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1962 file A15211

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AMERICAN DEPARTMENT

A15211/1 ✓

1963

GENERAL

FROM Mr. Malan
(S. Africa House)
to Mr. Speckley

SUBJECT ANTARCTICA
South African Activities

No.
Dated December 18.
Received December 26.

Activities for Season 1963-64 in accordance with Article VII (5) of the Antarctic Treaty.

References

- 9/62

MINUTES

Affs etc.

20/12

(Printing Instructions)

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Division

Pl. copy to:-
Admin (Mr. Dwyer) (3)
SAS (Sir V. Fuchs)
✓ C.O. (Mr. Whitefield) (2)
Dr. Roberts (4)
Myself

(Outward Action)

8a) Mr Malan
(S. Africa House)
for Mr. Speckley
2/1

Dr. Roberts a.a. 18/12
24/1

8b) Mr Dwyer (Admin)
Sir V. Fuchs (SAS)
Mr Whitefield (COI)
3/1

(Action completed)

27/1

(Main Indexed)

10/12/62

LAST PAPER

1964 FILE A15211

Enter.
P.S. 16/1

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Reference _____



SOUTH AFRICA HOUSE,
TRAFALGAR SQUARE,
LONDON, W.C.2.

Telephone: WHITEHALL 4488.
Telegraphic Address: —
"OPPOSITELY, LESQUARE, LONDON."

SOUTH AFRICAN EMBASSY

18th December, 1963.



Dear Nick,

We have been asked to furnish the United Kingdom with a copy of the attached memorandum outlining the information in regard to South Africa's proposed Antarctic activities in 1964 required in terms of Article VII of the Antarctic Treaty.

With very best wishes for Xmas and the New Year
yours sincerely

Boet Malan

(W. Malan)

J.N.T. Spreckley, Esq.,
Foreign Office,
LONDON, S.W. 1.

I. SHIPS.

- (a) The South African Research vessel "RSA" will operate in the Antarctic during the 1963/64 summer season. The "RSA" is a cargo/passenger boat of 1550 gross tons with one 1560 BHP turbo-charged diesel motor and provides accommodation for 25 passengers. "RSA" is not an icebreaker, but her construction is in accordance with Lloyd's specification for Ice Class I ships.
- (b) Except for one .303 rifle which will be used for shooting seals for dogs' food en route the "RSA" will not carry any armaments. No aircraft or other transport will be introduced into Antarctica.

II. MILITARY EQUIPMENT AT BASE.

No military equipment of any description will be kept at the South African base or at any other place in Antarctica except those rifles referred to in paragraph VI which are used for recreational purposes and the provision of food for the huskies and the personnel in cases of emergency.

III. EXPEDITIONS.

- (a) (i) As in previous years, South Africa will have only one expedition in Antarctica during 1964. The expedition is scheduled to depart from Cape Town on board the "RSA" on Friday, 27 December 1963.
- (ii) The "RSA" will sail direct to SANAE (the South African base) and will make no calls en route. It will remain at the base only long enough to discharge the provisions and equipment for the 1964 expedition to allow for the taking over of scientific programmes and for the erection of the huts required for the housing of a

seismograph and a neutron monitor. Thereafter it will return direct to Cape Town with the returning expedition on board. No calls will be made on the homeward voyage.

(iii) After returning from Antarctica the "RSA" will undertake the annual relief and re-supply voyages to the South African Weather Stations on Marion and Gough Islands.

(b) (i) The expedition going to Antarctica will remain at and operate from the South African base until their return to South Africa early in 1965.

IV. BASES.

South Africa maintains only one base known as SANAE. This base is situated at 17°18'S, 2°21'W. The buildings at the base were erected at the beginning of 1962 and were occupied on 11 February 1962. With the occupation of the new base the one occupied by previous expeditions (1960/61) and known as Norway Station, was abandoned. No other bases or stations will be opened during 1964.

V. DETAILS OF PERSONNEL.

(a) The "RSA" is under the command of Captain K.T. McNish.

(b) (i) The leader of the expedition will be Mr. W.R. van Zyl. He will be in charge of the base.

(ii) The expedition will consist of 14 members and will include the following :-

Leader	1
Meteorologists	4
Geologist	1
Geomagnetist	1
Geophysicist	2
Medical Officer	1

Radio Operator	1
Radio Technician	1
Diesel Mechanics	2

(iii) The expedition will not include any personnel designated by other countries. No member(s) of the military services will accompany the ship or be included in the expedition.

(iv) Observers from certain Antarctic Treaty Powers may possibly accompany the relief vessel "RSA" on the voyage to and from Antarctica and consultations are proceeding in this regard.

VI. ARMAMENTS POSSESSED BY PERSONNEL.

Three .303 rifles, the property of the Department of Transport, will be available at the base. These will be used for recreational purposes and the provision of food for the huskies and the personnel in cases of emergency.

VII. PROGRAMME OF WORK.

1. The scientific work planned for 1964 will constitute a continuation of the work done in previous years and will include:-

(a) Upper Atmosphere Physics.

(i) Ionosphere.

