

C.S.

SCIENTIFIC

(Miscellaneous)

1924.

No. 383/24

C. S. O.

SUBJECT.

192 4

SOIL ANALYSIS

29th May

Samples required for:

Previous Paper.

MINUTES.

PA 26/1/25  
PA 26/1/25  
PA 22/3/25  
PA 11/11/26

- Extract from letter from Powell Research Institute of 25<sup>th</sup> March 1924 — Encl ①
- Draft Telegram to Operator Fox Bay of 30<sup>th</sup> May 1924 " ②
- Telegram to Operator Fox Bay 30<sup>th</sup> May 1924 ③
- to Mr Robson Pt Louis N. 30<sup>th</sup> May 1924 ④
- " " Manager Teal Inlet — do — ⑤
- " W.R. Greenshields Douglas — do — ⑥
- " 1/2 Manager of Island — do — ⑦
- Telegram from R.B. Pole Evans, Port Howard of 31<sup>st</sup> May 1924 — Encl ⑧
- Telegram to Pole - Evans, Port Howard of 2<sup>nd</sup> June 1924 — Encl ⑨
- Letter from Mr J.E. Batts, Pebble Island of 18<sup>th</sup> June 1924, " ⑩
- Description of Samples of Soil — " ⑩A
- Letter from Mr P.B. Robertson, Port Stephens of 14<sup>th</sup> June 1924 " ⑪
- Description of Samples of Soil — " ⑪A
- Letter from R.B. Pole Evans, Port Howard of 20<sup>th</sup> June 1924 " ⑫

Subsequent Paper.

0107



- Lr from Mr. M. Robson Fox Bay W. d/5 June 1924. (13)  
 Sketch map . . . . . (13a)  
 Notes . . . . . (13b)
- Notes from Chartres Station d/6th June 1924 (14)
- Lr from Mr. J. Wilson, Fox Bay E. 4th June 1924 (15)  
 Notes . . . . . (15a)  
 Sketch map . . . . . (15b)
- Letter from Mr. H. Clement Ray Cove. 14 June 1924 (16)
- Minutes from Colonial Engineer 2nd July 1924 (17)
- Lr from Col Eng to Capt P. S. N. G. -- " -- " -- (17a)
- Notes on East Falkland samples by Mr. H. Mears (18)
- Lr. to Director Rowett Research Institute  
 2nd July 1924 (19)
- Copy of Notes enclosed . . . . . (19a)
- Lr. to Mr. J. C. Bells Port Peble Is. 7 July 1924 (20)
- Lr to Mr. C. H. Robertson Port Stephens do. (21)
- Lr to Mr. R. L. Pole Evans Port Howard do (22)
- Lr to Mr. M. Robson Fox Bay West do (23)
- Lr to Mr. A. J. Murray Chartres do (24)
- Lr to Mr. J. J. Wilson Fox Bay E. do. (25)
- Lr to Mr. H. Clement Ray Cove do (26)



Y.S. ~~AT~~  
 Submitted for information

2. All the samples from the East Falkland were despatched by the Ortega but the amount of work required in connection with the salts from the West rendered it advisable to postpone sending them until the 1st Sept.

~~AT~~ 1 July 24

~~AT~~

W.P.S.

I am very glad that it was possible to dispatch samples from East Falkland on 31<sup>st</sup> July & I am grateful to Mr Innes for the trouble which he has taken in connection with collection & preparation of samples.

~~AT~~

~~AT~~ 9 July 24

Mr. Innes, Commissioner for South

Referred as you will require this for the preparation of the samples from the West Falkland

~~AT~~ 9 July 24



Notes on Soil Samples collected on  
East Falkland - Encl (27)

Letter from Mr Howard Clement of  
4<sup>th</sup> August 1924 - Encl (28)

Letter from Mr W. Clowry of  
25<sup>th</sup> July 1924 - (29)

Notes on samples from East and  
West Falklands by Mr W. Clowry (30)

Copies of Notes sent to Rowett Inst 31/7/24

Letter to Director Rowett Research  
Institute 23<sup>rd</sup> Sept 1924 (33)

Colonial Engineer,

Mr W. Willyon please say  
if the samples have been packed for  
transmission.

G.P. 17  
for C.S.  
26 Sept 1924

The Hon; Col; Secretary.

Samples have been packed and case  
will be shipped per R.M.S. "Ortega" sailing  
about the 3<sup>rd</sup> October 1924.

2. Copy of letter to Agents P.S.N. Co re  
shipment herewith.

R. P. Barclay.  
Col; Engineer.

29/9/24.

Letter from Rowett Research Inst. 27/8/24. (35)

Telegram to Brown Agents. 23/10/24 (36)

Telegram from Brown Agents of 3<sup>rd</sup> November 1924 - Encl (37)



Y.S.

Submitted for information

~~W.H.H.~~ 4 Jan. 24  
7 Nov. 424

S of S. despatch No. 126 of 3rd December 1924 Encl (38)  
Letter from Powell Research Institute  
of 2nd December 1924 - " (38) A.  
Report on Seals \_\_\_\_\_ . (38) B

Y.S.

Submitted.  
Please see also 84/26  
~~W.H.H.~~ 17 Jan.

H.P.S.

Report to go to Chief Inspector of Stock  
for his information.  
Further action can await the further  
report which is forwarded in 84/24.

~~W.H.H.~~  
17 January 1925.

Copy of Encls. (38A) + (38B) sent to  
Chief Inspector of Stock, 26/1/25. (39)

Copies from Encl.  
42 in 84/26

S of S. General despatch of 7th January 1925 - (40)  
Letter to Powell Institute of 9th December 1924 - (40) A  
Letter from Powell Institute of 18th December 1924 - (40) B  
Letter to Powell Institute of 23rd December 1924 (40) C  
Letter from Powell Institute of 26th December 1924 (40) D



Chief Inspector of Stock. 41

Case

W. H. B. for C.S.  
11 Feb 1925

The to

Col Sec:

42

Thank you very much

W. B. Carter

4-3

14/2/25 Chief Insp of Stock

P.A.

27/4/25

copy of letter from Dr. Gibbs of 8. 11. 46. 44  
(new filed in 0102  
" samples of soil (F. 12).

Went about the  
soil P. 2

new

P.A.

28/7

386 cap 5/1

bx. 20/11



(1)

TRACT from letter from the Rowett Research Institute dated 25th  
ch, 1924. No. S/11/24

x x x x x x x x x

We want to get an indication of the chemical nature of the soil in different areas. To do this it is necessary to choose any area and take half a dozen samples from a given field, the places from which the samples are taken being chosen so as to give as nearly as possible a representative sample from the whole field. The samples are taken as follows: With a spade a square about 9 inches each way and 9 inches deep is cut out. Half a dozen of these are mixed together, and then dried in front of a fire. After drying, they are again thoroughly mixed up and a sample of about three pounds taken. Samples taken in different areas, one from a farm inland, and one from a farm near the sea, and, if convenient, one from a farm where the mortality is high, and one from a farm where the mortality is low. As in the case of the grasses, information should be given with regard to all the features of interest in connection with the investigation peculiar to the area from which the sample was taken, and information given so that we can locate on the map the area from which each sample was taken. A sample of grass should be sent from each area from which a sample of soil is sent.

x x x x x x x x x



Dr. Craft

(2)

Kindly receive three samples soil  
from Fort Howard for analysis as follows.

One from Camp vicinity of Coast,  
Second from unhealthy Camp inland,  
Third from healthy Camp inland.

