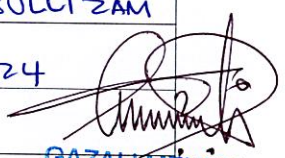


SLICKLINE ASSISTANT WORKBOOK

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	MD. IFWAT AFIA BIN SAMBULLIZAM
DATE OF JOIN	11 NOVEMBER 2025 2024
CONTACT NO.	017-815 4379
RECEIVED DATE	15 February 2025
DATE COMPLETED	7 MARCH 2025

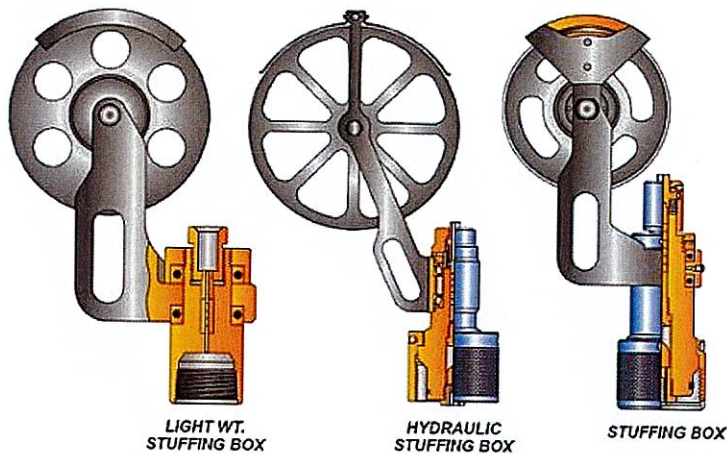

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Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
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B. SURFACE EQUIPMENT

B.1. STUFFING BOX



What is Stuffing Box

Stuffing Box is a primary barrier that positioned at the uppermost point of the PCE string.

What is the purpose of stuffing Box

- To allows the wireline to enter the well under pressure and provide a seal should be wireline break and be blow out of packing.

How to operate Stuffing Box

- Stuffing box can be operated either manually or hydraulically which when hydraulic pressure is applied to area above piston, piston is forced downward againsts force of spring.

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What is maintenance required for Stuffing Box

- i) Packing - not worn out
- ii) ~~Sheave~~ Sheave - use the correct size
- iii) upper/lower gland - check for wear.
- iv) BOP plunger - check for wear and freedom of vertical movement.
- v) Sheave Bearing - check for free spinning.
- vi) Sheave Staff - check for freedom of swivel movement.
- vii) Sheave guard - tight and adjust close to the sheave.

What is safety precaution required for Stuffing Box

- Check for packing whether worn out or in good condition and make sure using the correct size of sheave.

What is potential hazard during handling Stuffing Box

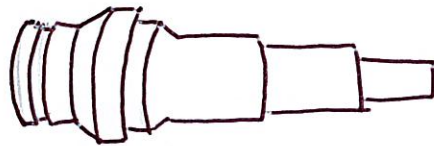
- Weather (Sun, rain, thunder)
- Pinch point
- Back Injury
- Drop object


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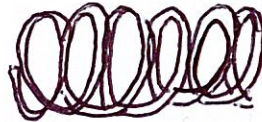
7/3/25



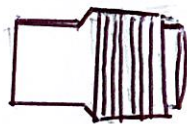
Draw & name each part of stuffing box



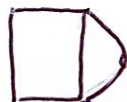
BODY



SPRING



RETAINER

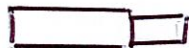


BOP
PLUNGER

LOWER
GLAND



PACKING



UPPER
GLAND



PISTON

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B.2. LUBRICATOR

What is Lubricator

- lubricator are series of interconnected length of pipe also known as risers.

What is the purpose of Lubricator

- To provide a space for the tool to be contained in under pressure, when opening and closing the wellhead.

How to operate Lubricator

- Connect lubricator section using chain block, wireline mast, crane or gin pole.

What is maintenance required for Lubricator

Check for:-

- general damage and corrosion
- condition of the needle valves on the lower section
- visual inspection of the internal bore for corrosion and wire tracking wear grooves.

What is safety precaution required for Lubricator

- lubricator should be X-rayed
- One of the lubricator must have a port to bleed of pressure.

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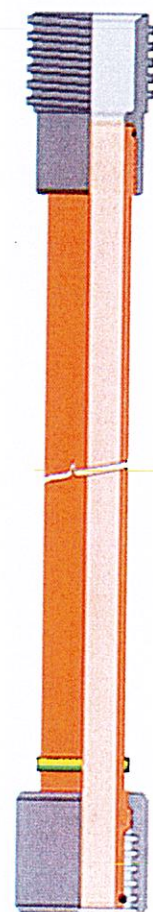
DIMENSION BID

WELL INTERVENTION | PERFORATION SERVICES

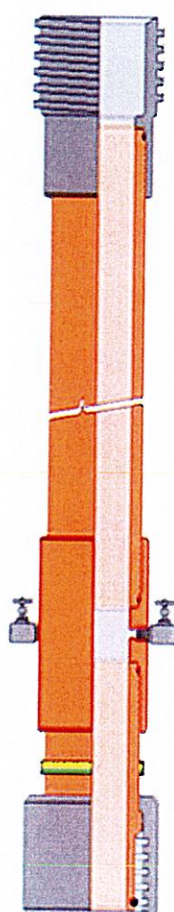
What is potential hazard during handling Lubricator

- Pinch point ✓
- Body motion ✓
- Back injury ✓
- Weather ✓
- drop object ✓

Draw & name each part of Lubricator



Top Section



Bottom Section

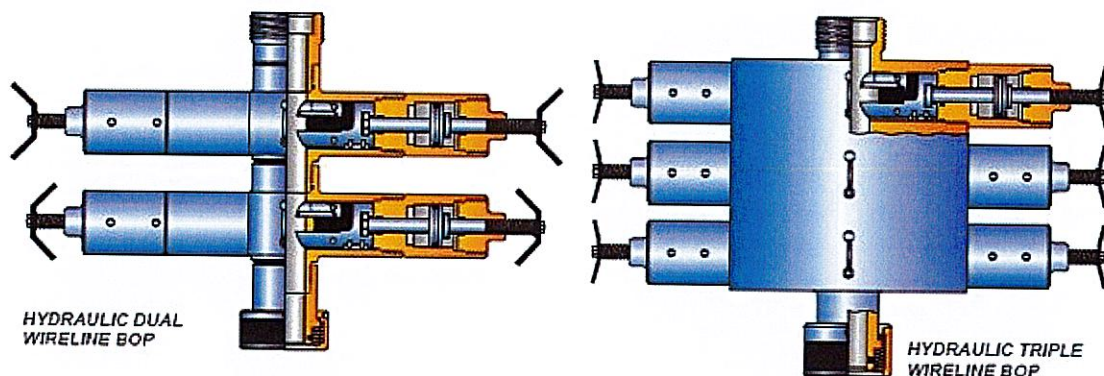
Box Connection


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Connection Port

Pin Collar ✓

B.3. BLOWOUT PREVENTER (BOP)



What is BOP

- Blow out preventer is known as wireline valve which is installed between the tree connection and lower lubricator section. ✓

What is the purpose of BOP

- TO enable the well pressure to be isolated without cutting the wire by closing the master valve.
- Permit the assembly of the wireline cutter above the BOP rams and dropping it if the tool string become stuck in the well.
- Allow slickline work to be conducted while containing the well pressure on surface with wire in the well bore. ✓

How to operate BOP

- i) Hydraulically ✓
- ii) using RSU ✓
- iii) using SWCP ✓

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What is maintenance required for BOP

Must service and pressure test.

