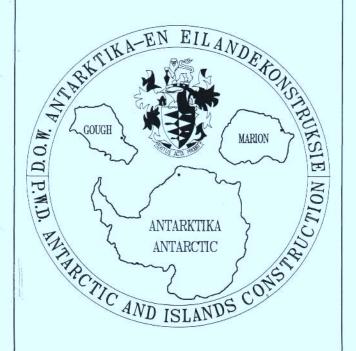
# GOUGH 1994 EXPEDITION



## GOUGH ISLAND

## 1994 EXPEDITION

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<sup>\* = (</sup>a) Work not set out in Departmental Work Schedules

<sup>\* = (</sup>b)Unforeseen tasks

<sup>\* = (</sup>c)Work that became necessary during take over

## LEADERS REPORT

The S.A. AGULHAS departed from Cape Town for Gough Island on the 8 th September 1994 at 16:00. The ship arrived off Gough Island on the 13 th September 1994 at 6:00 where all Island personal commenced working on the ship to prepare cargo for off loading.

All PWD team members were flown ashore at 9:00 and immediately set about repairing the crane, which had become faulty during the year. Due to rough seas, it was decided that all cargo would be flown ashore by helicopter. The off loading of all cargo was completed by the evening of the 14 th September 1994.

The base and surrounding area was inspected by myself, the coordinating officer of the Department of Environment Affairs, Mr.Jan Hattingh, the Administrator of Tristan Du Cunha, Mr.Daley and Dr.T. Andrews the conservation officer. The base was found to be in an excellent and well maintained condition overall.

On the 15 th September 1994 an attempt was made to discharge the diesel in very good weather conditions, but this proved futile due to a problem with the pipe line couplings in the sea. The pipe line was returned to the ship for repairs and further pumping could not take place as the sea became too rough.

On the 16 th September 1994 all cargo destined for Cape Town was loaded back onto the S.A. Agulhas as the weather was not suitable to pump diesel. It was decided that the ship would depart for Tristan Du Cunha to off load and return to Gough at a later stage for the pumping of fuel.

The ship arrived back at Gough on the 20 th September 1994 at 11:00 and ship to shore pumping began at 12:30 in very good conditions. A total of 100 000 litres of polar diesel was discharged over a period of eight (8) hours with no spillage being recorded by the conservation officer who complemented the PWD team on the professional way in which they handled the entire operation. As soon as the diesel was ashore the S.A. Agulhas departed for Cape Town.

The S.A.S. Protea arrived at Gough Island on the morning of 8 th October 1994 and loading of the ship started at first light. All loading was completed and the personal boardred the ship on the same day for the voyage to Cape Town via Tristan Du Cunha.

The duration of our stay on Gough Island was reduced by two (2) days due to the fact that more time than was unticipated was necessary for the Tristanians to load their visitors and supplies. This however did not prevent the team from completing the work schedules and various additional tasks.

The ship arrived back in Cape Town on the 15 th October 1994 after a very successful take over.

#### BUILDING REPORT

## GOUGH HOUSE: NEW SECTION

## A. SLEEPING QUARTERS

The bedrooms are in a very good condition.

New carpet tiles were laid in the eleven (11) rooms.

Only minor repairs were carried out to ensure good maintenance.

#### B. RADIO ROOM

The room is in a good condition.

- $\star$  Additional shelving was installed to accommodate the new satellite system modules.
- \* The working top was also modified to support the weight of the radio receiver.

## C. METEOROLOGICAL OFFICE

This office is in a very good condition.

## D. DARK ROOM

This room is in a good condition.

#### E. CAMPING EQUIPMENT STORE

This store is in a good condition.

Black blinds were fitted over the windows.

#### F. LABORATORY

The laboratory is in a very good condition.

\* A new wooden outside door was installed as well as black window blinds over all windows. A canopy was also fabricated and fitted above the outside door.

## G. BALLOON HUT

The sliding doors were inspected and found to be operating without any problems. The canopy above the doors on the sea side of the building was repaired due to storm damage.

The rest of the building is in a very good condition.