Each sample should consist of six squares  
soil measuring 4 inches each way & 4 deep  
taken from different parts of Camp.

The six squares comprising each sample  
may be forwarded in one clean sack  
each sack plainly numbered.

Also glad receive by letter fullest  
particulars regarding Camp from  
which each sample taken particu-  
larly to which it is healthy or  
unhealthy. Carefully describe  
locality in each case enable me to locate  
on map



TELEGRAM.

From : The Colonial Secretary.

To : The Operator, Fox Bay.

Dispatched :	30th May.....	19 24	Time 10.30 a.m.
Received :	.....	19	Time. ....

Operator,  
Fox Bay.

Please telephone all stations begins - Rowett Institute require samples of soil for analysis it is urgently requested that every station in West Falkland will send to Chief Inspector of Stock by Falkland three samples of soil one from camp vicinity of coast second and third from healthy and unhealthy camp inland respectively fullstop each sample should consist of six squares soil taken from different parts of each camp and measuring nine inches each way fullstop The six squares comprising each sample to be forwarded in one clean sack each sack plainly numbered fullstop Also glad receive letter fullest particulars regarding camp from which each sample taken particularly extent to which healthy or unhealthy carefully describing locality each case enable me to locate it on map.

Colonial Secretary.



3/24

(4)

30th May,

24.

Sir,

I am directed by His Excellency the Governor to inform you, with reference to the investigations which the Rowett Research Institute, Aberdeen is undertaking in connection with the Sheep Farming Industry, that samples of the soil of the various camps in the Colony are required for transmission to the Institute for analysis.

2. It is urgently requested that the following three samples of the soil on Port Louis North Station may be sent:

- (1) Sample from camp in the vicinity of the coast.
- (2) Sample from healthy camp inland.
- (3) Sample from unhealthy camp inland.

Each of the above samples should consist of six squares of soil, measuring nine inches each way and taken from different parts of each camp. The six squares, comprising each sample, should be forwarded in one clean sack, which should be plainly numbered on the outside and addressed to the Chief Inspector of Stock.

3. It is also requested that a letter should be addressed to me at the same time as the samples

J. Robson, Esquire,

Port Louis North,

East Falkland

are/



are sent, containing the fullest particulars which you can give regarding the camp from which each sample is taken, especially with regard to the extent to which the camp is healthy or unhealthy, and carefully describing the locality in such a way as to enable it to be readily located on the map.

4. The farmers must be fully aware of the advantages to be obtained for the industry by the investigations which the Rowett Research Institute has undertaken to conduct, and will, no doubt, readily realize the importance of supplying any specimens required for examination in strict conformity with the instructions sent. I am to point out that, if samples are not obtained and packed in accordance with every detail of the Institute's requirements, the value of their examination is greatly reduced.

I am,

Sir,

Your obedient servant,

H. Henniker-Heaton,

Colonial Secretary.



383/24

30th May,

24.

Sir,

I am directed by His Excellency the Governor to inform you, with reference to the investigations which the Rowett Research Institute, Aberdeen, ~~is~~ is undertaking in connection with the Sheep Farming Industry, that samples of the soil of the various camps in the Colony are required for transmission to the Institute for analysis.

2. It is urgently requested that the following three samples of the soil on Teal Inlet Station may be sent:

- (1) Sample from camp in the vicinity of the coast.
- (2) Sample from healthy camp inland.
- (3) Sample from unhealthy camp inland.

Each of the above samples should consist of six squares of soil, measuring nine inches each way and taken from different parts of each camp. The six squares, comprising each sample, should be forwarded in one clean sack, which should be plainly numbered on the outside and addressed to the Chief Inspector of Stock.

3. It is also requested that a letter should

The Manager,  
Teal Inlet,  
East Falkland.

be/



be addressed to me at the same time as the samples are sent, containing the fullest particulars which you can give regarding the camp from which each sample is taken, especially with regard to the extent to which the camp is healthy or unhealthy, and carefully describing the locality in such a way as to enable it to be readily located on the map.

4. The farmers must be fully aware of the advantages to be obtained for the industry by the investigations which the Rowett Research Institute has undertaken to conduct, and will, no doubt, readily realize the importance of supplying any specimens required for examination in strict conformity with the instructions sent. I am to point out that, if samples are not obtained and packed in accordance with every detail of the Institute's requirements, the value of their examination is greatly reduced.

I am,

Sir,

Your obedient servant,

H. Henniker-Heaton,

Colonial Secretary.



383/24

6

30th May, 24.

Sir,

I am directed by His Excellency the Governor to inform you, with reference to the investigations which the Rowett Research Institute, Aberdeen, is undertaking in connection with the Sheep Farming Industry, that samples of the soil of the various camps in the Colony are required for transmission to the Institute for analysis.

2. It is urgently requested that the following three samples of the soil on Douglas Station camp may be sent:

- (1) Sample from camp in the vicinity of the coast.
- (2) Sample from healthy camp inland.
- (3) Sample from unhealthy camp inland.

Each of the above samples should consist of six squares of soil, measuring nine inches each way and taken from different parts of each camp. The six squares, comprising each sample, should be forwarded in one clean sack, which should be plainly numbered on the outside and addressed to the Chief Inspector of Stock.

3. It is also requested that a letter should be addressed to me at the same time as the samples

R. Greenshields, Esq., are/  
Douglas Station,  
East Falkland.



are sent, containing the fullest particulars which you can give regarding the camp from which each sample is taken, especially with regard to the extent to which the camp is healthy or unhealthy, and carefully describing the locality in such a way as to enable it to be readily located on the map.

4. The farmers must be fully aware of the advantages to be obtained for the industry by the investigations which the Rowett Research Institute has undertaken to conduct, and will, no doubt, readily realize the importance of supplying any specimens required for examination in strict conformity with the instructions sent. I am to point out that, if samples are not obtained and packed in accordance with every detail of the Institute's requirements, the value of their examination is greatly reduced.

I am,

Sir,

Your obedient servant,

H. Henniker-Heaton,  
Colonial Secretary.



30th May,

24.

Sir,

I am directed by His Excellency the Governor to inform you, with reference to the investigations which the Rowett Research Institute, Aberdeen, is undertaking in connection with the Sheep Farming Industry, that samples of the soil of the various camps in the Colony are required for transmission to the Institute for analysis.

2. It is urgently requested that the following three samples of the soil on Fitzroy and Sparrow Cove camps may be sent:

- (1) Sample from camp in the vicinity of the coast.
- (2) Sample from healthy camp inland.
- (3) Sample from unhealthy camp inland.

Each of the above samples should consist of six squares of soil, measuring nine inches each way and taken from different parts of each camp. The six squares, comprising each sample, should be forwarded in one clean sack, which should be plainly numbered on the outside and addressed to the Chief Inspector of Stock.

3. It is also requested that a letter should be addressed to me at the same time as the samples  
The Manager of the Falkland Islands Company, Ltd., are/  
Stanley.



are sent, containing the fullest particulars which you can give regarding the camp from which each sample is taken, especially with regard to the extent to which the camp is healthy or unhealthy, and carefully describing the locality in such a way as to enable it to be readily located on the map.

4. The farmers must be fully aware of the advantages to be obtained for the industry by the investigations which the Rowett Research Institute has undertaken to conduct, and will, no doubt, readily realize the importance of supplying any specimens required for examination in strict conformity with the instructions sent. I am to point out that, if samples are not obtained and packed in accordance with every detail of the Institute's requirements, the value of their examination is greatly reduced.

