

# Heard Island 2016

Robert W. Schmieder  
Cordell Expeditions



Explorers Club  
18 Nov. 2016



Heard Island

The 1997 Expedition that broke all the records and defined a new spirit of collective pride in Amateur Radio.



VKØIR

# VKØIR

Heard Island

by KK6EK

ISBN: 0-9626013-2-5

Cordell Expeditions  
4295 Walnut Blvd.  
Walnut Creek, California USA 94596



# heardisland.org

Photo: Eric Woehler

# HEARD ISLAND

The 2016 Cordell Expedition

[This website is active again...](#)

[For the blog maintained during the expedition, go to the DXpedition website](#)

[NEW: Special message from the Expedition Leader](#)

*Discovering Life in the Extremes...*

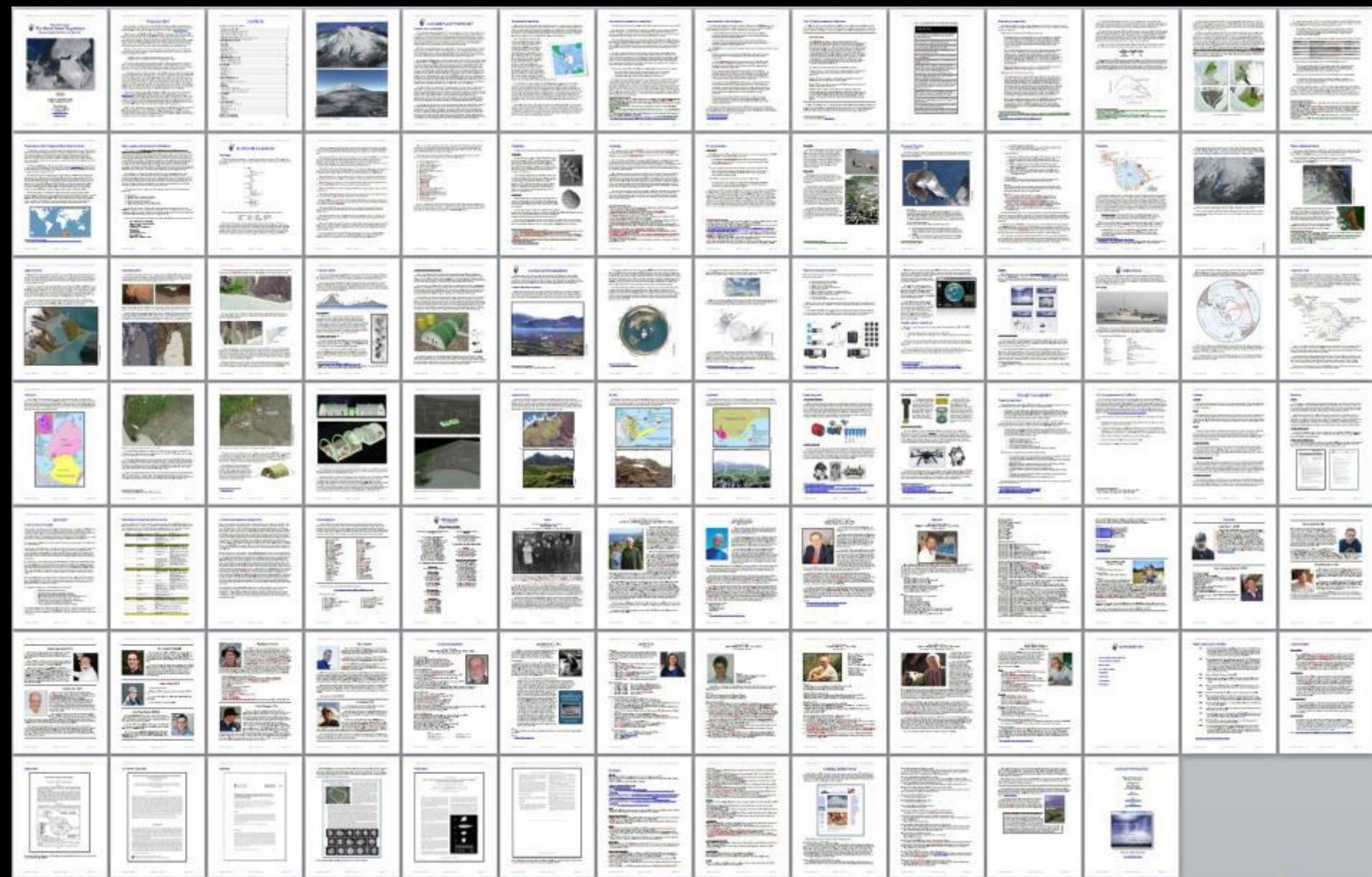
**VKØEK**

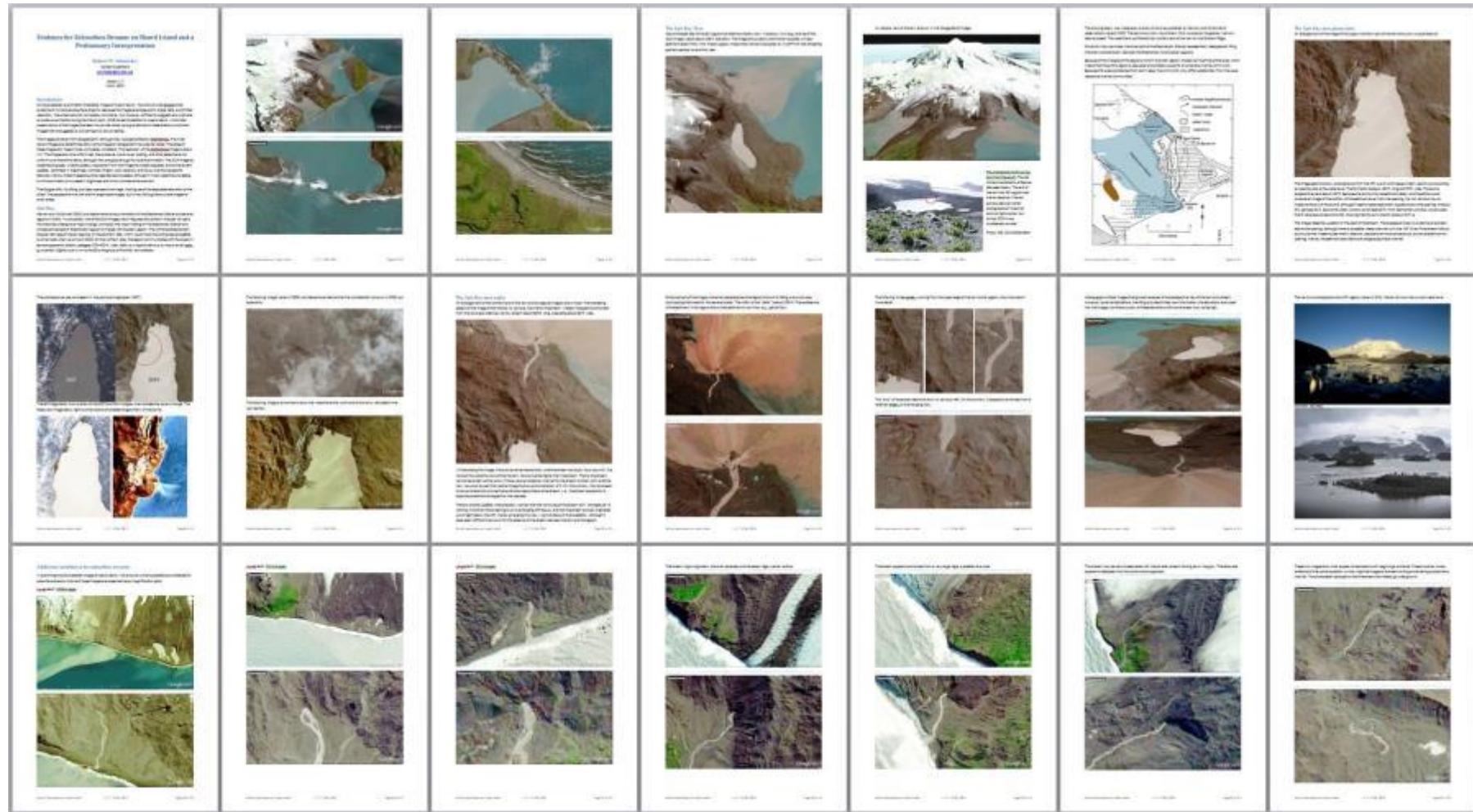
*Linking the Remote in Realtime...*

HOME ABOUT TEAM NEWS NEWSLETTER AUDIOLOG DXA QSLs SOUVENIRS PROJECTS FAQ DOCUMENTS SPONSORS DONATE!

# PERMIT APPLICATION

# PROJECT DESCRIPTION







## Risk Management Plan

Santa Barbara and Edward University

Version 1.0

2014-2015

### Response of Risk Plan

This document is a risk management plan. It identifies risks to our operation and outlines measures to prevent them from occurring during the 2014-2015 season. Part of the document is also a risk register which lists potential risks that may arise. A detailed section also highlights the impact on the individual and the organization.