Level 1 service : To be carried out after every job

Level 2 service : To be carried out once a year.

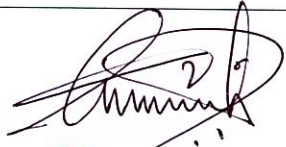
Level 3 service : To be carried out every 5 years.

What is safety precaution required for BOP

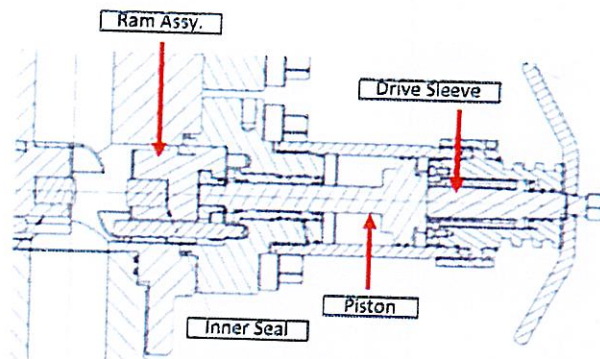
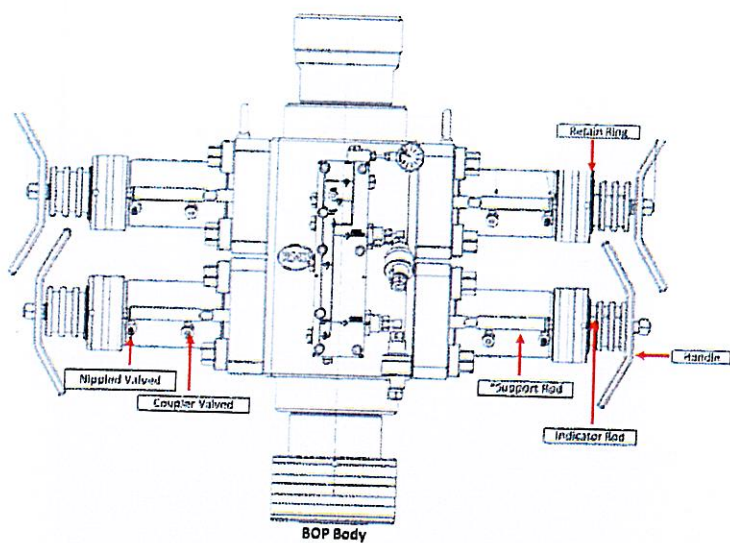
Ensure the rod has enlarged diameter below the ram to prevent it being blown out during testing.

What is potential hazard during handling BOP

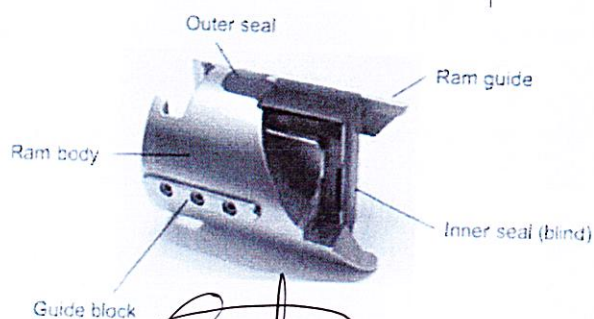
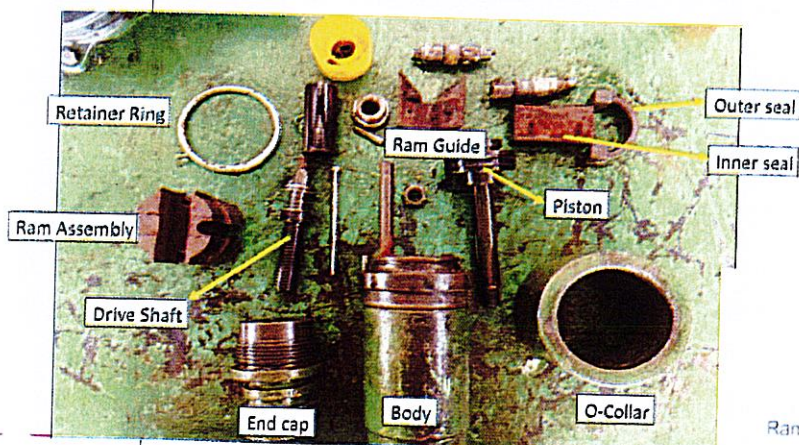
- i) high pressure. ✓
- ii) heavy equipment (load) ✓
- iii) Hoses burst ✓


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Draw & name each part of BOP



BOP Cylinder Body



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B.4. X-MAS TREE

What is x-mas tree

X-mas tree is a series of valves installed on the wellhead to control the flow of fluids from the well. Located on top of wellhead. ✓

What is the purpose of x-mas tree

Christmas tree are vertical assembly of valves with gauge and chokes that allow for adjustment in flow control as well as injections to stimulate production. ✓

How to operate x-mas tree

The valves that comprise some of the decorations on the Christmas tree are opened when the oil or gas well is ready to produce and the processing and storage facilities are ready to receive. ✓

What is maintenance required for x-mas tree

- Inspect and replace any damaged component, clean Christmas tree and do Critical Device Function test (CDFT) on Christmas tree. ✓

What is safety precaution required for x-mas tree

- Make a count during opening and closing valves.
- Do not overtighten the valves during operation and closing.
- ~~Never~~ Never use master valve to shut in the flowing well, except in emergency situation. ✓

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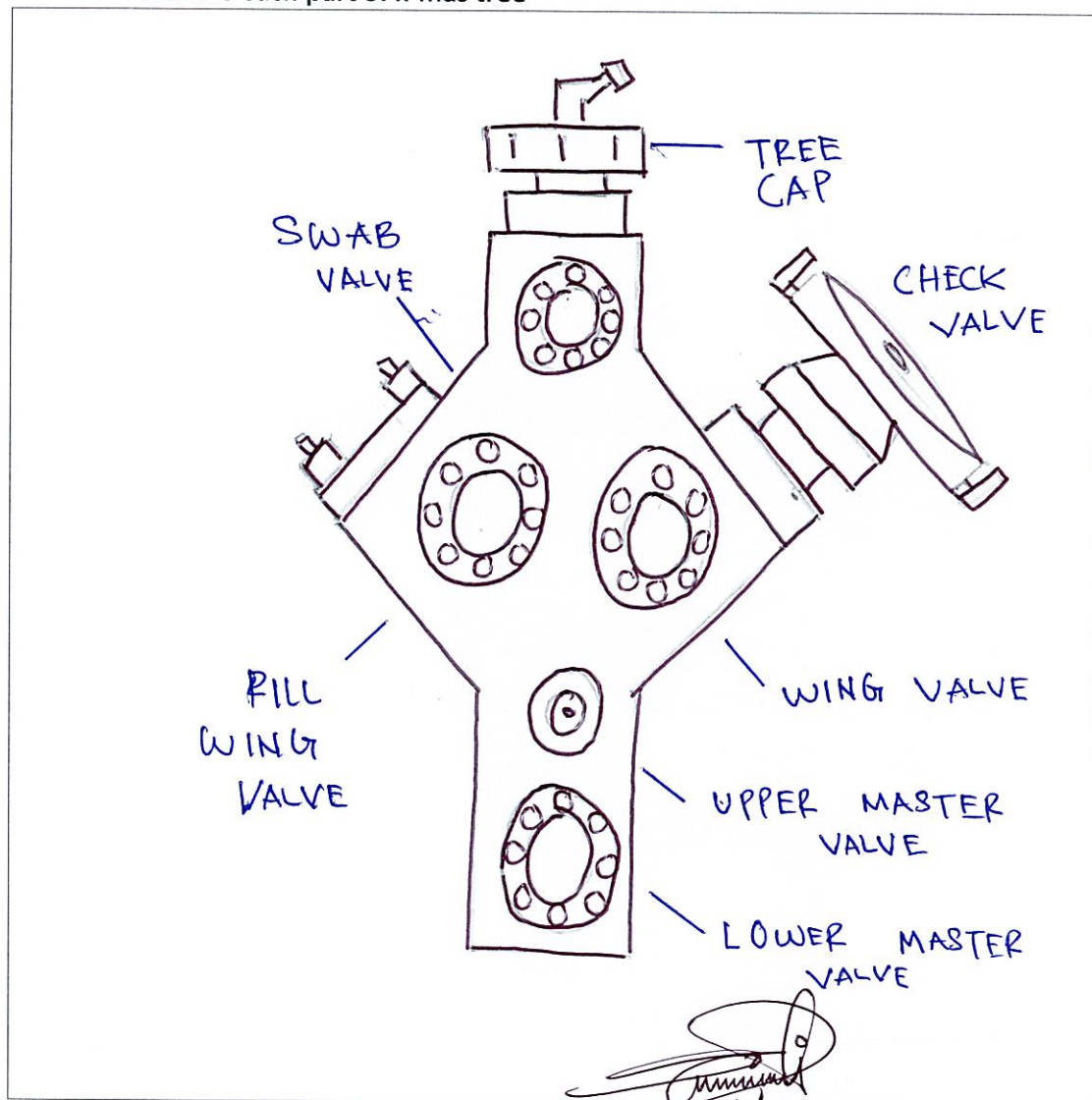
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What is potential hazard during handling x-mas tree