I am,

Sir,

Your obedient servant,

H. Henniker-Heaton,  
Colonial Secretary.



383/24

8

TELEGRAM.

From : R. C. Pole-Evans Port Howard

To : The Colonial Secretary

Dispatched :	31st May.....	19 <sup>24</sup>	Time.	10.15
Received :	31st May.....	19 24	Time.	12.30
				a.m.
				p.m.

Colonial Secretary  
Port Stanley

Does soil mean to include to. sod and also peats  
cannot cut and keep some soil n squares also if  
put in one sack the six samples would be all mixed  
before arrival does this matter

Evag.



Pole. Evans last-Thursday

Soil includes top soil not necessary  
to keep in squares mixing of the <sup>six</sup> squares  
into one sample in <sup>each</sup> sack does not matter

Colonial Secretary.



TELEGRAM.

9

From : The Colonial Secretary

To : R. C. Pole-Evans, Port Howard

Dispatched : 2nd June, ..... 19 24 Time 12.30  
Received : ..... 19 Time. p.m.

Pole-Evans

Port Howard.

Soil includes top sod not necessary to keep in  
squares mixing of the six squares into one sample  
in each sack does not matter

Colonial Secretary.



10

Pebble Island,  
West Falkland.

18th June, 1924.

To the Colonial Secretary,  
Fort Stanley, Falkland Islands.

Sir,

As requested I have already for shipment this trip per the "Falkland" THREE Bags of Soil,- each bag containing SIX Squares of NINE inches as near as we can get it. It is hard to quite understand the exact soil you require, but I have done my best to fulfil your requirements, and hope that this will be to your entire satisfaction. The three large bags are numbered from 1 to 3. and the squares are numbered from 1 to 6 in each large bag, which will enable you to know one class of soil from another, which you will see from the enclosed description paper.

The unhealthy soil from inland and coast does not grow a very good stock feeding grass, but the healthy soil from inland and coast grow a good class of grass for stock feeding, and this is the land where the most sheep are feeding all the year round.

I have addressed the three bags of soil to the Stock Inspector, and hope that it will arrive safely and in good condition.

I remain,

Sir,

Your obedient Servant,

*J. C. Betts*

Manager.



10A

Pebble Island,  
West Falkland.  
18th June, 1924.

The Colonial Secretary,  
Port Stanley, Falkland Islands.

Per S.S. "Falkland".

THREE Bags of Soil, each bag containing SIX Squares as follows:-

Large Bag No.1.

Nos. 1. 2. 3. 4. Squares Unhealthy Soil from Inland. (East & West End)  
" 5. 6. " Unhealthy Soil near Coast. (" " " )

Large Bag No.2.

Nos. 1. 2. 3. Squares Healthy Soil from near Coast. (West End)  
" 4. 5. 6. " Healthy Soil from Inland. (West End)

Large Bag No.3. ~~SQUARES~~

Nos. 1. 2. 3. Squares Healthy Soil from Inland. (East End)  
" 4. 5. 6. " Unhealthy Soil from Inland. (East End)

*J. C. Betts*

Manager.



Port Stephens Station,  
West Falklands,  
4th June.

11

Sir

Herewith enclose description of samples of soil and trust they will meet your expectations.

I have collected two series of coast line and one inland sample. The inland camps on this station are few and seem very general in formation. I deemed it better to send two coast series where there is greater variation in carrying capacity.

I am

Your obedient servant

*C. H. Robertson*

The Honourable  
The Colonial Secretary,  
Stanley.



Series  
I  
healthy  
coast  
lands.

Samples 1 2 & 3 from Port Stephens Rincon i.e. the southern boundry of Port Stephens Harbour. The ground here is hard mostly diddle-dee and tuft grass. Sheep get very fat and grow well. At present it is used a ram paddock.

Samples 4 5 & 6 are from Cape Orford and the vicinity of Orford Hill. The ground here is equally soft and hard but well covered with both white and fine grasses. This piece is undoubtedly the best ground on this station carrying the stud flock very well.

Series  
II  
unhealthy  
Coast  
Lands.

Samples 7 8 & 9 from Double Creek Rincon i.e. north west side Double Creek Settlement. This camp is mostly hard covered with diddle-dee, white grass and fern. Looking at this block one would expect good results as there is fine shelter and lies well open to the sun. For years it has been a trouble to get anything to survive with small death rate so all classes of sheep have been tried. At present there are cull ewes running there which are doing better than any other class of sheep.

Samples 10, 11 & 12 from Carew Hbr Rincon on the north side of that settlement. This ground looks ideal but really is not much better than Double Creek. Breeding ewes get <sup>fat</sup> and ~~so~~ strong but lamb badly the lambs being very small when born but improve rapidly the first two months to go weedy again from December to March.



Series

III

Inland

camp

unhealthy.

Samples 13,14,&15, taken from the vicinity of Mt Young  
<sup>good</sup> are samples of this inland camp it being mostly peaty  
and only used in winter for grazing cattle . Dry summers  
young sheep fatten quickly on such camp but are apt to  
blight if not removed in time during Autumns such as this  
last.

Samples 16,17,18, from Mc Guires Flat and the Two Pond  
Ridge south of Carew Hbr settlement comprises of camp <sup>le</sup> able  
to run sheep during winter but which have the most ~~inferior~~  
inferior lambings both ewes & lambs being poor even  
during shearing months. This is inclined to be both wet  
and sour and is of peaty nature.



12

Port Howard

West Falkland Islands

June 20. 1924.

To

The Honourable H. Henniker-Heaton.

Colonial Secretary

Port Stanley.

Sir,

I have the honour to acknowledge your telegram of May 30th., and I am despatching by S/S Falkland this time the three bags of soil as required, addressed to the Chief Inspector of Stock, Stanley.

No. 1 is from camp in the vicinity of the coast, which always produces our best lambing, Little Mountain.

No. 2 is from healthy camp inland, which produces our second best lambing, our Stud Flock.

No. 3 is from unhealthy camp inland, Mt. Edgeworth, which carries Cast Ewes, and which piece of ground I have to overstock occasionally to get the best results from. Cast Ewes are about the only sheep which will thrive at all on this ground.

I am enclosing a chart with the three places marked on it, and shall be glad if you will return same when done with.

I have the Honour to be

Sir,

Your Obedient Servant

R. B. Pole Evans.



13

Fox Bay.W.

June 5/24.

To,  
Chief Inspector of Stock,  
Stanley.

Sir,

I beg to acknowledge receipt of Radio sent by the Colonial Secretary May 31st, asking for samples of soil for the Rowett Institute.

I am forwarding 12 samples with the top sod & have packed them in boxes to prevent them getting broken up in transit.