## H. HYDROGEN-GENERATOR ROOM

The floor of the building was pulling away from the wall panels due to the weight of the generator, but this situation has now been rectified by supporting the floor by using screw jacks,  $9 \times 3$  timber beams and steel beams. Additional wooden beams have also been inserted under the foot pieces of the generator to spread the weight on the floor.

The corrosion caused by the fumes emitted onto the outer wall panels under the windows was treated with Leo stainless steel paint during the last take-over. On inspection of the outer walls, it was noted that no further corrosion has taken place over the past year.

Black blinds were also installed over the windows in this room.

#### I. WORKSHOP AREA AND STORE

The building is in a very neat and clean condition.

Black blinds were installed over the windows in this area.

#### J. KITCHEN AND PANTRY

\* The existing novalon in the kitchen was replaced with new.

The building is in a very good condition.

## K. LOUNGE AND DINING ROOM

The area is in a good condition.

Carpet tiles were laid in the lounge area which has blended in well with the existing furniture and fixtures.

#### L. REFRIGERATION AREA

The structure is in a good condition.

## M. ABLUTION BLOCK

\* Additional braces were installed under the hot water cylinder as the floor panel was collapsing.

Defective tap washers were replaced with new and shower roses were also replaced.

\* New Marley floor tiles were fitted where the existing tiles were cracked. The cracking of the tiles was caused due to the movement of the floor panels.

#### N. DRY ROOM

This room is in a very good condition.

#### H. WORKSHOP AREA

The workshop is in a good condition. The roof was leaking and had \* to be partly replaced. The bottom part of the door also had to be repaired as it was badly rusted.

## KITCHEN & PANTRY AREA

This area is in a reasonably good condition. It is however recommended that the existing "novilon" in the kitchen be replaced with "P.V.C. tiles" in order to repair damaged areas without having to replace the whole surface.

#### J. LOUNGE [TV ROOM]

The lounge is in a good condition.

#### K. GAMES CENTRE & OLD SLEEPING QUARTERS

- \* The outside staircase between the games centre and the TV room
- \* were replaced and a hand-railing was erected to prevent people from falling off the platform next to the stairs. (It happend during the year.)
- \* The staircase on the south-side of the old sleeping quarters were also replaced.
- \* The steel pipe structure under the building were derusted and painted with NS4. Badly rusted scaffold pipes and clamps were replaced.

## L. COOLING INSTALLATION AREA

This section of the base is in a good condition.

## M. ABLUTION BLOCKS

(a) New Base :

The ablution block is in a good condition. The hot water cylinder was replaced.

The floor in front of the showers had to be replaced as it was badly rusted. New shower roses must be installed next year.

(b) Old Sleeping Quarters :

The ablution block is in a good condition. The floor in front of the shower had to be replaced as it was badly rusted.

New shower roses must be installed wheat year.

#### O. PASSAGES

The carpet tiles laid during the previous take-over are still in excellent condition.

#### GOUGH HOUSE: OLD SECTION

## A. SLEEPING QUARTERS

The bedrooms are in a good condition internally due to the fact that they were painted during the year by the Gough 39 team.

Carpet tiles were laid in the five (5) bedrooms after all holes in the floor had been closed by using aluminium sheeting.

The under side of the floor panels which were rotten were replaced by securing sheets of marine ply to the wooden beams and inserting additional supports.

The entire scaffold pipe foundation under the building was chipped and painted with NS4 paint.

The facia boards were replaced where necessary and then given a coat of pink wood primer before the final coat of paint.

#### B. ABLUTION BLOCK

This section is in a fair condition.

The plumbing was checked and found to be in good working order.

 $\star$  New novalon was installed in this section after the floor panels had been repaired.

## C. RECREATION AREA

This section of the building is still in a good condition.

- \* New novalon was laid after the floor joints were sealed with silicon and all holes were repaired with aluminium sheeting.
- $\star$  Carpet tiles were also laid in the seating area next to the dart board.

#### OUTER BUILDINGS

#### A. PWD STORE

The store is in a very good condition.

The screw jacks under the building were painted with NS4 paint.

 $\star$  A hot water cylinder was installed to provide hot water for washing purposes.

## B. MAIN POWER HOUSE

New wooden double doors were installed in the workshop area to facilitate easy removal and installation of power plants.