### Risk Control Strategy

Heard Island has been operating since 2011-2012. The publication includes a review of previous years, and identifies the risks that may have arisen during the 2011-2012 season. The key to risk control is to identify the risks at an early stage. This plan is intended to prevent the risks from occurring during the 2014-2015 season. The plan will include identifying, assessing, and mitigating the risks. It will also include a review of the risks that have already occurred, and how they can be prevented in the future. This document is intended to provide a clear understanding of the risks and their potential impact on the organization.

The primary strategy for reducing risks is to identify them as quickly as possible, assess their potential consequences, and reduce the risks. The basic assumption is that you reduce the uncertainty of the risks by reducing them. This means that these risks will be reduced over time.

### Plan Document on Risk Management

This document is a risk management plan. It identifies risks to our operation and outlines measures to prevent them from occurring during the 2014-2015 season. Part of the document is also a risk register which lists potential risks that may arise. A detailed section also highlights the impact on the individual and the organization.

### Objectives of Risk

The document is a risk management plan. It identifies risks to our operation and outlines measures to prevent them from occurring during the 2014-2015 season. Part of the document is also a risk register which lists potential risks that may arise. A detailed section also highlights the impact on the individual and the organization.

### Personal Responsibility for Reporting Risk

All team members need to be aware of their risk management responsibilities. All team members will be required to take ownership and responsibility for the management of risks. This document is intended to provide a clear understanding of the risks and their potential impact on the organization.

### Review of Risk Plan

This document is a risk management plan. It identifies risks to our operation and outlines measures to prevent them from occurring during the 2014-2015 season. Part of the document is also a risk register which lists potential risks that may arise. A detailed section also highlights the impact on the individual and the organization.

### Objectives of Risk

The following objectives of risk management are described:

#### • Response

- Control
- Prevention
- Recovery
- Threat

#### • Avoidance

- Diversification
- Hedging
- Other
- Diversifying
- Hedging

#### • Detection

- Early detection
- Monitoring
- Generation
- Prevention

#### • Acceptance

- Acceptance
- Diversification
- Hedging
- Other

The purpose of this document is to provide a clear understanding of the risks and their potential impact on the organization. It also provides a clear understanding of the risks and their potential impact on the organization.

Through this document, we can ensure that the organization is well prepared for the challenges ahead. We can also ensure that the organization is well prepared for the challenges ahead.

