Action
Mark centre well and position of shaker skid-sand trap and utility skid

Details
Take the measurements from the general rig layout of rig xxTE, drawing number xxx-xxxTE-xx1. Verify with the toolpusher if the dimensions on the drawing is still accurate Lay out PVC lining for underneath the complete mud system

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears
2 x 2 single leg steel-wire sling SWL: 18,5 mT;|4 x shackle G2130 SWL: 9,5 mT

Machines

Name	Count
Crane 90 MT	1

Tools

- Measuring tape
- Nylon rope
- Nails
- Spray paint

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position sand trap / shale shaker skid

Details
Unload and position the sand trap / shale shaker skid. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Shale shaker frame Attach lifting gear to the skid and slowly start lifting by following the hand signals of the banks man. Position the skid according the well centre markings on the ground and skid

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Steel wire brush
- Measuring tape

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position shaker tank

Details
Unload and position shaker tank. Position the cranes according the lifting plan no. 14013.001.004 - (Un)load Shaker tank Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Position the skid against the sand trap / shale shaker skid. Connect the flow line between tank and sand trap plus the header box / mud return line (see picture Align tank along the nylon rope and sand trap / shale shaker skid.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Wheel Loader	1

Lifting Gears

Tools

- drift
- spanners

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Util-ity skid

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Utility skid Attach lifting gear to the lifting points of the Utility skid. Check if the lifting gear is installed correctly. Start lift by fol-lowing the hand signals of the banks man and unload the utility skid next sand trap /shaker tank and intermediate tank. When the skid is in position connect all the hoses and pipes to and from the trip tank. Connect the lines to and from the poor-boy degasser. Connect several flare-lines to the choke manifold. Remark: Utility skid can be positioned after the substructure box-es are offloaded because of crane position during of-floading and positioning of substructure box

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up Inter-mediate tank

Details
Unload and rig up intermediate tank. Position the cranes according the lifting plan no. 14013.001.003 - Unload intermediate tank Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the intermediate and the shaker tank. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up re-serve tank # x

Details
Unload and rig up reserve tank #x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload reserve tank #x Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the intermediate , shaker tank and reserve tank #1. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up re-serve tank # x

Details
Unload and rig up reserve tank #x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload reserve tank #x Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the reserve tank #x and reserve tank #x. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action

Unload and rig-up re-serve tank # x

Details

Unload and rig up reserve tank #x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload reserve tank #x Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the reserve tank #x and reserve tank #x. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up re-serve tank # x

Details
Unload and rig up reserve tank #x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload reserve tank #x Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the reserve tank #x and reserve tank #x. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up re-serve tank # x

Details
Unload and rig up reserve tank #x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload reserve tank #x Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the reserve tank #x and reserve tank #x. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up suc-tion tank

Details
Unload and rig up suction tank. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Suction tank Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the suction tank and intermedi-ate tank. Clean the flow line connections and check the seals. When the condition of the connections are good fix the con-nections. Afterwards align the tank and lower on the ground

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position big-bag crane / hopper skid

Details
Unload and rig up big-bag crane / hopper skid. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload big-bag crane / hopper skid Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Align the flow lines between the big bag crane/ hopper skid and suction tank. Clean the flow line connections and check the seals. When the condition of the connections are good fix the connections. Afterwards align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position rub-bish skip container

Details
Unload and rig up rubbish skip next to reserve tank #3. Attach lifting gear to the tank and slowly start lifting by following the hand signals of the banks man. Clean the flow line connections and check the seals. Align the rubbish skip along reserve tank # 3 and lower on the ground

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position matting super charge skid and mud pumps

Details
Layout PVC lining on the position of the super charge skid. Position the matting system for the mud pumps and super charge skid in front of the suction tank. Unload the matting and position them according lay-out and under supervision of the senior supervisor with help of a wheel loader

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Wheel loader ,
- Measuring tape

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position super charge skid

Details
Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Charge pump skid Attach lifting gear to the lifting points of the charge pump skid. Check if the lifting gear is installed correctly. Start lift by fol-lowing the hand signals of the banks man and unload the charge pump skid on top of the matting. Stop just above the matting and install the distance bars between charge pump skid and suction tank. Lower the skid on the matting. Clean the suction lines and check the seals. Afterwards con-nect the suction line to the charge pump skid and fix the ham-mer union coupling plus the second pipe fitting.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Well fluid tank #x & #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
First install PVC liner on the ground on the position of the Well fluid tanks. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Well fluid tank #x & #x Attach lifting gear to the lifting points of the Well fluid tank Check if the lifting gear is installed correctly. Start lift by fol-lowing the hand signals of the banks man and unload the Well fluid tank next to the reserve tank #3. When the tanks are in position connect all the hoses from the tanks to the mud system and in between the diesel tanks

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install several stairs

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Install stairs from the ground to top of the tank on the follow-ing tanks: - Shaker skid - Reserve tank #x - Reserve tank #x - Suction tank Lift the stairs in position and align the pin holes. When the holes are aligned install pin and secondary retention pin.

Dimensions

Lifting Gears

Tools

- Tagline
- Hand hammer
- spanners

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install vacuum degasser

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Attach lifting gear to the vacuum degasser. Check if the lifting equipment is installed in the correct way. Lift the vacuum degasser and position between shaker and intermediate tank (above the gap). The guides on the tanks and vacuum degasser define the correct position of the vacuum degasser. Connect on both side of the vacuum degasser a pipe which goes in to the shaker tank. Connect the flanges with bolts and nuts and use a paper seal in between. Make sure the bolts and nuts are cleaned and greased.

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install discharge line mud cleaner

Details
Lift the discharge line in position from mud cleaner to the in-termediate tank. Connect the line to the mud cleaner with a clamp. Make sure the bolts, clamp and seal are checked and cleaned before installation.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install platform and roof section

Details
Install platform and roof section between intermediate and suction tank. First install the platform and afterwards the roof section. When the platform is installed, install the handrails.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Tagline
- Hand hammer
- spanners

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install roof Shaker tank

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Install the roof above the mud cleaner on the shaker tank. Attach lifting gear to roof section. Start lifting by following the hand signals of the banks man. Lower the roof section on top of the support on the shaker tank. Align the holes from the connection between roof and support. Install the pins and secondary retention pins. Release the crane.

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Turnover platforms in between tanks

Details
Turn over and install platforms in between the mud tanks. Some platforms can be turned over manual others by crane. When the platforms are turned over install the handrails on the sides.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Tagline
- Hand hammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect power cables mud system

Details
Connect all the power cables between the Mud system - SCR building and in between the mud tanks. Check during installation of the cables if there is any damage, when damaged replace or repair. Check and clean plug and socket before making connection. When the cables are connected stow/organize them proper in the cable trays.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect air supply to mud system

Details
Connect the air supply lines to the air receivers/manifold on the tanks. Check and clean the connections before installation. When the lines are installed open the air supply valve slowly and check for leakage. When there is a leak close the air supply valve and solve the problem.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Steel wire brush
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

01.15: Mud system-PAGA + alarm

Action
Rig-up and connect PA-GA and gas alarm sig-nals

Details
Install the PAGA system around and on top of the mud tanks. Position the poles with speakers, and alarm lights on the mud tanks. Connect all the electrical cables to several speakers and gas alarm units. When the cables are connect stow and secure them with tie-wraps to handrails and cable trays.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect and prepare for transport cascade sys-tem

Details
Connect the main cascade-hose from the cascade bottle racks/air compressors to the cascade manifolds/stations on the Mud tanks. Stow and secure the main hose in cable trays and handrails. Clean and function check all the stations if they are working proper. Position all emergency cascade sets (15 min) on the mud system.

