

Construction Equipment List for 2003-2004 Apache Exploration Program

Nogha/Tunago

Snow cat
water truck
grader
D6 Dozer
D7 Dozer
Fuel Sloop

Roads: Norman Wells to FGH, FGH to Colville and to locations:

Snow Cats
D3 Cats
Water Trucks
25 man Sleigh Camp (12 to 14 items)
D7 Cats
D6 Cats
Fuel truck (5 tonne)
Fresh Water Truck
Fuel Sloop
Crew Cabs
Pickup truck
Graders
Truck and trailer

Wellsite construction:

D8 Ripper Cat
300 Hoe
D6
D7
Rathole rig





Drilling Equipment List for 2003-2004 Apache Exploration Program

Drilling Rigs - Akita 51 and Nabors 62.

Camps – One Akita camp and one Nabors camp

Well-site shacks- 3 well-site shacks at each drilling rig.

Cementing services- Schlumberger. Cementing equipment and bulk cement storage is in Norman Wells.

400 bbl Double walled storage tanks – Each drilling rig will have three double walled storage tanks. One tank will be for diesel storage and two tanks will be for oil-based mud storage.

400 bbl single walled tanks – Each rig will have two single walled tanks. One for fresh water storage and one for used water storage.

Water Trucks – Each rig will have two water trucks to provide water for the rig.

Vacuum Trucks – Each rig will have one vacuum truck and depending on the phase of drilling a third vacuum truck may be required.

Front End Loaders - Each rig will have one front end loader.

Rig Mats – 56 mats for laying underneath various equipment.

Drilling Fluids – fresh water drawn from approved sources will be used to build the water-based mud. Mineral Oil will be used to build the oil-based mud. The mineral oil is Distillate 822 and will be stored in a tank farm in Norman Wells until required on-site.

Casing – Three casing sizes, 340 mm, 245 mm and 178 mm will be used to case the wells. The casing is in Norman Well and there is enough present to drill 4 wells. Any additional casing required would be trucked on the winter road.

Tubing – The tubing is 73.0 mm O.D. and in storage in Norman Wells. Enough tubing will be available to drill four wells. Additional casing would be trucked on the winter road.

Centrifuges – Each rig will have two centrifuges for remove drill cuttings from the mud system..

Integral shale sloop/centrifuge – each rig will have an integral shale sloop/ centrifuge .

Mixing sloops – One mixing sloop per rig. Sawdust will be introduced into the cuttings in these sloops.

Power Tongs – Tongs to run 340mm, 245 mm and 178 mm casing. Two sets of tongs of each size as well as two power packs to provide hydraulic pressure to the tongs.

Fishing equipment - Tools for freeing stuck bottom-hole assemblies will be stored at one of the rig sites.

Directional Drilling Equipment – Directional drilling equipment including drilling motors, Measurement While Drilling (MWD) electronic equipment will be available. Some of the equipment may be flown to Norman well when available.



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Rathole Rig – Bernie's Rathole – Will small drilling rig ("rat hole rig") is currently in Norman wells and will be used to drill the initial conductor hole and also the "rat hole" and "mouse hole", used to hold drilling tools.

Mechanics shack – Each rig will have a heated mechanics shack for maintaining and repairing equipment.

Rock Bits – Baker. Some existing bits in Norman Wells. A new supply of rock bits will be flown into Norman Wells when necessary.

Large Fire Extinguishers – Two 150 lb, wheeled dry-chemical fire extinguishers on each rig.

Ambulances – Two ambulances will be present to service the two drilling rigs.

Medics Shack – Each drilling rig will have a medic's shack..

Sawdust – 40 – 3 m3 bales used for mixing cutting with sawdust prior to transporting.

Lumber – 2 lifts-3x12

– 1 lift – 2x4

Culverts – 40 culverts for water crossings. Assorted sizes.

Two way radios – 4 base stations.

Satellite phones – Approximately 5 phones available.

Computer systems – each rig will have one computer.

Rig intercoms – each rig will have one intercom system.



Service Rig Equipment List for 2003-2004 Apache Exploration Program

Service Rigs - One skid double, will be trucked up.

Camps – One Travers Camp

Well-site shacks- 4 well-site shacks at service rig site.

Fraccing services- TBA. 2 high pressure pumps, blender, fire protection, wellhead isolation , acid, vacuum truck, hot oiler.

400 bbl Double walled storage tanks – Service rig will have three double walled storage tanks for frac oil.

400 bbl single walled tanks – Service rig will have two single walled tanks. One for fresh water storage and one for used water storage.

Water Trucks – Service rig will have one water trucks to provide water for the rig. Apache completions may share trucking services with drilling.

Vacuum Trucks – Service rig will have one vacuum truck. Apache completions may share trucking services with drilling

Mats – 25 mats for laying underneath various equipment.

Completion Fluids – fresh water drawn from approved sources will be used to fill boilers, heaters and wellsite trailers. Type of Frac oil to be determined, approximately 65 m3/zone, frac oil will be recovered and trucked out of the NWT as it was last year.

Tubing – The tubing is 73.0 mm O.D. and in storage in Norman Wells. Enough tubing will be available to drill four wells.

Fishing equipment - Tools for freeing stuck bottom-hole assemblies will be stored at the service rig site.

Mechanics shack – Service rig will have a heated mechanics shack for maintaining and repairing equipment.

Large Fire Extinguishers – One 150 lb, wheeled dry-chemical fire extinguishers at rig.

Ambulances – Two ambulances will be present to service the two drilling rigs as well as service rig.

Logging/Perforating – One combination (E-line /slickline) unit.

Testing – One testing unit will be brought in to test each successful zone. A second unit may be required if a successful drilling program is conducted, or extended tests are required.

Medics Shack – Service rig will have a medic's shack..

Two way radios 3 base stations.

Satellite phones – Approximately 3 phones available..

Computer systems – Service rig will have one computer.

Snubbing Unit- One unit will be utilized to snub out equipment as required.