- High pressure
- Work under ~~some~~ suspended load
- line of fire
- weather (sun, rain, thunder)

Draw & name each part of x-mas tree



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B.5. WIRELINE REEL SKID UNIT (RSU) / WINCH – SINGLE DRUM AND DOUBLE DRUM

What is RSU

~~RSU~~ Reel Skid unit (RSU) also known as wireline unit or winch unit.

What is the purpose of RSU

- To turn the wire drum to lower and rise tool-string in the well that required wireline servicing.
- RSU also can operate BOP from the unit.

How to operate RSU

- By using Power Pack and hydraulic system supply from power pack.
- Transmission of hydraulic hose via hole between powerpack and RSU.

What is maintenance required for RSU

- Check the hand brake system.
- Check the chain tension.
- Check the angle drive function
- check the counter wheel condition
- check the pressure gauge.


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What is safety precaution required for RSU

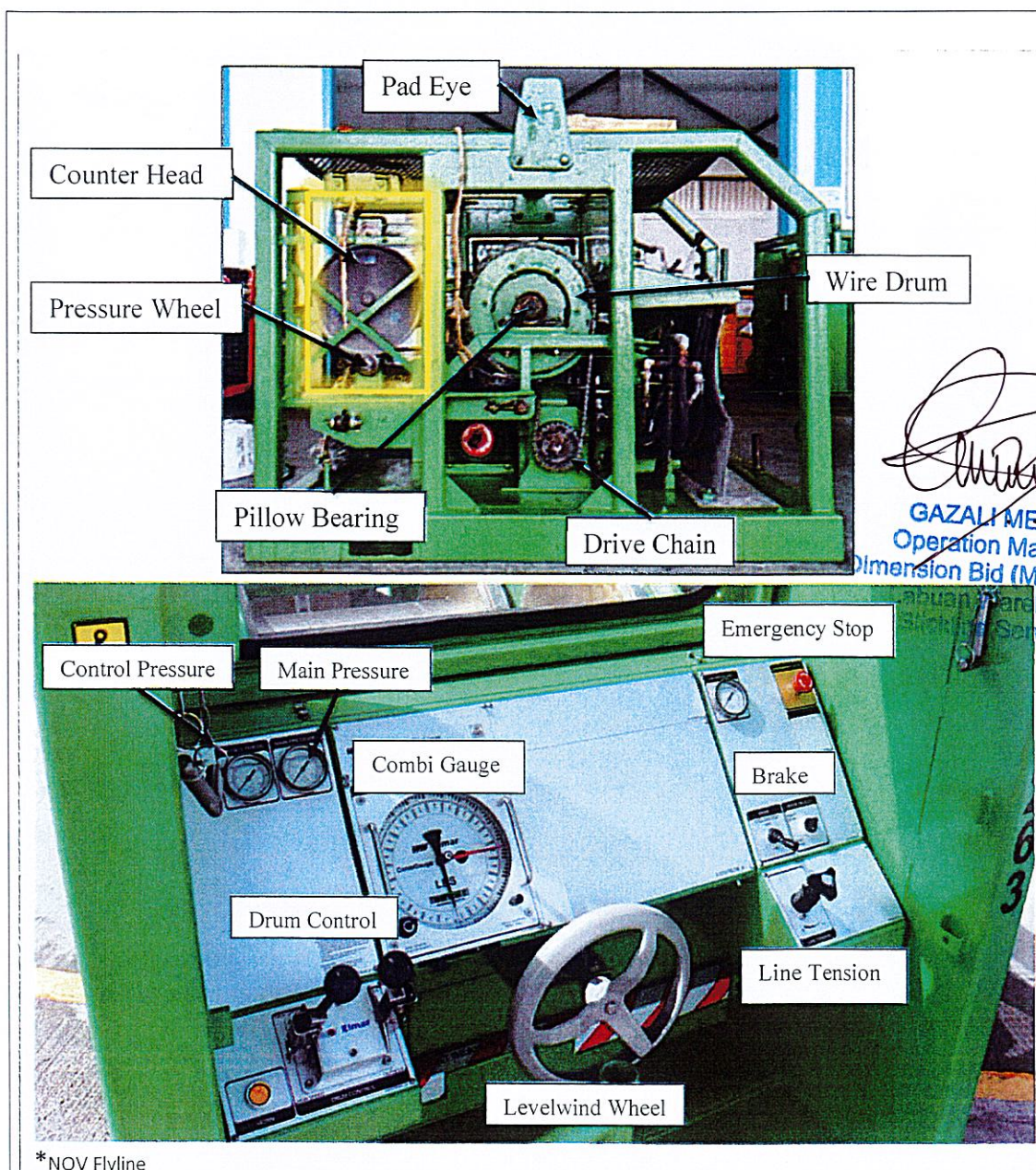
- Be careful with the wire because have tension of the wire.
- Be careful with rotating drum winch when running because it might break and may cause injury, make sure the cover was install.

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What is potential hazard during handling RSU

- Pinch point ✓
- wire tension ✓
- Rotating drum ✓
- Hydraulic pressure ✓
- ~~Noisy~~ Noise ✓

Draw & name each part of RSU



*NOV Flyline



B.6. ODOMETER

What is Odometer

- Odometer also known as Depth counter or Depth measuring device.

What is the purpose of Odometer

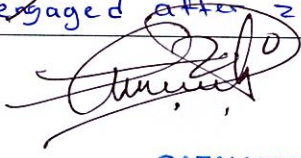
- To indicate the depth of slickline tool string hanging in a tubing string in feet or meters.

