

Romfor International Ltd.

Backup Hand

**RIGGING
DOWN**

RIGGING DOWN

Romfor International Ltd.

Backup Hand

RIGGING DOWN

**DRILLING
EQUIPMENT
&
ROTARY
TOOLS**

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support and Fall Protection.	
	2	During Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN and SHUTTING DOWN EQUIPMENT as per job specific, Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available.
1		Inspect Equipment as directed: Pick Up Slings, Shackles, Tag Lines, Sheaves, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment and Hoisting Equipment.	Make sure that all open holes are covered/flagged.
		READY TO RIG DOWN	Rig is released (tanks cleaned and BOP's nipped down)
2		Begin rigging down floor.	
3		Assist with removal of kelly bushings, lower kelly valve, upper kelly valve and subs, disconnect kelly hose, lay down kelly and lay down swivel according to rig design and JSA.	Watch for pinch points, check kelly hose for wear. Use 100% tie off. Ensure kelly is properly installed in kelly shuck/sock before laying kelly down.
4		Assist with placement of lower kelly valve, upper kelly valve and subs, swivel, and kelly for inspecting.	Watch for pinch points and use tag lines. Use mechanical lifting device.
5		Assist with removal of mouse hole.	Watch for pinch points and use tag lines. Cover all open holes.
6		Assist with removal of wireline unit, mud bucket, floor safety valves, stand pipe, stand pipe valves, handling subs, instrumentation gauges, lights, safety cables, bit breaker, tongs, slips, elevators, bails, dog collar clamp, related BHA equipment, floor safety mat and drilling line spooler/ line guide.	Use fall protection with 100% tie off. Watch for pinch points. Ensure that all breakers are in the off position before unplugging any electrical equipment. (Lock Out Tag Out)
7		Assist with placement of floor safety valves, handling subs, bails, elevators, tongs, related BHA and handling equipment for inspecting.	Watch for pinch points and use tag lines.
8		Assist as directed with installation of bridle / bull line, according to rig design and JSA.	Use fall protection with 100% tie off. Watch for pinch points and over head loads.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
9		Assist as directed, in clearing derrick board area making it ready for derrick to be laid over.	Use fall protection 100% tie off. Watch for pinch points and over head loads.
10	1	Assist in clearing front end of substructure of all rig components according to rig design and rig specific JSA's (v-door/beaver slide and cat walk).	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
	2	Assist in removing hand rails (wind walls if applicable) and floor plates on the front end of the substructure according to rig design and rig specific JSA's	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
		READY TO LOWER DERRICK	
11	1	Prior to lowering derrick.	Lower derrick during daylight hours or with adequate lighting.
	2	Inspect Equipment as directed: Inspect lines, sheaves, cables, rollers, pins, safety keys, bolts, safety cables, dead man / drill line anchor, adequate drilling line on the drum and bridle line in sheaves properly.	Use 100% tie off.
	3	Assist in removing equipment or securing: Kelly Hose, Tong Lines, Derrickman Assist Lines & Counter Weight, Escape Lines, Electrical Lines (electrical breakers should be turned off prior to unplugging electric power cords), Boom Lines, Hoist Lines, Static Lines and Derrick Ladder.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines. Use lock out/tag out.
12	1	Assist as directed in pulling pins to lay derrick over and store pins properly (pins should be secured / tied off prior to removal).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.
	2	Assist as directed in positioning fast line A-Leg raising sheave (sash cord will be used for positioning A-Leg sheave, run sash cord over sheave so that both ends touch floor).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
13		Assist in ensuring that proper tension is put on lines used to pull derrick over while Driller is slacking off drawworks drum according to rig design and rig specific JSA's (use air / hydraulic hoist / tuggers if applicable). Clear floor of all unnecessary personnel.	Stay clear of overhead loads, watch for obstructions while lowering. Use 100% tie off. Avoid pinch points.
14		Assist in setting derrick stand in proper position (place derrick stand under upright bracing).	Stay clear of overhead loads.
15		Assist in securing blocks to catwalk or block stand.	Use 100% tie off. Stay clear of overhead loads.
16		Assist in removing drill line from drum and dead man / drill line anchor and unstring blocks according to rig design and rig specific JSA's (cut off line according to Ton Miles).	Watch for wickers / burs in line. Do not let line slip thru hand. Use 100% tie off. Avoid pinch points.
17		Assist in unplugging lights, rolling up cables and store properly.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Use lock out/tag out.
18	1	Assist in removing and visual inspection of equipment (refer to maintenance manual): Check engines compound, disconnect chains as required by JSA and rig design, drain fluids into proper storage tanks, guards are removed, belts removed, disconnect all lines, proper removal and storage of all bolts and pins, remove drawworks tie downs, store electrical power supply cords, store air lines and store water lines.	Ensure power supply to drawworks is off and use lock out tag out. Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (drawworks brake cooling system, auxiliary brake, water lines, steam lines, air tanks and sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
19	1	Assist as directed with rig down of mud pumps. Removal of: Belts, guards, suction lines, discharge lines, pop off lines, dresser sleeves, lights, electrical wiring, safety lines, safety cables and grounding devices.	Ensure power supply to mud pumps is off, use lock out tag out. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (cooling pumps, water lines, steam lines, air tanks and mud pumps).	Use fall protection 100% tie off. Watch for pinch points.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
20	1	Assist as directed with rig down of mud tanks. Mud hoppers/house, desander, desilter, agitators, low pressure gun lines, valves, degasser, shale shaker, discharge slides, shaker screens, flow line, dresser sleeves, dump gates and seals, lighting, electrical wiring, plug-ins, switches, caustic barrel, PPE boxes, shower, mud gas separator, grounding devices, bar-salt-gel-chemical silos, corrosion inhibitor pumps, trip tanks, trip pumps and mud monitoring equipment.	Ensure power supply to mud tanks is off, use lock out tag out. Ensure there are no tools in, on or around mud equipment. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (centrifugal pumps, shower, water lines and steam lines).	Use fall protection 100% tie off. Watch for pinch points.
21	1	Assist with rig down of water circulating system. Remove plumbing to water source, electric lines, plug-ins, hoses, connections, grounding, covers, handrails, discharge lines and valves.	Ensure power supply to water circulating system is off, use lock out tag out. Ensure there are no tools in, on or around water circulating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, centrifugal pumps)	Use fall protection 100% tie off. Watch for pinch points.
22	1	If applicable assist with rig down of boiler and heating system.	Ensure power supply to boiler or heating system is off, use lock out tag out. Ensure there are no tools in on or around boiler or heating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines and fuel lines)	Use fall protection 100% tie off. Watch for pinch points.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
23	1	Assist with rig down according to rig design and JSA: Rig managers house, crew change house, air compressors, potable water tanks, accumulator, remaining water lines, remaining fuel lines, remaining steam lines, hydraulic lines, air lines and electric lines.	Ensure that all breakers are in the off position before unplugging any electrical equipment, (lock out tag out). Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines and fuel lines).	Use fall protection 100% tie off. Watch for pinch points.
24	1	Assist with shutting down and rigging down generator sets / SCR / engines according to rig design and JSA.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out.
	2	Assist with shutting down electrical breakers. Store: fuel lines, fuel tank, air lines, grounding devices, electric cables.	Lock out tag out.
	3	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines and sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
25		Assist with picking up tools and store properly. Ensure all buildings are secured and ready for transport.	Have all safety equipment and paper work ready and available for rig down with trucks and cranes.
		END OF PROCEDURE	

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Backup Hand

RIGGING DOWN

TOP DRIVE

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support and Fall Protection.	
	2	Attend Pre-Job safety meeting, review JSA's and manufactures installation instructions pertaining to RIGGING DOWN TOP DRIVE with all third party personnel at the start of the job.	Sign off on meeting.
1		Inspect Equipment as directed: Load Lines, Air Tuggers / Hydraulic Tuggers (and lines), Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers/Load Binders, Shackles, Tag Lines, Sheaves, Top Drive raising interface, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Fork Lifts and Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Rig down during daylight hours or with adequate lighting. If needed have Top Drive technician on location.
		READY TO RIG TOP DRIVE DOWN	On initial rig down, or if required have Top Drive technician on location.
2		Assist in removing the rotary hose, drill pipe elevators, blower hose / blower hood (if applicable) and elevator links.	Watch for pinch points, check loading hitches, use tag lines, watch for overhead loads, use fall protection with 100% tie off. Ensure hole cover is in place.
3	1	Assist in removing of lower connection clamp (s) between valves and break connection (make sure connection is still hand tight), and reinstall clamp (s).	Watch for pinch points.
	2	Assist in removing of connection clamps at the quill connection, and break.	Watch for pinch points.
4		Assist in proper removal of all connection clamps from subs on top drive.	Watch for pinch points.
5	1	After the Top Drive is lowered to the floor assist in removing manual lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
6	1	After Top Drive is lowered, assist in removing crossover sub or remote lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.
7		Assist in proper installation of live roller assembly to torque guide skid.	Watch for pinch points, use fall protection 100% tie off.
8		Assist in proper installation of upper and lower transport pins and keepers.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
9		Assist in slipping the proper amount of drill line on the drum to lower blocks to the floor.	Watch for burs / wickers, avoid pinch points.
10		Assist in proper removal of Top Drive upper connecting links. Leave bail or block adapter in traveling block.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
11		Be ready to assist in installing torque guide lifting assembly.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
12		Assist (if qualified) in pinning the yoke into the bail or block adapter.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
13	1	Stand clear while blocks are raised to allow sufficient clearance to install upper runner frame.	
	2	Assist in proper installation of the upper runner frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
14	1	Stand clear while blocks are raised to allow sufficient clearance to install lower lifting frame.	
	2	Assist in proper installation of the lower lifting frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
15	1	As directed, assist in shifting hydraulic valve on lower skid section to extend the two hydraulic cylinders that will loosen the torque guide tensioning cables.	Use fall protection 100% tie off.
	2	Assist in removing torque from tensioning cables by turning hydraulic cylinder head / yoke the proper direction to eliminated recoil.	Cable will have tension and will spin when unpinned if torque is not removed. Do not put wrench on polished cylinder rod.
	3	Assist in removing pins and replacing in cylinders.	Stay clear while removing pin. Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
16		Assist in unbolting torque guide from torque reaction beam, and unpinning any additional bracing.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
17		As directed, assist in shutting down all electric and hydraulic power supplies in Top Drive SCR house.	Use lock out tag out.
18		As directed, assist in disconnecting electric and hydraulic power from the torque guide and secure lines.	Watch for pinch points, watch for overhead loads, use fall protection with 100% tie off.
19		Assist in clearing the front end of the substructure of all rig components (v-door/beaver slide and cat walk) and ensure that derrick board area is clear to remove top drive.	Use slings for lifting devices. Make sure hand rails, gates, and fall protection is in place for rigging down Top Drive. While working around open V-door section of sub, use 100% tie off.
20		Assist in proper positioning of truck in front of substructure to accept Top Drive.	Use flagger to position truck, make sure that truck is centered with well.
21		Assist in raising truck winch line to floor with air / hydraulic hoist / tugger and assist in attaching to the lifting snubbing assembly.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off. Watch for wickers / burrs in winch lines.
22		Standby while harpoon is unlatched.	Watch for overhead loads.
23		Ensure that truck winch is tensioned to pull torque guide clear of substructure.	Use flagger to signal truck.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
24		Watch for snags or hang ups while truck pulls torque guide out the V-door until torque guide is secured on the bed of the truck.	Use flagger to signal truck. Use handheld radios for truck communications.
25		Assist in unbolting blower and secure in transport position.	Watch for pinch points, watch for overhead loads and use fall protection with 100% tie off.
26		While torque guide is folding onto truck ensure that the truck is being positioned back and forth to properly lower torque guide (maintain torque guide at a safe distance from substructure while lowering). Ensure service loops are folded in the torque guide (fold side by side) while lowering for transport.	Use flagger to position truck. Stay clear from trucks path. Use handheld radios. Keep floor clear of personnel. Stay clear of overhead/suspended loads. Watch service loops and tensioning cable for snags or problems.
27		Assist in securing the top section of torque guide at floor height and assist in removing the lifting assembly from blocks.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
28	1	Assist in proper installation of runner frame stop pin.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in lowering of top section of torque guide to truck using proper lowering equipment specific to rig JSA (Crane, Air Tugger, Blocks).	Use flagger to signal truck. Use handheld radios for truck communications. Watch for snags or hang ups.
29		Assist in securing V-door gate.	Use fall protection 100% tie off.
30		Assist in retracting service support / remote blower to transport position using ratchet (swing in).	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
31		Ensure that all components on Top Drive unit and torque guide are secured for transport.	Watch for pinch points.
		READY TO RIG DOWN TOP DRIVE SCR HOUSE	On initial rig down, or if required have Top Drive technician on location.
32		Assist in unhooking power cable and control cables from drillers console.	Make sure that ends are covered.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
33		Assist in proper removal of drillers control console and store properly.	Use proper lifting techniques. Have at least two people taking it down.
34		Assist in securing control and power cables in the grasshopper.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
35		Assist in removing grasshopper from rig floor using proper lifting device.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
36		Assist in proper removal of lifting device and reposition lifting device on opposite end. Swing complete grasshopper over top of Top Drive SCR house.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
37	1	Assist in disengaging main power feeder breaker for Top Drive SCR.	Use lock out tag out.
	2	Assist in disconnecting power cables from power supply and secure for transport.	Make sure ends are covered.
		END OF PROCEDURE	