Resources

Name	Count
Assistant Driller	1
Roustabout	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install cutting pit

Details
Dig with the digger a hole as big as the cutting skip under-neath the cutting ditches. Attach lifting gear to the lifting points of the cutting skip and lower in the hole. When the hole is not big or deep enough remove the skip and start digging again till it fits

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Tagline

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position and rig-up (dis)charge lines cement tanks

Details
Position and rig-up (dis)charge lines from the mud system to the cement tanks. Position the different section of lines with the wheel loader and connect the lines. Before making the connection check the alignment. Make sure the hammer union connections are clean and checked.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Sledgehammer
- Steel wire brush
- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Ce-ment tank #x

Details
Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Cement tank #x Attach lifting gear to the lifting points of the cement tank Check if the lifting gear is installed correctly. Start lifting by following the hand signals of the rigger-1 and unload the Ce-ment tank. Lower the tank and stop just above the ground to align the connection of the (dis)charge line and cement tank #x. Make the connection between line and cement tank by clos-ing the hammer union connection. Align the tank opposite the (dis) charge line and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Ce-ment tank #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Position the cranes according the lifting plan no. xxxxx.xxx.xxx - Unload Cement tank #x Attach lifting gear to the lifting points of the cement tank Check if the lifting gear is installed correctly. Start lifting by following the hand signals of the rigger-1 and unload the Ce-ment tank. Lower the tank and stop just above the ground to align the connection between cement tank #1 and cement tank #x. Make the connection between cement tank #x and cement tank #x by closing the hammer union connection. Align the tank opposite cement tank #x and lower on the ground.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect power cables to the cement tanks

Details
Connect all the power cables between the Cement tanks and mud system. Check during installation of the cables if there is any damage, when damaged replace or repair. Check and clean plug and socket before making connection. When the cables are connected stow/organize them proper between the (dis)charge lines.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- spanners
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Wa-ter tank #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Unload and position water tank #x. Position cranes according lifting plan number xxxxx.xxx.xxx- Unload water tank #x Attach lifting gear to the lifting points of the water tank. Check if the rigging gear is correctly installed and has no clashes. Start lift by following the hand signals of the rigger-1 and unload the water tank. Position the water tank in the corner along the cable tray which is running along the MCC container. Align the tank and lower on the ground. Connect the water lines from the centrifugal pumps to the water system and to the mud system. Connect on the other side of the water tank the hoses to the fire water pump sys-tem. Make sure that all the connections are cleaned and checked before making the connection

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Wa-ter tank #x

Details
Unload and position water tank #x. Position cranes according lifting plan number xxxxx.xxx.xxx - Unload water tank #x Attach lifting gear to the lifting points of the water tank. Check if the rigging gear is correctly installed and has no clashes. Start lift by following the hand signals of the rigger-1 and po-sition the water tank along the water tank #x. Stop lowering just above the ground and connect the pipe line between water tank # x and # x. When the line is connected align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Wa-ter tank #x

Details
Unload and position water tank #x. Position cranes according lifting plan number xxxxx.xxx.xxx - Unload water tank #x Attach lifting gear to the lifting points of the water tank. Check if the rigging gear is correctly installed and has no clashes. Start lift by following the hand signals of the rigger-1 and po-sition the water tank along the water tank #x Stop lowering just above the ground and connect the pipe line between water tank # x and # x. When the line is connected align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Wa-ter tank #x

Details
Unload and position water tank #x. Position cranes according lifting plan number xxxxx.xxx.xxx- Unload water tank #x Attach lifting gear to the lifting points of the water tank. Check if the rigging gear is correctly installed and has no clashes. Start lift by following the hand signals of the rigger-1 and po-sition the water tank along the water tank #x Stop lowering just above the ground and connect the pipe line between water tank # x and # x. When the line is connected align the tank and lower on the ground.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position mud pump mating

Details
Lay out PVC lining on the position of the matting system. Unload and position the matting system of the mud pumps. Align the matting with the matting of the super charge skid.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position MP # x

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mud pump #x Position truck underneath the cranes. Check if the seals and connections are good and clean. Attach lifting gear to the lifting points of MP # x. Check if the lifting gear is correctly installed and has no clashes with elec-trical boxes, supports, etc. Start lift by following the hand signals of the banks man and unload the mud pump. Lower the mud pump just above the matting and connect the HP discharge line. Align the mud pump an lower on the mat-ting. Connect the LP suction line.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position MP # x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mud pump #x Position truck underneath the cranes. Check if the seals and connections are good and clean. Attach lifting gear to the lifting points of MP # x. Check if the lifting gear is correctly installed and has no clashes with elec-trical boxes, supports, etc. Start lift by following the hand signals of the banks man and unload the mud pump. Lower the mud pump just above the matting and connect the HP discharge line. Align the mud pump an lower on the mat-ting. Connect the LP suction line.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position MP # x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Roustabout	1
Electrician	1

Machines

Name	Count
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mud pump #x Position truck underneath the cranes. Check if the seals and connections are good and clean. Attach lifting gear to the lifting points of MP # x. Check if the lifting gear is correctly installed and has no clashes with elec-trical boxes, supports, etc. Start lift by following the hand signals of the banks man and unload the mud pump. Lower the mud pump just above the matting and connect the HP discharge line. Align the mud pump an lower on the mat-ting. Connect the LP suction line.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect Mud pump (MP) #x,#x and #x electrical

Details
Connect the plugs straight from the SCR power house. Screw the protection caps on the plugs and coil them up in the cable trays. Connect the cables on the mud pumps straight from the switch box. Pull these cables also in the cable trays. When all the cables are unplugged and stowed in the cable trays, close the covers. Check for damages during disconnecting the plugs! When damages are found repair immediately to reduce down time

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the overpres-sure lines from MP x, x & x.

Details
Connect the overpressure lines from Mud pump #x till #x from Mud pump to suction tank. Clean and check the connection of the overpressure lines and the connections on mud pump and suction tank

Resources

Name	Count

Dimensions

Machines

Name	Count

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the High Pres-sure (HP) pump mani-fold

Resources

Name	Count

Machines

Name	Count

Details
Connect the HP pump manifold to the HP discharge lines coming from the super charge skid. Clean and check the connections of the HP discharge lines and HP pump manifold. Position the pump manifold just in front of the HP discharge lines of the super charge skid. Align the manifold if necessary with help of the crane by lifting it just of the ground and minor manual adjustment. When alignment is good connect the hammer unions.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect HP discharge hose

Details
Connect the HP discharge hoses to the HP discharge lines. Clean and check the connections of the HP discharge lines and HP discharge hoses. Position and connect one by one the HP discharge hoses to the HP lines.

Resources

Name	Count

Machines

Name	Count

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the High Pres-sure (HP) piping

Details
Connect the HP lines from the HP pump manifold in the di-rection of the substructure box ODS. Clean and check the connections of the HP discharge lines and HP pump manifold. Position and connect one by one the HP discharge lines. Align the lines and position the support of the lines proper

Resources

Name	Count

Dimensions

Machines

Name	Count

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Lay out PVC lining

Details
Lay-out PVC lining underneath the complete power plant

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position SCR power house

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position SCR power house. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load SCR Power House Attach lifting gear to the lifting points of the SCR power house. Check if the rigging gear is correctly installed and has no clashes with any parts of the SCR power house. Start lift by following the hand signals of the rigger-1 and load the SCR power house. Position the SCR power house according the equipment lay-out of Rig 88. The SCR is positioned along the cable tray which running between the mud pumps and SCR power house. When SCR is in position, position a small cable tray on the ground in front of the SCR power house (plug panel)

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position MCC house

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position MCC house. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load MCC House Attach lifting gear to the lifting points of the MCC house. Check if the rigging gear is correctly installed and has no clashes with any parts of the MCC house. Start lift by following the hand signals of the rigger-1 and un-load the MCC house. Position the MCC house according the equipment lay-out of Rig 88. The MCC is standing close to the Mud pump #3 and along the cable tray which is running behind the Mud pumps

Dimensions

Lifting Gears

Tools

- spanners

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position generator power house #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position generator power house # x. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Generator #x Attach lifting gear to the lifting points of the generator power house. Check if the rigging gear is correctly installed and has no clashes with any parts of the generator power house. Start lift by following the hand signals of the rigger-1 and un-load the generator power house. Position the generator power house #x according the equip-ment lay-out of rig #. Position the generator on the ground close to SCR. Release the crane on SCR side and leave the other side attached. Lift the generator a little up and push slowly with wheel loader the generator power house against the SCR power house.