\*A new canopy was also fabricated and erected above the doors.

New catwalks were laid in front of the new doors, which have additional wooden beam supports to handle the weight of the power plants.

#### C. FOOD STORE

The sliding door was re-adjusted and is now operating correctly.

The building is in a good condition.

## D. OLD EMERGENCY POWER HOUSE

This building was demolished as there was no further use for it. This has now created a much larger loading area for material and stores which come ashore.

# E. EMERGENCY POWER HOUSE

This building has been painted internally and externally with white masonry paint.

\*Roof sheets which were damaged by stormy weather were replaced with new.

The building is in a very good condition.

## F. EMERGENCY RADIO SHACK

This building is in a good condition.

New door hinges were fitted and the door re-hung.

Black blinds were fitted over the windows.

## G. HUTS

The concrete slab is in the process of being covered by indigenous vegetation and the conservation officer has stated verbally that the area should be left as is, so as not to do any further damage to the area.

## H. HELIPAD

The helipad has deteriorated alarmingly and is now very unsafe for flying operations. The boards are sagging, which has lead to huge hollows forming in various places. Boards are loose and can no longer be secured to the wooden foundation beams as they are saturated with water and have become rotten. The complete surface when wet has become very slippery and dangerous.

It is strongly recommended that this situation be rectified as soon as possible with a new helipad.

#### I. CATWALKS

Fifteen (15) of the wooden catwalks were replaced with new steel ones. Another thirty (30) wooden catwalks remain and should be replaced over the next few take overs.

#### J. SATELLITE BUILDING

The foundation pipes were driven to a depth ranging between 9m and 12m into the ground. The whole installation fitted together without any major problems arising. No difficulty was encountered with the erection of the building and the whole project ran very smoothly.

## K. DIESEL BULK STORAGE TANKS

The rusted parts on the tanks were chipped and given a coat of NS4 paint. Two (2) layers of universal undercoat was then applied before the high gloss enamel finishing coat was given.

#### L. OIL STORE

This building is in a very good condition.

#### GENERAL

All wooden steps around the base area which were rotten were replaced with new.

The door of the diesel pump station was repaired.

All leaks in the various buildings were repaired.

The water tank over flow pipe was diverted into sewerage the line, which has proved to prevent blockages in the sewerage system, as there is now a continual flow of water in the line.

The bases of the antenna were supported by means of scaffold pipes driven into the ground and cross pieces clamped around the base. These antenna are now firmly fixed at the base.

- $\star$  New canopies were fabricated and installed above the doors in the courtyard area.
- $\ensuremath{^{\star}}$  A new asbestos water tank was installed on the water tank platform.

## TASKS FOR NEXT TAKE OVER

Replace existing five (5) asbestos water tanks with fibreglass. The wooden platform will have to be replaced by new.

Replace existing wooden helipad with steel structure.

Build dam wall with wooden sleepers for water supply.

Check and seal roofs where necessary.

20 x Black blinds are still required.

A new roof structure will need to be erected over the braai area.

#### MECHANICAL REPORT

#### A. CRANE

The crane was serviced and tested.

New brake shoes and linings were fitted to the slewing motor.

On arrival, it was found that the crane had been chipped and painted by the Gough 39 diesel mechanic. The crane is at present in an very good condition.

\* The defective slewing motor brake unit was replaced with new.

All gearbox oils were drained and re-filled with new oils.

#### B. SANDFILTER

The old sand in the filter was replaced with sterilised sand and a copy of the certificate for the sterilised sand was handed to the conservation officer.

\* The sand filter was also given a coat of NS4 paint.

With regular back washing the water is clear and fit for human consumption.

All the water line filters were checked and cleaned.

#### C. DIESEL BULK STORAGE TANKS

The tanks are structurally in a good condition. The shells of the four (4) furthermost tanks tend to be pitted more than the others, but this is probably due to the sea spray which reaches them when rough seas are experienced.

The main ball valve on the inlet line was replaced due to faulty seals.

## D. PUMP STATION

Both booster pumps were checked and serviced and found to be in good working order.

The male Avery Hardall couplings were returned to Cape Town for servicing or replacement if necessary.