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Backup Hand

RIGGING DOWN

**TRUCKS &
CRANES**

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RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements - Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes and Back Support.	
	2	Attend pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN with all third party personnel at the start of the day, one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment as directed: Load Lines, Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers / Load Binders, Shackles, Tag Lines, Sheaves, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Only rig down with adequate people. Rig down during daylight hours or with adequate lighting.
		READY TO RIG DOWN	
		WHEN LOADING OR POSITIONING ANY HEAVY OR CRITICAL LOADS (SCR-GENERATOR HOUSE, ENGINES, PUMPS, DRAWWORKS) USE ADDITIONAL LIFTING SUPPORT.	Use slings for lifting devices. Stand at a safe distance away from loads being lifted.
		THE FOLLOWING SEQUENCE IS A GENERAL GUIDELINE AND WILL VARY DEPENDING ON RIG DESIGN	
2		Assist in clearing the front end of the rig: Tubulars (review best practices for handling tubulars), pipe racks, pipe tubs, accumulator (if applicable) and change house (if applicable).	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. On pipe tubs do not use drilling line for chokers / lifting / bridle line.
3		Assist in removing drillers dog house from rig floor.	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. Use fall protection 100% tie off.
4		Tie onto A-Legs using crane spreader beam with two short chokers to lower A-Legs (when applicable) according to rig design and JSA.	Avoid pinch points, keep hands and feet clear, watch for overhead load. Use fall protection 100% tie off.

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
5		Assist in removing bottom A-Leg pins, and store properly.	Use short rope to tie off on pin when removing. Avoid pinch points.
6		Assist in lowering A-Legs to derrick and pinning in position.	Be aware of overhead loads, and use fall protection 100% tie off.
7		If qualified, assist in removing crane slings from A-Legs.	Be aware of overhead loads, and use fall protection 100% tie off.
8		Assist in removing bridle line from blocks, remove blocks and block stand if applicable.	Be aware of overhead loads. Avoid pinch points. Use fall protection 100% tie off.
9		If qualified, assist in removing derrick board according to rig design and JSA.	Ensure equipment is secure. Avoid pinch points. Use tag lines. Use fall protection 100% tie off.
10		If qualified, assist in removing or securing boom poles, counter weights, escape line, air winch lines, kelly hose, and static lines according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
11	1	If qualified, assist in removing and rigging down of derrick from sub and crown stand according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
	2	Inspect equipment as directed: Crown sheaves, bridle lines, cable sheaves & cables, safety cables on sheaves, safety cable on lights, anti-fall devices, electrical wires, standpipe clamps, all bolt nuts pins and keepers, climbing ladder, safety lines on tong counter weight bucket, girts (bent), crown saver boards and covers, crown light, and check for cracked welds.	
12		If qualified, assist in removal of A-Leg spreader bar and fold A-Legs together.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use a ladder or man lift to unpin A-Leg spreader bar (never stand under or between raised A-legs).

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
13		Assist in removal of water tank, fuel tank, accumulator house, generator house, generator sets, boilers, heaters, toolpushers house, change house, parts house, catch all box, choke manifold, gas buster / gas separator, trip tank, according to rig design. When lifting critical loads on trucks use secondary lifting machinery (Gin truck or Crane).	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off . Be aware of traffic on location, do not get between loads. Use air ride trailer to haul SCR house, toolpushers house and crew quarters.
14	1	Assist in removal of mud pumps.	Avoid pinch points, use tag lines, be aware of overhead loads. Stay clear of trucks backing up to loads.
	2	Inspect Equipment as directed: Power supply, belts, chains, sprockets, brushes, pulsation dampners, suction lines, modules, pop off's, and pop off lines.	
15		Assist in removal of mud tank equipment: Flow line, stairs, hand rails, shakers, degasser, desander, desilter, ground rods, lighting fixtures, safety cables, slides, and other required equipment.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines.
16		Assist in removal of mud tanks.	Stay clear of trucks backing up to loads.
17	1	Assist in removal of drawworks and power supply (engines compound, electric motors).	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of trucks backing up to loads.
	2	Inspect equipment as directed: Tie downs (turnbuckles, pins, bolts, cables, shackles, cleaves), brushes, roller chains, sprockets, guards in place, safety keepers, water lines, oil lines, air lines and loading hitches.	

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
18		Assist in removal of additional houses on floor, beaver slide / V-door, catwalk, air / hydraulic tuggers.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
19	1	If qualified, assist in removal of rotary table, racking board and sub spreaders.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect equipment as directed: Pins, spreader ears, cracked welds.	
20		Assist in removal of BOP equipment from matting boards.	Watch for overhead loads, watch for pinch points and use tag lines. Make sure that hoist line is secured to BOP before 100% tie off is removed.
21	1	If qualified, assist in rig down of substructure.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect Equipment as directed: Bent beams, cracked weld, loose pin pockets, safety chains on pins, safety cables on lights, electric cords, dog house outriggers, mud lines, water lines, air lines, steam lines.	
22		Assist in removal of matting boards.	Watch for overhead loads, watch for pinch points, and use tag lines. Ensure all open holes are covered.
23		Assist in cleaning location of all boards, trash and miscellaneous items.	
24		Assist with removal of cellar cover, stay clear of cellar after removing cover.	Flag or rope off open holes.
		END OF PROCEDURE	

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Derrickman

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RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	During Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN and SHUTTING DOWN EQUIPMENT as per job specific, Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available.
1		Inspect Equipment as directed: Pick Up Slings, Shackles, Tag Lines, Sheaves, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment, Hoisting Equipment.	Make sure that all open holes are covered/flagged.
		READY TO RIG DOWN	Rig is released (tanks cleaned and BOP's nipped down)
2		Begin rigging down floor.	
3		Assist in removing kelly bushings, lower kelly valve, upper kelly valve and subs, disconnect kelly hose, lay down kelly, and lay down swivel according to rig design and JSA.	Watch for pinch points, check kelly hose for wear. Use 100% tie off. Ensure kelly is properly installed in kelly shuck/sock before laying kelly down.
4		Assist with proper placement of lower kelly valve, upper kelly valve and subs, swivel, and kelly for inspecting.	Watch for pinch points and use tag lines. Use mechanical lifting device.
5		Assist with removal of mouse hole.	Watch for pinch points and use tag lines. Cover all open holes.
6		Assist with removal of wireline unit, mud bucket, floor safety valves, stand pipe, stand pipe valves, handling subs, instrumentation gauges, lights, safety cables, bit breaker, tongs, slips, elevators, bails, dog collar clamp, related BHA equipment, floor safety mat, drilling line spooler/ line guide.	Use fall protection 100% tie off. Watch for pinch points. Ensure that all breakers are in the off position before unplugging any electrical equipment. (Lock Out Tag Out)
7		Assist with placement of floor safety valves, handling subs, bails, elevators, tongs, related BHA and handling equipment for inspecting.	Watch for pinch points and use tag lines.
8		When blocks are in proper position install bridle / bull line, according to rig design and JSA.	Use fall protection 100% tie off. Watch for pinch points and over head loads.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
9	1	Clear and secure derrick board area and visually inspect derrick to ensure it is ready to be laid over.	Use fall protection 100% tie off. Watch for pinch points and over head loads.
	2	Inspect Equipment: Inspect lines, sheaves, cables, rollers, pins, safety keys, bolts, safety cables, bridle line in sheaves properly.	Service if needed.
10	1	Assist in clearing the front end of the substructure of all rig components according to rig design and rig specific JSA's (v-door/beaver slide and cat walk).	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
	2	Assist in removing hand rails (wind walls if applicable) and floor plates on the front end of the substructure according to rig design and rig specific JSA's.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
		READY TO LOWER DERRICK	
11	1	Prior to lowering derrick.	Lower derrick during daylight hours or with adequate lighting.
	2	Assist in ensuring that equipment is removed or secured: Kelly Hose, Tong Lines, Derrickman Assist Lines & Counter Weight, Escape Lines, Electrical Lines (electrical breakers should be turned off prior to unplugging electric power cords), Boom Lines, Hoist Lines, Static Lines, Derrick Ladder.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines. Use lock out tag out.
12	1	Remove proper pins to lay derrick over and store properly (pins should be secured / tied off prior to removal).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.
	2	Properly position fast line A-Leg raising sheave (run sash cord over sheave so that both ends touch floor, sash cord will be used for positioning A-Leg sheave).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
13		Assist in ensuring that proper tension is put on lines used to pull derrick over while Driller is slacking off drawworks drum according to rig design and rig specific JSA's (use air / hydraulic hoist / tuggers if applicable). Clear floor of all unnecessary personnel.	Stay clear of overhead loads, watch for obstructions while lowering. Use 100% tie off. Avoid pinch points.
14		After derrick is broke over, ensure that fast line is engaged into A-Leg sheave properly, position sheave with sash cord if required.	Remove sash cord prior to full engagement of line into sheave. Avoid pinch points.
15		While derrick is being lowered watch lines and sheaves, for any snags or hang-ups.	Stay clear of overhead loads.
16	1	Ensure that derrick stand is in proper position to set derrick (place derrick stand under upright bracing).	Stay clear of overhead loads.
	2	Ensure that derrick is properly set onto derrick stand.	Stay clear of overhead loads.
17		Assist in securing blocks to catwalk or block stand.	Use 100% tie off. Stay clear of overhead loads.
18		Assist in removing drill line from drum and dead man / drill line anchor, unstring blocks according to rig design and rig specific JSA's (cut off line according to Ton Miles).	Watch for wickers / burs in line. Do not let line slip thru hand. Use 100% tie off. Avoid pinch points.
19		Assist in unplugging lights, rolling up cables and store properly.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points.
20		Ensure that the power supply to mud pumps is off.	Use lock out tag out.
21	1	Rig down mud pumps. Removal: Belts, guards, suction lines, discharge lines, pop off lines, dresser sleeves, lights, electrical wiring, safety lines, safety cables, grounding devices.	Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (cooling pumps, water lines, steam lines, air tanks, mud pumps).	Use fall protection 100% tie off. Watch for pinch points.
22		Ensure that the power supply to mud tanks is off.	Use lock out tag out.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
23	1	Rig down mud tanks. Mud hoppers/house, desander, desilter, agitators, low pressure gun lines, valves, degasser, shale shaker, discharge slides, shaker screens, flow line, dresser sleeves, dump gates and seals, lighting, electrical wiring, plug-ins, switches, caustic barrel, PPE boxes, shower, mud gas separator, grounding devices, bar-salt-gel-chemical silos, corrosion inhibitor pumps, trip tanks, trip pumps, mud monitoring equipment.	Ensure there are no tools in on or around mud equipment. Ensure that all breakers are in the off position before unplugging any electrical equipment, (lock out tag out). Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (centrifugal pumps, shower, water lines, steam lines).	Use fall protection 100% tie off. Watch for pinch points.
24		Ensure that the power supply to water circulating system is off.	Use lock out tag out.
25	1	Assist with rig down of water circulating system. Remove plumbing to water source, electric lines, plug-ins, hoses, connections, grounding, covers, handrails, discharge lines, valves.	Ensure there are no tools in, on or around water circulating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, (lock out tag out). Use fall protection 100% tie off. Watch for pinch points.
	2	Assist in draining, greasing and winterizing, according to maintenance manual (water lines, centrifugal pumps)	Use fall protection 100% tie off. Watch for pinch points.
26		If applicable ensure that the power supply to boiler or heating system is off.	Use lock out tag out.
27	1	If applicable assist with rig down of boiler and heating system.	Ensure there are no tools in, on or around boiler or heating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, (lock out tag out). Use fall protection 100% tie off. Watch for pinch points.
	2	Assist in draining, greasing and winterizing, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines)	Use fall protection 100% tie off. Watch for pinch points.
28		Ensure that the power supply to system is off.	Use lock out tag out.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
29	1	Assist with rig down according to rig design and JSA: Rig managers house, crew change house, air compressors, potable water tanks, accumulator, remaining water lines, remaining fuel lines, remaining steam lines, hydraulic lines, air lines, electric lines.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Assist in draining, greasing and winterizing, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines).	Use fall protection 100% tie off. Watch for pinch points.
30	1	Assist in shutting down and rigging down of generator sets / SCR / engines according to rig design and JSA.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out.
	2	Assist with shutting down of electrical breakers and storage of, fuel lines, fuel tank, air lines, grounding devices, electric cables.	Lock out tag out. Fuel tank valves locked.
	3	Assist in draining, greasing and winterizing, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
31		Assist in picking up tools and store properly. Ensure all buildings are secured and ready for transport.	Have all safety equipment and paper work ready and available for rig down with trucks and cranes.
		<i>END OF PROCEDURE</i>	

Romfor International Ltd.

