas tree swab valve. * Depressurize the lubricator assembly and remove the running tool from the toolstring. * Once the B7/FXE valve is confirmed locked in place, bleed off the control line pressure and re-pressurize again to 3600 psig. Repeat this cycle at least twice to check the integrity of the V-packings and internal seals of the B7FXE valve. * Pressurize the control line to 3600 psig and close the bleed-off valve on the control line manifold at the wellhead. Bleed off pressure in the supply line from the Single Well Control Unit Pump and disconnect the supply line from the bleed-off valve.		✓		01/07

	Differential pressure test on B7 valve *(Answer in bullets points)* * Once the B7/FXE valve has been installed into the Landing Nipple successfully a functional and differential pressure test shall be conducted to ensure functionality and pressure integrity of the valve. * Record CITHP, close isolating valve on the control line manifold on the well and bleed off control line pressure while collecting hydraulic fluid return in a measuring container until no more return is observed. Take note of the volume of hydraulic oil return and compare it to the valve manufacturer"s data to confirm consistency. * Once it is confirmed that the valve is in the closed position, depressurize above the B7/FXE valve in stages to the flowline pressure. At each stage of the depressurization process, monitor the pressure above the valve and the control line return closely for leaks or indication that the valve has been unseated. * Once the CITHP is equal that of the flowline pressure, close in the flowline valve and monitor for 15 minutes any pressure increase above the B7/FXE valve and in parallel, any return from the control line. * If no pressure build up above the B7/FXE valve is observed and no return from the control line is seen, close back the control line bleed-off valve and connect back the hydraulic pressure supply line from the Single Well Control Unit Pump. With the well still shut in, open the bleed-off valve on the control line manifold at the wellhead and slowly increase control line pressure until the CITHP begins to increase. Close the bleed-off valve and record the opening pressure of the B7/FXE valve. When the CITHP stabilizes, open back the bleed-off valve and continue to allow control line pressure to increase to its preset pressure of 3600 psig. At this juncture, it is essential to observe the pump pressure profile (signature) to confirm that the B7/FXE valve is going through its opening stages until it is fully opened. When the control line pressure reaches its set pressure of 3600 psig, monitor for pump stroking. If no stroking of the pump is observed and the control line pressure is holding, the operational integrity on the B7/FXE valve is confirm. * Open up flowline valve to bring well into production, allowing sufficient time for stabilization of flow (stable FTHP) before conducting the SC-SSV closure test under flowing condition.		✓		01/07

	Slam test on B7 valve (Answer in bullets points) * Disconnect the hydraulic pressure supply line from the Single Well Control Unit from the bleed-off valve on the control line manifold on the wellhead. Bleed off control line pressure to zero. Note time elapsed after triggering control line pressure until a reduction in the THP is observed (valve closure time). Record this information in the daily operation report. * When THP has decreased to the flowline pressure, close in the flowline valve and observed for any pressure increase in the THP and in parallel check for any control line returns for 15 minutes. * Repeat step no 5 * Cycle the B7/FXE valve twice. If satisfactory valve performance from control line pressure profile (signature) / hydraulic oil volume return / operating time intervals are observed, the B7/FXE valve is considered operation. * Close the bleed-off valve on the control line manifold at the wellhead. Bleed off pressure in the supply line from the Single Well Control Unit Pump and disconnect the supply line from the bleed-off valve. * Open the isolating valve on the supply line from the platform's control panel/"C.O.M." unit to re-instate the platform's automatic safety shut-down system.		✓		01/07