Each sod is labelled & numbered, these numbers corresponding with those marked on map enclosed. Trusting you will receive them safely & that they will meet with your approval

Yours faithfully

Michael Rowson



The Chukchee  
June 6<sup>th</sup> 1924

Reports on samples of soils

Bag No. 1. 2 samples taken from beaches

North West side of rocky inlet

and 4 samples taken from beaches

near about 1/2 mile from where

settlement is made on boat

Bag No. 2. 4 samples healthy soil taken from

both sides of Charley Stream

about 3-4 miles from Stony Range

2 1 samples taken from plain about

about 3 miles S. of Mr. Robinson

2 1 sample about 3 miles S. of

of Mr. Robinson

Bag No. 4

4 samples of unhealthy soil

taken from 1/2 mile South of Pt

Zigewoth. 2 samples taken

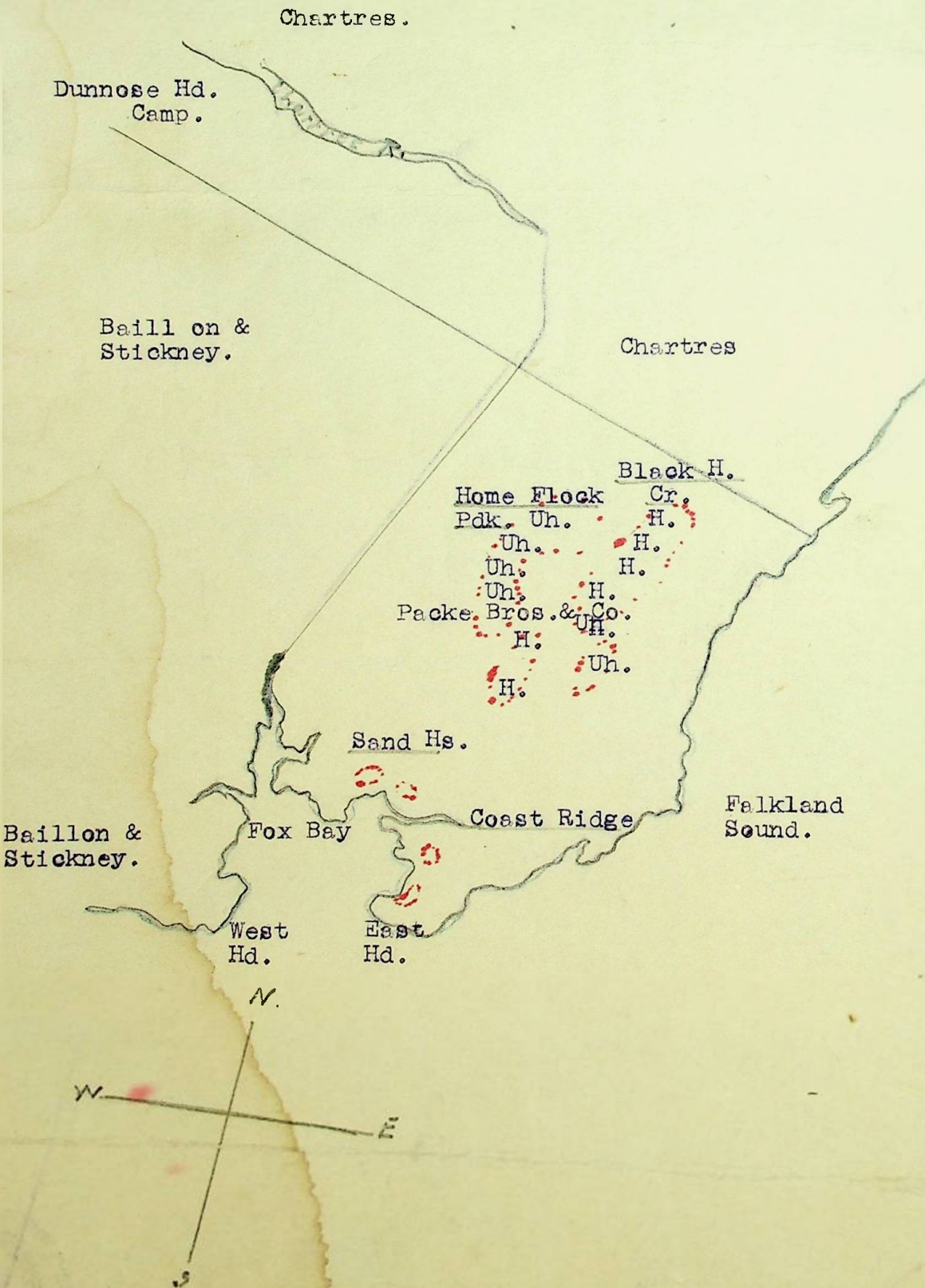
from terraces in lower grounds

of J. Stanley



256

Sketch of Fox Bay East Camp accompanying 18 samples of soil taken from inland "healthy" and "unhealthy" camp and from camp in the vicinity of the coast - as marked thereon.





Series  
I  
Healthy  
Coast  
Lands.

Samples 1 2 & 3 from Port Stephens Binson i.e. the southern boundary of Port Stephens Harbour. The ground here is hard mostly diddle-die and tuft grass. Sheep get very fat and grow well. At present it is used <sup>as</sup> a new paddock.

Samples 4 5 & 6 are from Cape Oxford and the vicinity of Oxford Hill. The ground here is equally soft and hard but well covered with both white and fine grasses. This piece is undoubtedly the best ground on this station carrying the stud flock very well.

Series  
II  
Unhealthy  
Coast  
Lands.

Samples 7 8 & 9 from Double Creek Binson i.e. north west side Double Creek Settlement. This area is mostly land covered with diddle-die, white grass and fern. Looking at this block one would expect good results as there is fine shelter and lies well open to the sun. For years it has had a trouble to get anything to survive with small death rate as all classes of sheep have been tried. At present there are still ewes running there which are doing better than any other class of sheep.

Samples 10, 11 & 12 from Carrow Har Binson on the north side of that settlement. This ground looks ideal but really is not much better than Double Creek. Breeding ewes get <sup>fat</sup> and strong but lamb badly the lambs being very small when born but improve rapidly the first two months to go woolly again from December to March.



Series

III

Unhealthy

Inland

Camps.

Samples 13, 14, 15, taken from the vicinity of Mt Young  
<sup>good</sup>  
are samples of this inland camp it being mostly peaty  
and only used in winter for grazing cattle. Dry summers  
young sheep fatten quickly on such camp but are apt to  
blight if not removed in time during Autumns such as this  
last.

Samples 16, 17, 18, from Mc Quirey Flat and the Two Pond  
Ridge south of Carey Mr settlement comprises of camp <sup>2e</sup> also  
to run sheep during winter but which have the most ~~inferior~~  
inferior lambings both ewes & lambs being poor even  
during shearing months. This is inclined to be both wet  
and sour and is of peaty nature.



Fox Bay East, West Falkland,

4th. June, 1924.

Sir,

With reference to the Colonial Secretary's radio of the 30th. May last, I am forwarding by this "Falkland" three sacks containing in each six samples or squares of soil measuring nine inches each way, taken from different parts of <sup>inland</sup> "healthy", "unhealthy" camp and camp "in the vicinity of the Coast".

Each sack is numbered "1", "2" and "3" respectively. i.e.- No. 1 contains six samples of "healthy" soil.

" 2 " " " " "unhealthy" "

" 3 " " " " " soil near the coast.

I am attaching herewith for your guidance a rough sketch or tracing of Fox Bay East Camp, and have marked thereon in red ink the different localities from which the soil was taken. "H" being for healthy; "Uh" for unhealthy, and that taken from near the coast shows itself

"Healthy soil": Most of these samples were taken from what is locally known as "Black Hill Corner" close to Chartres Station boundary. The ground here is comparatively dry and ridgy, and should graze from 500 to 800 breeding ewes. Generally both ewes and lambs from this quarter, show up in the Spring in good condition.

"Unhealthy soil": This covers a fairly large area of this paddock "Home Flock", which consists much of swamps and ponds with intervening ridges. Should the winter be a dry one, stock comes through in much better condition than otherwise.