Derrickman

RIGGING DOWN

TOP DRIVE

TOP DRIVE

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	Attend Pre-Job safety meeting, review JSA's and manufactures installation instructions pertaining to RIGGING DOWN TOP DRIVE with all third party personnel at the start of the job.	Sign off on meeting.
1		Inspect Equipment as directed: Load Lines, Air Tuggers / Hydraulic Tuggers (and lines), Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers/Load Binders, Shackles, Tag Lines, Sheaves, Top Drive raising interface, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Rig down during daylight hours or with adequate lighting. If needed have Top Drive technician on location.
		READY TO RIG TOP DRIVE DOWN	On initial rig down, or if required have Top Drive technician on location.
2		Assist in removing the rotary hose, drill pipe elevators, blower hose / blower hood (if applicable), and elevator links.	Watch for pinch points, check loading hitches, use tag lines, watch for overhead loads, use fall protection 100% tie off. Ensure hole cover is in place.
3	1	Assist in removing of lower connection clamp (s) between valves and break connection (make sure connection is still hand tight), and reinstall clamp (s).	Watch for pinch points.
	2	Assist in removing of connection clamps at the quill connection, and break.	Watch for pinch points.
4		Assist in proper removal of all connection clamps from subs on top drive.	Watch for pinch points.
5	1	After the Top Drive is lowered to the floor assist in removing manual lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
6	1	After Top Drive is lowered, assist in removing crossover sub or remote lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.
7		Assist in proper installation of live roller assembly to torque guide skid.	Watch for pinch points, use fall protection 100% tie off.
8		Assist in proper installation of upper and lower transport pins and keepers.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
9		Assist in slipping the proper amount of drill line on the drum to lower blocks to the floor.	Watch for burs / wickers, avoid pinch points.
10		Assist in proper removal of top drive upper connecting links. Leave bail or block adapter in traveling block.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
11		Be in position and tied off on Top Drive unit. Be ready to install torque guide lifting assembly.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
12		Pin the yoke into the bail or block adapter.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
13	1	Stand clear while blocks are raised to allow sufficient clearance to install upper runner frame.	
	2	Assist in proper installation of the upper runner frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
14	1	Stand clear while blocks are raised to allow sufficient clearance to install lower lifting frame.	
	2	Assist in proper installation of the lower lifting frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
15		After blocks are raised to proper position latch into section 4 lifting pocket (second from top section).	Watch for snags when raising.
16	1	Stand by while hydraulic valve is shifted on lower skid section to extend the two hydraulic cylinders that will loosen the torque guide tensioning cables.	
	2	Assist in removing torque from tensioning cables by turning hydraulic cylinder head / yoke the proper direction to eliminated recoil.	Cable will have tension and will spin when unpinned if torque is not removed. Do not put wrench on polished cylinder rod.
	3	Remove pins and replace in cylinders.	Stay clear while removing pin. Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
17		Unbolt torque guide from torque reaction beam, and unpin any additional bracing.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
18		Assist in disconnecting electric and hydraulic power from the torque guide and secure lines.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
19		Assist in clearing the front end of the substructure of all rig components (v-door/beaver slide and cat walk) and ensure that derrick board area is clear to remove top drive.	Use slings for lifting devices. Make sure hand rails, gates, and fall protection is in place for rigging down Top Drive. While working around open V-door section of sub use 100% tie off.
20		Assist in proper positioning of truck in front of substructure to accept Top Drive.	Use flagger to position truck, make sure that truck is centered with well.
21		Assist in raising truck winch line to floor with air / hydraulic hoist / tugger and assist in attaching to the lifting snubbing assembly.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off. Watch for wickers / burrs in winch lines.
22		Remove safety cables from top of torque guide.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
23		When torque guide raised in position, release harpoon latches.	Watch for pinch points use fall protection 100% tie off. Watch crown clearance.
24		Reposition to derrick ladder and ensure harpoon is clear of torque guide while lowering.	Watch for pinch points and use fall protection 100% tie off.
25		Descend ladder while watching torque guide for hang ups or snags.	Use fall protection 100% tie off.
26		Assist in securing the top section of torque guide at floor height, and assist in removing the lifting assembly from blocks.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
27	1	Assist in proper installation of runner frame stop pin.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in lowering of top section of torque guide to truck using proper lowering equipment specific to rig JSA (Crane, Air Tugger, Blocks).	Use flagger to signal truck. Use handheld radios for truck communications. Watch for snags or hang ups.
28		Assist in securing V-door gate.	Use fall protection 100% tie off.
29		Assist in retracting service support / remote blower to transport position using ratchet (swing in).	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
30		Ensure that all components on Top Drive unit and torque guide are secured for transport.	Watch for pinch points.
		READY TO RIG DOWN TOP DRIVE SCR HOUSE	On initial rig down, or if required have Top Drive technician on location.
31		Assist in unhooking power cable and control cables from drillers console.	Make sure that ends are covered.
32		Assist in proper removal of drillers control console and store properly.	Use proper lifting techniques. Have at least two people taking it down.
33		Assist in securing control and power cables in the grasshopper.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
34	1	Assist in removing grasshopper from rig floor using proper lifting device.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in proper removal of lifting device and reposition lifting device on opposite end. Swing complete grasshopper over top of Top Drive SCR house.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off. Use tag line.
	3	Watch cables while grasshopper pedestal is scoped down for transport.	
35		Ensure that main power feeder breaker for Top Drive SCR is disengaged.	Use lock out tag out.
36		Assist in disconnecting power cables from power supply, and secure for transport.	Make sure ends are covered and all cords have been secured.
		END OF PROCEDURE	

Romfor International Ltd.

Derrickman

RIGGING DOWN

**TRUCKS &
CRANES**

**TRUCKS &
CRANES**

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements - Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support.	
	2	Attend pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN with all third party personnel at the start of the day, one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment as directed: Load Lines, Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers / Load Binders, Shackles, Tag Lines, Sheaves, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Only rig down with adequate people. Rig down during daylight hours or with adequate lighting.
		READY TO RIG DOWN	
2		WHEN LOADING OR POSITIONING ANY HEAVY OR CRITICAL LOADS (SCR-GENERATOR HOUSE, ENGINES, PUMPS, DRAWWORKS) USE ADDITIONAL LIFTING SUPPORT.	Use slings for lifting devices. Stand at a safe distance away from loads being lifted.
3		THE FOLLOWING SEQUENCE IS A GENERAL GUIDELINE AND WILL VARY DEPENDING ON RIG DESIGN	
4		Assist in clearing the front end of the rig: Tubulars (review best practices for handling tubulars), pipe racks, pipe tubs, accumulator (if applicable), change house (if applicable).	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. On pipe tubs do not use drilling line for chokers / lifting / bridle line
5		Assist in removing drillers dog house from rig floor.	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. Use fall protection 100% tie off.
6		Tie onto A-Legs using crane spreader beam with two short chokers to lower A-Legs (when applicable) according to rig design and JSA.	Avoid pinch points, keep hands and feet clear, watch for overhead load. Use fall protection 100% tie off.

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
7		Assist in removing bottom A-Leg pins, and store properly.	Use short rope to tie off on pin when removing. Avoid pinch points.
8		Assist in lowering A-Legs to derrick and pinning in position.	Be aware of overhead loads, and use fall protection 100% tie off.
9		Assist in removing crane slings from A-Legs with qualified help.	Be aware of overhead loads, and use fall protection 100% tie off.
10		Assist in removing bridal line from blocks, remove blocks and block stand if applicable.	Be aware of overhead loads. Avoid pinch points. Use fall protection 100% tie off.
11		Remove derrick board according to rig design and JSA with qualified help.	Ensure equipment is secure. Avoid pinch points. Use tag lines. Use fall protection 100% tie off.
12		Assist in removing or securing boom poles, counter weights, escape line, air winch lines, kelly hose, and static lines according to rig design and JSA with qualified help.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
13	1	Assist in removal and rig down of derrick from sub and crown stand according to rig design and JSA with qualified help.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
	2	Inspect equipment as directed: Crown sheaves, bridle lines, cable sheaves & cables, safety cables on sheaves, safety cable on lights, anti-fall devices, electrical wires, standpipe clamps, all bolt nuts pins and keepers, climbing ladder, safety lines on tong counter weight bucket, girts (bent), crown saver boards and covers, crown light, and check for cracked welds.	
14		Assist in removal of A-Leg spreader bar and fold A-Legs together with qualified help.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use a ladder or man lift to unpin A-Leg spreader bar (never stand under or between raised A-legs).

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
15		Assist in removal of water tank, fuel tank, accumulator house, generator house, generator sets, boilers, heaters, toolpushers house, change house, parts house, catch all box, choke manifold, gas buster / gas separator, trip tank, according to rig design. When lifting critical loads on trucks use secondary lifting machinery (Gin truck or Crane).	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off . Be aware of traffic on location, do not get between loads. Use air ride trailer to haul SCR house, toolpushers house and crew quarters.
16	1	Assist in removal of mud pumps.	Avoid pinch points, use tag lines, be aware of overhead loads. Stay clear of trucks backing up to loads.
	2	Inspect Equipment as directed: Power supply, belts, chains, sprockets, brushes, pulsation dampners, suction lines, modules, pop off's, and pop off lines.	
17		Assist in removal of mud tank equipment: Flow line, stairs, hand rails, shakers, degasser, desander, desilter, ground rods, lighting fixtures, safety cables, slides, and other required equipment.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines.
18		Assist in removal of mud tanks.	Stay clear of trucks backing up to loads.
19	1	Assist in removal of drawworks and power supply (engines compound, electric motors).	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of trucks backing up to loads.
	2	Inspect equipment as directed: Tie downs (turnbuckles, pins, bolts, cables, shackles, cleaves), brushes, roller chains, sprockets, guards in place, safety keepers, water lines, oil lines, air lines, loading hitches.	

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
20		Assist in removal of additional houses on floor, beaver slide / V-door, catwalk, air / hydraulic tuggers.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay moving trucks.
21	1	Assist in removal of rotary table, racking board and sub spreaders with qualified help.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect equipment as directed: Pins, spreader ears, cracked welds.	
22		Assist in removal of BOP equipment from matting boards.	Watch for overhead loads, watch for pinch points and use tag lines. Make sure that hoist line is secured to BOP before 100% tie off is removed.
23	1	Assist in rig down of substructure with qualified help.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect Equipment as directed: Bent beams, cracked weld, loose pin pockets, safety chains on pins, safety cables on lights, electric cords, dog house outriggers, mud lines, water lines, air lines, steam lines.	
24		Assist in removal of matting boards.	Watch for overhead loads, watch for pinch points, and use tag lines. Ensure all open holes are covered.
25		Assist in cleaning location of all boards, trash and miscellaneous items.	Flag or rope off open holes.
26		Assist with removal of cellar cover, stay clear of cellar after removing cover.	
		END OF PROCEDURE	

Romfor International Ltd.

Driller

**RIGGING
DOWN**

RIGGING DOWN

Romfor International Ltd.