How to operate Odometer

- Prior to operation, this device should be manually set to zero and start reading from tubing hanger.
- connect hose to

What is maintenance required for Odometer

- Check if counter head is free to rotate.
- Check the rotation is being transmitted freely to odometer.
- Ensure the direction of rotation is correct.
- Check the odometer is fully engaged after zeroing.


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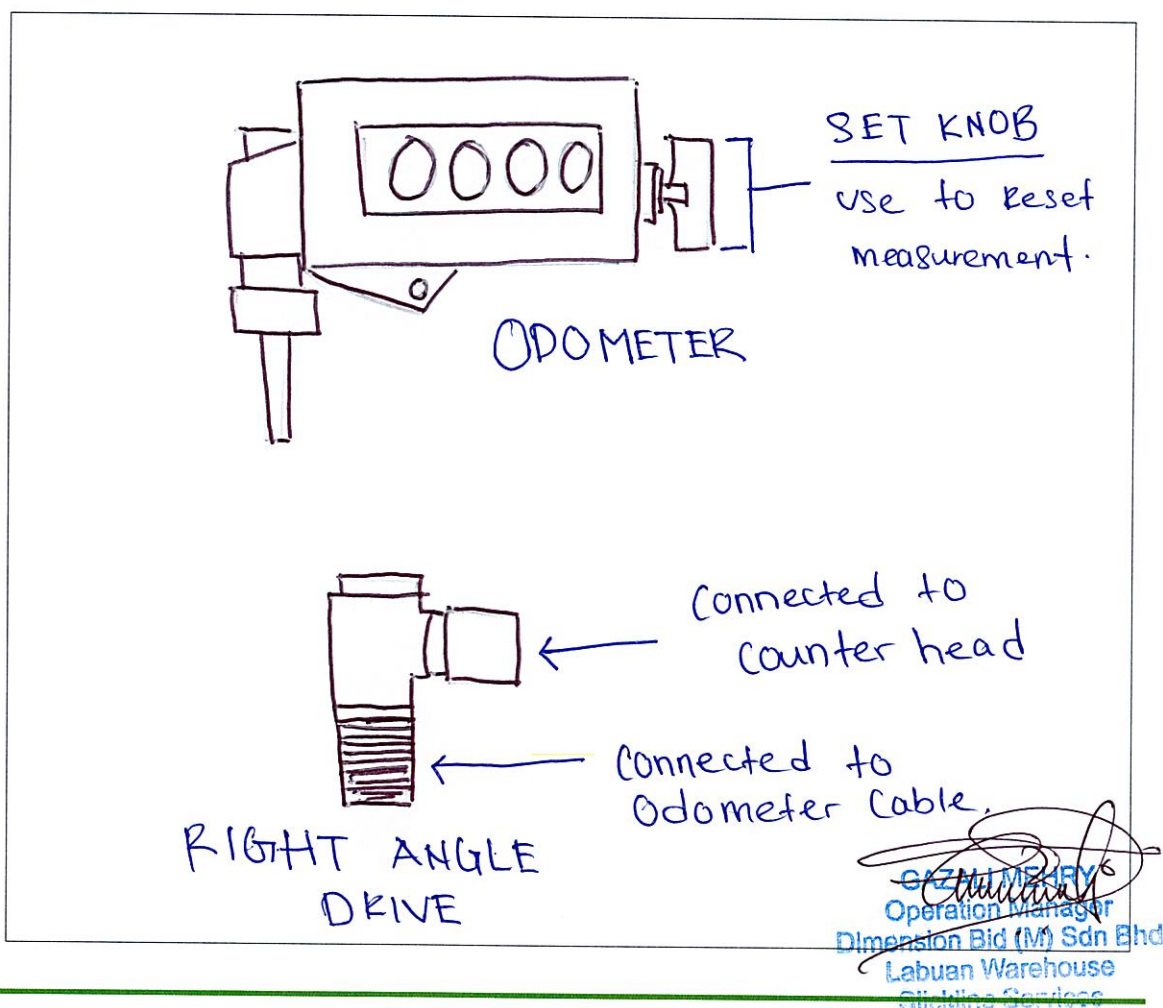
What is safety precaution required for Odometer

- wear appropriate PPE like glove.
- calibrate Odometer to 0

What is potential hazard during handling Odometer

- Pinch point
- sharp edges.

Draw & name each part of Odometer





B.7. WEIGHT INDICATOR (200 LBS AND 4000 LBS)

What is Weight Indicator

Weight indicator is a device to measure weight of tools in tubing string. Most common weight indicator in the field is the Martin Decker type and consist of an indicator in the cab or wireline unit, a hydraulic hose leading to a load cell coupled to the Counter head assembly.

What is the purpose of Weight Indicator

The function of weight indicator is to determine the total weight of tools hung in tubing string.

How to operate Weight Indicator

- The weight indicator will located at RSU is connected to the load cell using a rubber hose filled with hydraulic oil. Load cell is ~~attared~~ attached to heavy-duty hoses carries the pressure generated to the weight indicator gauge ~~indicator~~ calibrated in lbs
- It using w-8 fluid, hydraulic system.

What is maintenance required for Weight Indicator

- It is necessary to completely flush and re-charge the unit at least once per month. Having recharged the unit, a specific gap should be set between load plate and load cell retaining ring.
- Check for leaks around the hose and priming check valve assembly.

What is safety precaution required for Weight Indicator

- Do not crash the hoses.
- Secure gauge and fittings because the load cell is made of aluminium alloy and reasonably strong rough handling can damage it.

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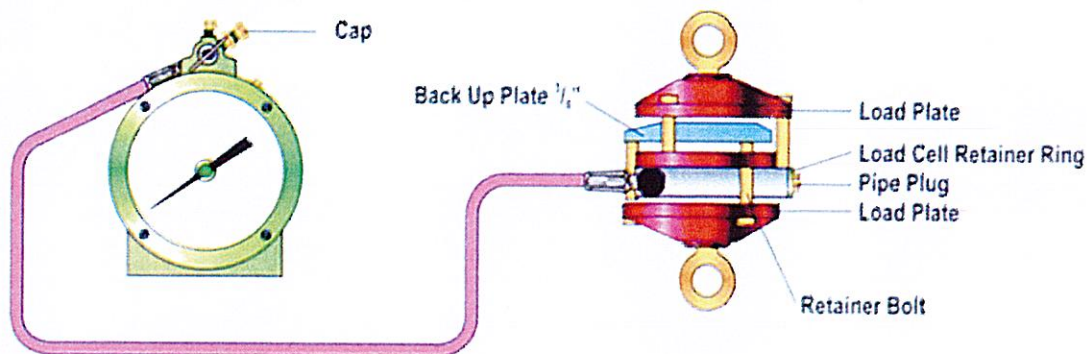
DIMENSION BID

WELL INTERVENTION | PERFORATION SERVICES

What is potential hazard during handling Weight Indicator

- Drop object ✓
- hydraulic fluid ✓
- hydraulic pressure ✓
- load weight ✓
- Pinch point ✓

Draw & name each part of Weight Indicator



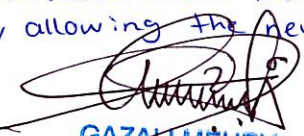

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B.8. SPOOLING DEVICE

What is Spooling Device

Generally, ~~once~~ one configured with removable drum that allow transport spools to be inserted, allowing the new string to be spooled into reel.


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What is the purpose of Spooling Device

- To hold the reel drum during spooling process
- To control the tension of the ~~times~~ line as it is spooled.

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How to operate Spooling Device

- Assemble the reel. The setup is almost the same with normal operation, which weight indicator and hay pulley are needed.
- Brake level will help to control the line tension.