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position generator power house #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position generator power house # x. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Generator #x Attach lifting gear to the lifting points of the generator power house. Check if the rigging gear is correctly installed and has no clashes with any parts of the generator power house. Start lift by following the hand signals of the rigger-1 and un-load the generator power house. Position the generator power house #x against generator power house #x. Position the generator on the ground close to SCR. Release the crane on SCR side and leave the other side attached. Lift the generator a little up and push slowly with wheel loader the generator power house against the SCR power house.

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position generator power house #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position generator power house # x. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Generator #x Attach lifting gear to the lifting points of the generator power house. Check if the rigging gear is correctly installed and has no clashes with any parts of the generator power house. Start lift by following the hand signals of the rigger-1 and un-load the generator power house. Position the generator power house #x against generator power house #x. Position the generator on the ground close to SCR. Release the crane on SCR side and leave the other side attached. Lift the generator a little up and push slowly with wheel loader the generator power house against the SCR power house.

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position generator power house #x

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position generator power house # x. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Generator #x Attach lifting gear to the lifting points of the generator power house. Check if the rigging gear is correctly installed and has no clashes with any parts of the generator power house. Start lift by following the hand signals of the rigger-1 and un-load the generator power house. Position the generator power house #x against generator power house #x. Position the generator on the ground close to SCR. Release the crane on SCR side and leave the other side attached. Lift the generator a little up and push slowly with wheel loader the generator power house against the SCR power house.

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Emergency generator

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Emergency generator Position the truck close to both cranes. Attach lifting gear to the emergency generator. Check if the rigging gear is correct-ly installed and has no clashes with any parts of the emer-gency generator. Slowly lift the emergency generator from the trailer. Position the emergency generator against the cable tray behind the MCC container. Align the emergency generator and lower afterwards on the ground

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Grasshopper skid

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and position grasshopper skid. Unload the grasshopper carefully with the Wheel loader and position in line with the cable tray which is running between SCR building and Mud pumps. Attach crane to the top part of the grasshopper. Lift the top part of the grasshopper. Align the pin connection between substructure and grasshopper and install the pins and afterwards safety pin. Connect all power cables and hoses from grasshopper to DWS & Driller console and from grasshopper to SCR. Connect water and air supply hose to the different systems
Remark: Can only be installed when the Draw work drive is in-stalled on the Draw work spreader (back side)

Dimensions

Lifting Gears

Tools

- spanners
- Wheel loader ,
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position cable trays

Details
Unload the different cable trays which are positioned between several pieces of equipment (SCR, MCC, Emergency generator). The cable trays can be positioned during the unloading of several pieces of equipment. When the cable trays are in position open the covers and install cables. Connect several pieces of pipe with each other by installing a flexible hose.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Wheel loader ,
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Diesel fuel tank #x & #x

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1

Details
Unload and position diesel fuel tank #x & #x. Position cranes according lifting plan number xxxxx.xxx.xxx & xxx - (Un)load Diesel Fuel tank #x & #x Attach lifting gear to the lifting points of the diesel fuel tank. Check if the rigging gear is correctly installed and has no clashes. Start lift by following the hand signals of the rigger-1 and unload and position the diesel fuel tank. Connect the diesel fuel lines and electric cables to the diesel tanks.

Dimensions

Lifting Gears

Tools

- spanners
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the diesel fuel lines to and between the generator power houses

Details
Connect the diesel fuel line between the generators and from generator power house #x to diesel fuel tank. Connect the diesel fuel line between the generators by con-necting the quick couplings of each generator to each other. Connect the diesel supply line from diesel fuel tank #x to the generator #x. When all the lines are installed open the valves of the diesel supply line. Check for leaks. When there is a leak close the valve and solve the problem.

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect air-lines

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1

Details
Connect the airlines from the air supply tanks to the different air receivers and diesel engines. Connect the air supply line between the generator houses by connecting the different flexible air lines. Connect the lines to the air receivers by connecting the air hoses to the different air lines of the rig.

Dimensions

Lifting Gears

Tools

- spanners
- Tie-wraps
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect all power cables to and from SCR container

Details
Connect all the power cables from the grasshopper, generators and MCC container to the SCR container. Run all the cable thru the cable trays to the SCR container. Organize the cable proper in case you need to disconnect or replace a cable. Check during the installation for damages. When there is damage replace or repair the cable/plug. Clean each plug and socket before connecting. Remark: Make sure that all electrical systems are switched off.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- Tie-wraps
- Manila rope
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Mark centre well

Details
Mark centre well on the new location with help off the RIG # STE - LAYOUT GENERAL ARRANGEMENT, drawing number xxx-xxx-xxx.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Hand hammer
- Measuring tape
- Nylon rope
- Nails
- Spray paint

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Mark position and posi-tion mating plan

Details
Check on the rig lay-out/mating plan the position of the mat-ing for the substructure Mark the position of the mating with a nylon rope and position the mating with help of a wheel loader and/or crane 9 pieces of big mattings and 2 pieces of small mattings Drawing Mating plan: TBD Grey Wolf

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Hand hammer
- Measuring tape
- Nylon rope
- Nails
- Spray paint

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Mark position substruc-ture box

Details
When the rig mating are laid out mark the position of the sub-structure ODS and DS. Mark the position with a nylon rope and/or spray paint

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Hand hammer
- Measuring tape
- Nylon rope
- Nails
- Spray paint

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position substructure box ODS

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Substructure ODS Reverse the truck with the substructure ODS on top or beside the rig mating on ODS side. Attach lifting gear to the lifting points of the substructure box. Check if lifting equipment is proper attached and start the lift by following the hand signals of the rigger-1. position the sub-structure box on top of the mating along the nylon rope. When the substructure is lowered on the mating check the measurement. Centre well marking check picture

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install base box distance bar and K-frame

Details
Position the base distance bar in the front and back of the substructure ODS. Align the pin holes between distance bar and substructure and install the pins, afterwards secondary retention pins. The DS side of the distance bar can be positioned/lowered on wooden blocks. Install between ODS substructure and the front distance bar one of the K-frame beams. The second one can only be installed when the Substructure DS is positioned

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- Tagline
- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position substructure box DS

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Substructure DS Reverse the truck with the substructure DS on top or beside the rig mating on DS side. Attach lifting gear to the lifting points of the substructure box. Check if lifting equipment is proper attached and start the lift by following the hand signals of the rigger-1. Position the sub-structure box just above the mating and connect the distance bars one by one. Either from front to back or the other way around. Remove the wood from underneath the distance bars before lowering the substructure on the mating. When all the distance beams are connected lower the sub-structure on the mating and install the second K-frame bar. Do a cross measurement to check if both substructure base boxes are standing in line with each other

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and install rear substructure box DS & ODS

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 90 MT	1

Details
Unload and install the rear substructure box DS or ODS. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Substructure Box DS & ODS
Attach lifting gear to the lifting points of the rear substructure box. Check if lifting equipment is proper attached and start the lift by following the hand signals of the rigger-1. Position and align the rear box with the main substructure box. Release the lifting gear of the crane which is connected on the front side of the rear box. Lift the rear box a liitle bit up and push by wheel loader the rear box till the holes of the pin connection between rear and main substructure are lines up. Install the pin and secondary retention pin.
Repeat above steps for DS or ODS rear box

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install substructure spreader/platform

Details
Install substructure spreader/platform between the rear sub-structure boxes. Lift the spreader in position and align the pin connections. When pin connections are aligned install the pins and after-wards the secondary retention pins.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and install X-beams, front & back side

Details
Unload and position the X-beams in between the substruc-ture boxes. First install the back side and later the front side. Lift the X-beam in position between the substructure boxes and align the pin connections. Install the pins and secondary retention pins. Lower the X-beam in the direction of DWS and it will automat-ically start to tilt. Lower it down and leave it rest on the sub-structure spreader/platform. Repeat above steps for the second X-beam, front side).