Driller

RIGGING DOWN

**DRILLING
EQUIPMENT
&
ROTARY
TOOLS**

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	Hold Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN and SHUTTING DOWN EQUIPMENT as per job specific, Drillers responsibility to direct and organize crew throughout rig down.	Make sure that all personnel sign off on meeting and current emergency contact numbers are readily available.
1		Inspect Equipment: Pick Up Slings, Shackles, Tag Lines, Sheaves, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment, Hoisting Equipment.	Make sure that all open holes are covered/flagged.
		READY TO RIG DOWN	Rig is released (tanks cleaned and BOP's nipped down)
2		Begin rigging down floor.	
3		Ensure proper removal of kelly bushings, lower kelly valve, upper kelly valve and subs, disconnect kelly hose, lay down kelly, and lay down swivel according to rig design and JSA.	Watch for pinch points check kelly hose for wear. Use 100% tie off. Ensure kelly is properly installed in kelly shuck/sock before laying kelly down.
4		Ensure proper placement of lower kelly valve, upper kelly valve and subs, swivel, and kelly for inspecting.	Watch for pinch points and use tag lines. Use mechanical lifting device.
5		Ensure proper removal of mouse hole.	Watch for pinch points and use tag lines. Cover all open holes.
6		Ensure proper removal of wireline unit, mud bucket, floor safety valves, stand pipe, stand pipe valves, handling subs, instrumentation gauges, lights, safety cables, bit breaker, tongs, slips, elevators, bails, dog collar clamp, related BHA equipment, floor safety mat, drilling line spooler/ line guide.	Use fall protection 100% tie off. Watch for pinch points. Ensure that all breakers are in the off position before unplugging any electrical equipment. (Lock Out Tag Out)
7		Ensure proper placement of floor safety valves, handling subs, bails, elevators, tongs, related BHA and handling equipment for inspecting.	Watch for pinch points and use tag lines.
8	1	Raise blocks to proper height for installation of bridle / bull line.	
	2	Ensure proper installation of bridle / bull line and proper positioning of crown saver, according to rig design and JSA.	Use fall protection 100% tie off. Watch for pinch points and over head loads. Use fall protection 100% tie off.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
9	1	Ensure derrick board area is ready for derrick to be laid over.	Watch for pinch points and over head loads.
10	1	Ensure that front end of substructure is clear of all rig components according to rig design and rig specific JSA's (v-door/beaver slide and cat walk).	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
	2	Ensure that hand rails (wind walls if applicable) and floor plates on the front end of the substructure are removed according to rig design and rig specific JSA's.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
		READY TO LOWER DERRICK	
11	1	Prior to lowering derrick.	Lower derrick during daylight hours or with adequate lighting.
	2	Inspect Equipment: Inspect lines, sheaves, cables, rollers, pins, safety keys, bolts, safety cables, dead man / drill line anchor, adequate drilling line on the drum, bridle line in sheaves properly.	Use 100% tie off.
	3	Ensure equipment is removed or secured: Kelly Hose, Tong Lines, Derrickman Assist Lines & Counter Weight, Escape Lines, Electrical Lines (electrical breakers should be turned off prior to unplugging electric power cords), Boom Lines, Hoist Lines, Static Lines, Derrick Ladder.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines. Use lock out/tag out.
12	1	Raise blocks to proper positioning for tension on bridle line for unpinning of derrick according to rig design and rig specific JSA's.	
13	1	Ensure that proper pins are pulled to lay derrick over and stored properly (pins should be secured / tied off prior to removal).	Use 100% tie off. Watch for pinch points. Stay clear of

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
	2	Ensure that fast line A-Leg raising sheave is properly positioned (run sash cord over sheave so that both ends touch floor, sash cord will be used for positioning A-Leg sheave).	overhead work area. Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.
14		Ensure that proper tension is put on lines used to pull derrick over while slacking off drawworks drum according to rig design and rig specific JSA's (use air / hydraulic hoist / tuggers if applicable). Clear floor of all unnecessary personnel.	Stay clear of overhead loads, watch for obstructions while lowering. Use 100% tie off. Avoid pinch points.
15		After derrick is broke over, ensure that fast line is engaged into A-Leg sheave properly, position sheave with sash cord if required.	Remove sash cord prior to full engagement of line into sheave. Avoid pinch points.
16		Ensure that the proper breaking device is being used to help control speed while lowering derrick according to rig design and rig specific JSA's.	Check that bridle line sheaves and rollers are turning free and operating properly. Stay clear of overhead loads. Avoid pinch points.
17	1	Ensure that derrick stand is in proper position to set derrick (place derrick stand under upright bracing).	Stay clear of overhead loads.
	2	Slowly set derrick onto derrick stand.	Stay clear of overhead loads.
18		Lower blocks to catwalk or block stand and secure.	Use 100% tie off. Stay clear of overhead loads.
19		Ensure that drill line is removed from drum and dead man / drill line anchor. Unstring blocks according to rig design and rig specific JSA's (cut off line according to Ton Miles).	Watch for wickers / burs in line. Do not let line slip thru hand. Use 100% tie off. Avoid pinch points.
20		Ensure that all lines, cables are rolled up and properly stored, and lights are unplugged. Ensure that all lines, cables and lights are rolled up and properly stored.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points.
21		Ensure that the power supply to drawworks is off.	Use lock out tag out.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
22	1	<p>Ensure proper Removal and Inspection of Equipment (refer to maintenance manual):</p> <p>Check engines compound, disconnect chains as required by JSA and rig design, drain fluids into proper storage tanks, guards are removed, belts removed, disconnect all lines, proper removal and storage of all bolts and pins, remove drawworks tie downs, store electrical power supply cords, store air lines, store water lines.</p>	<p>Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.</p>
	2	<p>Ensure that equipment is drained and winterized (drawworks brake cooling system, auxiliary brake, water lines, steam lines, air tanks, sufficient engine coolant).</p>	<p>Use fall protection 100% tie off. Watch for pinch points.</p>
23		<p>Ensure that the power supply to mud pumps is off.</p>	<p>Use lock out tag out.</p>
24	1	<p>Ensure proper rig down of mud pumps.</p> <p>Removal of: Belts, guards, suction lines, discharge lines, pop off lines, dresser sleeves, lights, electrical wiring, safety lines, safety cables, grounding devices.</p>	<p>Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.</p>
	2	<p>Ensure that equipment is drained, greased and winterized according to maintenance manual (cooling pumps, water lines, steam lines, air tanks, mud pumps).</p>	<p>Use fall protection 100% tie off. Watch for pinch points.</p>
25		<p>Ensure that the power supply to mud tanks is off.</p>	<p>Use lock out tag out.</p>
26	1	<p>Ensure proper rig down of mud tanks.</p> <p>Mud hoppers/house, desander, desilter, agitators, low pressure gun lines, valves, degasser, shale shaker, discharge slides, shaker screens, flow line, dresser sleeves, dump gates and seals, lighting, electrical wiring, plug-ins, switches, caustic barrel, PPE boxes, shower, mud gas separator, grounding devices, bar-salt-gel-chemical silos, corrosion inhibitor pumps, trip tanks, trip pumps, mud monitoring equipment.</p>	<p>Ensure there are no tools in, on or around mud equipment. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.</p>
	2	<p>Ensure that equipment is drained, greased and winterized according to maintenance manual (centrifugal pumps, shower, water lines, steam lines).</p>	<p>Use fall protection 100% tie off. Watch for pinch points.</p>
27		<p>Ensure that the power supply to water circulating system is off.</p>	<p>Use lock out tag out.</p>

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
28	1	Ensure proper rig down of water circulating system. Remove plumbing to water source, electric lines, plug-ins, hoses, connections, grounding, covers, handrails, discharge lines, valves.	Ensure there are no tools in, on or around water circulating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Ensure that equipment is drained, greased and winterized according to maintenance manual (water lines, centrifugal pumps)	Use fall protection 100% tie off. Watch for pinch points.
29		If applicable ensure that the power supply to boiler or heating system is off.	Use lock out tag out.
30	1	If applicable ensure proper rig down of boiler and heating system.	Ensure there are no tools in, on or around boiler or heating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Ensure that equipment is drained and winterized according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines)	Use fall protection 100% tie off. Watch for pinch points.
31		Ensure that the power supply to system is off.	Use lock out tag out.
32	1	Ensure proper rig down according to rig design and JSA: Rig managers house, crew change house, air compressors, potable water tanks, accumulator, remaining water lines, remaining fuel lines, remaining steam lines, hydraulic lines, air lines, electric lines.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Ensure that equipment is drained and winterized according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines).	Use fall protection 100% tie off. Watch for pinch points.

RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
33	1	Ensure proper shut down and rig down of generator sets / SCR / engines according to rig design and JSA.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out.
	2	Ensure proper shut down of electrical breakers and storage of, fuel lines, fuel tank, air lines, grounding devices, electric cables.	Lock out tag out.
	3	Ensure that equipment is drained and winterized according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
34		Ensure all tools are picked up and stored properly. Ensure all buildings are secured and ready for transport.	Have all safety equipment and paper work ready and available for rig down with trucks and cranes.
		END OF PROCEDURE	

Romfor International Ltd.

Driller

RIGGING DOWN

TOP DRIVE

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	Hold Pre-Job safety meeting, review JSA's and manufactures installation instructions pertaining to RIGGING DOWN TOP DRIVE with all third party personnel at the start of the day, designate one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	Make sure that all personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment: Load Lines, Air Tuggers / Hydraulic Tuggers (and lines), Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers/Load Binders, Shackles, Tag Lines, Sheaves, Top Drive raising interface, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Rig down during daylight hours or with adequate lighting. If needed have Top Drive technician on location.
		READY TO RIG TOP DRIVE DOWN	On initial rig down, or if required have Top Drive technician on location.
2		Ensure proper removal of the rotary hose, drill pipe elevators, blower hose / blower hood (if applicable), and elevator links.	Watch for pinch points, check loading hitches, use tag lines, watch for overhead loads, use fall protection 100% tie off. Ensure hole cover is in place.
3	1	Ensure proper removal of lower connection clamp (s) between valves and break connection (make sure connection is still hand tight), and reinstall clamp (s).	Watch for pinch points.
	2	Ensure proper removal of connection clamps at the quill connection, and break.	Watch for pinch points.
4		Ensure proper removal of all connection clamps from subs on top drive.	Watch for pinch points.
5	1	Lower top drive to floor and remove manual lower well control valve.	Watch for pinch points.
	2	Ensure proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
6	1	Lower top drive to floor and remove crossover sub or remote lower well control valve.	Watch for pinch points.
	2	Ensure proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.
7	1	Raise top drive to allow rig up of live roller assembly.	Watch for pinch points, use fall protection 100% tie off.
	2	Ensure proper installation of live roller assembly to torque guide skid.	Watch for pinch points, use fall protection 100% tie off.
8	1	Position top drive, and ensure proper installation of upper and lower transport pins and keepers by qualified personnel.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
	2	Set weight of top drive on lower transport pins.	Lower blocks to proper position.
9		Ensure that the proper amount of drill line is on the drum to lower blocks to the floor.	Watch for burs / wickers, avoid pinch points
10		Ensure proper removal of top drive upper connecting links by qualified personnel. Leave bail or block adapter in traveling block.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
11	1	Raise block to proper position for installation of torque guide lifting assembly.	
	2	Ensure that two qualified personnel are positioned and tied off on top drive unit, and ready to install torque guide lifting assembly.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
12		Ensure proper raising of torque guide lifting assembly to pin the yoke into the bale or block adapter.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
13	1	Slowly raise the blocks to allow sufficient clearance to install upper runner frame.	
	2	Insure proper installation of the upper runner frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
14	1	Slowly raise the blocks to allow sufficient clearance to install lower lifting frame.	
	2	Ensure proper installation of the lower lifting frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
15		Slowly raise the blocks until the lifting assembly is in position and ensure proper latching into section 4 lifting pocket (second from top section).	Watch for snags when raising.
16	1	Ensure hydraulic valve is shifted on lower skid section to extend the two hydraulic cylinders that will loosen the torque guide tensioning cables.	
	2	Ensure that torque is removed from tensioning cables by turning hydraulic cylinder head / yoke the proper direction to eliminated recoil.	Cable will have tension and will spin when unpinned if torque is not removed. Do not put wrench on polished cylinder rod.
	3	Ensure pins are removed and replaced in cylinders.	Stay clear while removing pin. Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
17		Ensure that torque guide is unbolted from torque reaction beam, and unpin any additional bracing.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
18		Ensure proper shut down of all electric and hydraulic power supplies.	Use lock out tag out.
19		Ensure that electric and hydraulic power is disconnected from the torque guide and lines are secured.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
20		Ensure that front end of substructure is clear of all rig components (v-door/beaver slide and cat walk) and ensure that derrick board area is clear to remove top drive.	Use slings for lifting devices. Make sure hand rails, gates, and fall protection is in place for rigging down Top Drive. While working around open V-door section of sub use 100% tie off. Use flagger to position truck,