"Vicinity of Coast": Taken from Sand Hills and Coast Ridge paddocks near coast towards East Head Fox Bay. Mixture of diddle-dee ridges (low), patches of peaty soil and mud flats.

I am, Sir,  
Your obedient servant,

*James Wilson*

P. P. PACKE BROS. & CO



re Case.

marked B & F

Containing samples  
of soil.

70  
Roy Cove,  
West Falkland Island,  
S. America.

June 14<sup>th</sup> 1924.

To

The Chief Inspector of Stock.

Stanley.

Sir,

I am forwarding per "Falkland" samples of soil from  
various parts of Roy Cove Station, which I hope will prove  
satisfactory.

I am,

Sir,

Yours faithfully

Howard Clement





17a

THE COLONIAL ENGINEER'S OFFICE,  
STANLEY.

2nd July, 1924.

Sirs,

The following are particulars of a case which the Governor wishes to ship by the R.M.S. "ORTEGA".

<u>Marks.</u>	<u>No.</u>	<u>Contents.</u>	<u>Measurements.</u>
B.	I	Earth.	2' 10" x 1' 5" x 1' 2"

consigned to:-

The Director,  
Rowett Research Institute,  
Aberdeen,  
Scotland.

2. Freight charge to be rendered to the Colonial Secretary's Department.

I am,  
Sirs,  
Your obedient Servant,

Colonial Engineer.

Messrs The Falkland Islands Company,  
Shipping Agents,  
Stanley.



No.

MINUTE.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

...2nd July.....1924.

From The Colonial Engineer.

To

THE COLONIAL SECRETARY,

Stanley, Falkland Islands.

The Hon. Col. Secy.,

I beg to submit, herewith, copy of letter to Agents P.S.N.Co. with reference to the shipment of samples of earth.

2. The case has been delivered to the Agents.

*P. B. Banley.*

Colonial Engineer.

2/7/24

383/24.

2nd July,

24.

Sir,

With reference to your letter to His Excellency the Governor, No. S/11/24 of the 25th of March, relating to specimens required for examination in connection with the stock investigations being carried out on behalf of the Colony, I am directed by His Excellency to inform you that a case containing samples of soil taken from representative sheep stations in East Falkland Island is being sent to you by the s.s. "Ortega" on the 3rd inst.

2. A copy of notes on these samples, prepared by Mr. Hugh Munro, Principal District Inspector, Auckland Province, New Zealand, whose services have been lent by the Dominion Government for the purpose of advising this Government on matters relating to stock, is attached, together with a map on which Mr. Munro has marked the districts from which the samples were taken.

3. It will not be possible to forward samples of soil from West Falkland Island by the same mail, but these will be sent by the next opportunity.

The Director,  
Rowett Research Institute,  
Aberdeen.

I am,  
Sir,  
Your obedient servant,  
H. Henniker-Heaton,  
Colonial Secretary.



383/24.

7th July,

24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 18th of June and to thank you for the samples of soil which have been received as advised and which will in due course be forwarded to the Rowett Research Institute for analysis. I am also to thank you for the notes on these samples contained in your letter and for the prompt and thorough manner in which you have responded to the request made to obtain the specimens.

I am,

Sir,

Your obedient servant,

G. R. L. Brown,

for Colonial Secretary.

J. C. Betts, Esq.,

Manager,

Pebble Island,

West Falkland.



21

383/24.

7th July, 24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 4th of June and to thank you for the samples of soil which have been received as advised and which will in due course be forwarded to the Rowett Research Institute for analysis. I am also to thank you for the notes on these samples enclosed in your letter and for the prompt and thorough manner in which you have responded to the request made to obtain the specimens.

I am,

Sir,

Your obedient servant,

C. R. L. Brown,

for Colonial Secretary.

C. H. Robertson, Esq.,  
Port Stephens,  
West Falkland.



383/24

22

7th July,

24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 20th of June and to thank you for the samples of soil which have been received as advised and which will in due course be forwarded to the Rowett Research Institute for analysis. I am also to thank you for the notes on these samples contained in your letter and for the prompt and thorough manner in which you have responded to the request made to obtain the specimens. The chart which you kindly sent, marked with the localities from which the soil was taken, will be returned to you as requested when the markings have been copied to a chart which is being forwarded with the samples

I am,

Sir,

Your obedient servant

G. R. L. BROWN,  
for Colonial Secretary

R. C. Pole-Evans, Esq., J.P.,  
Manager,  
Port Stephens.



383/24.

7th July,

24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 5th of June and to thank you for the samples of soil which have been received as advised and which will in due course be forwarded to the Rowett Research Institute for analysis. I am also to thank you notes and sketch map enclosed with your letter and to express His Excellency's appreciation of the prompt and thorough manner in which you have responded to the request made to obtain the specimens.

I am,

Sir,

Your obedient servant,

G. R. L. Brown,

for Colonial Secretary.

M. Robson, Esq., J. P.,  
 Fox Bay, West,  
 West Falkland.



383/24.

7th July,

24.

Sir,

I am directed by the Governor to acknowledge with thanks the receipt of the samples of soil from Chartres Station, required for analysis by the Rowett Research Institute, Aberdeen. The samples will be forwarded to the Institute in due course, together with a copy of the notes furnished, describing the localities from which the samples were taken.

I am,

Sir,

Your obedient servant,

G. R. L. Brown,

for Colonial Secretary.

A. J. Harvey, Esq.,

Chartres,

West Falkland.



383/24.

7th July,

24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 4th of June and to thank you for the eighteen samples of soil which have been received and which will, in due course, be forwarded to the Rowett Research Institute for analysis. I am also to thank you for the notes and sketch map enclosed with your letter and to express His Excellency's appreciation of the prompt and thorough manner in which you have responded to the request made to obtain the specimens.

I am,

Sir,

Your obedient servant,

G. R. L. Brown,

for Colonial Secretary.

J. Innes Wilson, Esq., J. P.,  
Fox Bay, East,  
West Falkland.



383/24.

7th July,

24.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter of the 14th of June, and to thank you for the samples of soil from various parts of Roy Cove Station which have been duly received. I am to say, however, that before satisfactory use can be made of these specimens, it will be necessary to obtain particulars regarding the locality from which each sample was taken, and I am to request that you will be so good as to furnish this information as fully as possible, especially with regard to the extent to which the camp is healthy or unhealthy and carefully describing the locality in such a way as to enable it to be readily located on the map. I am also particularly to request that, when supplying this information, reference should in every case be made to the samples as numbered by you, and that the descriptions required may be sent by return so to enable the samples to be forwarded for analysis by the first opportunity.

2. I am to thank you for your kindness in responding so promptly to the request made to obtain the specimens.

Howard Clement, Esq.,  
Roy Cove,  
West Falkland.

I am,

Sir,

Your obedient servant,  
*C. R. B. Brown*  
for Colonial Secretary



Notes on soil samples collected in East Falkland  
Island.

(27)

Lafonia Station.  
-----

Sample No. 1.

From camp adjacent to the coast at the upper  
reach of Darwin Harbour (Block 8).

There is an average depth of approximately 7  
inches of chocolate coloured soil over a subsoil of  
free working yellow clay with which is mixed a soft  
sandstone rubble. Rock is found at an average depth  
of approximately 6 feet. This camp is dry and very  
healthy for stock. The vegetation is mostly heath  
(diddle-dee) and a very scant growth of fine grasses.

Sample No. 2.

From inland camp in the vicinity of "High Hill"  
(Block 25).