	6. Describe how to make up, set and test a downhole plug. You can choose the type and either an oil well or gas well. Also highlight the telltale signs in terms of tool, wireline and pressure indications to confirm that the plug has been properly set and installed. Type of downhole plug: "XX" plug to install in an oil well a) Preparation for the Lock Mandrels *(Answer in bullets points)* * Ensure all threads are in good condition, and all connections on the running tool are tight. * Ensure all retaining pins in the running tool are intact. * Place the running tool in the control position and check that the core can slide freely in the mandrel sub-assembly. * Make up the appropriate running equalizing prong for the subsurface control to be run (if required) to the bottom of the running tool core and tighten the connection. * Check all threaded connections on the "X" or "XN" lock mandrel are tight. * Ensure that all locking keys in the lock mandrel are the same and in good condition. * Fully extend the fishing neck of the lock mandrel to collapse the locking keys. Hold the lock mandrel horizontally and check that none of the keys will drop out towards the locked position. * Place the lock mandrel in the "control" position and check that all the locking keys are expanded outwards fully, but can be collapsed fully inwards when pressed against by hand. If any one key does not expand out properly, the key spring on that key must be replaced. * Fully collapse the fishing neck in the lock mandrel ready for assembly to the running tool. Place the lock mandrel and subsurface control in a vise, gripping on an appropriate part of the body of the subsurface control.		✓		01/07

	b) Assembling the lock Mandrel to the "X" running tool (Answer in bullets points) * Insert the "X" running tool core end into the fishing neck end (top) of the lock mandrel until the boss shoulder on the core of the running tool seats against the top shoulder of the packing mandrel in the lock. * Rotate the running tool as necessary until the releasing shear pin hole in the core is aligned with the releasing shear pin hole in the packing mandrel. * Insert a 5/16" brass pin into this set of releasing shear pin holes until the end of the pin is about half way in. Tap on the side of the pin until it is slightly bent. Continue to drive the pin through the holes until the end is just flush with the O.D. of the packing mandrel on the opposite side. * Cut off the shear pin at the side of the shear pin hole such that it will be flush with the O.D. of the packing mandrel. Flare the ends of the shear pin with a center punch. * Insert a 1/4" pin punch into the other shear pin hole in the packing mandrel and punch on the releasing shear pin through the hole in the core to bend the pin such that the remains of the shear pin will not drop out from the running tool core when the pin is sheared and the running tool is being pulled out from the well. * Extend the fishing neck of the lock mandrel until the retainer pin at the top of the running tool mandrel sub-assembly shoulders up on the bottom of the slot. The running tool and lock mandrel are now in the "control" (non- selective) position. * Press down on all the lock mandrel keys to ensure that they can collapse inward fully and flush with the O.D. of the key retainer sleeve, yet spring out again when released. Also check that the keys do not wobble. * Insert a slightly bent 1/4" steel pin into the upper shear pin hole of the running tool. This pins the core to the mandrel sub-assembly. Flare the ends of the shear pin to prevent them from dropping out after shearing. * Place a flat screwdriver blade in the gap between the bottom of the top sub on the main mandrel and the spring housing of the running tool. Pry the top sub and the spring housing further apart; this relieves the spring load on the tripping dogs. Grasp the heel of the dogs with the thumb and forefinger, and press to expand the dogs. Remove the screwdriver, this allows the spring housing to snap back against the top sub on the mandrel subassembly. The lock mandrel and running tool are now in the "selective" position.		✓		01/07