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and install draw works spreader, back side

Details
Unload and position draw work spreader back side. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Draw work spreader rear Attach lifting gear to lifting points of the draw work spreader. Lift it slowly by following the hand signals of the rigger-1and lower it on the back of the rear substructure box. Align the pin connection between X-beam (back) and draw work spreader (back). Install the pin and secondary retention pins. Turn-over the securing plates between rear substructure box and draw work spreader. Align the pin connection and install the pin and secondary retention pin.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and install draw work spreader, front side

Details
Unload and position draw work spreader front side. Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Draw work spreader front Attach lifting gear to lifting points of the draw work spreader. Lift it slowly by following the hand signals of the rigger-1and lower it in front of the back side draw work spreader. Align the pin connection between both draw work spreader and install pins and afterwards secondary retention pins Align the pin connection between X-beam (front) and draw work spreader (front). Install the pin and secondary retention pins.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Draw work Drum

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Draw work drum Reverse truck close to the Back side of the substructure. Attach lifting gear to the lifting points of the draw work drum. Start lifting slowly the draw work from the trailer by following the hand signals of the rigger-1. Position the draw work drum on the front draw work spreader. The draw work spreader and draw work drum have guides. Slide the guides in proper way into each other. Lower the draw work down on the frame and connect bolts between draw work drum - draw work spre

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 70 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Draw work drive

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Draw work drive Reverse truck close to the Back side of the substructure. Attach lifting gear to the lifting points of the draw work drive. Start lifting slowly the draw work from the trailer by following the hand signals of the rigger-1. Position the draw work drive on the back draw work spreader against the draw work drum. The draw work drive and draw work drum have guides. Slide the guides in a proper way into each other. Lower the draw work drive on the frame and connect bolts between draw work drive - draw work drum and between spreader - draw work drive.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1

Machines

Name	Count
Crane 70 MT	1

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Crowbar
- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

04.06: actions before-after-install power, hoses, etc.

Action
Position and install Drill-ers console

Details
Position and rig-up driller console. Attach lifting gear to the lifting points of the driller console. Lift the driller console in position by following the hand signals of the banks man. Lower the driller console on his position and fix to the rigfloor. Connect all the hoses and cables to and from the driller console

Resources

Name	Count
Driller	1
Derrickman	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect power cables

Details
Connect all the cable from the grasshopper to the driller con-sole and draw work. Check during connecting the cables and plug for damages. When damaged replace and/or repair immediately. Clean Socket and plug before making the connection. Stow and secure the cables afterwards in trays to avoid slips, trips and falls.

Resources

Name	Count
Driller	1
Derrickman	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect hoses and piping

Details
Connect all the hoses from the grasshopper to the driller con-sole, air receivers and draw work. Check during connecting the connections and hoses for dam-ages. When damaged replace and/or repair immediately. Clean connections before making the connection. Stow and secure the hoses afterwards in trays to avoid slips, trips and falls

Resources

Name	Count
Driller	1
Derrickman	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Screwdrivers
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Prepare for installation mast

Details
Prepare cranes and lifting equipment for the mast installation. Prepare JSA and permit for the next task.

Resources

Name	Count
Driller	1
Assistant Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Mechanic	1

Dimensions

Lifting Gears

Tools

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Lift mast and install to substructure Critical operation

Resources

Name	Count
Driller	1
Assistant Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mast on dolly Position all 6 cranes according lifting plan. Hold a special TBT with all people involved in the operation. Discuss the job and assign each person his position and task. Bring the mast in position as good as possible with the Ken-worth. Lift the drill-line skid from the mast dolly on the ground. Attach lifting gear of all 6 cranes with help of a man lift. Pull tension on the lifting gear. Increase the load of each crane according the directions giv-en by the rigger-1 till the weight of the mast is almost com-pletely hanging in the cranes. Remove the chains between mast dolly - mast & mast sup-port plate - mast. Lift the mast up in the air according the directions of the rig-ger-1. Remove the mast dolly with help of the wheel loader and re-move the super Kenworth from underneath the crown sec-tion. Position the mast by following the directions of the rigger-1 in the mast footings of the substructure. Align the holes and install the mast pin from the pin connec-tion mast bottom section - mast footing substructure. Install afterwards the secondary retention pin on the mast pin. Lift the mast and position the mast on top of the high mast stand. Adjust the mast stand with help of the wheel loader when necessary. Slowly lower the mast on the stand and release crane.

Dimensions

Lifting Gears

Tools

- Man lift
- Safety harness with twin hook fall arrestor
- Chain Hoist
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up and position Setback

Resources

Name	Count
Driller	1
Floorman	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Setback Position the setback underneath the mast in front of the sub-structure with help of the wheel loader. Attach lifting gear to Setback on both sides. Lift the setback on top of the substructure and connect the setback legs. Align the pin connection between setback - setback legs. In-stall the pin and afterwards the secondary retention pin. Lift the setback again and align the connection between set-back and mast. Align the holes and install the pins and after-wards secondary retention pins.

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install raising line

Resources

Name	Count
Driller	1
Floorman	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Lift the raising line bundle from the mast construction and lower on the ground. Lift the raising line up and lay done along the mast. Lift the raising sling up and install on the A-leg. Connect both raising lines from the mast together on the backside of the mast. Attach the other end of the raising line to the travelling block. Pull as much as possible on the raising to get enough slack to make installation on the traveling as easy as possible.

Dimensions

Lifting Gears

Tools

- Sledgehammer
- pliers,adjustable
- Man lift
- Safety harness with twin hook fall arrestor

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install drill-line on DWS drum

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Remove the bundle of drill-line from the mast construction and put on the ground. Take the end of the drill-line and man-ual move it to the DWS drum. Test the draw work and draw work emergency braking system. Remove protection plate front and side of draw work drum; Rotate drum into the horizontal position, anchor block should end slightly above the horizontal; Electrical isolate the draw works; Check if the end of the drill-line has a clean cut; Put the end of the drill-line thru the slotted opening into the anchor channel, pull the cable to the outside. Install the cable clamp at 10 cm from the end. Pull the cable back into the anchor channel. Remove electrical isolation of draw works Slowly rotate the drum and coil the drill-line on the drum. Coil additional wraps on the drum. Install drill-line on dead-line anchor. 3 wraps of drill-line over the dead-line anchor. Fix drill-line in the clamp and tighten the bolts.