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
21		Ensure proper positioning of truck in front of substructure to accept Top Drive.	make sure that truck is centered with well.
22		Ensure that truck winch line is raised to floor with air / hydraulic hoist / tugger and attached to the lifting snubbing assembly.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
23		Reposition crown saver / crown-o-matic to allow blocks to be raised high enough to unlatch harpoon.	
24		Ensure that the derrickman is in position to remove safety cables and unlatch harpoon.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off, use handheld radios.
25		Slowly lift up blocks and torque guide, high enough to release harpoon latches.	Watch for pinch points use fall protection 100% tie off. Watch crown clearance.
26		After derrickman has released harpoon latch, lower blocks slowly ensuring harpoon is clear of torque guide.	Ensure that derrickman is out harms way. Watch for pinch points and use fall protection 100% tie off.
27		Ensure that truck winch is tensioned to pull torque guide clear of substructure.	Use flagger to signal truck.
28		Slowly lower blocks while truck pulls torque guide out the V-door.	Use handheld radios for truck communications. Watch for snags or hang ups.
29		Continue lowering, until skid section of torque guide is secured on the bed of the truck.	Watch for snags or hang ups. Use flagger to signal truck. Use handheld radios for truck communications.
30		Ensure that blower is unbolted, and secured in transport position.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
31		Slowly lower blocks (watching weight indicator closely) while torque guide is folding onto truck. Ensure that the truck is being positioned back and forth to properly lower torque guide (maintain torque guide at a safe distance from substructure while lowering). Ensure service loops are folded in the torque guide (fold side by side) while lowering for transport.	Use flagger to position truck. Stay clear from trucks path. Use handheld radios. Keep floor clear of personnel. Stay clear of overhead/suspended loads. Watch service loops and tensioning cable for snags or problems.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
32		Ensure that the top section of the torque guide is secured at floor height while removing lifting assembly from block.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
33	1	Ensure proper installation of runner frame stop pin.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Ensure proper lowering of top section of torque guide to truck using proper lowering equipment specific to rig JSA (Crane, Air Tugger, Blocks).	Use flagger to signal truck. Use handheld radios for truck communications. Watch for snags or hang ups.
34		Ensure that V-door gate is secure.	
35		Ensure that service support / remote blower is retracted to transport position using ratchet (swing in).	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
36		Ensure that all components on Top Drive unit and torque guide are secured for transport.	Watch for pinch points.
37		Inspect and service top drive as per maintenance manual (change traction motor brushes after six months service).	Watch for pinch points.
		READY TO RIG DOWN TOP DRIVE SCR HOUSE	On initial rig down, or if required have Top Drive technician on location.
38		Ensure that power cable and control cables are unhooked from drillers console.	Make sure that ends are covered.
39		Ensure the proper removal of drillers control console and stored properly.	Use proper lifting techniques. Have at least two people taking it down.
40		Ensure that control and power cables are in the grasshopper and secured.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
41	1	As timing and equipment permits, ready to remove grasshopper. Ensure removal of grasshopper from rig floor using proper lifting device.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Ensure upper section of grasshopper is resting on lower section.	Watch for pinched cables when positioning grasshopper.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
	3	Ensure proper removal of lifting device and reposition lifting device on opposite end. Swing complete grasshopper over top of Top Drive SCR house.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	4	Ensure that grasshopper pedestal is scoped down for transport.	
42		Ensure that main power feeder breaker for Top Drive SCR is disengaged.	Use lock out tag out.
43		Ensure that power cables are disconnected from power supply, and secured for transport.	Make sure ends are covered.
		END OF PROCEDURE	

Romfor International Ltd.

Driller

RIGGING DOWN

**TRUCKS &
CRANES**

**TRUCKS &
CRANES**

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements - Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support.	
	2	Hold Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN with all third party personnel at the start of the day, designate one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	Make sure that all personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment: Load Lines, Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers / Load Binders, Shackles, Tag Lines, Sheaves, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Only rig down with adequate people. Rig down during daylight hours or with adequate lighting.
		READY TO RIG DOWN	
		WHEN LOADING OR POSITIONING ANY HEAVY OR CRITICAL LOADS (SCR-GENERATOR HOUSE, ENGINES, PUMPS, DRAWWORKS) USE ADDITIONAL LIFTING SUPPORT.	Use slings for lifting devices. Stand at a safe distance away from loads being lifted.
		THE FOLLOWING SEQUENCE IS A GENERAL GUIDELINE AND WILL VARY DEPENDING ON RIG DESIGN	
2		Ensure the front end of the rig is cleared; Tubulars (review best practices for handling tubulars), pipe racks, pipe tubs, accumulator (if applicable), change house (if applicable).	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. On pipe tubs do not use drilling line for chokers / lifting / bridle line
3		Remove drillers dog house from rig floor.	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. Use fall protection 100% tie off.
4		Tie onto A-Legs using crane spreader beam with two short chokers to lower A-Legs (when applicable) according to rig design and JSA.	Avoid pinch points, keep hands and feet clear, watch for overhead load. Use fall protection 100% tie off.

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
5		Ensure bottom A-Leg pins are removed, and stored properly.	Use short rope to tie off on pin when removing. Avoid pinch points.
6		Ensure A-Legs are lowered to derrick and pinned in position.	Be aware of overhead loads, and use fall protection 100% tie off.
7		Ensure crane slings are removed from A-Legs.	Be aware of overhead loads, and use fall protection 100% tie off.
8		Ensure proper removal of bridle line from blocks, remove blocks and block stand if applicable.	Be aware of overhead loads. Avoid pinch points. Use fall protection 100% tie off.
9		Ensure derrick board is removed according to rig design and JSA.	Ensure equipment is secure. Avoid pinch points. Use tag lines. Use fall protection 100% tie off.
10		Ensure that boom poles, counter weights, escape line, air winch lines, kelly hose, and static lines are secured or removed according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
11	1	Ensure proper removal and rig down of derrick from sub and crown stand according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
	2	Inspect equipment: Crown sheaves, bridle lines, cable sheaves & cables, safety cables on sheaves, safety cable on lights, anti-fall devices, electrical wires, standpipe clamps, all bolt nuts pins and keepers, climbing ladder, safety lines on tong counter weight bucket, girts (bent), crown saver boards and covers, crown light, and check for cracked welds.	
12		Ensure proper removal of A-Leg spreader bar and fold A-Legs together.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use a ladder or man lift to unpin A-Leg spreader bar (never stand under or between raised A-legs).

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
13		Ensure proper removal of water tank, fuel tank, accumulator house, generator house, generator sets, boilers, heaters, toolpushers house, change house, parts house, catch all box, choke manifold, gas buster / gas separator, trip tank, according to rig design. When lifting critical loads on trucks use secondary lifting machinery (Gin truck or Crane).	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off . Be aware of traffic on location, do not get between loads. Use air ride trailer to haul SCR house, toolpushers house and crew quarters.
14	1	Ensure proper removal of mud pumps.	Avoid pinch points, use tag lines, be aware of overhead loads. Stay clear of moving trucks.
	2	Inspect Equipment: Power supply, belts, chains, sprockets, brushes, pulsation dampners, suction lines, modules, pop off's, and pop off lines.	
15		Ensure proper removal of mud tank equipment: Flow line, stairs, hand rails, shakers, degasser, desander, desilter, ground rods, lighting fixtures, safety cables, slides, and other required equipment.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines.
16		Ensure proper removal of mud tanks.	Stay clear of moving trucks.
17	1	Ensure proper removal of drawworks and power supply (engines compound, electric motors).	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
	2	Inspect equipment: Tie downs (turnbuckles, pins, bolts, cables, shackles, etc.), brushes, roller chains, sprockets, guards in place, safety keepers, water lines, oil lines, air lines, loading hitches.	

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
18		Ensure proper removal of additional houses on floor, beaver slide / V-door, catwalk, air / hydraulic tuggers.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
19	1	Ensure proper removal of rotary table, racking board and sub spreaders.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect equipment: Pins, spreader ears, cracked welds.	
20		Ensure proper removal of BOP equipment from matting boards.	Watch for overhead loads, watch for pinch points and use tag lines. Make sure that hoist line is secured to BOP before 100% tie off is removed.
21	1	Ensure proper rig down of substructure.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect Equipment: Bent beams, cracked weld, loose pin pockets, safety chains on pins, safety cables on lights, electric cords, dog house outriggers, mud lines, water lines, air lines, steam lines.	
22		Ensure proper removal of matting boards.	Watch for overhead loads, watch for pinch points, and use tag lines. Ensure all open holes are covered.
23		Ensure location is cleaned of all boards, trash and miscellaneous items.	
24		Ensure proper removal of cellar cover, stay clear of cellar after removing cover.	Flag or rope off open holes.
		END OF PROCEDURE	

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Lead Tong

**RIGGING
DOWN**

RIGGING DOWN

Romfor International Ltd.

Lead Tong Hand **RIGGING DOWN**

**DRILLING
EQUIPMENT
&
ROTARY
TOOLS**

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RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	During Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN and SHUTTING DOWN EQUIPMENT as per job specific, Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available.
1		Inspect Equipment as directed: Pick Up Slings, Shackles, Tag Lines, Sheaves, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment, Hoisting Equipment.	Make sure that all open holes are covered/flagged.
		READY TO RIG DOWN	Rig is released (tanks cleaned and BOP's nipples down)
2		Begin rigging down floor.	
3		Assist with removal of kelly bushings, lower kelly valve, upper kelly valve and subs, disconnect kelly hose, lay down kelly, and lay down swivel according to rig design and JSA.	Watch for pinch points check kelly hose for wear. Use 100% tie off. Ensure kelly is properly installed in kelly shuck/sock before laying kelly down.
4		Assist with placement of lower kelly valve, upper kelly valve and subs, swivel, and kelly for inspecting.	Watch for pinch points and use tag lines. Use mechanical lifting device.
5		Assist with removal of mouse hole.	Watch for pinch points and use tag lines. Cover all open holes.
6		Assist with removal of wireline unit, mud bucket, floor safety valves, stand pipe, stand pipe valves, handling subs, instrumentation gauges, lights, safety cables, bit breaker, tongs, slips, elevators, bails, dog collar clamp, related BHA equipment, floor safety mat, drilling line spooler/ line guide.	Use fall protection 100% tie off. Watch for pinch points. Ensure that all breakers are in the off position before unplugging any electrical equipment. (Lock Out Tag Out)
7		Assist with placement of floor safety valves, handling subs, bails, elevators, tongs, related BHA and handling equipment for inspecting.	Watch for pinch points and use tag lines.
8		Assist as directed with installation of bridle / bull line, according to rig design and JSA.	Use fall protection 100% tie off. Watch for pinch points and over head loads.

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RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
9		Assist as directed, in clearing derrick board area making it ready for derrick to be laid over.	Use fall protection 100% tie off. Watch for pinch points and over head loads.
10	1	Assist in clearing front end of substructure of all rig components according to rig design and rig specific JSA's (v-door/beaver slide and cat walk).	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
	2	Ensure that hand rails (wind walls if applicable) and floor plates on the front end of the substructure are removed according to rig design and rig specific JSA's.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
		READY TO LOWER DERRICK	
11	1	Prior to lowering derrick.	Lower derrick during daylight hours or with adequate lighting.
	2	Inspect Equipment as directed: Inspect lines, sheaves, cables, rollers, pins, safety keys, bolts, safety cables, dead man / drill line anchor, adequate drilling line on the drum, bridle line in sheaves properly.	Use 100% tie off.
	3	Assist in removing equipment or securing: Kelly Hose, Tong Lines, Derrickman Assist Lines & Counter Weight, Escape Lines, Electrical Lines (electrical breakers should be turned off prior to unplugging electric power cords), Boom Lines, Hoist Lines, Static Lines, Derrick Ladder.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
12	1	Assist as directed in pulling pins to lay derrick over and store pins properly (pins should be secured / tied off prior to removal).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.
	2	Assist as directed in positioning fast line A-Leg raising sheave (run sash cord over sheave so that both ends touch floor, sash cord will be used for positioning A-Leg sheave).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.