#### E. COLD AND FREEZER ROOMS

The existing R 12 cold and freezer room refrigeration plants were removed and new R 22 units were installed.

The old units have been returned to Cape Town for conversion to  $\ensuremath{\mathbb{R}}$  22.

The spare unit was also connected to a temporary electrical supply for testing and servicing.

Both rooms are in a good condition.

The domestic freezers and fridges were also serviced.

#### F. GOUGH HOUSE

 $\star$  A defective extractor fan in the drying room was replaced with new.

A defective extractor fan in the hydrogen generator room was also replaced with new.

The ice maker was repaired and serviced but this unit is no longer in a good condition and should be replaced.

#### G. MAIN POWER HOUSE

The two (2) existing generator sets are at present in a good and clean condition.

Both engines have completed 20 000 hours and it is recommended that they be replaced with new in the near future.

Both engines received a 500 hour service, which was carried out by the new diesel mechanic.

Both silencers were replaced, but new silencers will have to supplied in the next take over, as there are no spare ones available at present.

\* A new gantry was fabricated on the island.

## H. EMERGENCY POWER HOUSE

The engine is in a good and clean condition.

\* A defective extract fan was replaced with new.

#### I. FIRE ALARM SYSTEM

The complete system was tested and found to be in good working order.

All fire hose reels were checked and found to be in a good condition.

## TASKS FOR NEXT TAKE OVER

Replace the spare R 12 fridge unit with a new R 22 unit.

Chip and paint fuel tanks.

Stainless steel brake disc for slewing motor to be fitted.

It is recommended that the existing diesel storage tank at the refuelling point be removed due to very thin and badly pitted steel walls.

#### ELECTRICAL REPORT

# A. GOUGH HOUSE

All distribution boards in the base were serviced and found to be in good working order.

All defective lamps and light fittings were replaced with new.

The Vulcan stove was rewired due to mice eating the insulation on the wiring.

\* A new domestic stove was installed in the kitchen. The old stove was returned to Cape Town.

All illegal wiring was removed and re-done according to regulations.

Dimmer switches were installed in the lounge and TV room, as the lighting was too bright.

One (1) defective hot water cylinder element was replaced in the ablution block.

## B. DIESEL PUMP STATION

A defective circuit breaker was replaced with new. The rest of the installation is in good working order.

#### C. FOOD STORE

All the electrical equipment was found to be in good working order.

#### D. EMERGENCY RADIO SHACK

The installation is in good working order. Only one (1) socket outlet had to be replaced.

## E. CRANE

All limit switches were tested and set to operate at the correct cut-off.

The control panel was serviced as well as the two (2) hand held control boxes.

The crane is in a very good condition.

#### F. MAIN POWER HOUSE

The distribution boards and control panels were serviced.

All loose cables were secured to the underside of the building.

All safety circuits were tested and both engines have been set to their most effective operating positions.

The engines were found to be in a clean and well maintained condition, but both have 20 000 hours running time recorded, and new engines should be installed in the near future.

\*Emergeoncy light fittings were installed above the engines.

## G. EMERGENCY POWER HOUSE

The engine was found in a very clean and good condition.

The distribution boards and control panel was serviced.

The control panel was rewired as to correspond with the wiring diagrams available on the island.

All safety circuits were tested and the engine was set to the most effective operating position.

#### H. GENERAL

All cables along the catwalks and under buildings were neatly strapped.

All defective spot lights were replaced with new.

All unnecessary heating devices were removed to save energy.

The existing Bollard light fittings between Gough House and the PWD store were replaced with new fittings.

The existing street light fittings between Gough House and the Helipad were replaced with new fittings.

A new distribution board was installed in the food store to replace the badly rusted old one.

\* Additional socket outlets were installed in the Radio Room to supply the satellite equipment.

A new distribution board, socket outlet and light fitting was installed in the satellite room. Heaters were also installed to keep the room moisture free.

#### TASKS FOR NEXT TAKE OVER

Night lights should be installed in all passages to stop night bird attacks.

It is recommended that the two existing Deutz power plants be replaced with new.

The existing engine exhausts should be replaced with stainless steel exhausts.