Dimensions

Lifting Gears

Tools

- spanners
- Screwdrivers
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Release travelling block

Details
Position frame for travelling block in front of the setback. Position crane and attach lifting gear to the travelling block. Slowly lift the block up, when there is enough slack on the hang off slings release them. Lower the block on the frame and securing with chain and ratchet spanner to the frame (avoid sliding of the block)

Resources

Name	Count
Driller	1
Assistant Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Man lift
- Safety harness with twin hook fall arrestor
- Lewer hoist SWL : 3.2mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Lift Kelly-hose from mast

Details
Lift Kelly from the mast construction. Attach lifting gear to the Kelly hose. Slowly lift the hose and remove one by one the manila rope which secured the Kelly to the mast. When Kelly hose is loose lower it on the ground along the mast. Same steps for the second Kelly hose

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Man lift
- Safety harness with twin hook fall arrestor

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig-up racking board

Resources

Name	Count
Driller	1
Floorman	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load racking board Tilt the racking board with help of crane and wheel loader in vertical position next to the mast. Move the racking board underneath the mast with help of crane and wheel loader. Re-arrange lifting gear and attach a steel wire sling to each crane. Lift the racking board slowly in position by following the hand signals of the rigger-1. Align the pin connection between mast and racking board. When the holes are lined up install at the pins from inside to outside. Afterwards install secondary retention pin. Install racking board support DS and ODS with help of a crane. Install the pins from inside to outside and afterwards secondary retention pin. Install from the crown a steel wire sling with at the end a mas-ter link. Add to the master link 2 stop chutes and pull them out till it is possible to fix to the racking board. Connect air supply line to the air winch on the racking board. Install the cable from the PAGA and alarm system from rack-ing board along the mast construction to the rig floor. Secure the cable with Tie wraps to the mast construction.

Dimensions

Lifting Gears

Tools

- Hand hammer
- Sledgehammer
- Man lift
- Safety harness with twin hook fall arrestor

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install winch cables

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Install air winch and tong cables. Remove the bundle of air winch cable from the upper section and lower on the ground. Remove the manila rope and install the air winch cable through the racking board in the direction of the setback. Remove the manila rope from the bundles of tong cables. Install the cables in the mast construction. Check the cables from the derrick man climb assist and fall arrestor cable along the mast ladder. In case of damage, Replace. Install the derrick man escape line on a support just above the racking board

Dimensions

Lifting Gears

Tools

- Man lift
- Safety harness with twin hook fall arrestor

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Prepare for mast raising

Details
Do a visual mast inspection of the mast construction and check all items according the check list and DROPS. Remove loose items and tools out of the mast.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Man lift
- Safety harness with twin hook fall arrestor
- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Visual inspection mast

Details
Visual inspection of the mast. Check if all the cables, hoses and winch lines are rigged up and well stowed/secured for mast raising. Check also if all secondary retention is in place at the pin connection. Check for DROPS in mast

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Roustabout	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Man lift
- Safety harness with twin hook fall arrestor
- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Raise mast from High support
Critical operation

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Roustabout	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Prepare to raise the mast with the draw works from high stand. Make a special JSA and discuss this during the TBT with all involved personnel. Check and load test the draw work system incl. emergency brake. . Make sure the checklist is filled out and signed by all senior supervisors before raising the mast. Assign each supervisor to his position and his tasks. Pull some tension on the raising slings with the draw works and slowly pull the mast from the high stand. Continue raising the mast till we almost reach the point when there is no weight on the weight indicator on the driller console. Keep the pull-line under tension with the wheel loader and slowly drive back wards and let the mast raise against the A-leg. Install the bolts between mast and A-legs Remove platform for travelling block.

Dimensions

Lifting Gears

Tools

- Wheel loader ,
- Man lift
- Safety harness with twin hook fall arrestor
- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up stairs Setback - ground

Details
Rig up stairs on the front side of the setback. Attach lifting gear to the first part of the stairs. Lower the sa-tairs in position and pin it to the setback. Lower the mast and position the landing platform with the wheel loader in the cor-rect position. Land the stairs on the platform. Install the sec-ond part from the landing platform to the ground.

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Roustabout	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Re-arrange raising slings

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
When the mast is in vertical position and pinned to the A-legs, lower the travelling block. Release the main raising line from the short raising which is fixed to the mast. Release the connection and lower the main raising line to the draw works spreader. Fix the raising line to the draw work spreader and when both are installed pull tension and check if everything is installed proper. Check the stoppers on the raising sheaves. Remove the pins from the connection between bottom sub-structure box and draw work spreader.

Dimensions

Lifting Gears

Tools

- Sledgehammer
- Crowbar
- Man lift
- Safety harness with twin hook fall arrestor
- Crane lifting gear : big bag handling tool

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Visual inspection sub-structure (draw work bridge

Details
Visual inspection of the Substructure. Check if all the cables, hoses are rigged up and well stowed/secured for raising Sub-structure . Check if all secondary retention is in place at the pin connection. Check for DROPS in Substructure.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Raise substructure Critical operation

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Prepare to raise the substructure. Make a special JSA and discuss this during the TBT with all involved personnel. Check and load test the draw work system (incl. emergency brake). Make sure the checklist is filled out and signed by all senior supervisors before raising the substructure . Assign each supervisor to his position and his tasks. raise the substructure by raising the travelling block. Keep a close eye during raising on the indicators on the driller con-sole. Check during the raising line, hoses and cables during raising. When the substructure is up install the pins between rotary support beams and setback. Afterwards install secondary retention

Dimensions

Lifting Gears

Tools

- Wheel loader ,
- Man lift
- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Chain hoist SWL : 5mT

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up platforms DS and ODS

Details
Rig up platforms DS and ODS next to the draw works. Attach lifting gear to the platforms. Slowly lift the platforms up and bring them in position. Lower them in position and secure to the draw works spreader by installation of securing pins from underneath and to setback. Picture 06.23 is DS platform Picture 06.24 is ODS platform

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position and rig-up dog-house

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position and rig-up doghouse. Install doghouse supports number 1 and 2 to the bottom and top substructure box. Align the holes and install the pins and afterwards secondary retention pins. Position cranes according lifting plan number xxxxx.xxx.xxx (Un)load Doghouse Attach lifting gear to the lifting points of the doghouse. Slowly lift the doghouse from the lowbed and position on the doghouse support by following the hand signals of the Rigger-1. Use a man-lift to give good and proper directions during positioning. Disconnect all the power cables and hoses to and from the doghouse

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
install stairs doghouse to ground

Details
Install the first part of the stairs from doghouse to the platform with help of a crane. Attach lifting gear to the stairs and install the bolts and nuts from the connection doghouse - stairs. When the stairs is fixed lower it and position the platform with wheel loader. Install the second part of the stairs from platform to ground with help of a crane.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up Can-rig VFD container

Details
Unload and rig-up the can-rig unit. Position cranes according lifting plan number xxxxx.xxx.xxx (Un)load Canrig unit Attach lifting gear to the Can-rig unit and lift slowly by follow-ing the direction of the Rigger-1 from the trailer on the ground. Attach a crane to the cable tray and lift it from the Can-rig unit in the direction of the substructure support. Pull the cables from the grasshopper over a cable tray to the roof of the draw works. Connect the cables and hoses when the Top drive is installed in the mast. Connect all the power cable from the can-rig unit to the SCR container

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable
- Man lift

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig-up and install hoses, cables

Details
Rig up and install all the cables and hoses between the set-back and the draw work side. When the cables and hoses are connected stow and secure them to avoid collisions when rigging up BOP.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Hand hammer
- spanners
- Tie-wraps
- pliers,adjustable
- Man lift

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and install rotary table

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload and install rotary table. Attach lifting gear to the lifting points of the rotary table. Lift slowly the table from the trailer on top of the rotary sup-port beams at rig floor level. The rotary table and rotary support beams have guides to adjust the table straight into the correct position. Install blower hose to the electrical motor of the rotary table. Connect the power cables to the electrical motor. Remark: During lifting of the rotary table be aware that the table can lean to one side. The centre of gravity is out of the middle

Dimensions

Lifting Gears

Tools

- Tagline
- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install rig floor panels

Details
Install several rig floor panels. Attach lifting gear to the rig floor panel and install on the rig floor. Be aware of the open gaps in the rig floor during installation

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Tagline
- Sledgehammer
- Crowbar

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install covers A-leg sheaves

Details
Install the covers over the A-leg sheaves on DS and ODS. Attach lifting gear to the covers and lower the covers over the A-leg sheaves

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig down raising lines

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Rig down raising line from the equalizer. Remove the sheave of the equalizer by removing two connection pins. When the pins are removed raise the block and remove the raising line with help of the air winch out of the sheave. Lower the travelling block and fix the connection pins again. Afterwards install the secondary retention plates on the pins. When the raising line is removed drive travelling block up. Disconnect ODS and DS raising line. Hang off/stow each raising line on DS or ODS side of the mast.