Category	Description	Impact	Probability	Severity	Control
1	High Impact, High Probability	Very High	Very High	Very High	Very High
2	Medium Impact, Medium Probability	Medium	Medium	Medium	Medium
3	Low Impact, Low Probability	Low	Low	Low	Low
4	Very Low Impact, Very Low Probability	Very Low	Very Low	Very Low	Very Low

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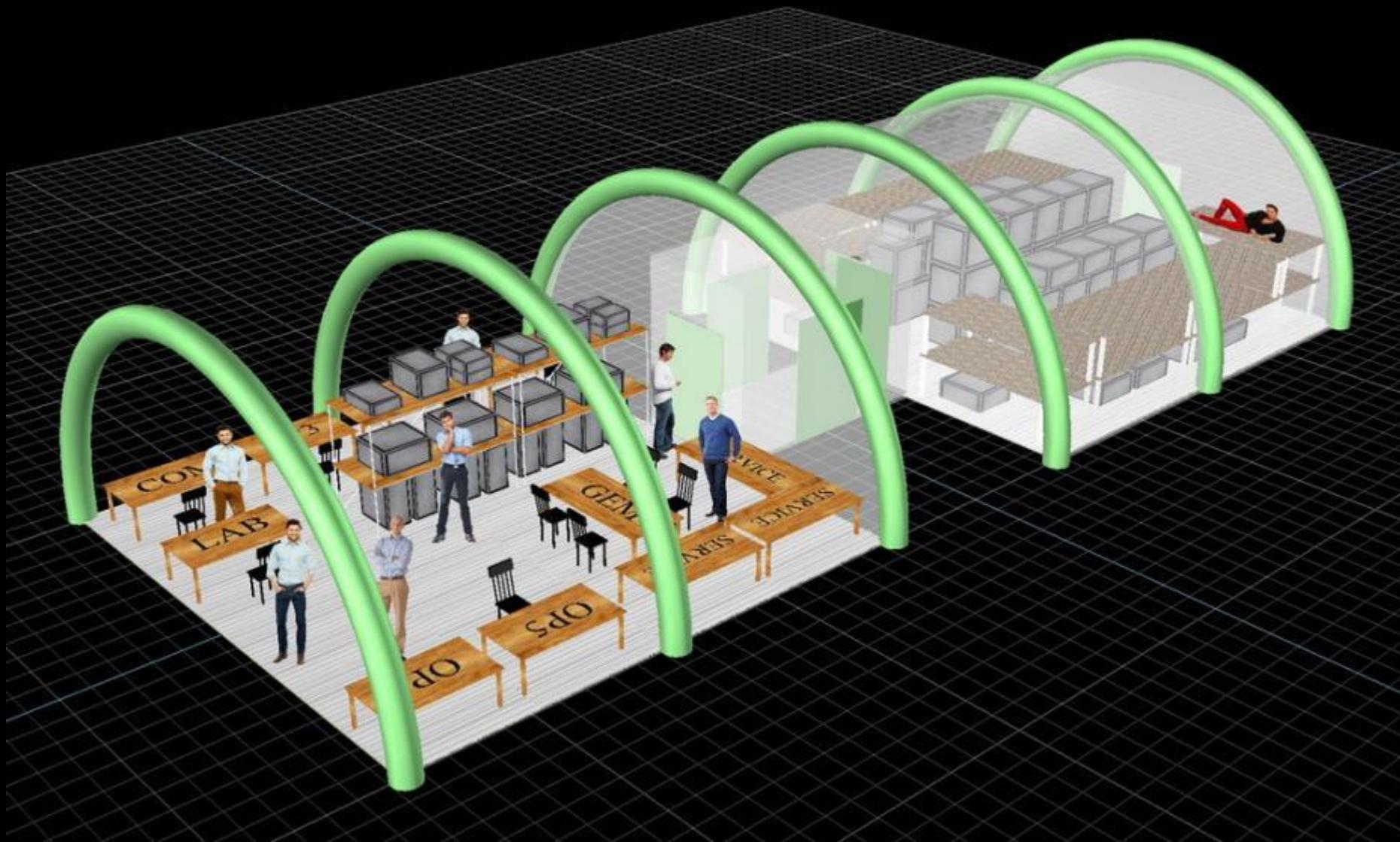
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# THE AIRBEAM SHELTER