New flame proof light fittings are to be installed in the Oil store.

The socket outlets in the Radio workshop are to be replaced.

#### CONCLUSION

The take over was a great success and Mr. Jan Hattingh, coordinator for D.E.A., must be complemented on this.

Thanks also to the S.A.A.F., D.E.A., team members, Capt. Denning of the S.A. Agulhas, Capt. Law of the S.A.S. Protea and all island based personal who offered their assistance willingly when required.

The Gough 39 team must also be complemented on the way that the base was maintained during the year.

A special thank you to the PWD team, (Messrs. Burt, Kuun, Jonas, Telleman, Salie and Williams) for the professional manner and effort displayed in completing the work schedules and additional tasks delegated to them in the short space of time available. I have no hesitation in recommending them for future expeditions to the islands.

Compiled By : S.Morrison (PWD Team Leader)

#### Enclosures :

- 1. Diesel mechanics report for 92/93
- 2. Revised management plan for the Gough Island wildlife reserve.

## BUILDING STOCK LIST

```
1-
     50mm
             Gate valves
3-
     40mm
             Gate valves
     Shower roses
0-
0-
     Pan connectors
5-
     22mm
            Stop cocks
     15mm
             Stop cocks
6-
10- 15mm
             Jumpers
10- 22mm
             Jumpers
            Screw in connector for black pipe
18- 40mm
4-
    15mm
            Straight couplings (copper)
            Elbows
0-
    15mm
3-
    15mm
            Wall plate elbows
15- 110mm
            PVC pipe
0-
     1501
10- "P" Trap
20- Thread tape
     P Traps
7-
             C/C PVC Bends
     40mm
    50mm P/PVC Bends
40mm C/E PVC Bends
22mm Gate valves
15mm Gate valves
1-
5-
4-
2-
     1/2" Non return va
1 1/2" MP Ball valve
0-
             Non return valve
     1 1/4" MP Ball valve
2" MP Ball valve
5-
4-
2-
             Brass BB taps
     15mm
3-
           Chrome pillar taps
Chrome pillar taps
    15mm
10-
    22mm
0-
7-
    22x22x15mm T-pieces
    22x15x22mm T-pieces
3-
    25x22x25mm T-pieces
3-
10
    22mm T-pieces
20- 25mm T-pieces
10- 25mm C/C Bends
7-
     15mm C/C Bends
     1" C/C Bends
3-
0-
     15mm Straight couplings
15- 22mm Straight couplings
    25mm Straight couplings
7-
7-
     22mm Male couplings
     Vacuum breakers
2-
1-
     Complete cistern
0-
     Syphons P80
2-
     Bottle trap chrome
     95x110x50mm PVC Junctions
5-
     110mm Bends
6-
4-
     110mm Plain junction
0-
     110mm C/E Bends
5-
     110mm C/E Junctions
0-
     50mm PVC Pipe
3-
     Pan connectors
0-
    32mm Basin grating
0-
    40mm Basin grating
12- Reducing couplings 1"-3/4"
4-
     22mm Ball 0 stop
```

0- 15mm Ball 0 stop 5- 22mm-15mm Reducing sets 10- 22mm C/I couplings 7- Flush pipe rubbers 0- Fenix valve 2- Automatic syphons for urinals 0- 40mm C/E Junctions 1-set-Swivel C/P taps (Hospital)