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RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
13		Assist in ensuring that proper tension is put on lines used to pull derrick over while Driller is slacking off drawworks drum according to rig design and rig specific JSA's (use air / hydraulic hoist / tuggers if applicable). Clear floor of all unnecessary personnel.	Stay clear of overhead loads, watch for obstructions while lowering. Use 100% tie off. Avoid pinch points.
14		Assist in setting derrick stand in proper position (place derrick stand under upright bracing).	Stay clear of overhead loads.
15		Assist in securing blocks to catwalk or block stand.	Use 100% tie off. Stay clear of overhead loads.
16		Assist in removing drill line from drum and dead man / drill line anchor and unstring blocks according to rig design and rig specific JSA's (cut off line according to Ton Miles).	Watch for wickers / burs in line. Do not let line slip thru hand. Use 100% tie off. Avoid pinch points.
17		Assist in unplugging lights, rolling up cables and store properly.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Use lock out/tag out.
18	1	Assist in removing and visual inspection of equipment (refer to maintenance manual): Check engines compound, disconnect chains as required by JSA and rig design, drain fluids into proper storage tanks, guards are removed, belts removed, disconnect all lines, proper removal and storage of all bolts and pins, remove drawworks tie downs, store electrical power supply cords, store air lines, store water lines.	Ensure power supply to drawworks is off and use lock out tag out. Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (drawworks brake cooling system, auxiliary brake, water lines, steam lines, air tanks, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
19	1	Assist as directed with rig down of mud pumps. Removal of: Belts, guards, suction lines, discharge lines, pop off lines, dresser sleeves, lights, electrical wiring, safety lines, safety cables, grounding devices.	Ensure power supply to mud pumps is off, use lock out tag out. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (cooling pumps, water lines, steam lines, air tanks, mud pumps).	Use fall protection 100% tie off. Watch for pinch points.

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RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
20	1	Assist as directed with rig down of mud tanks. Mud hoppers/house, desander, desilter, agitators, low pressure gun lines, valves, degasser, shale shaker, discharge slides, shaker screens, flow line, dresser sleeves, dump gates and seals, lighting, electrical wiring, plug-ins, switches, caustic barrel, PPE boxes, shower, mud gas separator, grounding devices, bar-salt-gel-chemical silos, corrosion inhibitor pumps, trip tanks, trip pumps, mud monitoring equipment.	Ensure power supply to mud tanks is off, use lock out tag out. Ensure there are no tools in, on or around mud equipment. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (centrifugal pumps, shower, water lines, steam lines).	Use fall protection 100% tie off. Watch for pinch points.
21	1	Assist with rig down of water circulating system. Remove plumbing to water source, electric lines, plug-ins, hoses, connections, grounding, covers, handrails, discharge lines, valves.	Ensure power supply to water circulating system is off, use lock out tag out. Ensure there are no tools in on or around water circulating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, centrifugal pumps)	Use fall protection 100% tie off. Watch for pinch points.
22	1	If applicable assist with rig down of boiler and heating system.	Ensure power supply to boiler or heating system is off, use lock out tag out. Ensure there are no tools in, on or around boiler or heating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines).	Use fall protection 100% tie off. Watch for pinch points.

RIGGING DOWN

DRILLING EQUIPMENT

ROTARY TOOLS

STEP	SUB	PROCEDURE	REMARKS
23	1	Assist with rig down according to rig design and JSA: Rig managers house, crew change house, air compressors, potable water tanks, accumulator, remaining water lines, remaining fuel lines, remaining steam lines, hydraulic lines, air lines, electric lines.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines).	Use fall protection 100% tie off. Watch for pinch points.
24	1	Assist with shutting down and rigging down generator sets / SCR / engines according to rig design and JSA.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out.
	2	Assist with shutting down electrical breakers. Store: fuel lines, fuel tank, air lines, grounding devices, electric cables.	Lock out tag out.
	3	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
25		Assist with picking up tools and store properly. Ensure all buildings are secured and ready for transport.	Have all safety equipment and paper work ready and available for rig down with trucks and cranes.
		END OF PROCEDURE	

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RIGGING DOWN

TOP DRIVE

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	Attend Pre-Job safety meeting, review JSA's and manufactures installation instructions pertaining to RIGGING DOWN TOP DRIVE with all third party personnel at the start of the job.	Sign off on meeting.
1		Inspect Equipment as directed: Load Lines, Air Tuggers / Hydraulic Tuggers (and lines), Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers/Load Binders, Shackles, Tag Lines, Sheaves, Top Drive raising interface, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Rig down during daylight hours or with adequate lighting. If needed have Top Drive technician on location.
		READY TO RIG TOP DRIVE DOWN	On initial rig down, or if required have Top Drive technician on location.
2		Assist in removing the rotary hose, drill pipe elevators, blower hose / blower hood (if applicable), and elevator links.	Watch for pinch points, check loading hitches, use tag lines, watch for overhead loads, use fall protection 100% tie off. Ensure hole cover is in place.
3	1	Assist in removing of lower connection clamp (s) between valves and break connection (make sure connection is still hand tight), and reinstall clamp (s).	Watch for pinch points.
	2	Assist in removing of connection clamps at the quill connection, and break.	Watch for pinch points.
4		Assist in proper removal of all connection clamps from subs on top drive.	Watch for pinch points.
5	1	After the Top Drive is lowered to the floor assist in removing manual lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
6	1	After Top Drive is lowered, assist in removing crossover sub or remote lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.
7		Assist in proper installation of live roller assembly to torque guide skid.	Watch for pinch points, use fall protection 100% tie off.
8		Assist in proper installation of upper and lower transport pins and keepers.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
9		Assist in slipping the proper amount of drill line on the drum to lower blocks to the floor.	Watch for burs / wickers, avoid pinch points.
10		Assist in proper removal of Top Drive upper connecting links. Leave bail or block adapter in traveling block.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
11		Be ready to assist in installing torque guide lifting assembly.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
12		Assist (if qualified) in pinning the yoke into the bail or block adapter.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
13	1	Stand clear while blocks are raised to allow sufficient clearance to install upper runner frame.	
	2	Assist in proper installation of the upper runner frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
14	1	Stand clear while blocks are raised to allow sufficient clearance to install lower lifting frame.	
	2	Assist in proper installation of the lower lifting frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
15	1	As directed, assist in shifting hydraulic valve on lower skid section to extend the two hydraulic cylinders that will loosen the torque guide tensioning cables.	Use fall protection 100% tie off.
	2	Assist in removing torque from tensioning cables by turning hydraulic cylinder head / yoke the proper direction to eliminated recoil.	Cable will have tension and will spin when unpinned if torque is not removed. Do not put wrench on polished cylinder rod.
	3	Assist in removing pins and replacing in cylinders.	Stay clear while removing pin. Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
16		Assist in unbolting torque guide from torque reaction beam, and unpinning any additional bracing.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
17		As directed, assist in shutting down all electric and hydraulic power supplies in Top Drive SCR house.	Use lock out tag out.
18		As directed, assist in disconnecting electric and hydraulic power from the torque guide and secure lines.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
19		Assist in clearing the front end of the substructure of all rig components (v-door/beaver slide and cat walk) and ensure that derrick board area is clear to remove top drive.	Use slings for lifting devices. Make sure hand rails, gates, and fall protection is in place for rigging down Top Drive. While working around open V-door section of sub use 100% tie off.
20		Assist in proper positioning of truck in front of substructure to accept Top Drive.	Use flagger to position truck, make sure that truck is centered with well.
21		Assist in raising truck winch line to floor with air / hydraulic hoist / tugger and assist in attaching to the lifting snubbing assembly.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off. Watch for wickers / burrs in winch lines.
22		Standby while harpoon is unlatched.	Watch for overhead loads.
23		Ensure that truck winch is tensioned to pull torque guide clear of substructure.	Use flagger to signal truck.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
24		Watch for snags or hang ups while truck pulls torque guide out the V-door until torque guide is secured on the bed of the truck.	Use flagger to signal truck. Use handheld radios for truck communications.
25		Assist in unbolting blower and secure in transport position.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
26		While torque guide is folding onto truck ensure that the truck is being positioned back and forth to properly lower torque guide (maintain torque guide at a safe distance from substructure while lowering). Ensure service loops are folded in the torque guide (fold side by side) while lowering for transport.	Use flagger to position truck. Stay clear from trucks path. Use handheld radios. Keep floor clear of personnel. Stay clear of overhead/suspended loads. Watch service loops and tensioning cable for snags or problems.
27		Assist in securing the top section of torque guide at floor height, and assist in removing the lifting assembly from blocks.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
28	1	Assist in proper installation of runner frame stop pin.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in lowering of top section of torque guide to truck using proper lowering equipment specific to rig JSA (Crane, Air Tugger, Blocks).	Use flagger to signal truck. Use handheld radios for truck communications. Watch for snags or hang ups.
29		Assist in securing V-door gate.	Use fall protection 100% tie off.
30		Assist in retracting service support / remote blower to transport position using ratchet (swing in).	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
31		Ensure that all components on Top Drive unit and torque guide are secured for transport.	Watch for pinch points.
		READY TO RIG DOWN TOP DRIVE SCR HOUSE	On initial rig down, or if required have Top Drive technician on location.
32		Assist in unhooking power cable and control cables from drillers console.	Make sure that ends are covered.

RIGGING DOWN

TOP DRIVE

STEP	SUB	PROCEDURE	REMARKS
33		Assist in proper removal of drillers control console and store properly.	Use proper lifting techniques. Have at least two people taking it down.
34		Assist in securing control and power cables in the grasshopper.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
35		Assist in removing grasshopper from rig floor using proper lifting device.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
36		Assist in proper removal of lifting device and reposition lifting device on opposite end. Swing complete grasshopper over top of Top Drive SCR house.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
37	1	Assist in disengaging main power feeder breaker for Top Drive SCR.	Use lock out tag out.
	2	Assist in disconnecting power cables from power supply, and secure for transport.	Make sure ends are covered.
		END OF PROCEDURE	

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Lead Tong Hand

RIGGING DOWN

**TRUCKS &
CRANES**

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements - Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support.	
	2	Attend pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN with all third party personnel at the start of the day, one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment as directed: Load Lines, Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers / Load Binders, Shackles, Tag Lines, Sheaves, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Only rig down with adequate people. Rig down during daylight hours or with adequate lighting.
		READY TO RIG DOWN	
		WHEN LOADING OR POSITIONING ANY HEAVY OR CRITICAL LOADS (SCR-GENERATOR HOUSE, ENGINES, PUMPS, DRAWWORKS) USE ADDITIONAL LIFTING SUPPORT.	Use slings for lifting devices. Stand at a safe distance away from loads being lifted.
		THE FOLLOWING SEQUENCE IS A GENERAL GUIDELINE AND WILL VARY DEPENDING ON RIG DESIGN	
2		Assist in clearing the front end of the rig: Tubulars (review best practices for handling tubulars), pipe racks, pipe tubs, accumulator (if applicable), change house (if applicable).	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. On pipe tubs do not use drilling line for chokers / lifting / bridle line
3		Assist in removing drillers dog house from rig floor.	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. Use fall protection 100% tie off.
4		Tie onto A-Legs using crane spreader beam with two short chokers to lower A-Legs (when applicable) according to rig design and JSA.	Avoid pinch points, keep hands and feet clear, watch for overhead load. Use fall protection 100% tie off.

RIGGING DOWN

TRUCKS AND CRANES

STEP	SUB	PROCEDURE	REMARKS
5		Assist in removing bottom A-Leg pins, and store properly.	Use short rope to tie off on pin when removing. Avoid pinch points.
6		Assist in lowering A-Legs to derrick and pinning in position.	Be aware of overhead loads, and use fall protection 100% tie off.
7		If qualified, assist in removing crane slings from A-Legs.	Be aware of overhead loads, and use fall protection 100% tie off.
8		Assist in removing bridle line from blocks, remove blocks and block stand if applicable.	Be aware of overhead loads. Avoid pinch points. Use fall protection 100% tie off.
9		If qualified, assist in removing derrick board according to rig design and JSA.	Ensure equipment is secure. Avoid pinch points. Use tag lines. Use fall protection 100% tie off.
10		If qualified, assist in removing or securing boom poles, counter weights, escape line, air winch lines, kelly hose, and static lines according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
11	1	If qualified, assist in removing and rigging down of derrick from sub and crown stand according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
	2	Inspect equipment as directed: Crown sheaves, bridle lines, cable sheaves & cables, safety cables on sheaves, safety cable on lights, anti-fall devices, electrical wires, standpipe clamps, all bolt nuts pins and keepers, climbing ladder, safety lines on tong counter weight bucket, girts (bent), crown saver boards and covers, crown light, and check for cracked welds.	
12		If qualified, assist in removal of A-Leg spreader bar and fold A-Legs together.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use a ladder or man lift to unpin A-Leg spreader bar (never stand under or between raised A-legs.