3

4

5

2

8

9

10 COAX

11 COAX

12 COAX









DRYDOCK  
PRESSURE





11  
COAXZ

ATLAS

2A

4

ATLAS

3A

ATLAS

3

10

ATLAS

10



## Australian Government

### Department of the Environment Australian Antarctic Division

#### TERRITORY OF HEARD ISLAND AND MCDONALD ISLANDS

#### ENVIRONMENT PROTECTION AND MANAGEMENT ORDINANCE 1987

##### CORDELL EXPEDITIONS 2016

I, Gillian Louise Slocum, Delegate of the Minister for the Environment, acting under section 15 of the Environment Protection and Management Ordinance 1987, considering: (i) the need to protect the environment, and (ii) the safety of persons, aircraft, vehicles and vessels, grant to:

Cordell Expeditions  
4295 Walnut Boulevard  
Walnut Creek  
California  
United States of America<sup>1</sup>

a permit authorising entry to the Territory of Heard Island and McDonald Islands (the Territory) to undertake the following two specific activities subject to conditions<sup>2</sup> which unless authorised are offences as per:

- s.12(1) enter the Territory;
- s.14(1)(c) take any organism from the Territory;
- s.14(1)(d) engage in conduct that results in death or injury to, or interference with, any organism in the Territory;
- s.14(1)(e) remove from the Territory any organism indigenous to the Territory;
- s.14(1)(f) land an aircraft, drive a vehicle or sail a vessel in the Territory;
- s.14(1)(h) remove any soil or other geological matter from the Territory;

<sup>1</sup> For the purpose of this permit, Cordell Expeditions is defined as all those persons listed on the crew and passenger manifests of the vessel MV *Bronewheart*.

<sup>2</sup> Failure to adhere to these conditions is an offence and may result in compliance action, including the suspension or cancellation of this permit.

- s.14(1)(j) engage in conduct that results in interference to any soil or other geological matter in the Territory;
- s.14(1)(k) collect material in the Territory.

#### 1. Specific Activity No. 1 [COMMUNICATIONS PROJECT]

Cordell Expeditions may undertake a COMMUNICATIONS PROJECT in the Territory as described at page 2 of its cover letter submitted to the Australian Antarctic Division on 09 October 2015. The objective of this COMMUNICATIONS PROJECT is the amateur operation of radio communications equipment, satellite communications equipment and computer equipment only.

#### 2. Specific Activity No. 2 [FIELD RESEARCH PROJECT]

Cordell Expeditions may undertake a FIELD RESEARCH PROJECT<sup>3</sup> within the Territory in accordance with the supplementary science application that Cordell Expeditions submitted to the Australian Antarctic Division on 12 January 2016. The scientific objectives of this FIELD RESEARCH PROJECT concern volcanology, glaciology, biology and ecology.

#### 3. Time period:

##### (a) Specific Activity No. 1 [COMMUNICATIONS PROJECT]

10 March 2016 and 30 April 2016.

##### (b) Specific Activity No. 2 [FIELD RESEARCH PROJECT]

10 March 2016 and 30 April 2016.

#### 4. Authorised persons:

##### (a) Specific Activity No. 1 [COMMUNICATIONS PROJECT]

All persons listed on the crew and passenger manifests of the vessel MV *Bronewheart* may undertake Special Activity No. 1 [COMMUNICATIONS PROJECT].

##### (b) Specific Activity No. 2 [FIELD RESEARCH PROJECT]

All persons listed on the crew and passenger manifests of the vessel MV *Bronewheart* may undertake Special Activity No. 2 [FIELD RESEARCH PROJECT]. Teams undertaking Specific Activity No.2 must:

- consist of at least two persons;
- consist of no more than six persons; and
- include a person capable and suitably experienced in field operations.<sup>4</sup>

<sup>3</sup> As per definition of 'field studies' at page 4 of Cordell Expeditions' submitted Environmental Approvals Application Form: '(f)ield studies related to recent environmental changes, biodiversity and climate change'.

<sup>4</sup> Persons capable and suitably experienced in field operations must: (i) possess relevant and extensive field operations experience; and (ii) be fit and healthy enough to undertake effective search and rescue operations.