There is an average depth of 7 inches of black  
loam over a subsoil consisting of a free working yellow  
clay and soft sandstone rubble mixed. Rock is found  
at an average depth of approximately 5 feet. The  
vegetation consists of balsam bog (plentiful), some  
diddle-dee and a very scant growth of fine grasses. This  
camp is dry and healthy for stock.

Sample No. 3.

From inland camp in the vicinity of Tranquilidad  
between Cutter Cove and Brenton Loch.

An average of 10 to 12 inches of peaty soil on  
rock. This camp is very wet during the greater part  
of the year and is not healthy sheep country. As is  
usual with this class of camp, the vegetation is almost  
exclusively white grass with a few fine grasses and  
herbs growing between.

Sample 4.



Fitzroy Station.

## Sample No. 4.

From camp adjacent to the coast at Pleasant Point (Block 15).

An average depth of a approximately 12 inches of black loam over a subsoil of free working clay about 6 feet deep with rock underlying. This camp is dry and very healthy for stock. The vegetation consists of mixed tussock grasses.

## Sample No. 5.

From inland camp at Pleasant Point (Block 15).

The camp from which this sample was taken is similar to that from which No. 4 was secured excepting that it is some distance from the coast.

## Sample No. 6.

From inland camp about the centre of Block 2.

This camp appears to be in every way similar to that from which sample No. 5 was taken.

## Sample No. 7.

From inland camp about the centre of Block 16.

This camp is very similar to that from which samples 4, 5 and 6 were taken excepting that the vegetation, in place of tussock pasture is mostly small fern with a sprinkling of Christmas bush and some diddle-dee.

Sparrow Cove Station.

## Sample No. 8.

From inland camp about midway between Islet Point and Sparrow Cove (Block 57).

A peaty formation varying in depth from 12 to 30 inches with rock underlying. It is very wet during



the greater part of the year and is not healthy camp for stock. The principal vegetation is white grass tussock with rushes and moss between. This is considered very poor camp.

Sample No. 9.

From camp in the vicinity of the coast about the centre of Block 4.

A peaty formation similar to that from which sample No. 8 was taken, but the camp here is considerably drier. The vegetation consists of a mixture of diddle-dee, small fern and rushes with a few straggling roots of fine grass. This is very poor pasture and not healthy camp for stock.

San Carlos North Station.  
-----

Sample No. 10.

From camp adjacent to the coast at Careening Cove, Port San Carlos (Block 37).

There is an average depth of approximately 8 inches of black loam overlying a subsoil consisting of a free working yellow clay which contains a quantity of soft sandstone rubble. This camp is dry and very healthy for stock.

Sample No. 11.

From camp about the centre of Block 36.

There is an average depth of approximately 10 inches of peaty soil over a subsoil of clay and rubble with rock at an average depth of about 6 feet. This is dry camp and good healthy sheep country. The vegetation consists of mixed tussock pasture.

Sample No. 12.

From inland camp about the centre of Block 42.  
There is an average depth of approximately 2  
feet/



feet of peaty soil overlying rock. This camp is very wet during the greater part of the year and is not healthy sheep country. The vegetation is mostly white grass with some herbs and fine grasses between.

San Carlos South Station.

Sample No. 13.

From camp at the head of the harbour (Port Sussex), (Block 28).

There is an average depth of 11 inches of black loam with a free working yellow clay subsoil about 1 foot deep with rock underlying. This is dry camp and good healthy sheep country. The vegetation is mostly diddle-dee and Christmas bush with a sprinkling of fine grasses.

Sample No. 14.

From inland camp about the centre of Block 39.

There is an average of approximately 9 inches of black loam with a subsoil of yellow clay and soft sandstone rubble about 18 inches in depth overlying rock. This is dry camp and healthy for stock. The vegetation is mostly balsam bog with some Christmas bush, moss and a sprinkling of fine grasses. The carrying capacity of this country in its present condition is very small.

Sample No. 15.

From the centre of block 74 (Bodie Peak).

About 18 inches of peaty soil over 12 inches of slate coloured clay with rock underlying. This camp is very wet and unhealthy for stock and can only be grazed during the summer months.

The vegetation is white grass with a few herbs and fine grasses between.

Sample 16/



Mrs. T. R. Robson's Station,  
"Port Louis North."

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Sample No. 16.

About 12 inches of black loam over a subsoil of yellow clay mixed with soft sandstone rubble. This camp is dry and healthy for stock, but in its present condition its carrying capacity is extremely low. The vegetable covering is fine grass, moss and some Christmas bush and diddle-dee.

---

WATERBURY & SONS  
LIMITED



(28)

Roy Cove,  
West. Falkland Island.

S. America.

Ref. No 383/24.

Aug<sup>o</sup> 4<sup>th</sup> 1924.

Sir,

In reply to your letter of July 4<sup>th</sup> respecting samples of soil sent from Roy Cove Station. I regret it is impossible for me to give the locality from, or according to Chart. My samples were all labelled and believe Case 1, 2, 3, contain specimens of healthy grass, both Coasts and Inland. Of course I can only judge by the stock (Sheep) feeding on each section, but possibly the analysis may prove that some parts, or sections are not so healthy as others.

I am,

Sir,

Your obedient servant

Howard Clement

The Hon<sup>ble</sup> The Colonial Secretary  
Stawley.



Geal Inlet

25<sup>th</sup> July 1924

Sir,

In accordance with instructions from you by letter dated 30<sup>th</sup> May and received on 4<sup>th</sup> instant, I beg to inform you that I am forwarding three samples of soil to the Chief Inspector of Stocks Stanley.

Being in Stanley a few days after receiving your letter and not being quite clear about part of instructions I spoke to Mr Brown about it and he advised me to see Mr Gunnro, which I did.

I pointed out the places on the map to Mr Gunnro from which samples would be sent and explained as well as I could the nature of the growth, sub soil etc.

Mr Gunnro told me then to get the squares of soil from each section, to dry them

The Hon.

The Colonial Secretary



them, mix the squares from each section and send about five pounds of each lot to Stanley. He also said that the explanation given him would be sufficient.

I am,

Sir,

Your obedient servant  
Walter Jewing



Notes on soil samples collected in West Falkland  
Island.

-----  
Pebble Island Station.  
-----

Sample No. 25. (No. 24 not  
represented)  
From Camp on which stock does not thrive.

Sample No. 26.  
From Camp on which stock keep healthy and in  
good condition.

(No further particulars available.)

-----  
Fox Bay East Station.  
-----

Sample No. 28. (No. 27 not  
represented)  
From inland Camp in the vicinity of Black Hill  
country near the boundary of Chartres Station.  
Stock thrive on this country.

Sample No. 29.  
From inland Camp on which stock do well during  
dry seasons only.

Sample No. 30.  
From Camp in the vicinity of the coast close to  
Fox Bay.

(No further information available.)

-----  
CHARTRES Station.  
-----

Sample No. 31.  
From Camp in the vicinity of the coast.

Sample No. 32.  
From inland Camp which is healthy for stock.



## Sample No. 33.

From inland Camp which is unhealthy for stock.

(No further information available.)

## Port Howard Station.

## Sample No. 34.

From Camp in the vicinity of the coast close to Little Mountain. This is very healthy camp and the best lambing country on the property.

## Sample No. 35.

From inland camp which is healthy for stock and the second best lambing country on the property.

## Sample No. 36.

From inland camp in the vicinity of Mt. Edgeworth. This country is unhealthy for stock.