## MECHANICAL STOCK LIST

```
Exhaust silencers
10- Duetz head gasket set
16- Sets of piston rings
10- Sets of piston spacer plates
9-
     Push rod tubes
10- Cam lifters
30- Crankshaft bolts
200- Cheese head screws
     Box assorted 0 rings
1-
     Intake manifold gaskets
9-
    Pilot bushes
4-
    526072 A Bearings
4-
20- Banjo bolts
4-
    Injector mounting bolts
7-
   Rocker arm adjusting nuts
3- Altenators
1-
    Starter motors
1-
   Temp gauges
0-
    Voltmeter
3-
    Diesel water traps
    Sets of injector pipes
ñ-
30- Injector nozzles
1-
    Sump gasket sets
5-
    Crankshaft bearing sets
0-
    Camshaft bushes
1-
     Assorted gasket sets
7-
    Mechanical seal
7-
     Oil seal
    Exhaust gasket
8-
     Intake valves
6-
15- Exhaust valves
1-
     Box assorted bearings
12- Pistons
12- Piston sleeves
3-
    Easy Flux powder
1-
     Liquid soldering flux
1000-Welding rods
200- Brazing rods
100- Copper tech rods
20- Silver solder rods
2000-Assorted pop rivets
100- Hacksaw blades
300- Roofing screws
3-
     Belt dressing spray
4-
     Penetrating oil
15- 1" Heavy duty clamps
15- 1"-2" Heavy duty clamps
70- Assorted steel nipples
     1"-2" Heavy duty clamps
10- Assorted pipe unions
100- Scaffold clamps
3000-Assorted nails
30- Silicon tubes
60- Assorted diesel, oil and air filters
5- Del Tec Truck batteries
```

2 set-Drill bits 1,5-13mm 0- Fire hose reels

## ELECTRICAL STOCK LIST

```
Samite s/p 5A mcb
7-
    Samite s/p 10A mcb
6-
    Samite s/p 20A mcb
    Samite d/p 60A Earth leakage
3-
    Samite t/p 60A Earth leakage
1-
    FWJ s/p 20A mcb
1-
    FWJ d/p 60A Earth leakage
2-
3-
    Rikon contactors
4-
   Klockner moeller contactors
4-
   Sunvic room thermostat
6-
    15A Industrial plugs
3-
   60A 3 pole isolators
1-
   Davlight switch
9-
   Watertight switch
0-
    2 lever dimmer switches
    Urn elements
3-
0-
   Kettle elements
23- Flashlight lamps
30- Stove fuses
16- Bottle fuses
10- Plug tops
8-
    HWC Elements
2-
    Wellglass fittings
    PVC 2x4 Wanda boxes
PVC 4x4 Wanda boxes
14-
20-
    MCB Adapter clips
38-
     LEO Spray
5-
     104
6-
     105
4-
     106
0-
    108
10-
    109
5-
    119
0-
    129
    Engineers blue
1-
5-
   Telon 66
8-
   Cutting fluid
5-
    Pratley clear
5-
    Pratley putty
5-
    Bostick clear
60- Wire markers
    Magnetic pick-up
2-
    Voltmeter
7-
    Ampmeters
0-
    Electronic timers
5-
    Ambac control units
    24V Relays
9-
    12V Relays
2-
1-
    220v Relay
4-
    Change over switch
7-
    Cable joints
10- 300W Tubes
1-
    500W Tube
    1000W Tube
5-
8-
   1500W Tube
```

100- 100W BC Lamps

- 40- 60W BC Lamps
- 18- 16A Flush Plugs
- 2- 16A Duo Plugs 9- S/L Switches
- 5- D/L Switches Ferrules
- 100- 1,5/2,5/4/6/10/16/35/70/95mm
- 100- 1,5/2,5/4/6/10/16/35/70/95mm
- 200- Assorted cable ties
- 4- TF 1603 Thermostat
- 2- 51 TH Thermostat
- 1- 70 TH Thermostat
- 1- 8562 Thermostat
- 1- Vulcan T 150 Switch
- 2- 90 ER Simmer switch
- 10- Pull switches
- Insulation tape
- 5- Red/black/blue/white/green
- 20- 2 D Lamps
- 15- PAR 38 Lamps
- 20- PL 9 Lamps
- 5- 2,4m Ballast
- 6- 400W M/V Lamps
- 9- 400W SON T Lamps
- 10- 10A Connector strips
- 10- 15A Connector strips
- 20- 1,5V Batteries
- 5- B10 fittings
- 7- Pratley joint boxes 100- Compression glands
- 11- Brass ES batton holders
- 10- Porcelain BC holders
- Cable Glands
- Cable Glands
- 19- No.0
- 20- No.1
- 10- No.2 0- No.3
- 7- No.4
- 0- No.5
- 50- Starters
- 2- Samite T/P 100A mcb 1- Samite T/P 60A mcb
- 1- Samite T/P 60A mcb 2- Samite D/P 60A mcb
- 1- Freq. Meter
- 100m-1,5/2,5/6mm PVC Wire
- 1- 200mm Solid stove plate
- 1- 300mm Solid stove plate

## ANNUAL MECHANICAL REPORT 93/94

The S.A. Agulhas arrived at Gough Island on the 13 th September 1994, at which time I joined the PWD team for the duration of the take over.

