B.2

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.

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DATE OF JOIN	**03/03/2013**
CONTACT NO.	
RECEIVED DATE	
DATE COMPLETED	

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 • SC-SSV – Surface Control Subsurface Safety Valve The SSV and SC-SSV hydraulic system of the well to be work on are isolated from the production facility's ASD system and hooked up to an independent single well control panel operated only by Well services personnel .Such isolation will prevent inadvertent cutting of the wire line in case of process instability. In the event of an emergency the well services personnel will have a direct control over the well protection system in order to safeguard life and property without any delay	Interview	C		13/5/24
	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. • *Pre-checks are required to be carried out on the services tools prior to well entry to ensure that there are in good condition and functioning in order to prevent any mishap occurring downhole due to defective tool* Possible consequences if pre-checks are not done :- a) *Tools left in hole due to loose connections/breakage.* b) *Tools malfunction downhole leading to miss run /downtime/production deferment and the worst scenario a stuck tool requiring to cut the wireline.*	Interview	C		13/5/24

	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: • *To indicate where the wireline tools are in the hole at any time, and to locate and work on the correct accessory downhole and it must be reset prior to every run so that any slippage can be accounted for.* i. the rig floor - *The drill floor or rotary table.* ii. a remote installation - *BTHF (below tubing hanger flange)*	Interview	C		13/5/24
	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: • *Daily operation report is prepared on a PC using microsoft word.* i. on a production platform - The *Senior Wellservices Supervisor will scrutinize the report and the final person to endorse it will be the OIM.* ii. on a drilling rig - *The Well Completion Supervisor will scrutinize the report and the final person to endorse it will be the Drilling Supervisor.*	Interview	C		13/5/24

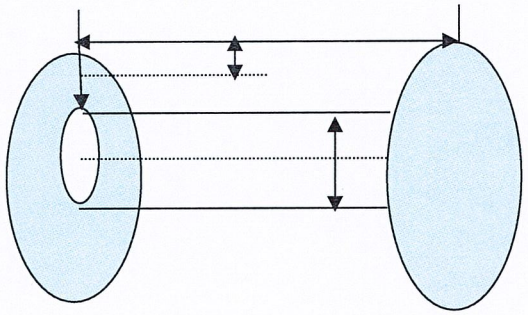
Form B.2.2	RUN AND MANIPULATE SURVEY AND NON-SETTING TOOL STRING				
	1 How do you prepare a well for wireline entry, with respect to the platform Shutdown system? *(Answer in description form & bullet points)* The custodian of a particular well shall be transferred to the wellservices supervisor or wireline senior foreman upon successful application of the PTW and the associated remote control for the SSV and SCSSV shall be lined up to the portable single well control unit. As such, there is no direct access by unauthorized personnel to the well without the consensus of the wellservices supervisor or wireline senior foreman • *Hook up the SCSSV output line from the single well control unit to the bleed-off valve on the control line manifold at the wellhead using 1/4 " control line* . • *Pressure test this line to 5000 psig to check integrity of all connections. If no leaks observed, bleed down the pressure to 4000 psig.* • *Hook up the SSV output line from the single well control unit to the bleed-off valve on the supply line to the upper master valve actuator using 1/4 " control line.* • *Pressure test this line to 3000 psig to check integrity of all connections. If no leaks observed, bleed down the pressure to 2500 psig.* • *Close the needle valve at the wellhead control line manifold on the supply line from the platform's central well control panel and open the bleed-off valve on the control line manifold at the wellhead. This will enable the well services single well control unit to take over control of the SCSSV.* • *Close the needle valve at the upper master valve hydraulic actuator supply line from the platform's central well control panel and open the bleed-off valve on the supply line. This will enable the well services single well control unit to take over control of the SSV.*	Interview	C		13/5/2024

	2 Why is it important to do that? • *In the event of an emergency occurring at the wellhead, the wireline crew should have a direct control over the well protection system in order to safeguard life and property without any delay.Such isolation will ensure wireline operations progress without interference from process instability.*	Interview	C		130524
	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)* • *The control of the SCSSV should also be transferred to the SWCP to prevent any interference from process instability.* • *Ensure SCSSV is open. Check well pressures and countered check with previous record.* • *If sinker hold up at SCSSV, do not bang down hard. Instead pull back, check condition of sinker in case of wax or other tell-tale signs. If the SCSSV is not open, attempting to work through it could result in a blown up. For FGS close in well momentarily while the sinker bars/gauges are passing through the SCSSV to prevent the risk of a blown up.*	11	C		130524