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Remove equalizer from travelling block

Details
Remove equalizer from the travelling block. Position the equalizer box on top of rotary table. Drive the travelling block down and position equalizer in the box. Lower travelling block and open the hook by removing the pin. Raise the travelling over the equalizer and close the hook by installing the pin back and afterwards secondary retention plate.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install Stand-pipe manifold

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Install HP standpipe manifold on rig floor. Attach lifting gear to the frame construction of the standpipe manifold. Lift the standpipe manifold of the ground and check if it is hanging level. If not, adjust. Lift the standpipe manifold in position and align the bottom standpipes with standpipe manifold. Fixed the hammer union couplings. First check and clean the hammer unions and seals. Afterwards connect the hammer union connections between the mast standpipes and the standpipe manifold. When installed connect all the sensor cables.

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up HP standpipe from ground to rig floor

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Rig up the standpipe from the rig floor to the ground. Lower the air winch through the gap of the standpipe to the ground. Connect the top of the pipe to the air winch cable and to the bottom of crane. Clean and check the hammer union connections plus seals. First lift the air winch a little bit up to get the stand-pipe of the ground afterwards the crane. Simultaneous raise the air winch and lower the crane and position the standpipe. Align the hammer union connection between standpipe sub-structure and vertical standpipe. Fix the hammer union con-nection on the bottom of the standpipe (connection between standpipe Substructure and standpipe rig floor - ground Repeat above for the second HP pipe

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position and rig-up air winches & man rider winch

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position the air winches on the supports on the rigfloor. Connect the winch to the air system. Check if the winch is proper operating. Install the air winch cable according the following procedure: Isolate the air system; Feed the cable end into the rope an-chor; Make a large loop and put the cable end back into the rope anchor; Insert the wedge in the loop and pull slowly on the wire rope till the wedge is almost in position; At the last moment give it a powerful pull, the cable is installed on the drum; Open the air supply and coil the cable on the drum. The first layer need to be tight on the drum. Spool all cable on the winch. Repeat the same for the second air winch and the 2 man rid-er winches.

Dimensions

Lifting Gears

Tools

- Hand hammer
- spanners
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install Bull fence

Details
Install bull fence in front of the driller console. Attach lifting gear to the fence and position it in front of the drillers console. Fixed the hammer union (3x).

Resources

Name	Count
Assistant Driller	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Tagline
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up Iron Roughneck

Details
Rig-up and connect the iron roughneck. Attach lifting gear to the HPU and lift it on the rig floor. Connect the electrical power to the HPU. Attach lifting gear to the iron roughneck and lift it out of the transport skid. Position the iron roughneck in the support of the rig floor. Connect the hydraulic hoses from the hydraulic unit (HPU) to the iron roughneck. Operate the Iron roughneck and remove the securing pin

Resources

Name	Count
Assistant Driller	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up hydraulic unit easy Torque

Details
Rig up the hydraulic unit (HPU) on the rig floor (positioned ODS side on top of raising sheave cover). Connect the hydraulic hoses to the easy torque unit. After installation stow/secure the hoses to avoid slips, trips and falls

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Hand hammer
- spanners
- Screwdrivers
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position choke remote panel

Details
Attach lifting gear and lift the panel on the rig floor. Connect all the cables and hoses from the sensors on the choke manifold to the remote panel. After installation of all the cables and hoses secure/stow them to avoid slips, trips and falls.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Tagline
- spanners
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up PAGA/Alarm system

Details
Rig up PAGA system on the rig floor. Install the pole with lights and speaker on the rig floor close to the doghouse. Pull the cables to the doghouse and connect to the speaker and alarm signals. After installation of all the cables and hos-es secure/stow them to avoid slips, trips and falls.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Hand hammer
- spanners
- Screwdrivers
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up Cascade system

Details
Rig up the cascade system on the rig floor. Connect all the supply lines to rig floor to the cascade systems. After installation of all the cables and hoses secure/stow them to avoid slips, trips and falls

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- spanners
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up BOP trolley beams

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Rig up both BOP trolley beams with help of crane and air winch. Lift both trolley beams underneath the rig floor. Attach air winch to one side of the beam. Guide the air winch between rotary and setback. Attach the crane to the front of the trolley beam. Simultaneous operate crane and air winch and lift the trolley beam in position. Align the holes between substructure and trolley beam and install the pins and secondary retention pins

Dimensions

Lifting Gears

Tools

- Tagline
- spanners
- Sledgehammer
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up BOP hoist

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Position the transport skids with BOP hoists close to the crane. Attach lifting gear to the skid. Lift the skid in position with the two connection pins in the BOP trolley beams. Keep the skids in position and keep weight in the crane. Remove the end stops from both trolley beams and skid. Drive BOP hoist on the skid. When hoist is in position install end stops on skid and discon-nect the air-supply. Remove the skid and lower to the ground. Stow remote con-trol on the skid and secure for transport. Repeat above for the second BOP hoist.

Dimensions

Lifting Gears

Tools

- Tagline
- Hand hammer
- spanners
- Sledgehammer
- Tie-wraps

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig up BOP

Details
Rig up the BOP . Position first the first part of the BOP in position underneath the BOP hoists (Single preventer with spool). Afterwards lift the second part of the BOP (Double nad annular preventer on top of the first part. Tight the bolt between the 2 part with hammer and strike force key or an hydraulic tool. Test the BOP.

Resources

Name	Count
Assistant Driller	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position Catwalk

Details
Position the catwalk part by wheel loader. Check alignment between V-door and catwalk before final positioning

Resources

Name	Count
Assistant Driller	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Sledgehammer
- Wheel loader ,
- Sledgehammer

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install V-door ramp

Details
Install the V-door ramp with help of the crane. Attach 2 single leg slings to the lifting points of the V-door ramp with shackles. Lift the V-door in position and line up the pin connection. Install the pins and secondary retention pins. Be aware that the V-door will move into vertical position during rig up.

Resources

Name	Count
Assistant Driller	1
Electrician	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Position pipe racks (pipe storage

Details
Position the pipe racks with help of a wheel loader.