Hill Cove Station.  
-----

## Sample No. 37.

From camp in the vicinity of the coast.

This is dry camp and very healthy for stock. Vegetation, diddle-dee, Christmas bush and some fine grasses.

## Sample No. 38.

From inland camp which is fairly dry and on which stock do moderately well. Vegetation, tussock with fine grasses and herbs on the intervening spaces.

## Sample No. 39.

From wet inland camp which is unhealthy for stock.

Port Stephens Station.  
-----

## Sample No. 40.

From camp in the vicinity of the coast on which stock do well. Vegetation, diddle-dee, whitegrass and some fine grasses.



Sample 41.

From camp in the vicinity of the coast.

This is dry camp but very unhealthy for stock.  
Vegetation, diddle-dee, fern, and whitegrass.

Sample No. 42.

From inland camp which is wet and unhealthy for  
stock.

Fox Bay West Station.  
-----

Samples Nos. 43, 44 and 45.

The localities from which these samples were  
obtained are indicated on the map. No further partic-  
ulars are available regarding them.

Roy Cove Station.  
-----

Samples Nos. 46, 47, 48 and 49.

The localities from which these samples were  
obtained are indicated on the map. No further particul-  
ars are available regarding them. Roy Cove Station is  
reputed to include some of the most healthy stock country  
in the Colony.

-----



Notes on soil samples collected in East Falkland  
Island.

-----  
Teal Inlet Station.  
-----

Sample No. 17.

From Camp in the vicinity of the coast (Chata  
Rincon) opposite Bobs Island.

About 12 inches of sandy soil over a subsoil of  
mixed yellow clay and sandstone rubble. Dry camp  
and very healthy for stock. Vegetation, diddle-dee  
and Christmas bush with a sprinkling of fine grasses.

Sample No. 18.

From inland camp midway between Pedro River and  
Bull Hill.

About 10 inches of dark chocolate coloured soil  
over a subsoil of mixed yellow clay and rubble. Dry  
camp and very healthy for stock. Vegetation whitegrass,  
tussock, with fine grasses and herbs on the intervening  
spaces.

Sample No. 19.

From inland camp to the north of Mt. Simon (Block  
55).

From 12 to 18 inches of peaty soil with rock  
underlying. Wet camp and unhealthy for stock. Veget-  
ation, almost wholly whitegrass.

Douglas Station.  
-----

Sample No. 20.

From camp on the coast between Middle Creek and  
South East Creek.

About 12 inches of chocolate coloured soil over  
a clay subsoil which is light blue in colour. Dry  
camp and very healthy for stock. Vegetation, diddle-  
dee and fine grasses.

Sample 21.



## Sample No. 21.

From medium dry camp inland about  $2\frac{1}{2}$  miles due north from Middle Creek.

Very healthy country for stock. Vegetation, fine grasses.

## Sample No. 22.

From inland camp about one mile south of West Hill.

About 9 inches of peaty soil which is not healthy sheep country. Vegetation, whitegrass, rushes, moss and Christmas bush.

## Sample No. 23.

From dry inland camp 3 miles north of Bombilia Hill.

About 10 inches of peaty soil over a clay subsoil which is light blue in colour. This camp is healthy for stock. Vegetation, whitegrass tussock with fine grasses and herbs on the intervening spaces.

---







34

THE COLONIAL ENGINEER'S OFFICE,  
STANLEY.

27th September, 1924.

Sirs,

The following are particulars of cases which  
the Government wishes to ship by the R.M.S. "ORTEGA".

<u>Marks.</u>	<u>No.</u>	<u>Contents.</u>	<u>Measurements.</u>	<u>Consignees.</u>
B.	1	Earth samples.	14"x 16"x 2'10"	The Director, Rowett Research Inst., Aberdeen, Scotland.
<del>C.</del>	<del>1</del>	<del>Bearings.</del>	<del>7"x 9"x 11"</del>	<del>The Crown Agents, 4, Millbank, Westminster, S.W.</del>
<del>C.</del>	<del>2</del>	<del>Water samples.</del>	<del>1'10"x 1'8"x 1'6"</del>	<del>The Crown Agents, 4, Millbank, Westminster, S.W.</del>
<del>C.</del>	<del>1</del>	<del>Chronometer.</del>	<del>13"x 14"x 16" (Ship's Parcel)</del>	<del>Messrs Green Shields, Cowie &amp; Co., North Castle Street, Liverpool.</del>

2. Freight charges on Earth samples, Water samples and Chronometer should be rendered to the Colonial Secretary's Department.

3. Freight and other charges on Bearings will be paid by the Crown Agents on delivery.

I am,

Sirs,

Your obedient Servant,

Colonial Engineer.

Messrs THE FALKLAND ISLANDS COMPANY,  
Shipping Agents,  
Stanley.



TELEPHONE—BUCKSBURN 8.

383/24.  
84/24.  
Railway Station:  
BUCKSBURN (L.N.E.R.),  
Northern Scottish Area.

University of Aberdeen and The North of Scotland College of Agriculture.

(JOINT COMMITTEE ON RESEARCH IN ANIMAL NUTRITION.)

Director:

JOHN BOYD ORR,  
D.S.C., M.C., M.A., M.D., D.Sc.

Secretary and Treasurer:

D. B. GUNN,  
M.B.E., M.A., LL.B.

The Rowett Research Institute,

BUCKSBURN, ABERDEEN,

27th August, 1924.

The Colonial Secretary,  
The Falkland Islands.

Sir,

I beg to acknowledge receipt of your letter of 2nd July with enclosures, which are having our attention.

So soon as the analysis of the pastures and the soils are completed a report will be forwarded.

I have the honour to be, Sir,

Your obedient Servant,

*A. A. Bowie*  
pro. Director.



TELEGRAM.

From : The Colonial Secretary.

To : The Crown Agents for the Colonies.  
~~The Director of the Falkland Islands.~~

Dispatched : 23rd October, 1924. Time 3.30 pm.

Received : ... .. 1924. Time.

CROWN  
LONDON

ROWABYPECH NYSETWAKMI YPLOONYSET WEPXOZARKA  
NATIMAWPHI KOANPONCTE LYORMPAWUV MIMUADYNIE  
GNUZO.

Meaning:

Following for Director, The Rowett Research Institute, Bucksburn, Aberdeen, message begins "With reference to my letter of 2nd May No. 84 With reference to my letter of 2nd July No.,383 request telegraphic reply as to whether it is now possible to make any report message ends.

Colonial Secretary  
Falkland Islands.



84/24 & 383/24  
TELEGRAM.

37

From : The Crown Agents for the Colonies.

To : The Colonial Secretary

Dispatched : 3rd November..... 192 4

Time. 5.15

Received : 4th November..... 192 4

p.m.  
Time. 10.20  
a.m.

SECRETARY

PORT STANLEY

YOKWI ROWETT PIOVBKALYH (PIOOBKALYH) SGJOUPEVEP  
(SGJOUPEOEP) BEYCYABODI VIDKE TOUEV EJWEN.

Meaning:

With reference to your telegram of 23rd October Rowett  
Research Institute state Report will be available in  
about three weeks time.

Crown Agents for the Colonies.



DUPLICATE

FALKLAND ISLANDS

Downing Street,

No. 126

3 December, 1924

Sir,

With reference to your telegram of the 23rd November I have the honour to transmit to you a copy of a letter from the Rowett Research Institute forwarding a report on the samples of grasses and soils sent from the Falkland Islands.