What is maintenance required for Spooling Device

- Brake maintenance.
- check the hydraulic system.
- check the skid condition.

What is safety precaution required for Spooling Device

- make sure to check the glass in good condition before start the job.
- make sure Bolts and nuts are ~~in~~ in good condition.



What is potential hazard during handling Spooling Device

- rotating device
- pinch point.
- Noise
- wire tension.

Draw & name each part of Spooling Device





B.9. CONTROL PANEL

What is Control Panel

- Control Panel are used to operate a number of valves normally operated in slickline operations.
- Provide a high pressure oil ~~to~~ output from a low pressure air or gas input.

What is the purpose of Control Panel

- To operate BOP rams and provide a high pressure oil ~~to~~ output from a low pressure air or gas input.
- Hydraulic oil supplied 3,000 - 5,000 PSI pressure via port to DUAL BOP and SB.

How to operate Control Panel

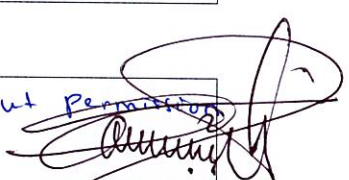
- Connect the control line to the equipment.
- Open air supply, use regulator to control pump out pressurized the line.

What is maintenance required for Control Panel

- Daily = Check hydraulic fluid level
- Monthly = Disassembly air, filter and clean thoroughly
- Yearly = Renew hydraulic tank and return filters, disassembly hydraulic pump, check for corrosion and wear

What is safety precaution required for Control Panel

- > Don't stand ~~the~~ near Control Panel without permission because have high pressure.
- > Do not tighten or loosen the connection ~~with~~ under pressure.


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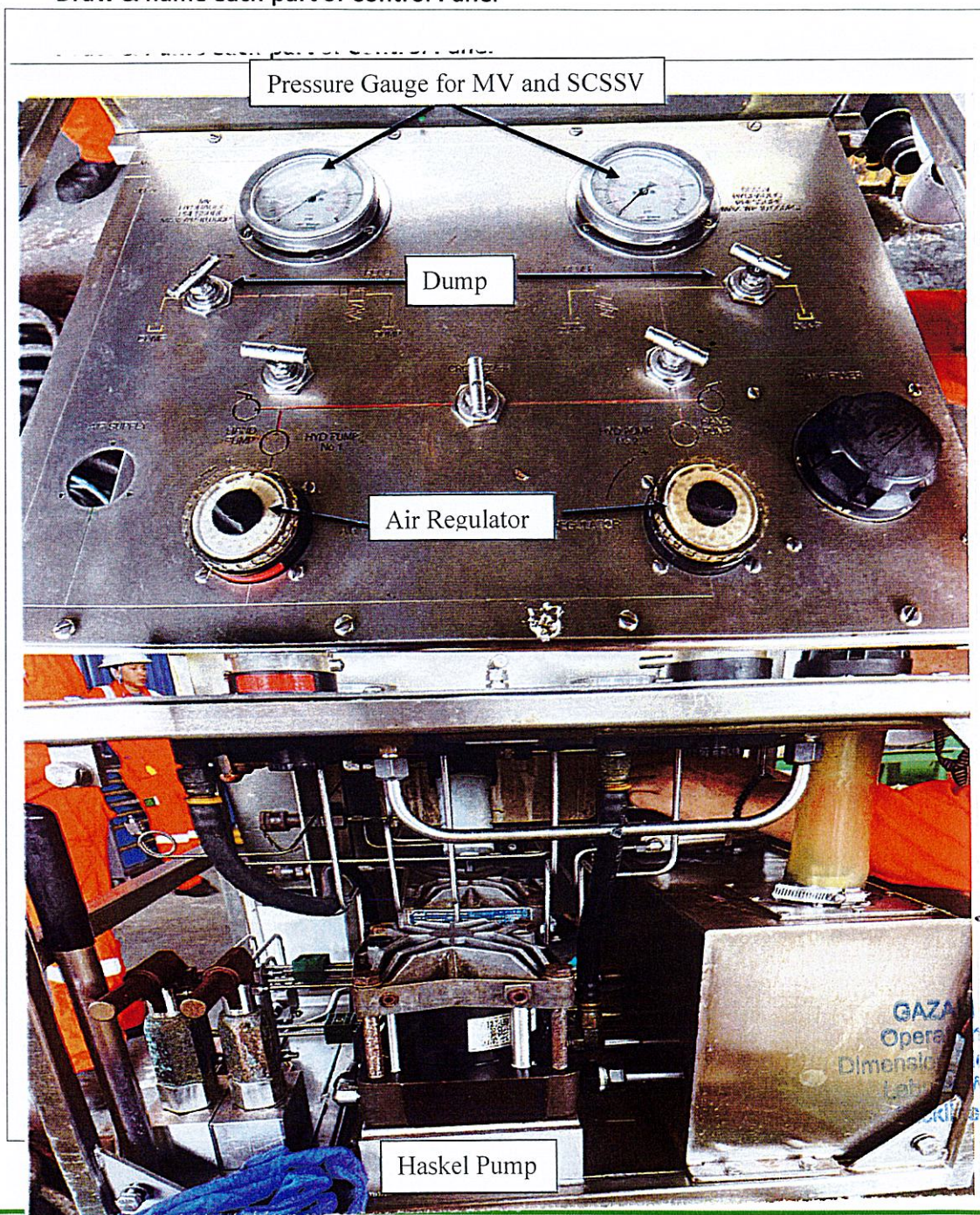
DIMENSION BID

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What is potential hazard during handling Control Panel

- high pressure ✓
- hydraulic oil ✓
- long hoses. ✓

Draw & name each part of Control Panel





B.10. HUSKEL DRUM

What is Huskel Drum

- Is an air ~~driven~~ driver pump.

What is the purpose of Huskel Drum

- TO drive the hydraulic or water in control panel or test pump.

How to operate Huskel Drum

- Operate from the knob or regulator of the panel.

What is maintenance required for Huskel Drum

- check the condition of the O-ring.
- Service huskel pump
- Hydraulic check valve and liquid seal repair.

What is safety precaution required for Huskel Drum

- check O-ring condition
- Make sure connection tubing in good condition.