(Vertical Incidence sounding, Oblique Incidence investigation and V.L.F. noise recording).

(ii) Aurora and Airglow.

(iii) A neutron monitor and R10-meter, Model AR1 1000, will be installed at the base for recordings on the nuclear component of cosmic radiation.

(b) Meteorology.

The programme of conventional surface observations at the standard hours 0000, 0600, 1200 and 1800 G.M.T.

and at 3-hourly intermediate intervals will be continued. Short-wave, (global, direct solar, diffuse sky and albedo) and long-wave (diffuse sky and upward) radiation will be measured. Radio-sonde and radiowind soundings will be carried out once daily (at 0000 G.M.T.). Wind and temperature measurements at six levels up to 25m above the surface and snow temperatures down to 25 cm., will be continued. Blowing snow will be measured and optical phenomenae will be observed and recorded.

(c) Earth Sciences.

(i) Geomagnetism.

Continuation of the present programme, which will include recording of vertical and horizontal components and declination of the earth's field using a low-sensitivity magnetograph. Absolute measurements will be made at regular intervals with the QHM and BMZ apparatus.

(ii) Gravity.

Surveys will be carried out at and in the vicinity of the base using the Worden Master Model gravimeter. In addition surveys will be carried out during traverses.

(iii) Geology.

A general reconnaissance of the area between SANAE and approximately 2W and $4^{\circ}30'W$, down to latitude $71^{\circ}30'S$ will be carried out. Samples will be collected.

(iv) Glaciology.

Observations will be made at and in the vicinity of SANAE and during traverses. These will include

measuring of snow accumulation and ablation, stake patters, snow surface observations, snow stratigraphy, Ramsonde soundings at 150 cm. below snow surface and microscopic examination of snow crystals.

(v) Physiology.

This will consist of a continuation of the present programme covering observations such as the acclimatization of Man to stress and extreme cold with special reference to metabolic changes, calory and vitamin adjustments and lipid studies.

- (vi) A seismograph, presented by the United States of America will be installed at the base. The instrument to be installed embraces standarized 3-component short and long-term seismometers. The motion of the ground set up by earthquakes will thus be measured quantitatively not only in the vertical direction, but also in the East-West and North-South directions.

2. During voyages of the "RSA" the following observations will receive attention :-

(a) Airglow.

Observations will be taken to investigate airglow associated with the magnetic anomaly in the South Atlantic Ocean.

(b) Cosmic Radiation.

A neutron monitor has been installed on the "RSA" for recordings on the latitude distribution of the nucleon component of cosmic radiation at sea level associated with magnetic anomaly.

(c) Geomagnetism.

Observations will be taken on the ship during the voyages also with a view to investigate the anomalous magnetic field in the South Atlantic Ocean.

VII. PRINCIPAL SCIENTIFIC EQUIPMENT.

The principal scientific equipment in use at the base include the following :-

- (i) One "Stoffregen" All-sky camera.
- (ii) One radiosonde receiver (Vaisala type).
- (iii) One radio theodolite.
- (iv) Two QHM (Quartz Horizontal Force Magnetometers).
- (v) One BMZ (Magnetometric Zero Balance).
- (vi) Meteorological instruments for surface observations.
- (vii) RLO-meter.
- (viii) Neutron monitor.
- (ix) Seismograph.

IX. TRANSPORTATION FACILITIES.

The expedition will have the use of three tractors - two "Muskeg" Caterpillars, one Oliver OC.3 and a motor toboggan designed and built by the S.A. Department of Transport. Further they will have two dog teams (Huskies) for hauling sledges.

X. COMMUNICATION EQUIPMENT.

The Principal communication equipment consists of two "G.40" Redifon transmitters with a power output of 750 Watt each as well as two receivers.

XI. FACILITIES FOR RENDERING ASSISTANCE.

- (i) Since no aircraft are available, it will be most difficult to render any form of assistance at any point away from the base. The expedition will nevertheless be prepared to assist where-ever possible.
- (ii) There is a properly equipped surgery at the base and a hospital with accommodation for two patients. Trained medical help can be obtained at the base.

OTHER EXPEDITIONS.

Expeditions of other countries might call at South African ports on their way to or from Antarctica. No other expedition(s) will be organised in or proceed from South African territory.

PRETORIA.

12 NOVEMBER 1962.

No. A 15211/1

FOREIGN OFFICE, S.W.1.

January 2, 1964.

Thank you for your letter of December 18 and the statement of South African activities in the Antarctic for 1963/64. A statement of our activities has already been transmitted to your Government by our Embassy at Pretoria.

All best wishes to you for 1964.

(J. N. T. Spreckley)

Mr. W. Malan,
South African Embassy,
Trafalgar Square,
W.C.2.

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UNCLAS.

W. Malan,
South African
Embassy,

from

J.N.T. Sprackley

Thank you for your letter
of December 18 and the
Statement of South African
activities in the Antarctic
for 1963/4. A statement of
our activities has already
been transmitted to your
Government by our Embassy
at Pretoria.

All best wishes to you
for 1964

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NOTHING TO BE WRITTEN IN THIS MARGIN

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