	* Ensure proper operation of both the running tool and lock mandrel assembly c) *Setting the 3" Otis XX plug* (Answer in 14 steps) * After setting the "zero" reference depth, make up the X-running tool attached With the "XX" plug choke to the wireline toolstring. * Pull toolstring assembly into lubricator and make up quick union. Pressurize the lubricator to full CITHP slowly and open Xmas tree swab valve fully. * Run in hole the "XX" plug at moderate speed and stop at 30 feet above the uppermost "X" profile accessory (an Otis "X" landing nipple or SSD). Check pulling weight of the toolstring assembly. * Continue to lower the "XX" plug until hold-up at the "X" profile seal bore. Note the wireline depth of this accessory for depth correlation and control later on. *Tap the "XX" plug through the seal bores until the depth of the accessory where the plug is to be set. * Check pulling weight of the toolstring just above the depth of the "X" nipple profile where the plug is to be set. Then, lower down and tap the plug through this "X" nipple profile (in the case of an SSD, it will be the top seal bore only). * Pull back the plug slowly until the tripping dogs locate the bottom of the seal bore in the nipple; this is indicated by an overpull, as well as the depth reading corresponding to the depth of the accessory. * Apply an overpull of 300 to 400 lbs to trip the running tool and bring the "XX" plug lock mandrel into the "Control" position. Alternatively, the plug may be lowered to some 10 feet below the nipple (in the case of an SSD, lower the plug until hold-up at the bottom seal bore) and then run up fast into the nipple seal bore, thereby creating a jarring action which has the same effect as an overpull to trip the running tool. Continue to pull the plug until it is just pass the "X" profile accessory and note the pulling weight. * Lower the plug slowly into the landing nipple. Tap down on the plug slowly to get the V-packings into the seal bore, and the lock mandrel keys locate into the landing nipple recess. Tap down at least 20 times to be sure. * Apply downward jarring to shear the setting pin in the running tool and move the lock mandrel expander sleeve behind the keys to lock them in the expanded position. When this is done, the plug is set in the nipple. Make at least 20 downward jars.		✓		01/07

	* Check to confirm the plug is fully locked in the nipple by applying a 200 to 350 lbs overpull. When confirmation is positive, jar up to shear the releasing pin attaching the running tool core to the plug and free the running tool. * Once the running tool is free, check pulling weight to be sure that the plug is not attached to the running tool. When confirmed that the plug has been left set in the nipple, pull out the toolstring to surface and into the lubricator. * Close Xmas tree swab valve and depressurize the lubricator completely. Break open lubricator and remove the "X" running tool. Check that the running equalizing prong is still attached to the bottom of the running tool core, and that all shear pins have sheared. * Carry out an inflow test (if all other accessories in the tubing string are closed, e.g. SSD's) by bleeding down at least 50% of the CITHP and observing for no pressure build-up over 1/2 hour to confirm the plug holding.				
	7. In a vertical well, you are to equalise and pull a 3" plug at 7656 ft. Reservoir pressure = 2800 psig. Liquid level is detected at 1867 ft. Liquid gradient of well = 0.28 ppf. CITHP = 980 psig. Ignoring pressure exerted by gas column and assuming that the liquid level remains unchanged, calculates the final CITHP after you have RIH and have properly equalised the plug. Show the mathematical steps on how you arrived at your answer. Data: Fluid level: 1867 ft. Plug to be pulled: 7656 ft. Expected reservoir pressure: 2800 psig *Surface THP: 980 psig* **ANSWER :** Final THP = (Set depth – liquid level) X liquid gradient + CITHP = (7656-1867) X 0.28 +980 = 5789 X 0.28 +980 = 2601 PSI = 2800 psi – 2601 psi = 199 psi		✓		01/07

8. What is the most appropriate instrument you can use to monitor pressures during a plug equalization process, and state the advantages over a conventionnel pressure gauge?
(Answer in bullets points)

* digital pressure transducer or transmitter.
* Accuracy and Precision
* Real-time Monitoring
* Reliability and Durability

✓ 01/04

9. How do you confirm that a WR SCSSV is proper set or installed in its landing nipple with respect to tool, wire line and pressure indication?

No	Tool indications	Wireline indications	Pressure indications
01	Continue tapping down on the valve until a solid sound is heard.	As soon as the pump stops pumping (indicating the B7/FXE valve packing stacks are across the seals bores of the landing nipple and sealing), stop the pump and bleed off the control line pressure to equal that of the CITHP.	Pressurize the control line to 3600 psig using the single well control unit and observe for no pressure drop for 5 minutes with the pump stops operating.
02			
03			
04			

✓ 01/07

10 How do you confirm that a downhole plug is properly set or installed in its landing nipple with respect to tool, wire line and pressures indication?