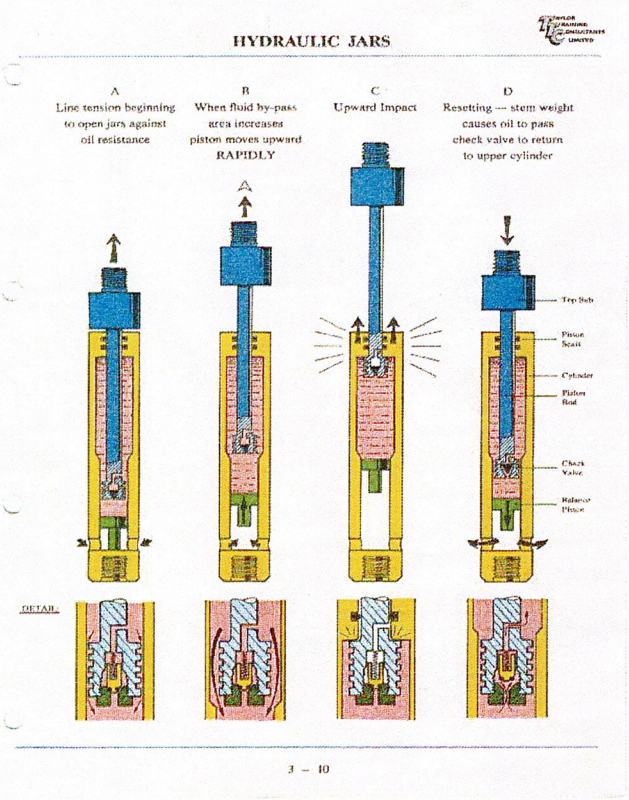
	4 When carry out a sand bailing operation using a pump bailer, describe the precautions to be taken, and the application of correct pumping technique to ensure that the bailer does not get stuck in the sand or buried by a potential sand bridge? i. Pre-operational checks *(Answer in bullet points)* • *Ensure the size of the bailer is compatible with the tubing size and downhole accessories.* • *Ensure the plunger can make its full stroke fully.* • *Check sucking action of the bailer using water.* • *Ensure all components are made up tight.* • *Check travelling valve for wear.* • *Ensure enough length of lubricator is rigged up to accommodate the bailer with the plunger fully extended* ii. Sand bailing *(Answer in bullet points)* • *Prior to commencement of bailing, take note of pulling weight.* • *Lower the bailer slowly to top of the sand and record the hold-up depth. Pull back the sand bailer above the sand to ensure it does not get stuck, in case the sand is soft, or mud is encountered. Repeat few times to confirm the sand bailer is free (no overpull).* • *Commence bailing sand by operating the plunger up fast and lowering down slowly to suck in and fill up the bailer tube with sand.* • *Always pull the toolstring away from the sand after every stroke to check that the sand bailer is not stuck in the sand. Then set the bailer back down to make another stroke.* • *Do not jar down in an attempt to get more sand into the bailer. This is a misconception, and if practiced, will more often result in a stuck toolstring.* • *Do not allow the bailer to sit down on the sand for more that 1 minute. Sitting down for any extended period of time may result in getting stuck, as a crater created by the bailer could cause the surrounding wall of sand to fall back on the bailer and hold it fast, or if the sand is soft, the bailer will just sink into the sand and stay stuck.*	Interview	C		130524

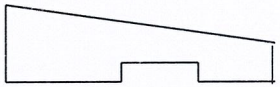
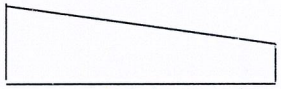
	5. Explain why the integrity of the flowline valve is important during a wireline well entry work. The integrity of the flowline valve is important during a wireline well entry work because :- *(Answer in bullets points)* • *There is an element of risk working with a badly leaking flowline valve which could resultant in a toolstring being blown up.* • *A badly leaking valve does not provide a conducive situation for any TIC and survey ops.* How will a badly passing flowing valve jeopardize: **a. A non-setting survey job** • *the gauges may not be able to pass through the SCSSV. A blown up may occur.* • *For SGS, it is essential to maintain the well under static condition before and throughout the survey. A badly passing flowline valve does not provide an ideal condition for an SGS. True pressure parameters can't be acquired with a leaking flowline valve.* **b. A setting survey job** • *Preparatory work for the job like drift run and retrieval of SCSSV would be hampered by the badly leaking flowline valve.* • *True pressure parameters will be attained during a FBUS c/in period with a badly passing flowline valve.* **c. A non-setting toolstring well entry work** • *Any wireline runs made will be hampered by a badly leaking flowline valve which could resultant in a toolstring being blown up.*	Interview	C		130524