The water supply was a source of continual problems. We discovered that after any substantial drought we had severe problems with the water supply to the base caused by the low water level from the supply point. The conditions caused by heavy rainfall seemed to increase the problem with airlocks forming in the pipe and the separation of pipe sections. I recommend that steps be taken to avoid these future problems in the form of building a dam wall of approximately one meter (1000mm) in height. The purpose of the dam wall is to ensure a protected and constant water supply.

The existing asbestos water tanks in use are not suitable for the conditions on the island. The constant rain and high humidity cause the asbestos to go brittle. The high prevailing winds and sudden gusts cause the tanks to sway. It is impossible to anchor the tanks to the floorboards, as it would place too much stress on the already weakened tank walls. We have experienced this problem with the floor of one tank, causing it to give way due to the brittleness of the base. I recommend that this problem could be solved by replacing the existing asbestos tanks with fibreclass tanks.

During the year one of the excitor fields on the alternator of Deutz No. 1 (CTG 228) burnt out due to high humidity. This problem could be solved with the installation of a heating system in the generator shack.

The cool room was a source of continual frustration. The refrigeration plant broke down and was replaced by the spare unit. Problems seemed to continue and the spare unit also broke down a few months later due to the age of the units. The old units were replaced with new units during the take over. I foresee no future problems with the new units.

During the year some mechanical and electrical problems with the crane occurred. The crane control malfunctioned and had to be repaired, the problem was burnt contact points. Rust on the brake disc of the slewing motor created a problem every time the crane was in operation. Due to the rust the brake shoes gave in and had to be replaced on a regular basis. This problem could be avoided with the installation of a stainless steel brake disc. The brake unit on the slewing motor burned out shortly before take over took place. This unit was replaced during take over and the crane is now in a serviceable condition.

The condition of the helipad deteriorated during the year and it is recommended that the existing wooden platform be replaced with steel catwalks. The extreme weather conditions on the island are not suitable for a permanent wooden platform.

I have signed and handed over all mechanical, electrical tools and equipment to the diesel mechanic, Mr. G.P. Du Preez. I am

confidant that he is familiar with the job expected from him and anticipate no problems for the Gough 40 team. I gave him my best regards for the year and I hope that he will keep the high standard of the diesel mechanics on Gough Island.

I wish to express my gratitude to my team leader Mr. J. Mc Linden and my fellow team members for there outstanding support they gave me during the past year and also to Mr.S. Morrison and the rest of the PWD team members.

Last but not least I thank the Department of Environmental Affairs for the opportunity they gave me to work on Gough Island. It was an experience that I will never forget. You can count on my participation in any future island relief team should my services be required.

Yours sincerely

Mr. M. Nortman (Diesel Mechanic Gough 39)

# RECORD OF FIRE EXTINGUISHERS

2- 9 Kg Dry Powder -Gough House, Hospital Avenue	94/09/27
1- 9 Kg Dry Powder -Gough House, Laboratory	94/09/27
1- 4,5 Kg CO 2 -Gough House, Metkassie Road	94/09/27
1- 9 Kg Dry Powder -Bathroom	94/09/27
2- 4,5 Kg CO 2 -Radio Room	94/09/27
1- 9 Kg Dry Powder -Dinning Room	94/09/27
1- 9 Kg Dry Powder -Kitchen	94/09/27
1- 9 Kg Dry Powder -Pantry	94/09/27
1- 9 Kg Dry Powder -Lounge	94/09/27
2- 9 Kg Dry Powder -Games Room	94/09/27
2- 9 Kg Dry Powder -Old Section	94/09/27
1- 4.5 Kg CO 2 -Bar	94/09/27
1- 4,5 Kg Dry Powder -Met Office	94/09/27
1- 9 Kg CO 2 -Met Room	94/09/27
1- 9 Kg CO 2 -Balloon Hut	94/09/27
1- 9 Kg Dry Powder -Plant Store	94/09/27
1- 9 Kg Dry Powder -PWD Store	94/09/27
1- 9 Kg BFC Halon 1211 -PWD Store	94/09/27
1- 4,5 Kg CO 2 -Food Store	94/09/27
1- 9 Kg BCF Halon 1211 -Food Store	94/09/27
2- 9 Kg CO 2 -Power Shack	94/09/27
	94/09/27
1- 9 Kg Dry Powder -Power Shack Workshop	
2- 9 Kg Dry Powder -Emergency Power Shack	94/09/27
1- 9 Kg CO 2 -Emergency Power Shack	94/09/27
1- 9 Kg BCF Halon 1211 -Emergency Power Shack	94/09/27
1- 9 Kg Dry Powder -Emergency Radio Shack	94/09/27
1- 9 Kg BCF Halon 1211 -Radio Workshop	94/09/27