No	Tool indications	Wireline indications	Pressure indications
01	Pull back the plug slowly until the tripping dogs locate the bottom of the seal bore in the nipple; this is indicated by an overpull, as well as the depth reading corresponding to the depth of the accessory.	Check to confirm the plug is fully locked in the nipple by applying a 200 to 350 lbs overpull. When confirmation is positive, jar up to shear the releasing pin attaching the running tool core to the plug and free the running tool.	Carry out an inflow test (if all other accessories in the tubing string are closed, e.g. SSD's) by bleeding down at least 50% of the CITHP and observing for no pressure build-up over 1/2 hour to confirm the plug holding.
02	Apply downward jarring to shear the setting pin in the running tool and move the lock mandrel expander sleeve behind the keys to lock them in the expanded position. When this is done, the plug is set in the nipple. Make at least 20 downward jars.	Once the running tool is free, check pulling weight to be sure that the plug is not attached to the running tool. When confirmed that the plug has been left set in the nipple, pull out the toolstring to surface and into the lubricator.	

✓ 01/07

Form B.2.4	**INSTALL RETRIEVE AND MANIPULATE CIRCULATING AND COMMUNICATION DEVICES.**				
	1. What are the checks should be carried out on a 142BO positioning tool prior to running it into the well? Pre-operational checks *(Answer in bullets points)* * Ensure the appropriate size of 142BO positioning tool is available. * Check and ensure the positioning tool keys are in good condition, i.e. shifting shoulders not worn out or rounded, and the key springs are strong. * Check and ensure the tripping dogs are in good condition, and will retract easily when pushed upwards with the tool set in the selective position. * Check and ensure all connections in the tool are tight, and the top connecting threads and fishing neck are in good condition.		✓		01/07
	2. What features and components on the 42XO positioning tool allows it to reciprocate between selective and non selective position? Explain how is this achieve? *(Answer in bullets points)* * Selective Mode: In this mode, the tool can selectively engage or disengage with specific downhole components, such as nipples or profiles, based on predetermined settings or signals. * Non-Selective Mode: In contrast, the tool can operate in a non-selective mode where it engages uniformly with any encountered obstacle or profile, regardless of its configuration.		✓		01/07
	3. When opening a SSD why it is not recommended to open the link jar fully? * This is to prevent premature tripping of the positioning tool.		✓		01/07

	4. When installing a GLV, are the two sets of tangential shear pins installed on the Camco "GA-2" running tool jar up to shear or vice versa? * To shear the tangential shear pins, the running tool is jarred down or struck downward. This mechanical force is applied deliberately to exceed the shear strength of the shear pins. * Tangential shear pins are designed to withstand a certain amount of mechanical force. When the running tool is jarred down, the force applied exceeds the shear strength of these pins, causing them to shear off. * Once the shear pins shear, the GLV is released from the running tool. This allows the GLV to be installed in its intended position in the well completion, ready for operation.		✓		01/07
	5. After installing/setting a GLV in the SPM is it necessary to shear off the locating finger's pin on KOT to enable release from the particular SPM and also passing through other while POOH. Explain. * after installing or setting a GLV in an SPM, shearing off the locating finger's pin on the Kickover Tool (KOT) is necessary to enable the release of the KOT and to allow the GLV to remain securely positioned in the SPM.		✓		01/07

	6 Describe how to install/set a BKR-5 in the first SPM. You are to include tool-string configuration, services tools selection, type/size of shear pins, pressures checking, running & pulling speed and confirmation of proper installation. 1) <u>To install a BKR-5 in the first SPM</u> a) <u>Tool-string configuration from top to bottom</u> (Answer in bullets points) * Rope socket * Swivel joint * Normal Stem * Knuckle joint * Spank jar * Kick over tool * JK-1 b) <u>Serviced Tools selection</u> (Answer in bullets points) * Kick over tool * JK-1 c) <u>*Type & Size of Shear pins*</u> (Answer in bullets points) * 2/16" brass shear pin * 3/16" brass shear pin * 4/16" brass shear pin d) <u>Pressure checking</u> * Check SITCP before and after d) <u>Running and Pulling speed</u> * Arround 100ft/min		✓		01/07