	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)** • *A hydrostatic bailer is run to recover sand/debris from inside a plug and around the fishing neck which normal bailing cannot recover.* State the conditions under which it could be effectively used to accomplish a work Objective. • *A solid base is available for the shearing of the shear disc.* • *Ensure that the shear disc available for the bailer is of a rating higher that the bottom hole pressure in the well to be work on.* • *Check and ensure all O-rings are in good condition.* • *Ensure the bottom housing is made up tight to the barrel after installing the correct rating of shear disc.*	Interview	C		130524
	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)* • *To calculate the initial entry depth of the toolstring into the tubing tail, when pulling up, take the actual depth (WLD) of the No-Go or the Mule shoe + the length of the toolstring and this will give the depth reading on the odometer when the rope socket is entering the tubing tail*	Interview	C		130524

	8. Describe the mathematical steps to estimate the length of the wire left or available on a wire-line reel skid. estimation only  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 $\frac{A-D}{d} \times \frac{C}{d} \times Pi((A-D)+B)$	Interview	C		130524

	9. Why is it important to establish correlation of tubing accessories depth with well diagram depth during well entry work? • Evaluation of downhole pressure data in tandem with surface pressure. • To record any abnormality in well pressure during the survey period Describe how you could achieve this by wireline means? • The wireline toolstring will be set with a "zero" reference depth which forms the datum for measuring against the depths of all the wireline accessories downhole. The "zero" reference depth of the wireline toolstring will be where the depth counter is reset to 0-foot when the bottom of the toolstring is level with the tubing hanger flange or hub. • Correlation of tubing accessories depth with well diagram depth can be done during a drift run. Any contact made with the tubing accessories will be indicated by a slight kick on the weight indicator.	Interview	C		130524
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)* • Check all threaded connections on the "XX" or "PR" lock mandrel are tight. • Ensure 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 the key must be replaced. • Ensure the lock mandrels v-packings, equalizing valve o-rings are in good condition	Interview	C		130524

	2. Describe, with the aid of a diagram, how a hydraulic jar works. Please see the attachment on the next page. Answer: 1) Jars in closed starting position 2) Line tension being applied 3) Rapid upward motion creates upward impact 4) Stem weight closes the jar  	Interview	C		130524

	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  • It has a slot in the middle and is designed with an overload release feature. Plain type (B) slip  • It has no slot and does not have the overload release feature How many types of breaking strength slips are available and what are they? • Five breaking strength slips are available, for 50%, 60%, 70%, 80%, and 90% of the breaking strength	Interview	C		130524
	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 fishing neck profiles for burrs and wrench damage. • Inspect mechanical jar for buckling, bending, bowing, and check for smooth operation. • Check integrity of roll pins in knuckle joints, freedom of movements of ball in socket. • Check for gas lock in the hydraulic jar and replace with new hydraulic fluid if necessary.	Interview	C		130524

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.
- Check to confirm that minimum outside diameter (O.D.) of the No-Go ring on the lock mandrel is not less than 2.852".
- Ensure that V-packing stacks and O-rings are in good condition.
- Check to confirm that all connections are tight.
- Ensure that the flapper housing does not sustain any damage or deformation due to impact.