2. I should be glad if you would inform me by telegram whether you agree that payment of the further grant of £250 may be made when required.

I have the honour to be,

Sir,

Your most obedient,

humble Servant,

(Signed) L. S. AMERY

GOVERNOR,

J. MIDDLETON, ESQ., K.B.E., C.M.G.

etc., etc., etc.

2nd December 1924.

*Encls re Grasses  
Accepted to  
M.P. BH/24*



COPY

304

UNIVERSITY OF ABERDEEN AND THE NORTH OF SCOTLAND  
COLLEGE OF AGRICULTURE.

(Joint Committee on Research in Animal Nutrition.)

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THE ROWETT RESEARCH INSTITUTE

Bucksburn, Aberdeen.

Ref. R/9/24.

2nd December, 1924.

The Under Secretary of State for the Colonies,  
The Colonial Office,  
Whitehall, LONDON, S.W. 1.

Sir,

I have the honour to submit the enclosed report which is prepared for His Excellency the Governor of the Falkland Islands.

The analytical work in connection with this investigation has just been completed, and there has not been sufficient time to enable a full report to be drawn up. It is believed, however, that the analyses show that deficiencies in essential food constituents in the pastures account for the condition of malnutrition from which the sheep in the Falkland Islands are suffering.

Further samples of soil are being sent for chemical analyses and, for pathological examination, bone from animals which have died, and it is also intended to carry out certain feeding experiments to ascertain whether it is possible to feed direct to the sheep substances

which



which are deficient in the pastures.

It was also arranged with the Governor of the Falkland Islands that if it were thought desirable to continue the work, a second grant of £250 would be made to defray the cost. This further work is being carried out and it is understood that, in terms of your letter of 3rd March last, this further grant will be available when required.

I have, etc.,

(Signed) J. B. ORR.

Director.



Recd. on  
3/12/24

38 B

REPORT ON SOILS.

BY

Mr. W. Godden, Head of the Biochemical Department.

-----

SOILS:- All the samples show a marked deficiency in lime. The lime content varies from 0.05 to 0.27% of CaO, with an average of 0.13%. When this is compared with a value of 0.80% as quoted by Hall for a soil carrying good pasture, it may be seen how marked is the deficiency. Correlated with these figures is the fact that all of the soils show a more or less marked acid reaction.

The organic matter content (average 43%) of the soils is very high, rising, as it does in some cases, to over 80% of the dry soil. As might be expected from the high percentage of organic matter, the soils are extremely rich in nitrogen, but it is probable that this nitrogen is largely in a non-available form, consisting, as it does, of undecayed plant residues.

The total phosphoric acid content of the soils is satisfactory (average 0.133%) but the percentage of total potash (average 0.334%) is not high. The percentage of available phosphoric acid and potash are, however, satisfactory.

CONCLUSIONS:- The main conclusion to be drawn from the analytical data is that the soils require the application of lime and that without such an application little or no improvement in the pasture is to be expected. The application of lime would (1) supply lime as a food for the plants,



plants, (2) neutralise the acidity of the soil and hence tend towards an improved herbage, (3) help in the breaking down of the undecayed vegetable residues and so render the nitrogen more available.

39

No. 383/24...

COLONIAL SECRETARY'S OFFICE,  
STANLEY,

26th January, 1925.

To The Chief Inspector of Stock,

I am directed by the Governor to attach the  
correspondence noted below for **your information.**

H. HENNIKER-HEATON,  
Colonial Secretary.

Date	Description
1924. 2nd December,	Copy of Report by Rowett Research Institute on soil from the Falkland Islands.



COPY.

410

FALKLAND ISLANDS

No. 4.

Downing Street,

7th January, 1925.

Sir,

With reference to my despatch No. 126 of the 3rd December, I have the honour to transmit to you the accompanying copy of correspondence with Rowett Research Institute regarding the investigations in connection with the Sheep Farming Industry of the Falkland Islands.

To R.R. Inst  
9th Dec. '24  
From do. 18th Dec.  
To -do- 23rd "  
From -do- 26th "

2. Mr. Munro has now reported his arrival in this country and is arranging to proceed to Aberdeen with a view to attending the meetings to be held there on the 9th and 10th of this month.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

(sgd) L. S. Amery,

GOVERNOR,

J. MIDDLETON, ESQ., K.B.E., C.M.G.

&c., &c., &c.,

Downing Street,

9th December, 1924.

Sir,

I am directed by Mr. Secretary Amery to acknowledge the receipt of your letter of the 2nd of December (R/9/24) forwarding a report on the samples of grasses and soils sent from the Falkland Islands.

2. A copy of your letter, with enclosures, has been sent to the Governor, who has been asked to report by telegram whether the contemplated further payment of £250 may be paid when required.

3. I am to add that a telegram has been received from the Governor stating that Mr. Munro will arrive in England about the end of December.

I am, etc.,

(sgd) G. Grinale.

THE DIRECTOR

ROWETT RESEARCH INSTITUTE.



40 B

THE ROWETT RESEARCH INSTITUTE

Ref. R/9/24

Bucksburn, Aberdeen,

18th December, 1924.

The Under Secretary of State,  
Colonial Office,  
London, S. W. 1.

Sir,

I have the honour to acknowledge the receipt of your letter of 9th December curt. No. 56632/24. I understand that Mr. Munro will report to you on arrival in England. I am very anxious to consult Mr. Munro with regard to the problem in connection with the Falkland Islands, which we are investigating. A meeting with certain scientists has been arranged, to be held here on January 9th and 10th. The Governor, Sir J. Middleton has informed me that Mr. Munro proposes to visit the Institute. It would be very convenient if he could be present at that meeting. Would you please inform Mr. Munro of this meeting when he reports to you, and ask him to communicate with me as soon as possible after he arrives..

I have, etc.,

(SD) J. B. ORR,

Director.

Downing Street,

23rd December, 1924.

Sir,.

In reply to your letter of the 18th of December R/9/2 I am directed by Mr. Secretary Amery to state that Mr. Munro has not yet reported his arrival in England, but that as soon as he does so, he will be informed of the proposed meeting on the 9th and 10th of January, and asked to communicate with you as soon as possible.

2. Mr. Amery gathers from your previous letter of the 2nd of December, R/9/24, that a further report on the grasses and soils of the Falkland Islands is being prepared; and as the next mail for the Colony leaves this Office on the 7th January, I am to enquire whether it is anticipated that the report will be ready for transmission to the Governor by that opportunity.

I am., etc.,

(SDO J. E. SHUCKBURGH.)

THE DIRECTOR,

ROWETT RESEARCH INSTITUTE.



60

Ref. R/9/24

Your Ref. 59481/1924.

The Rowett Research Institute

Bucksburn, Aberdeen,

23th December, 1924.

The Under Secretary of State,

Colonial Office,

LONDON, S.W., 1.

Sir,

I beg to acknowledge receipt of your letter of 23rd December, curt. and to thank you for trying to secure Mr. Munro's attendance at the meetings here on the 9th and 10th January, prox.

A further report on the soils and grasses of the Falkland Islands will not be prepared until after the meeting with Mr. Munro and a further meeting with certain gentlemen now resident in England, who have spent some time on the Falkland Islands and have, therefore, a knowledge of the local conditions, and who could therefore advise us with regard to the practicability of suggestions which, as a result of our investigation, we might make in the report. It will therefore be some time in the Spring before the final report can be submitted.

I have, etc.,

(SDO J. B. ORR,  
Director.