	f) Confirmation of proper installation * Conduct pull test g) To install BKR-5 in the first SPM * Pass thru the SPM * Pick up running tool * Record weight * Locate and seat at SPM. * Jar down for some time to set 2) To retrieve a BK-R 5 from the first SPM. a) Tool-string configuration from top to bottom. * Rope socket * Swivel joint * Normal stem * Knuckle Joint * Spank Jar * KOT * 1-1/4" JDC b) Serviced Tools selection * KOT * 1-1/4" JDC c) Type & Size of Shear pins * Brass pin 3/16" d) Pressure checking * Before and after pulling * Calculate hydrostatic pressure before pulling		✓		01/07

	e) Running and Pulling speed. * Record RW / PW before pulling f) Confirmation of proper installation * Pressure either increase, decrease or maintain. * Keep monitoring pressure. g) Mode of retrieving BKR-5 valve from first SPM * Locate, sit, latch BKR-5 and jar up to pull.				

	7. Describe how to close a 3.5" SSD using a 42XO positioning tool. You are to include Tool-string configuration, size of bottom cap, function testing of tool, maximum allowable line extension, how to accomplish effective and productive jarring and confirmation of SSD fully closed. a) Tool-string Configuration from top to bottom. * Rope socket * Swivel joint * Normal stem * Knuckle joint * Spank jar * 42XO b) Serviced Tools selection * 42XO c) Pressure checking * No differential pressure d) Function test of the tool. * Check spring * Check fishing neck * Check dog * Check shear pin e) Maximum allowable line tension * less than 1250 lbs f) To accomplish effective and productive jarring and confirmation of SSD fully closed. * Reciprocate * Check pin on surface 42XO * If pin shear need to Re RIH		✓		01/07

	8 Describe how to open a 2.7/8" SSD using a 142BO positioning tool. You are to include Tool-string configuration, function testing of tool, pressure differential issue, manipulation of the tool-string, precautions during jarring operations and proper monitoring of tubing pressure. To open a 2.7/8" SSD using a 142BO positioning tool. a) Tool-string Configuration from top to bottom * Rope socket * swivel joint * Normal stem * Knuckle joint * Spank jar * 142bo b) Serviced Tools selection * 142bo c) Pressure differential issues Yes. Have a differential pressure d) Pre-check and Function test of the tool * Check spring * Check fishing neck * Check dog * Check bottom thread e) Mode of opening the 2.7/8" SSD * Record pickup weight before pass thru * Running with selective mode * locate * control the selective * Jardown until pass thru. * monitor pressure * Reciprocate to confirm fully open.		✓		01/07

Form B.2.5	PERFORM FISHING OPERATIONS				
	1. For a wireline fish which already been established to have clear fishing neck, what initial pulling tool would you use for: Note: Disregard the size of the fishing neck and the tool to be run for this question. Give your reasons. a. a fish with an external fishing neck. * JDC pulling tool * FRC pulling tool * RB pulling tool b. a fish with an internal fishing neck. * GS pulling tool		✓		01/07

2. What is the important factor you have to consider prior to the selection of lubricator / BOP configuration for a wireline fishing operation, and what are the consequences of not using the correct length?

   * If the lubricator is too short, it may not recover the length of toolstring + fish preventing effective fishing operations.