RIGGING DOWN

TRUCKS AND CRANES

STEP	SUB	PROCEDURE	REMARKS
13		Assist in removal of water tank, fuel tank, accumulator house, generator house, generator sets, boilers, heaters, toolpushers house, change house, parts house, catch all box, choke manifold, gas buster / gas separator, trip tank, according to rig design. When lifting critical loads on trucks use secondary lifting machinery (Gin truck or Crane).	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off . Be aware of traffic on location, do not get between loads. Use air ride trailer to haul SCR house, toolpushers house and crew quarters.
14	1	Assist in removal of mud pumps.	Avoid pinch points, use tag lines, be aware of overhead loads. Stay clear of moving trucks.
	2	Inspect Equipment as directed: Power supply, belts, chains, sprockets, brushes, pulsation dampners, suction lines, modules, pop off's, and pop off lines.	
15		Assist in removal of mud tank equipment: Flow line, stairs, hand rails, shakers, degasser, desander, desilter, ground rods, lighting fixtures, safety cables, slides, and other required equipment.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines.
16		Assist in removal of mud tanks.	Stay clear of moving trucks.
17	1	Assist in removal of drawworks and power supply (engines compound, electric motors).	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
	2	Inspect equipment as directed: Tie downs (turnbuckles, pins, bolts, cables, shackles, etc.), brushes, roller chains, sprockets, guards in place, safety keepers, water lines, oil lines, air lines, loading hitches.	

RIGGING DOWN

TRUCKS AND CRANES

STEP	SUB	PROCEDURE	REMARKS
18		Assist in removal of additional houses on floor, beaver slide / V-door, catwalk, air / hydraulic tuggers.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
19	1	If qualified, assist in removal of rotary table, racking board and sub spreaders.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect equipment as directed: Pins, spreader ears, cracked welds.	
20		Assist in removal of BOP equipment from matting boards.	Watch for overhead loads, watch for pinch points and use tag lines. Make sure that hoist line is secured to BOP before 100% tie off is removed.
21	1	If qualified, assist in rig down of substructure.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect Equipment as directed: Bent beams, cracked weld, loose pin pockets, safety chains on pins, safety cables on lights, electric cords, dog house outriggers, mud lines, water lines, air lines, steam lines.	
22		Assist in removal of matting boards.	Watch for overhead loads, watch for pinch points, and use tag lines. Ensure all open holes are covered.
23		Assist in cleaning location of all boards, trash and miscellaneous items.	
24		Assist with removal of cellar cover, stay clear of cellar after removing cover.	Flag or rope off open holes.
		END OF PROCEDURE	

Romfor International Ltd.

Motorman

**RIGGING
DOWN**

RIGGING DOWN

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Motorman

RIGGING DOWN

**DRILLING
EQUIPMENT
&
ROTARY
TOOLS**

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	During Pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN and SHUTTING DOWN EQUIPMENT as per job specific, Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available.
1		Inspect Equipment as directed: Pick Up Slings, Shackles, Tag Lines, Sheaves, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment, Hoisting Equipment.	Make sure that all open holes are covered/flagged.
		READY TO RIG DOWN	Rig is released (tanks cleaned and BOP's nipped down)
2		Begin rigging down floor.	
3		Assist with removal of kelly bushings, lower kelly valve, upper kelly valve and subs, disconnect kelly hose, lay down kelly, and lay down swivel according to rig design and JSA.	Watch for pinch points check kelly hose for wear. Use 100% tie off. Ensure kelly is properly installed in shuck/sock before laying kelly down.
4		Assist with placement of lower kelly valve, upper kelly valve and subs, swivel, and kelly for inspecting.	Watch for pinch points and use tag lines. Use mechanical lifting device.
5		Assist with removal of mouse hole.	Watch for pinch points and use tag lines. Cover all open holes.
6		Assist with removal of wireline unit, mud bucket, floor safety valves, stand pipe, stand pipe valves, handling subs, instrumentation gauges, lights, safety cables, bit breaker, tongs, slips, elevators, bails, dog collar clamp, related BHA equipment, floor safety mat, drilling line spooler/ line guide.	Use fall protection 100% tie off. Watch for pinch points. Ensure that all breakers are in the off position before unplugging any electrical equipment. (Lock Out Tag Out)
7		Assist with placement of floor safety valves, handling subs, bails, elevators, tongs, related BHA and handling equipment for inspecting.	Watch for pinch points and use tag lines.
8		Assist as directed with installation of bridle / bull line and proper positioning of crown saver, according to rig design and JSA.	Use fall protection 100% tie off. Watch for pinch points and over head loads.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
9		Assist as directed, in clearing derrick board area making it ready for derrick to be laid over.	Use fall protection 100% tie off. Watch for pinch points and over head loads.
10	1	Assist in clearing front end of substructure of all rig components according to rig design and rig specific JSA's (v-door/beaver slide and cat walk).	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
	2	Ensure that hand rails (wind walls if applicable) and floor plates on the front end of the substructure are removed according to rig design and rig specific JSA's.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines.
		READY TO LOWER DERRICK	
11	1	Prior to lowering derrick.	Lower derrick during daylight hours or with adequate lighting.
	2	Inspect Equipment as directed: Inspect lines, sheaves, cables, rollers, pins, safety keys, bolts, safety cables, dead man / drill line anchor, adequate drilling line on the drum, bridle line in sheaves properly.	Use 100% tie off.
	3	Assist in removing equipment or securing: Kelly Hose, Tong Lines, Derrickman Assist Lines & Counter Weight, Escape Lines, Electrical Lines (electrical breakers should be turned off prior to unplugging electric power cords), Boom Lines, Hoist Lines, Static Lines, Derrick Ladder.	Use slings for lifting devices. While working around open V-door section of sub, use 100% tie off. Watch for pinch points and use tag lines. Use lock out/tag out.
12	1	Assist as directed in pulling pins to lay derrick over and store pins properly (pins should be secured / tied off prior to removal).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.
	2	Assist as directed in positioning fast line A-Leg raising sheave (run sash cord over sheave so that both ends touch floor, sash cord will be used for positioning A-Leg sheave).	Use 100% tie off. Watch for pinch points. Stay clear of overhead work area.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
13		Assist in ensuring that proper tension is put on lines used to pull derrick over while Driller is slacking off drawworks drum according to rig design and rig specific JSA's (use air / hydraulic hoist / tuggers if applicable). Clear floor of all unnecessary personnel.	Stay clear of overhead loads, watch for obstructions while lowering. Use 100% tie off. Avoid pinch points.
14		After derrick is broke over, ensure that fast line is engaged into A-Leg sheave properly, position sheave with sash cord if required.	Remove sash cord prior to full engagement of line into sheave. Avoid pinch points.
15		Assist as directed in engaging breaking device used to help control speed while lowering derrick according to rig design and rig specific JSA's.	Check that bridle line sheaves and rollers are turning free and operating properly. Stay clear of overhead loads. Avoid pinch points.
16	1	Assist in setting derrick stand in proper position (place derrick stand under upright bracing).	Stay clear of overhead loads.
	2	Ensure that derrick is properly set onto derrick stand.	Stay clear of overhead loads.
17		Assist in securing blocks to catwalk or block stand.	Use 100% tie off. Stay clear of overhead loads.
18		Assist in removing drill line from drum and dead man / drill line anchor, unstring blocks according to rig design and rig specific JSA's (cut off line according to Ton Miles).	Watch for wickers / burs in line. Do not let line slip thru hands. Use 100% tie off. Avoid pinch points.
19		Assist in unplugging lights, rolling up cables and store properly.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Use lock out/tag out.
20		Turn off power supply to drawworks.	Use lock out tag out.
21	1	Assist in removing and visual inspection of equipment (refer to maintenance manual): Check engines compound, disconnect chains as required by JSA and rig design, drain fluids into proper storage tanks, guards are removed, belts removed, disconnect all lines, proper removal and storage of all bolts and pins, remove drawworks tie downs, store electrical power supply cords, store air lines, store water lines.	Watch for wickers / burs in line. Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
	2	Drain, grease and winterize, according to maintenance manual (drawworks brake cooling system, auxiliary brake, water lines, steam lines, air tanks, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
22		Turn power supply off to mud pumps.	Use lock out tag out.
23	1	Assist as directed with rig down of mud pumps. Removal of: Belts, guards, suction lines, discharge lines, pop off lines, dresser sleeves, lights, electrical wiring, safety lines, safety cables, grounding devices.	Use 100% tie off. Avoid pinch points. Stay clear of overhead work area.
	2	Drain, grease and winterize, according to maintenance manual (cooling pumps, water lines, steam lines, air tanks, mud pumps).	Use fall protection 100% tie off. Watch for pinch points.
24		Turn power supply off to mud tanks.	Use lock out tag out.
25	1	Assist as directed with rig down of mud tanks. Mud hoppers/house, desander, desilter, agitators, low pressure gun lines, valves, degasser, shale shaker, discharge slides, shaker screens, flow line, dresser sleeves, dump gates and seals, lighting, electrical wiring, plug-ins, switches, caustic barrel, PPE boxes, shower, mud gas separator, grounding devices, bar-salt-gel-chemical silos, corrosion inhibitor pumps, trip tanks, trip pumps, mud monitoring equipment.	Ensure there are no tools in on or around mud equipment. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (centrifugal pumps, shower, water lines, steam lines).	Use fall protection 100% tie off. Watch for pinch points.
26		Turn off power supply to water circulating system.	Use lock out tag out.
27	1	Assist with rig down of water circulating system. Remove plumbing to water source, electric lines, plug-ins, hoses, connections, grounding, covers, handrails, discharge lines, valves.	Ensure there are no tools in, on or around water circulating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, centrifugal pumps)	Use fall protection 100% tie off. Watch for pinch points.

RIGGING DOWN**DRILLING EQUIPMENT****ROTARY TOOLS**

STEP	SUB	PROCEDURE	REMARKS
28		If applicable turn power supply off to boiler or heating system.	Use lock out tag out.
29	1	If applicable assist with rig down of boiler and heating system.	Ensure there are no tools in, on or around boiler or heating system. Ensure that all breakers are in the off position before unplugging any electrical equipment, (lock out tag out). Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines)	Use fall protection 100% tie off. Watch for pinch points.
30		Turn off power supply to system.	Use lock out tag out.
31	1	Assist with rig down according to rig design and JSA: Rig managers house, crew change house, air compressors, potable water tanks, accumulator, remaining water lines, remaining fuel lines, remaining steam lines, hydraulic lines, air lines, electric lines.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out. Use fall protection 100% tie off. Watch for pinch points.
	2	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines).	Use fall protection 100% tie off. Watch for pinch points.
32	1	Shut down and rig down generator sets / SCR / engines according to rig design and JSA.	Ensure that all breakers are in the off position before unplugging any electrical equipment, lock out tag out.
	2	Shut down electrical breakers. Store: fuel lines, fuel tank, air lines, grounding devices, electric cables.	Lock out tag out.
	3	Drain, grease and winterize, according to maintenance manual (water lines, circulating pumps, steam lines, fuel lines, sufficient engine coolant).	Use fall protection 100% tie off. Watch for pinch points.
33		Assist with picking up tools and store properly. Ensure all buildings are secured and ready for transport.	Have all safety equipment and paper work ready and available for rig down with trucks and cranes.
		END OF PROCEDURE	

Romfor International Ltd.