Resources

Name	Count
Assistant Driller	1
Electrician	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Prepare Top drive (TDS) for rig up

Details
Check if all required tools and equipment are available, checked, certified and proper installed for rig up the TDS. ? Live Roll assembly incl. lifting/snubbing assembly (installed) ? Transport pins (4x) (installed) ? Erection apparatus (installed) ? Lifting equipment

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Roustabout	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install/rig-up the torque guide incl. Top drive (one package)
Critical operation

Resources

Name	Count
Driller	1
Toolpusher	1
Floorman	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 90 MT	1

Details
Hold with all people involved in the task a special TBT and discuss the JSA. Assign one person to be in charge of the operation. Use portable radios when available. Align the winch truck loaded with top drive in front of the sub-structure. Attach the air winch to the top of the torque guide. Attach the truck winch cable to the lifting/snubbing assembly. Attach crane with a sling to the erection apparatus. Start lifting the torque guide with the air winch and simultane-ous by crane. Watch carefully the signals of senior supervisor. Lower the top section of the torque guide beam on the rigfloor and hold for support with the crane. Attach the travelling block adapter bail to the rigging yoke. Remove the sling from the crane. Start lifting the torque guide by raising the travelling. The air winch can stay attach to the torque guide but can also be removed, this is up to senior supervisor. Raise travelling block till section 4 & 5 are straight and then remove the air winch cable. Continue raising the torque guide till section 5, 4, 3, 2 are unfolded and only the skid with TDS is on the lowbed. Check if the winch line from the truck is still under tension. Continue raising the block and back-up the truck when nec-essary. Monitor continues the clearance on the racking board. Continue raising the block and letting off the winch when required. Try to avoid the torque guide from touching the rig floor. Once the skid reaches floor level let-off the winch by following the directions of the senior supervisor on the rigfloor. This could mean that the block needs to reach a little bit more up, to avoid the skid touching any obstacles on the rigfloor. Stop raising and release the winch cable from the snubbing assembly. Lower the winch cable with help of the air winch to the ground. Raise the torque guide slowly up till the harpoon starts to stab in. The crane needs to stay in front of the substructure in case.
Remark: Preferable to use a winch truck with lowbed as per instal-lation manual of the manufacturer instead of a truck with lowbed and 2 wheel loaders.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Portable radios

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install torque tube on harpoon

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
When the torque tube is in the mast continue raising the torque guide by the travelling block till the harpoon enters the opening of the torque guide. Continue raising the torque guide, the latches of the harpoon will go inwards and allowing the torque guide to Pass over them. When the torque guide passed the latches they pivot outward again. Lower the torque guide on top of the harpoon latches. Install the safety cables from the harpoon to the torque guide. Make sure the shackles are secured (secondary retention). Remark: Derrick man needs to be up in the mast underneath crown to witness the operation in case something goes wrong. Minimize the amount of people on the rigfloor!

Dimensions

Lifting Gears

Tools

- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Release torque guide erection apparatus

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Release the erection apparatus from the torque guide. Raise the travelling till the hook in its uppermost position. The derrick man needs to pull the cotter pin to activate the release latch. Insert the latch release rod and turn the release latch till it is unlocked position. Lower the block till the hook is free from the lifting groove. Continue lowering the erecting apparatus till just above the topdrive. Watch the operation carefully while lowering since the torque guide is still not under tension. Attach air winch to the rigging yoke. Remove the pins from the connection between rigging yoke and travelling block adapter. Open the runner and lifting frame. Remove the pin and ex-tend the runner and lifting frame. Remove from the torque guide and lower to the rigfloor.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect travelling block to TDS

Details
Lower the travelling block with adapter so it is possible to connect the upper connecting links from the top drive. Align the holes and install the pins. Afterwards install the secondary retention to the pins.

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- spanners
- Sledgehammer
- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

07.04: Power plant-Fix torque tube

Action
Install the torque reac-tion devices

Details
Install the torque reaction devices to the torque guide at sec-tion number 1. Align the holes of the reaction devices and install the connec-tion pins. Afterwards secondary retention. Check the measurement between torque guide and torque reaction beam, adjust by extending or retracting the turnbuck-les. The torque reaction devices half way the guide beam can only be installed when the torque guide is under tension. Installation procedure is the same as mentioned above

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Safety harness with twin hook fall arrestor
- Snakes (2x)
- Ridgid

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Pull tension on the torque guide

Details
Rig-up the hydraulic hoses to the cylinders on the Torque guide. Check if the HPU is connected to the power. Test the system by operating the control valve which is fixed on the lower skid section. Install the tension cable to the hydraulic cylinders by aligning the holes and installing the connection pin and secondary retention pin. Pull tension on the torque guide by retracting the hydraulic cylinder of the torque guide tensioning cable (mechanical job) .

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1

Lifting Gears

Tools

- spanners
- Sledgehammer
- Safety harness with twin hook fall arrestor
- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install power cables

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1

Details
Install the power cables to the main junction box on the lower skid section. Open the junction box plug the cable straight into the junction box. Stow and secure the cables from the grasshopper over the roof of the DWS to the lower skid section of the torque guide

Dimensions

Lifting Gears

Tools

- spanners
- Screwdrivers
- Tie-wraps
- Safety harness with twin hook fall arrestor
- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install Kelly–hose (rotary hose)

Details
Clean the hammer union connection on the kelly hose and on the goose neck of the top drive. Attach a webs ling to the kelly hose and lift the hose in posi-tion. Align the connection and fix the hammer union coupling

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1

Tools

- spanners
- Sledgehammer
- Ladder
- Safety harness with twin hook fall arrestor
- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Remove Live Roll as-sembly

Details
Raise TDS with travelling block to allow proper access to the torque guide skid. Attach both air-winches to the Live Roll assembly. Remove the retainers and pins, afterwards lower the live roll on the rig floor. Lift the Live Roll assembly from the rig floor on the ground with help of a crane

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1

Dimensions

Machines

Name	Count
Crane 90 MT	1

Lifting Gears

Tools

- spanners
- pliers,adjustable
- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Install top drive links and elevator

Details
Lift elevator and links with help of a crane to the rig floor. Install each elevator link with help of on air-winch to the link-tilt system and by opening link block TDS. Install elevator from elevator links by opening the link block

Resources

Name	Count
Driller	1
Derrickman	1
Roustabout	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 90 MT	1

Tools

- spanners
- Ladder
- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.01: Rig camp-Unload masterskids

Action
Unload and position master skid Mudlab, elec/mech & clinic

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mudlab, elec/mech & clinic Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.01: Rig camp-Unload masterskids

Action
Unload and position master skid training room, mess hall

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Training room & mess hall Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.01: Rig camp-Unload masterskids

Action
Unload and position master skid 3 x sleeper junior

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load 3 x Sleeper junior Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.01: Rig camp-Unload masterskids

Action
Unload and position senior recreation con-tainer

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Senior recreation container Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the container. Start lifting by following the hand signals of the rigger-1 and position the container according the directions of the senior supervisor. Release all the stairs on the container and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Floorman	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.01: Rig camp-Unload masterskids

Action
Unload and position master skid mechanic & electrician workshop

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mechanic & Electrician work-shop Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units

Resources

Name	Count

Machines

Name	Count

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.02: Rig camp-Unload workshop + watertank

Action
Unload and position master skid mechanic & electrician workshop

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Mechanic & Electrician work-shop Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.02: Rig camp-Unload workshop + watertank

Action
Unload and position master skid water tanks and treatment plant

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load water tanks and treatment plant Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Power will be connected during the positioning of the other units. Remark: The water tanks need to be empty/drained before start lifting!