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Preparation for running the B7 valve *(Answer in bullets points)*

- Pin the No-Go ring in the lower (running) position with aluminum shear pins.
- Make up the running equalizing prong to the 3" QXD running tool and tighten all connections.
- Pin the tell-tale ring in the lower position with a new ¼" brass shear pin.
- Insert the running tool with prong into the B-7 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 QXD running tool to the B7 valve with 2 pieces of ready-cut to length brass pin through the holes in the bottom of the skirt and the matching grooves on the No-Go retainer.
- Lightly grease the V-packings on the B7 valve with an all purpose light grease.
- Record the valve identification number for the daily report

Setting the B7 valve *(Answer in bullets points)*

- While running in hole the B7 valve, commence flushing the control line using the SWCP.
- When the B7 valve is about to reach the landing nipple, stop flushing and bleed

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 and connections on the tool are good and tight.
- All retaining pins in the running tool are intact.
- When the tool is in running position, the core can slide freely in the mandrel sub-assembly.
- Tighten the connection between the equalizing prong and the bottom of the running tool.
- When the fishing neck of the lock mandrel is extended, the locking keys should be collapsed.
- Hold the lock mandrel horizontal and check that non of the keys will drop out towards the locked position.
- When the lock mandrel is in the "control position" the locking keys are expanded outwards fully. But this can be collapse fully inwards when pressed against by hand. If one of the keys does not expand out properly, the key spring on that key must be replaced

b) Assembling the lock Mandrel to the "X" running tool
(Answer in bullets points)

- 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 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 ¼" 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 screw driver 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

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	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* Hydrostatic pressure: gradient x fluid column = 0.28 ppf x 5789 ft. = 1620.92 psig Total pressure inside tubing: hydrostatic pressure + THP = 1620.92 + 980 = 2600.92 psig Final CITHP after equalizing the plug: expected reservoir pressure – total pressure inside tubing + surface THP = 2800 psig – 2600.92 psig + 980 psig = 1179.08 psig	Interview - competent to calculate hyd pressure - LVl 3	C		130524
	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) *Pressure recorder is the most appropriate instrument to monitor pressure changes during a plug equalization process.* *The advantages over a pressure gauge are: -* • Any slight or sudden changes in pressure can show up more noticeably on a pressure recorder. • Pressure recorder provides the mean to record the event accurately with respect to pressure and time. • Pressure recorder gives a more sustain confirmation of pressure stabilization.	Interview	C		130524

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	The tell-tale brass pin of the QXD running tool is sheared	A solid sound is heard	No returns from control line.
02		A solid blow can be felt through the wire-line.	Control line is holding 4000 psig.
03		A feel of both valve packing stacks entering the seal bores.	Differential pressure across valve is tested ok.
04		The reading on the odometer indicates the correct depth the SCSSV is installed.	Slam test on the valve is ok.

Interview | C | | 130524

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	The two shear pins on the X-running tool are sheared.	Reading on the odometer indicates the correct depth the downhole plug is installed	Inflow test – good.
02		Positive confirmation of plug is fully locked in nipple by the application of a 200 to 350 lbs overpull.	

Interview | C | | 130524

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 the 142BO shifting tool is available. • Check and ensure the shifting tool keys are in good condition, i.e. shifting shoulders not worn out or rounded, and the key springs are strong. • Check and ensure all connections in the tool are tight, and the top connecting threads and fishing neck are in good condition. • Check and ensure the tripping dogs are in good condition, and will retract easily when push upwards with the tool set in the selective position	Interview	C		130524
	2. What featurea nd 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 features and components on the 42XO positioning tools that allow it to reciprocate between selective and non-selective position are:- • The moveable portion of the dogs. • The slip ring well-meant. • The continuous 'J' slot. *A running J design in the release profile permits the tool to be positioned to contact or to go through a shifting profile. Upward or downward movement of the tool string in the tubing bore above or below the circulating device moves the releasing profile to the desired.*	Interview	C		130524

	3. When opening a SSD why it is not recommended to open the link jar fully? - Do not open the link jar fully. Execute downward jars with the link jars open 70 to 80 % of its stroke is sufficient. This is to prevent damage to the shifting tool key shoulders and sleeve profile, and the possibility of the toolstring being blown up the hole should it be lifted above the flow ports in the sleeve	Interview	C		130524
	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 two sets of tangential shear pins in the GA-2 running are jarred down to shear.	Interview	C		130524
	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. • No, from our experience in the field we encountered no difficulty in releasing the KOT from any particular SPM and also passing through other while POOH without having to shear the plunger pin.	Interview	C		130524

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) To install a BKR-5 in the first SPM

a) Tool-string configuration from top to bottom
(Answer in bullets points)