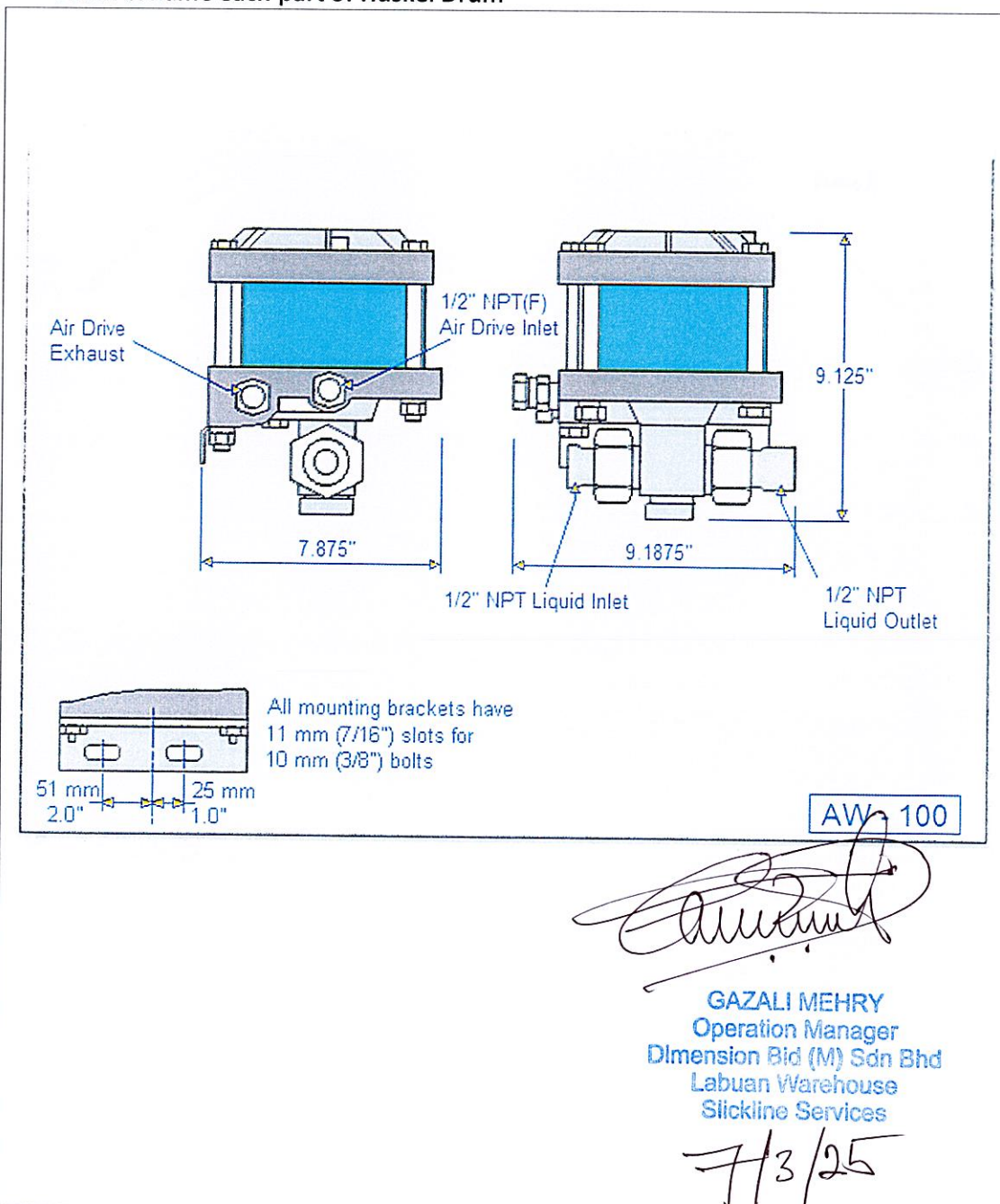
DIMENSION BID

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What is potential hazard during handling Huskel Drum

- hydraulic oil ✓
- hydraulic pressure ✓
- high pressure ✓
- pinch point ✓

Draw & name each part of Huskel Drum



B.11. POWER PACK (ELECTRICAL & DIESEL)

What is Power Pack

- Power pack is a single piece configuration, skid mounted with integral crash frame, constructed in carbon steel with single point lifting.

What is the purpose of Power Pack

- To supply driving hydraulic power to equipment like Mast and RSU.

How to operate Power Pack

- By operating several valves, adjust speed, power and rotation of drum.

What is maintenance required for Power Pack

- check the oil level
- check the water / coolant level
- check the diesel level
- check the condition of belt belting ✓
- check any leaking.


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What is safety precaution required for Power Pack

- wear appropriate PPE when changing hydraulic oil
- Beware of rotating fan when engine is running
- Do not open radiator cap while power pack is still running.



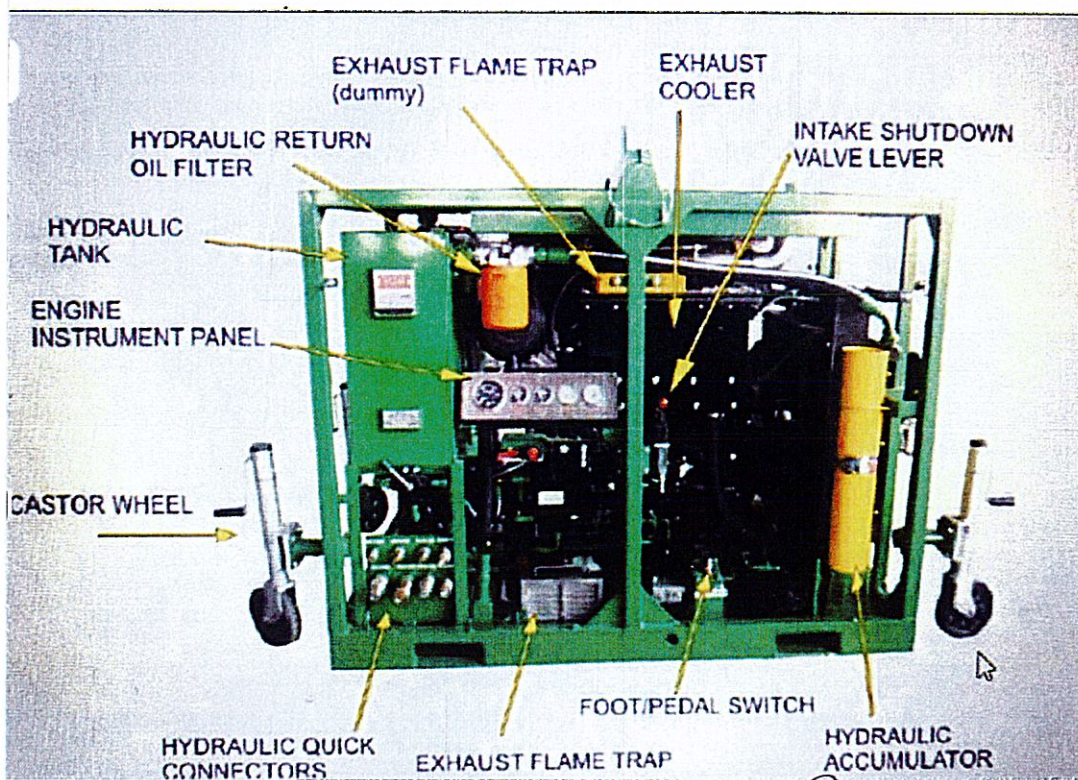
DIMENSION BID

WELL INTERVENTION | PERFORATION SERVICES

What is potential hazard during handling Power Pack

- fan rotating
- Noise
- Hot radiator / engine.
- high pressure engine
- Exhaust

Draw & name each part of Power Pack



[Handwritten signature]

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B.12. AIR COMPRESSOR

What is Air Compressor

- Air Compressor is an open loop hydraulic system unit which is used to supply compressed air to control panels when there is no supply on site.
- Air Compressor uses diesel engine to produce power.
- The unit has 84.5 hp diesel engine, water cooled and Dynaset hydraulic driven air compressor with an output capacity of 1300 L/min

What is the purpose of Air Compressor

- TO supply compressed air for control panel, test pump and air starter engine.

How to operate Air Compressor

- By operating several valve, adjust speed, power and rotation
- The air compressor usually use spring starter
- TO the crank the starter, rotate the shaft clockwise until indicator turn red. Replace the spring to start the engine.

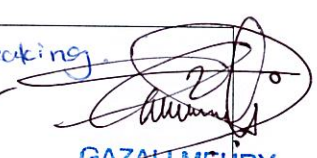
What is maintenance required for Air Compressor

Exhaust Gas cooler → Should be cleaned at an interval of 1200 hrs.

Exhaust flame trap → Daily: remove flame trap element, soak in cleaning agent for 2 hrs. wash through with clean water.

What is safety precaution required for Air Compressor

- Make sure all the hoses connection no leaking.
- Make sure the fan is covered.