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.03: Rig camp-Unload 20ft containers

Action
Unload and position 20 ft store container

Details
Unload and position the 20 ft store container with help of the wheel loader. Position the container according the directions of the senior supervisor. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Snakes (2x)

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.03: Rig camp-Unload 20ft containers

Action
Unload and position BA container

Details
Unload and position the BA container. Reverse the truck underneath the crane. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the banks man and position the container according the directions of the senior supervisor. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.04: Rig camp-Unload sleepers

Action
Unload and position master skid junior sleepers

Details
Position cranes according lifting plan number xxxxx.xxx.xxx- (Un)load 3 x junior sleepers Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.04: Rig camp-Unload sleepers

Action
Unload and position master skid senior sleepers

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load 3 x senior sleepers Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Release all the stairs on the skid and turn them over. All the service lines (sewage, water, power) will be installed during the rig-up of the other camp units.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.05: Rig camp-Unload powerplant camp

Action
Unload and position Camp generator

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Camp generator Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.05: Rig camp-Unload powerplant camp

Action
Unload and position diesel tank

Details
Position cranes according lifting plan number xxxxx.xxx.xxx - (Un)load Diesel tank Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the skid. Start lifting by following the hand signals of the rigger-1 and position the skid according the directions of the senior super-visor. Connect the diesel fuel line to the camp generator. When connected open the valve of the fuel line and check for leaks. When it is leaking close the valve and solve the problem.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

08.05: Rig camp-Unload powerplant camp

Action
Unload and position Septic tank

Details
Position cranes according lifting plan number xxxx.xxx.xxx - (Un)load Septic tank Reverse the truck underneath both cranes. Attach lifting gear to the lifting points of the master skid. Start lifting by following the hand signals of the rigger-1 and position the master skid according the directions of the senior supervisor. Power will be connected during the positioning of the other units. Remark: The septic tank need to be empty/drained before start lifting!

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Dimensions

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect all the electrical cables

Details
Connect all the electrical cables from the master skid to the transformer unit and camp generator. Before connecting the cable check them for damages. When damaged replace or repair. Check and clean the plug and socket before connecting. Stow the cables afterwards in several PVC cable trays posi-tioned between the master skids.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Screwdrivers
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the sewage lines

Details
Connect all the sewage lines from the master skid to master skid and afterwards in the direction of the septic/sewage tank. Before connecting the sewage lines check the seal and cou-pling of the line. When damaged replace to avoid leakage (Bad smell & Hygiene)

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- spanners
- Steel wire brush
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect the water line

Details
Connect all the water lines from the water tanks to the master skid and in between. Before connecting the water lines check the condition of the hose. When damaged replace to avoid leakage of water

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- spanners
- Steel wire brush
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Connect communication cables

Details
Connect the offices with the communication cables for telephone and internet. The communication system (dish and receiver) will be set by service companies

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Screwdrivers
- pliers,adjustable

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Chemical store x till x

Details
Unload and position chemical store x till x. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load chemical skid Attach lifting gear to the lifting points of the chemical skid. Slowly lift the chemical skids by following the hand signals of the banks man from the trailer and position them according the directions of the senior supervisor on the ground. Repeat above for all 3 skids. When all 3 the skids are unloaded and positioned remove the front load securing plate

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position DP-basket

Details
Unload and position DP-basket. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load DP-basket Attach lifting gear to the lifting points of the DP baskets. Slowly lift the DP basket by following the hand signals of the banks man from the trailer and position them according the directions of the senior supervisor on the ground. Repeat above for all DP baskets.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Paint store

Details
Unload and position paint store. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Paint store Attach lifting gear to the lifting points of the paint store. Slowly lift the paint store by following the hand signals of the banks man from the trailer on the ground. Position the paint store according the directions of the senior supervisor

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position rubber store

Details
Unload and position rubber store. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Rubber store Attach lifting gear to the lifting points of the rubber store. Slowly lift the rubber store by following the hand signals of the banks man from the trailer on the ground. Position the rubber store according the directions of the senior supervisor

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Aramco store

Details
Unload and position Aramco store. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Aramco store Attach lifting gear to the lifting points of the Aramco store. Slowly lift the Aramco store by following the hand signals of the banks man from the trailer on the ground. Position the Aramco store according the directions of the senior supervisor.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Sling store

Details
Unload and position Sling store. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Sling store Attach lifting gear to the lifting points of the sling store. Slowly lift the sling store by following the hand signals of the banks man from the trailer on the ground. Position the sling store according the directions of the senior supervisor.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and position Toolbox rig

Details
Unload and position Toolbox rig. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Toolbox rig Attach lifting gear to the lifting points of the toolbox. Slowly lift the toolbox by following the hand signals of the banks man from the trailer on the ground. Position the toolbox according the directions of the senior supervisor

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Unload and rig-up Accu-mulator unit

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Unload Accumulator unit. Position the cranes according the lifting plan no. xxxxx.xxx.xxx - (Un)load Accumulator unit Mark position for accumulator unit on the new location. Attach lifting gear to the lifting points of the accumulator unit. Slowly lift the Accumulator unit by following the hand signals of the banks man from the trailer and position according lay-out on the ground. Position the remote control close to the TP & company man office. Connect the hose between accumulator unit and re-mote control. Connect afterwards the hose between remote control on rig floor and accumulator unit. Unroll electrical cables between accumulator unit , SCR and TP-office.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Manila rope

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Rig down suitcases

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Details
Connect and rig up the BOP control line suitcases. Before positioning the suitcases unroll a PVC liner (see pic-ture 12.06) Position the suitcases with help of a wheel loader. Clean the hammer union connection with a wire-brush and check the seals. Connect the lines between suitcase and ac-cumulator unit and between both units. The co-flex hoses from suitcases to the BOP can be installed when BOP is rigged up. The connections need to be cleaned and checked before connection.

Dimensions

Lifting Gears

Tools

- spanners
- Sledgehammer
- Steel wire brush
- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

11.02: Miscellaneous-Load miscellaneous

Action
Unload and rig-up fire fighting pump

Details
Unload and position the fire fighting pump with help of wheel loader. Connect the (dis)charge hoses from the fire fighting pump to the water tank and to the fire fighting stations.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- spanners
- Sledgehammer
- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

11.02: Miscellaneous-Load miscellaneous

Action
Load Belly board

Details
Unload Belly board with wheel loader and position in the stacking yard.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Load lower stands

Details
Unload lower stands with wheel loader and position in the stacking yard.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

11.02: Miscellaneous-Load miscellaneous

Action
Platform for travelling block

Details
Unload platform for travelling block. Position the travelling with wheel loader when required under-neath the travelling block

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Cutting tank

Details
Unload the cutting tank on the ground with help of a crane. Dig with a digger a hole underneath the cutting ditches for the cutting tank. When the hole is ready lower the tank with a crane in the hole.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Load Belly board

Details
Unload Belly board with wheel loader and position in the stacking yard.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Load lower stands

Details
Unload lower stands with wheel loader and position in the stacking yard.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Tools

- Wheel loader ,

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

11.03: Miscellaneous-Load mast stands + platform

Action
Platform for travelling block

Details
Unload platform for travelling block.
Position the travelling with wheel loader when required under-neath the travelling block

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Mud pump store

Details
Position the cranes according the lifting plan no. xxxxx.xxx.xxx- (Un)load Mud pump store Attach lifting gear to the mud pump store and slowly start lift-ing by following the hand signals of the banksman. Unload the container on the ground according the directions of the senior supervisor. Connect power cables to the MCC container

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

- Manila rope

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
Load welding shop

Details
Position the cranes according the lifting plan no. 14013.009.013 - (Un)load Welding shop Attach lifting gear to the welding shop and slowly start lifting by following the hand signals of the banksman. Unload the welding shop on the ground according the direc-tions of the senior supervisor. Connect power cables the Camp generator.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Lifting Gears

Tools

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
General loading with wheel loader

Details
Load equipment with help of the wheel loader. Check if the equipment is proper stowed / secured for loading. Give proper direction to the wheel loader operator during loading of the trailer.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_

Action
General loading with crane

Details
Load equipment with help of the crane. Check if the equipment is proper stowed / secured for loading. Give proper direction to the crane operator during loading of the trailer.

Resources

Name	Count
Assistant Driller	1
Banks-man	1
Electrician	1
Mechanic	1

Dimensions

Lifting Gears

Machines

Name	Count
Crane 70 MT	1
Crane 90 MT	1

Tools

- Wheel loader ,

Risk Analysis

Activity	Danger/Consequence	K	B	E	Risk	Control Measure	K_	B_	E_	Risk_