Motorman

RIGGING DOWN

TOP DRIVE

TOP DRIVE

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements – Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support, Fall Protection.	
	2	Attend Pre-Job safety meeting, review JSA's and manufactures installation instructions pertaining to RIGGING DOWN TOP DRIVE with all third party personnel at the start of the job.	Sign off on meeting.
1		Inspect Equipment as directed: Load Lines, Air Tuggers / Hydraulic Tuggers (and lines), Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers/Load Binders, Shackles, Tag Lines, Sheaves, Top Drive raising interface, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Rig down during daylight hours or with adequate lighting. If needed have Top Drive technician on location.
		READY TO RIG TOP DRIVE DOWN	On initial rig down, or if required have Top Drive technician on location.
2		Assist in removing the rotary hose, drill pipe elevators, blower hose / blower hood (if applicable), and elevator links.	Watch for pinch points, check loading hitches, use tag lines, watch for overhead loads, use fall protection 100% tie off. Ensure hole cover is in place.
3	1	Assist in removing of lower connection clamp (s) between valves and break connection (make sure connection is still hand tight), and reinstall clamp (s).	Watch for pinch points.
	2	Assist in removing of connection clamps at the quill connection, and break.	Watch for pinch points.
4		Assist in proper removal of all connection clamps from subs on top drive.	Watch for pinch points.
5	1	After the Top Drive is lowered to the floor assist in removing manual lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
6	1	After Top Drive is lowered, assist in removing crossover sub or remote lower well control valve.	Watch for pinch points.
	2	Assist in proper removal and placement for inspection.	Use proper lifting eyes for handing subs. Watch for pinch points.
7		Assist in proper installation of live roller assembly to torque guide skid.	Watch for pinch points, use fall protection 100% tie off.
8		Assist in proper installation of upper and lower transport pins and keepers.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
9		Assist in slipping the proper amount of drill line on the drum to lower blocks to the floor.	Watch for burs / wickers, avoid pinch points.
10		Assist in proper removal of Top Drive upper connecting links. Leave bale or block adapter in traveling block.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
11		If qualified, be in position and tied off on Top Drive unit. Be ready to assist in installing torque guide lifting assembly.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
12		Assist (if qualified) in pinning the yoke into the bale or block adapter.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
13	1	Stand clear while blocks are raised to allow sufficient clearance to install upper runner frame.	
	2	Assist in proper installation of the upper runner frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.
14	1	Stand clear while blocks are raised to allow sufficient clearance to install lower lifting frame.	
	2	Assist in proper installation of the lower lifting frame to torque guide.	Watch for pinch points, use tag lines, watch for overhead loads, use fall protection 100% tie off.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
15	1	Shift hydraulic valve on lower skid section to extend the two hydraulic cylinders that will loosen the torque guide tensioning cables.	Use fall protection 100% tie off.
	2	Assist in removing torque from tensioning cables by turning hydraulic cylinder head / yoke the proper direction to eliminated recoil.	Cable will have tension and will spin when unpinned if torque is not removed. Do not put wrench on polished cylinder rod.
	3	Assist in removing pins and replacing in cylinders.	Stay clear while removing pin. Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
16		Assist in unbolting torque guide from torque reaction beam, and unpinning any additional bracing.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
17		Shut down all electric and hydraulic power supplies in Top Drive SCR house.	Use lock out tag out.
18		Disconnect electric and hydraulic power from the torque guide and secure lines.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
19		Assist in clearing the front end of the substructure of all rig components (v-door/beaver slide and cat walk) and ensure that derrick board area is clear to remove top drive.	Use slings for lifting devices. Make sure hand rails, gates, and fall protection is in place for rigging down Top Drive. While working around open V-door section of sub use 100% tie off.
20		Assist in proper positioning of truck in front of substructure to accept Top Drive.	Use flagger to position truck, make sure that truck is centered with well.
21		Assist in raising truck winch line to floor with air / hydraulic hoist / tugger and assist in attaching to the lifting snubbing assembly.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off. Watch for wickers / burrs in winch lines.
22		Reposition crown saver / crown-o-matic to allow blocks to be raised high enough to unlatch harpoon.	
23		Standby while harpoon is unlatched.	Watch for overhead loads.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
24		Ensure that truck winch is tensioned to pull torque guide clear of substructure.	Use flagger to signal truck.
25		Watch for snag or hang ups while truck pulls torque guide out the V-door until torque guide is secured on the bed of the truck.	Use flagger to signal truck. Use handheld radios for truck communications.
26		Assist in unbolting blower and secure in transport position.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
27		While torque guide is folding onto truck ensure that the truck is being positioned back and forth to properly lower torque guide (maintain torque guide at a safe distance from substructure while lowering). Ensure service loops are folded in the torque guide (fold side by side) while lowering for transport.	Use flagger to position truck. Stay clear from trucks path. Use handheld radios. Keep floor clear of personnel. Stay clear of overhead/suspended loads. Watch service loops and tensioning cable for snags or problems.
28		Assist in securing the top section of torque guide at floor height, and assist in removing the lifting assembly from blocks.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
29	1	Assist in proper installation of runner frame stop pin.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in lowering of top section of torque guide to truck using proper lowering equipment specific to rig JSA (Crane, Air Tugger, Blocks).	Use flagger to signal truck. Use handheld radios for truck communications. Watch for snags or hang ups.
30		Assist in securing V-door gate.	Use fall protection 100% tie off.
31		Assist in retracting service support / remote blower to transport position using ratchet (swing in).	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
32		Ensure that all components on Top Drive unit and torque guide are secured for transport.	Watch for pinch points.
33		Inspect and service top drive as per maintenance manual (change traction motor brushes after six months service).	Watch for pinch points.

RIGGING DOWN**TOP DRIVE**

STEP	SUB	PROCEDURE	REMARKS
		READY TO RIG DOWN TOP DRIVE SCR HOUSE	On initial rig down, or if required have Top Drive technician on location.
34		Assist in unhooking power cable and control cables from drillers console.	Make sure that ends are covered.
35		Assist in proper removal of drillers control console and store properly.	Use proper lifting techniques. Have at least two people taking it down.
36		Assist in securing control and power cables in the grasshopper.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
37	1	Assist in removing grasshopper from rig floor using proper lifting device.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	2	Assist in proper removal of lifting device and reposition lifting device on opposite end. Swing complete grasshopper over top of Top Drive SCR house.	Watch for pinch points, watch for overhead loads, use fall protection 100% tie off.
	3	Activate hydraulic bypass and scope down grasshopper pedestal for transport.	Check for leaks.
38		Disengage main power feeder breaker for Top Drive SCR.	Use lock out tag out.
39		Assist in disconnecting power cables from power supply, and secure for transport.	Make sure ends are covered.
		END OF PROCEDURE	

Romfor International Ltd.

Motorman

RIGGING DOWN

**TRUCKS &
CRANES**

TRUCKS &
CRANES

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
0	1	PPE Requirements - Hard Hat, Safety Glasses, Work Gloves, Steel Toe Shoes, Back Support.	
	2	Attend pre-Job safety meeting, review JSA's pertaining to RIGGING DOWN with all third party personnel at the start of the day, one person to give signal directions for movement of equipment (usually the Truck Supervisor with hand held radio), Rig Manager and Drillers responsibility to direct and organize crew throughout rig down.	All personnel sign off on meeting and current emergency contact numbers are readily available. Make sure all rig down personnel have adequate radio communications (Truck & Crane Operators).
1		Inspect Equipment as directed: Load Lines, Pick Up Slings, Tail Chains, S-Hooks, C-Hooks, Boomers / Load Binders, Shackles, Tag Lines, Sheaves, Communication Equipment, Back Up Alarms, Fall Protection, Hand Tools, Man Lifts, Fork Lifts, Anti-Fall Equipment.	Make sure that all open holes are covered/flagged. All third party equipment has been visually inspected. Only rig down with adequate people. Rig down during daylight hours or with adequate lighting.
		READY TO RIG DOWN	
		WHEN LOADING OR POSITIONING ANY HEAVY OR CRITICAL LOADS (SCR-GENERATOR HOUSE, ENGINES, PUMPS, DRAWWORKS) USE ADDITIONAL LIFTING SUPPORT.	Use slings for lifting devices. Stand at a safe distance away from loads being lifted.
		THE FOLLOWING SEQUENCE IS A GENERAL GUIDELINE AND WILL VARY DEPENDING ON RIG DESIGN	
2		Assist in clearing the front end of the rig: Tubulars (review best practices for handling tubulars), pipe racks, pipe tubs, accumulator (if applicable), change house (if applicable).	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. On pipe tubs do not use drilling line for chokers / lifting / bridle line
3		Assist in removing drillers dog house from rig floor.	Avoid pinch points, keep hands and feet clear, watch for overhead load, use tag lines. Use fall protection 100% tie off.
4		Tie onto A-Legs using crane spreader beam with two short chokers to lower A-Legs (when applicable) according to rig design and JSA.	Avoid pinch points, keep hands and feet clear, watch for overhead load. Use fall protection 100% tie off.

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
5		Assist in removing bottom A-Leg pins, and store properly.	Use short rope to tie off on pin when removing. Avoid pinch points.
6		Assist in lowering A-Legs to derrick and pinning in position.	Be aware of overhead loads, and use fall protection 100% tie off.
7		If qualified, assist in removing crane slings from A-Legs.	Be aware of overhead loads, and use fall protection 100% tie off.
8		Assist in removing bridle line from blocks, remove blocks and block stand if applicable.	Be aware of overhead loads. Avoid pinch points. Use fall protection 100% tie off.
9		If qualified, assist in removing derrick board according to rig design and JSA.	Ensure equipment is secure. Avoid pinch points. Use tag lines. Use fall protection 100% tie off.
10		If qualified, assist in removing or securing boom poles, counter weights, escape line, air winch lines, kelly hose, and static lines according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
11	1	If qualified, assist in removing and rigging down of derrick from sub and crown stand according to rig design and JSA.	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off.
	2	Inspect equipment as directed: Crown sheaves, bridle lines, cable sheaves & cables, safety cables on sheaves, safety cable on lights, anti-fall devices, electrical wires, standpipe clamps, all bolt nuts pins and keepers, climbing ladder, safety lines on tong counter weight bucket, girts (bent), crown saver boards and covers, crown light, and check for cracked welds.	
12		If qualified, assist in removal of A-Leg spreader bar and fold A-Legs together.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use a ladder or man lift to unpin A-Leg spreader bar (never stand under or between raised A-legs.

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
13		Assist in removal of water tank, fuel tank, accumulator house, generator house, generator sets, boilers, heaters, toolpushers house, change house, parts house, catch all box, choke manifold, gas buster / gas separator, trip tank, according to rig design. When lifting critical loads on trucks use secondary lifting machinery (Gin truck or Crane).	Avoid pinch points, use tag lines, be aware of overhead loads, and use fall protection 100% tie off . Be aware of traffic on location, do not get between loads. Use air ride trailer to haul SCR house, toolpushers house and crew quarters.
14	1	Assist in removal of mud pumps.	Avoid pinch points, use tag lines, be aware of overhead loads. Stay clear of trucks backing up to loads.
	2	Inspect Equipment as directed: Power supply, belts, chains, sprockets, brushes, pulsation dampners, suction lines, modules, pop off's, and pop off lines.	
15		Assist in removal of mud tank equipment: Flow line, stairs, hand rails, shakers, degasser, desander, desilter, ground rods, lighting fixtures, safety cables, slides, and other required equipment.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines.
16		Assist in removal of mud tanks.	Stay clear of trucks backing up to loads.
17	1	Assist in removal of drawworks and power supply (engines compound, electric motors).	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of trucks backing up to loads.
	2	Inspect equipment as directed: Tie downs (turnbuckles, pins, bolts, cables, shackles, etc.), brushes, roller chains, sprockets, guards in place, safety keepers, water lines, oil lines, air lines, loading hitches.	

RIGGING DOWN**TRUCKS AND CRANES**

STEP	SUB	PROCEDURE	REMARKS
18		Assist in removal of additional houses on floor, beaver slide / V-door, catwalk, air / hydraulic tuggers.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Stay clear of moving trucks.
19	1	If qualified, assist in removal of rotary table, racking board and sub spreaders.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect equipment as directed: Pins, spreader ears, cracked welds.	
20		Assist in removal of BOP equipment from matting boards.	Watch for overhead loads, watch for pinch points and use tag lines. Make sure that hoist line is secured to BOP before 100% tie off is removed.
21	1	If qualified, assist in rig down of substructure.	Use fall protection 100% tie off , watch for overhead loads, watch for pinch points, and use tag lines. Use short rope to tie off on pin when removing.
	2	Inspect Equipment as directed: Bent beams, cracked weld, loose pin pockets, safety chains on pins, safety cables on lights, electric cords, dog house outriggers, mud lines, water lines, air lines, steam lines.	
22		Assist in removal of matting boards.	Watch for overhead loads, watch for pinch points, and use tag lines. Ensure all open holes are covered.
23		Assist in cleaning location of all boards, trash and miscellaneous items.	
24		Assist with removal of cellar cover, stay clear of cellar after removing cover.	Flag or rope off open holes.
		END OF PROCEDURE	