- *1 pcs 1.7/8" teardrop rope socket.*
- *1 pcs 1.7/8" x 5 ft stem.*
- *1 pcs 1.1/2" Knuckle joint.*
- *1 pcs 1.1/2" Hydraulic Jar.*
- *1 pcs 1.1/2" Link Jar.*
- *1 pcs 1.1/2" Knuckle joint.*

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b) Serviced Tools selection
(Answer in bullets points)

- *1 pcs 3" OK-6 KOT.*
- *1 pcs 1.25" GA-2 running tool.*

c) Type & Size of Shear pins
(Answer in bullets points)

- *¼" brass pin for locating finger and finger housing.*
- *3/16" brass pin for the release plunger and finger housing.*
- *1/8" aluminium shear pin for the GA-2 running tool.*

d) Pressure checking

In order to install a valve or dummy in a SPM, the pocket of the particular mandrel must be empty. ie, the valve or dummy originally in that pocket has been retrieved. There will be no pressure differential between the tubing and the annulus since there is communication

	f) Confirmation of proper installation *The confirmation of proper installation of the gas-lift depend on two things:-* • *Both the releasing and tell-tale pins in the GA-2 running tool are sheared.* • *Bleed down CHP to observe for no leak and integrity of the gas-lift valve packing.* g) To install BKR-5 in the first SPM *Prior to any installation and retrieval of gas-lift valve operation, a gas-lift valve catch should be installed below the deepest SPM where the gas-lift change is performed. That is the gas-lift valve catcher will be installed in the top X-profile in the tubing string, either in an Otis X-landing nipple or in an SSD.*	Interview	C		130524

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.

- *1 7/8 r/socket + 1 7/8 x 5ft stem + 1/16 p x 15/16 b X-over + 1 ½ Knuckle joint + 1 ½ Hyd jar + 1 ½ x 20 stroke link jar + 1 ½ QLS*

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b) Serviced Tools selection

- *1 pcs 2.735" drift*
- *1 pcs 3" 42XO positioning tool*
- *1 pcs 3" B and X crossover.*
- *1pcs 2.62" bottom cap.*

c) Pressure checking

- *After closing the SSD. If the SSD is above the RHD packer continue carry out an inflow test by bleeding off the CITHP to minimum. Observe for any pressure build-up over a 2 hour period to confirm all SSD in the string are close and holding*

d) Function test of the tool.

- *Ensure the correct size of the tool are used. Confirm the shifting tool keys are in good condition, that is shifting shoulder are not worn out or rounded and the key springs are strong.*
- *Otis 42XO shifting tool with old type of dogs shall not be used in wells installed with Teledyne Merla SPM. In this case, a diamond dogs shall be used in this exceptional case.*

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.

Interview C 130524

To open a 2.7/8" SSD using a 142BO positioning tool.

a) Tool-string Configuration from top to bottom.

- *1.7/8" R/socket + 1 7/8 x 5 ft stem + 1 1/16 p x 15/16 b x-over + 1 ½ knuckle joint 1 ½ hyd jar + 1 ½ x 20 stroke link jar + 1 ½ QLS .*

b) Serviced Tools selection

- *2.302" drift.*
- *2 ½ " 142BO positioning tool.*

c) Pressure differential issues

- *Record CITHP and check the latest formation pressure expected in the SSD to be opened. Calculate the hydrostatic pressure, P at the SSD including the gas correction factor. Fluid level can be obtained via drift run into the tubing. P=(Vertical depth of the fluid column x gradient of the fluid) + (surface gas pressure x gas correction factor). If the formation pressure at the SSD depth is greater than the hydrostatic pressure at SSD depth, inject pressure into tubing to equalise it out. Vice versa, reduce CITHP to equalise both. This will make operation easier and safer to work.*

d) Pre-check and Function test of the tool

- *Ensure the correct size of the tool are used. Confirm the shifting tool keys are in good condition, that is shifting shoulder are not worn out or rounded and the key springs are strong.*
- *Check and ensure the shifting tool keys are in good condition, i.e. shifting shoulders are 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.*
- *Confirmed all connections in the shifting tools are tight, and the top connecting threads and fishing neck are in good condition.*
- *On the surface, set the 142BO positioning tool to the "non-selective" position. Check the pair of shifting keys (arranged in the same phase and the right angle*