# Summary of Meteorological Data for 23 September - 6 October 1994

## Temperature:

Highest Max. :17,9 on 27 Sept. Mean Max. :12,3 Lowest Max. : 8,6 on 25 Sept.

Mean Min. : 7,9

Highest Min. :12,6 on 5 Oct. Lowest Min. : 4,2 on 20 Sept.

# Rainfall:

Total Rainfall: 258,3 mm

Max. Rain in 24 Hrs. 46,0 mm on 15 Sept.

Days With Rain: 22 of 25 Days

## Sunshine:

Max. Sunshine: 8,7 Hrs on 17 Sept.
Min. Sunshine: 0,0 Hrs on 22, 23 Sept. and 2 Oct.

Mean Sunshine Per Day: 3,8 Hrs

## Pressure:

Highest Pressure (Sea Level): 1035,0 on hPa 30 Sept. 983,2 on hPa 25 Sept.

Lowest Pressure:



THE CONCRETE SLAB FROM THE OLD HUT IS IN THE PROCESS OF BEING COVERED BY INDIGENOUS VEGETATION AND SHOULD NOT BE REMOVED





VIEW OF THE PIPE FOUNDATION AND THE COMPLETED SATELLITE BUILDING WHICH IS SITUATED NEXT TO THE BALLOON HUT.



VIEW OF THE LANDING STAGE WITH THE OLD EMERGENCY POWER SHACK BEMOVED. THIS HAS ALLOWED MORE SPACE FOR HELICOPTER MOVEMENT.



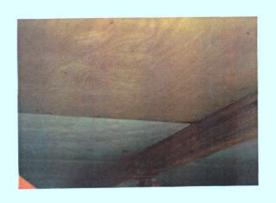
THE CRANE WAS PAINTED WITH ALUMINIUM PAINT AND IS IN AN EXCELLENT CONDITION.





VIEW OF PITTING WHICH IS TAKING PLACE ON THE SHELL OF THE FOUR (4) FURTHERMOST DIESEL BULK STORAGE TANKS





ROTTEN FLOOR BOARDS UNDER OLD GOUGH HOUSE WERE REPLACED WITH MARINE PLY AND THE SCAFFOLD PIPE FOUNDATION WAS PAINTED WITH NS4





FLOOR OF THE HYDROGEN GENERATOR ROOM WHICH WAS IN THE PROCESS OF COLLAPSING. THIS HAS BEEN RECTIFIED WITH STEEL BRACING.





VIEW OF THE POWER HOUSE WHERE THE WINDOW WAS REMOVED AND NEW WOODEN DOUBLE DOORS WERE INSTALLED





NEW FLOOR TILES WERE INSTALLED WHERE THE FLOOR HAD RUSTED. NEW ALUMINIUM SHEETING WAS INSTALLED UNDER THE TILES





VIEW OF THE LOW DENSITY TYPE LIGHT FITTINGS INSTALLED BESIDE THE CAT-WALKS FROM THE HELIPAD TO THE PWD STORE





VIEW OF THE CARPETS WHICH WERE LAID IN THE TV ROOM, PASSAGES AND BEDROOMS.





VIEW OF THE WATER TANK PLATFORM WHICH SHOULD BE REPLACED NEXT YEAR