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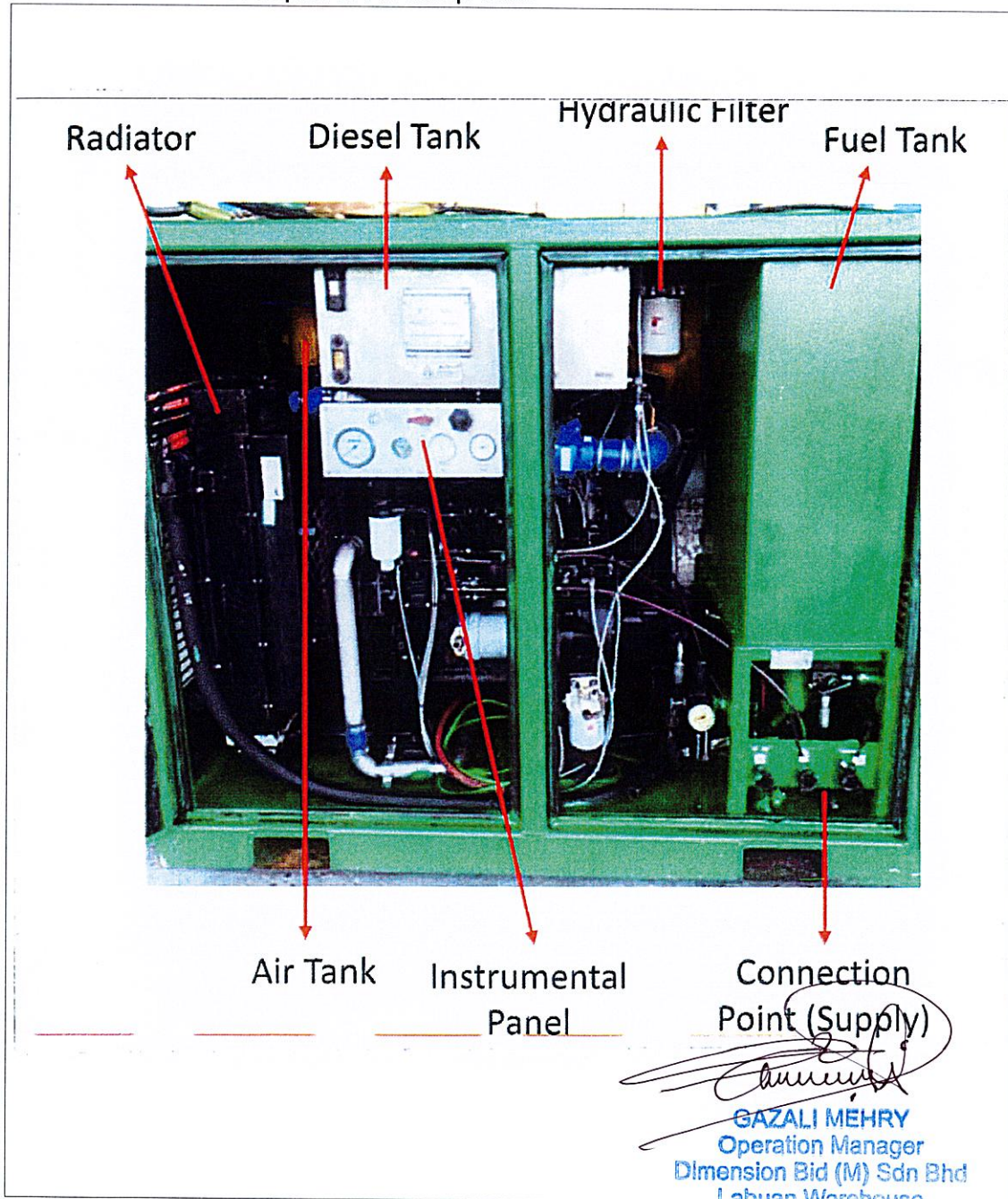
DIMENSION BID

WELL INTERVENTION | PERFORATION SERVICES

What is potential hazard during handling Air Compressor

- i) Hot Surface ✓
- ii) High pressure ✓
- iii) Noise ✓
- iv) Hose burst ✓

Draw & name each part of Air Compressor



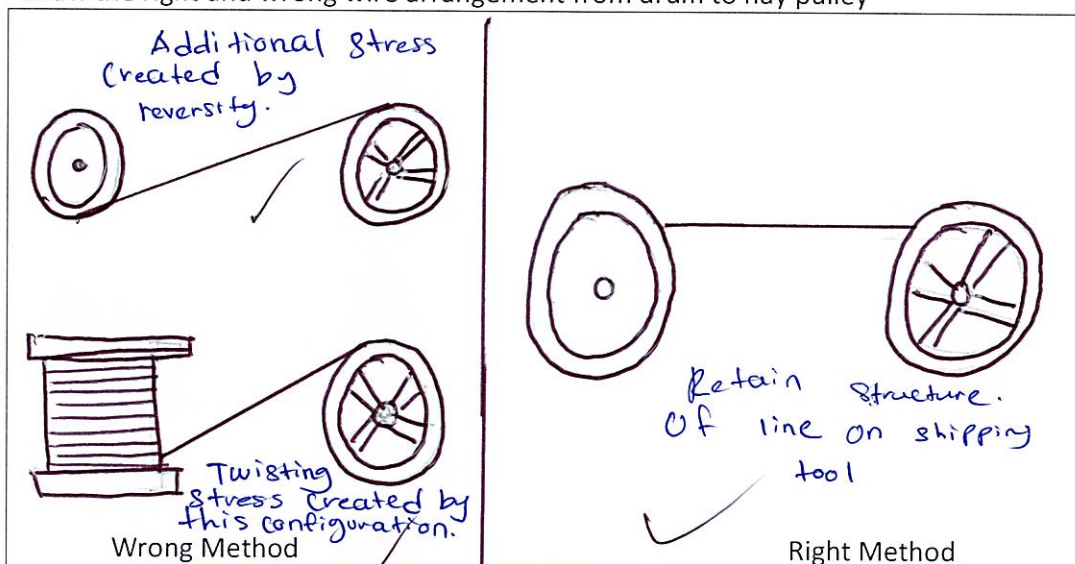
B.13. DRUM

What is the purpose of Drum

TO spool the wireline wire.



Draw the right and wrong wire arrangement from drum to hay pulley



What is maintenance required for Drum

Make sure the to service and always check the drum bearing, change if there any have any broken or damage.