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. • *Use pulling tools that are capable to engage an external fishing neck such as the JDC, JDU, JDS, SM, the Otis S & R series (SB,SS, SSJ; RS, RJ, RB)of pulling tool* b. a fish with an internal fishing neck. • *Use pulling tools that are capable to engage an internal fishing neck such as: GS, GSL, GR, GR*	Interview	C		130524
	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? • *The total length and numbers of lubricators and BOP (single of dual rams) that made up a safe working range to accommodate the total length of the fishing tool plus possible fish recovered.* • *The consequences of not using the correct length can create an unsafe condition where the total tool-string fails to be isolated from the well pressure. Thus we are unable to secure the well for safety*	Interview	C		130524

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	7"	7"	7"
B	0.108" slick line	16"	15"	15"
C	0.125" slick line	16"	17"	16"
D	3/16" braided line	16"	14"	14"

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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 assembly shall be subjected to pressure test with the maximum CITHP available in site whereas the wire-line BOP is tested to its full differential pressure test. The test duration shall not be less than 15minutes*

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5 How and where is the pressure normally introduced into the lubricator/BOP assembly?

- *The pressure is normally introduced into the lubricator/BOP assembly after the rope socket is butted against bottom of the stuffing box to prevent the tool-string from being blow-up if a sudden admission of pressure into the lubricator. This is done by the following methods.*
- *Cracking open the Xmas tree swab valve and continue opening slowly until pressure is heard to escape from the open bleed-off valve on the lubricator. Stop cracking the swab valve at once.*
- *Close the bleed –off valve and observe the pressure gauge on the lubricator for pressure to build up until there is no further increase. Compare the final pressure in the lubricator with the CITHP recorded.*
- *When pressure in the lubricator is equal to the CITHP recorded and no further increase is observed. Only then the swab valve may be opened fully*

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	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 • *A tubular jar is preference than a mechanical jar in fishing operation because the tubular jar is an enclose jar and has less chance of wire becoming entangled and jamming the jar*	Interview	C		130524
	7. How and when do we record the weight reference of the fishing toolstring prior to latching onto the fish? • *We record the weight reference of the fishing tool-string 10ft prior to latch onto the fish by noting down the hanging weight and pulling weight (pulling very slow on a slow gear)*	Interview	C		130524
	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. There is difference encountered in checking the static weight of the tool-string, its upwards and downwards run.* • *Static weight is the weight of the tool-string when it is not moving at a defined depth.* • *Pulling weight is the pulling force exerted by the tool-string moving upwards against gravitational force and fluid displacement at a defined depth.* • *Running weight is the downwards force created by the weight of the tool-string due to gravitational pull and a loss of weight in fluid a result of Archimedes principles at a define depth.* • *Running weight is lighter than static weight. The pulling weighing is the highest among all.* • *Yes. Both weight references can be employed provided that we compared them at the same depth.*	Interview	C		130524

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	*990 lbs (50% to 70%)*	*1980 lbs*
B	0.108" Bridon U.H.T Bright	*1360 lbs (50% to 70%)*	*2720 lbs*
C	0.108" Bridon Supa 70	*1050 lbs (50% to 70%)*	*2100 lbs*
D	0.108" Bridon Supa 75	*1015 lbs (50% to 70%)*	*2030 lbs*
E	0.125" Bridon U.H.T.3	*1820 lbs (50% to 70%)*	*3640 lbs*
f	3/16" Bridon Dyform 1 x 19 (9x9x1)	*3150 lbs (50% to 70%)*	*6300 lbs*

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	11 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 blow-up tool-string.* - *A stuck tool-string in hole* - *To cut lost wire in hole using a side-wall wire cutter.* - *Tool-string falls to re-entry into tubing end.* - *To use a blind box as a wire cutter to cut of the wire when tool- string is blown up.*	Interview	C		130524
	10. List out three conditions whereby it is necessary to use an overshot to grip down-hole tools in a fishing situation. *3 conditions when an overshot is used to grip down-hole tools in a fishing operation:-* - *When the fishing neck of the fish is worn out or damaged.* - *When slippage of pulling is experienced.* - *When the fish has no fishing neck. Example, the piston rod of a hydraulic jar.*	Interview	C		130524
	11. 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? • *A rope socket should be installed onto the non releasable overshot and it is run on a SB or RS pulling tool for releasing the overshot when falling to pull out the fish.*	Interview	C		130524