✓ 01/07

3. What should the minimum recommended diameter be for the measuring wheel, hay pulley and stuffing box sheave used in conjunction with:

No	Wireline	Measuring Wheel	Hay Pulley	Stuffing Box sheave
A	0.092" slick line	11.25"	11.25"	16"
B	0.108" slick line	13"	13"	16"
C	0.125" slick line	15"	15"	16"
D	3/16" braided line	12"	12"	N/A

✓ 01/07

	4. After rigging up and prior to running in hole, to what pressure should the lubricator / BOP assembly be tested to and for what duration? * The lubricator and BOP assembly should be tested to a pressure typically 1.5 times the maximum anticipated surface pressure (commonly around 5,000 psi to 10,000 psi, depending on specific requirements) and held for a minimum duration of 5 to 10 minutes		✓		01/07
	5 How and where is the pressure normally introduced into the lubricator/BOP assembly? * Open the swab valve slowly until pressure is heard to enter the lubricator assembly or equalize the well first before open the swab valve.		✓		01/07
	6. A tubular jar is normally used in place of a mechanical jar (link jar) when fishing for wire. Explain the reason behind this philosophy? * To prevent from wire slip inside mechanical link jar.		✓		01/07
	7. How and when do we record the weight reference of the fishing toolstring prior to latching onto the fish? * Recording the weight reference of the toolstring is done immediately before attempting to latch onto the fish, with the toolstring hanging freely in the wellbore. This reference weight is crucial for accurately detecting engagement with the fish and monitoring the progress of the fishing operation.		✓		01/07

8. In checking the static weight of the tool-string state whether any difference would be encountered when checking the weight during the upward pull and downward run. Can both weight references be used and explain under what condition are each applicable?

* Yes. When entering new well for the first tubing clearance check.
* To know the weight of the tool string at actual depth.
* For weight comparison after setting tool.
* detected obstruction or fluid inside the well.

✓ 10/10

9 What is the maximum line pull allowable for the following wires used in SSB/SSPC, and state their minimum-breaking load

Answer:

No	Wireline	Max. Line Pull	Min. Breaking Load
A	0.092" Bridon U.H.T Bright	1230 lbs	2050 lbs
B	0.108" Bridon U.H.T Bright	1638 lbs	2730 lbs
C	0.108" Bridon Supa 70	930 lbs	1550 lbs
D	0.108" Bridon Supa 75	1278 lbs	2129 lbs
E	0.125" Bridon U.H.T.3	2199 lbs	3665 lbs
f	3/16" Bridon Dyform 1 x 19 (9x9x1)	33.12 kn	55.2 kn

✓ 10/10

	10 Give five circumstances under which it becomes necessary to employ a wire cutter for the purpose of cutting the wire-line in the well? * Unrecoverable Stuck Tool: If a wireline tool or equipment becomes stuck in the wellbore and all attempts to free it using standard fishing techniques have failed, cutting the wireline may be necessary to retrieve the remaining wire and prevent further complications. * Uncontrolled Well Conditions: In situations where well control is compromised (e.g., unexpected pressure surges or kicks), cutting the wireline can help to quickly secure the well and prevent a blowout. * Surface Equipment Malfunction: If there is a failure in surface equipment that poses a safety risk (such as a winch malfunctioning), cutting the wireline may be necessary to protect personnel and equipment. * Compromised Wireline Integrity: If the wireline shows signs of significant damage, such as severe kinks, abrasions, or wear that compromises its integrity and strength, cutting the wireline and replacing it with a new section can prevent catastrophic failure.		✓		01/07
	11. List out three conditions whereby it is necessary to use an overshot to grip down-hole tools in a fishing situation. * Fish with a Protruding Top End: When the stuck tool has a protruding part like a fishing neck that the overshot can grip. * Unobstructed Access Around the Fish: When the wellbore around the fish is clear, allowing the overshot to be properly positioned and engaged. * Fish with a Profile Suitable for Overshot Engagement: When the fish has a profile that is compatible with the overshot's design, ensuring a secure grip for retrieval.		✓		01/07

	12. With respect to safety and procedure what type of pulling tool should be used in conjunction with the non-releasable overshot when running it into the well? * Tandem (RB/SB + ROPE SOCKET)		✓		01/07

Assessed By:		Verified By	
Name	JAMES BRODY WILSON SANABONG	Name	AFIQ AIMAN BIN HASSAN Field Service Manager DIMENSION BID (M) SDN BHD
Position	SOO	Position	
Date	01/07/2024	Date	01/07/24