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What is safety precaution required for Drum

- 1- Use tag line or push pull stick.
- 2- Make sure using the safety glasses or full ~~standards~~ PPE



DIMENSION BID

WELL INTERVENTION | PERFORATION SERVICES

What is potential hazard during handling Drum

- Rotating device ✓
- Pinch point ✓
- weight. ✓

Please draw/sketch the toolstring configuration for:

- 1) Drift run/tubing clearance check ✓
- 2) Sinker bar run ✓
- 3) Set and retrieve plug ✓
- 4) Set and retrieve insert valve ✓

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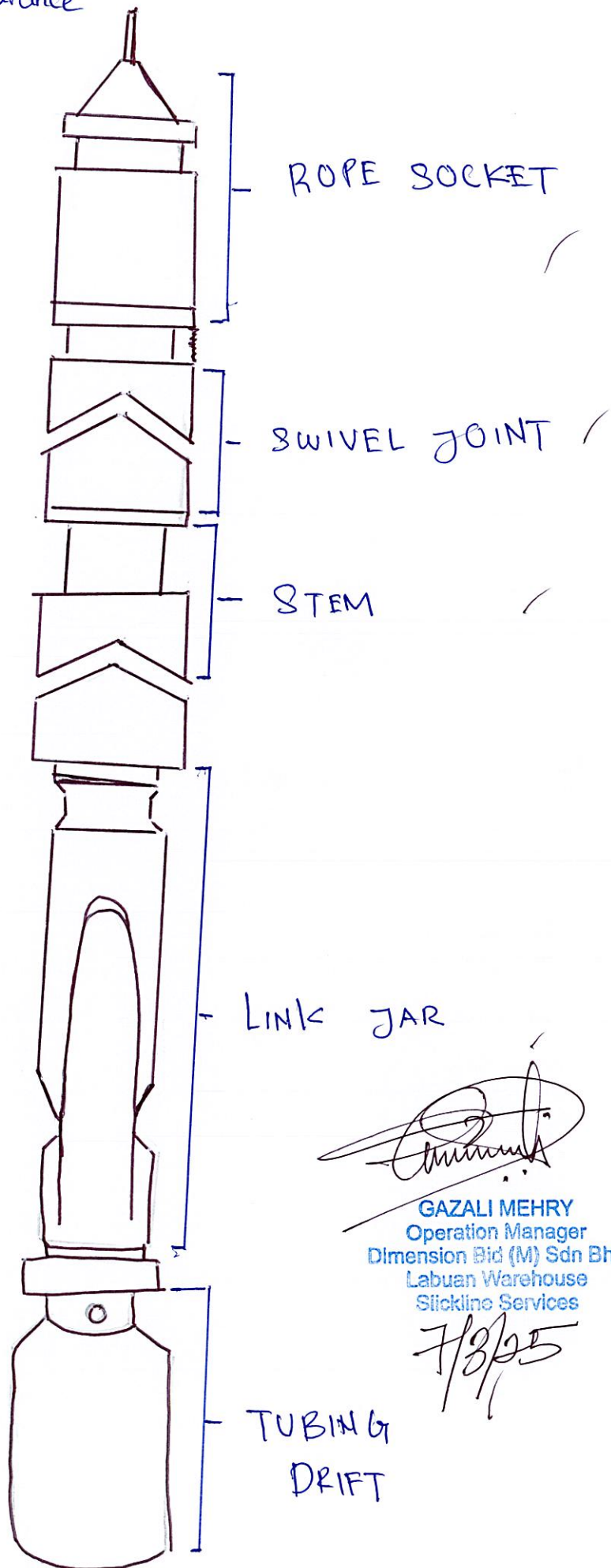
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1. Drift Run / Tubing Clearance Check.



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2. Sungker Bar
hun.

ROPE
SOCKET —

SWIVEL
JOINT

MALLOK9 STEM

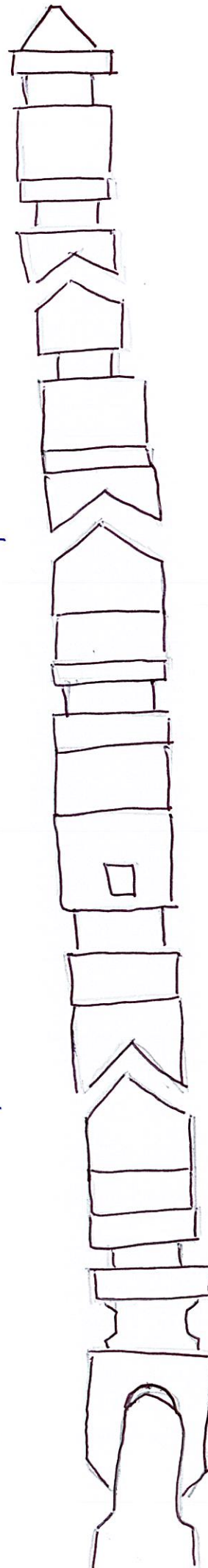
Knuckle

MALLOK
STEM

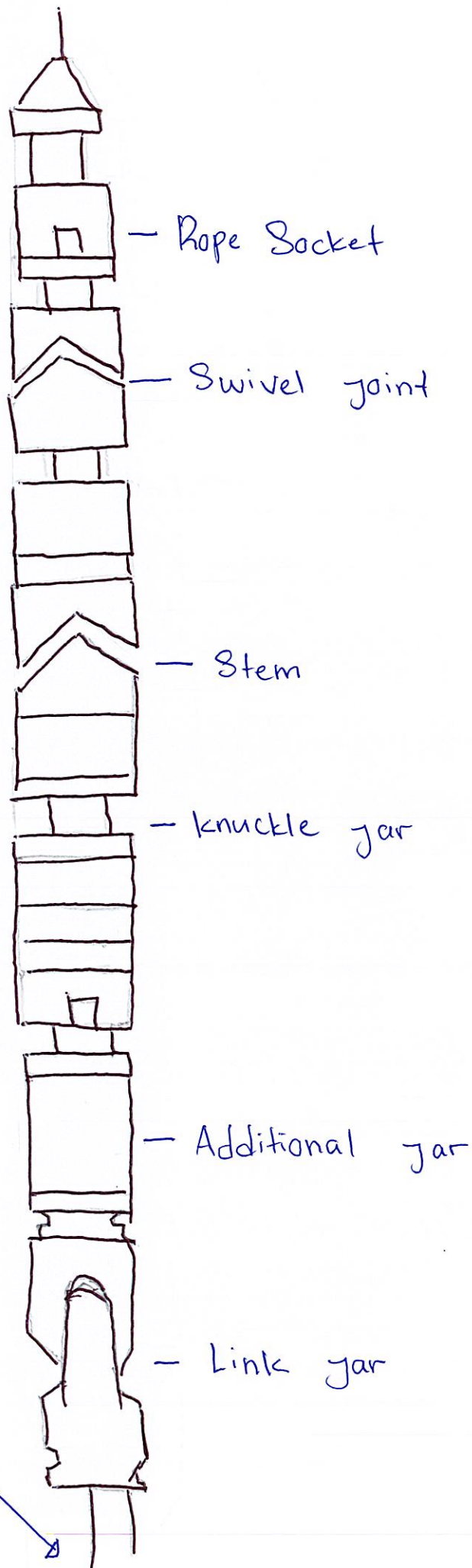
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Link jar
came with
~~both~~ bull
nose.

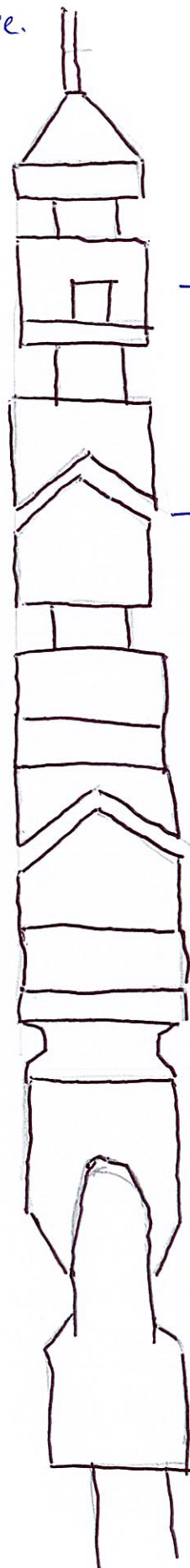


3. SET / Retrive Plug.




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4. Set / retrieve Insert valve.



— Rope socket

— Swivel joint

— stem

— Link jar

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1) X-Line come with
prong (set)
←

2) GSL come with
prong (retrieved)