1

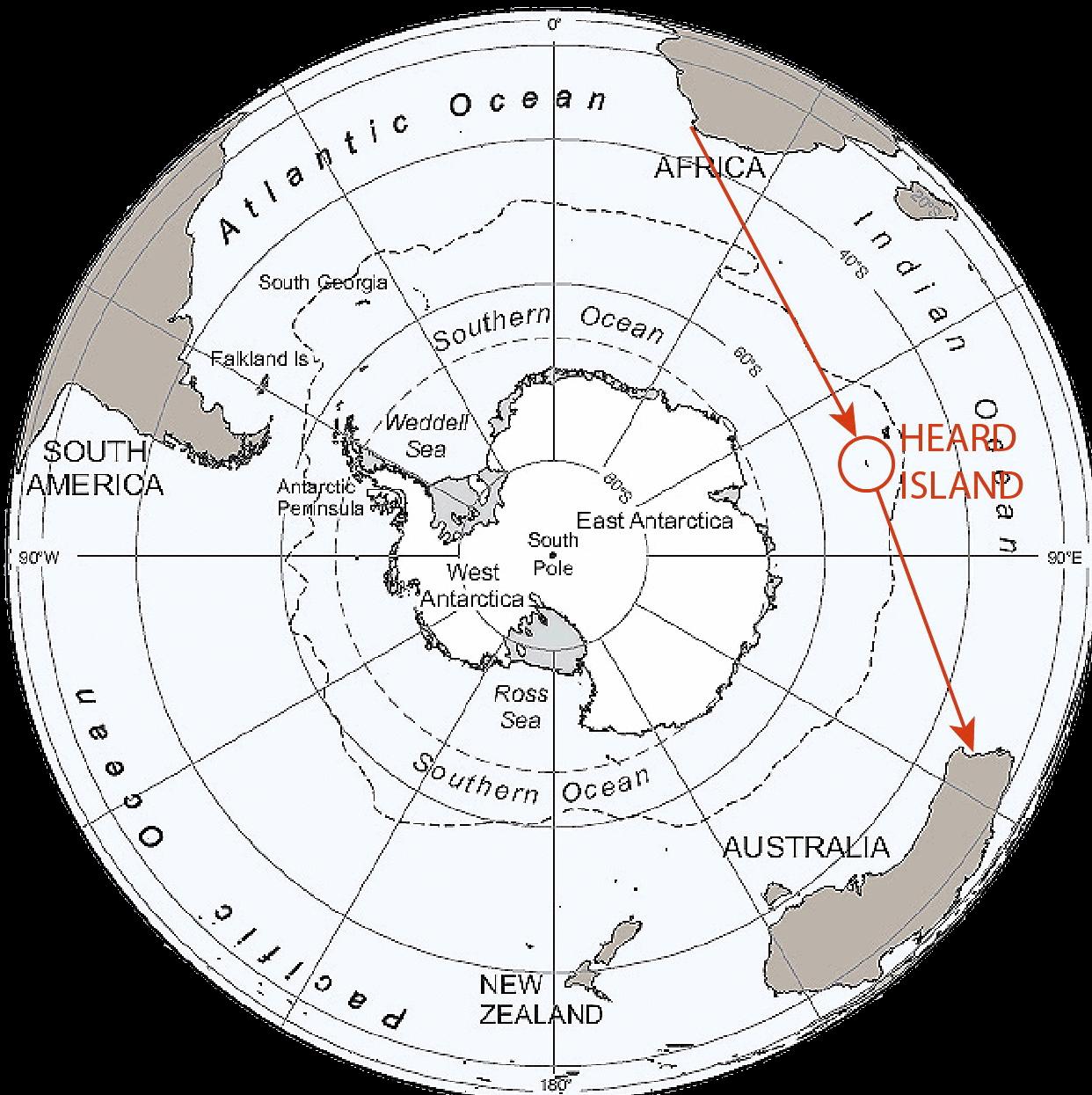
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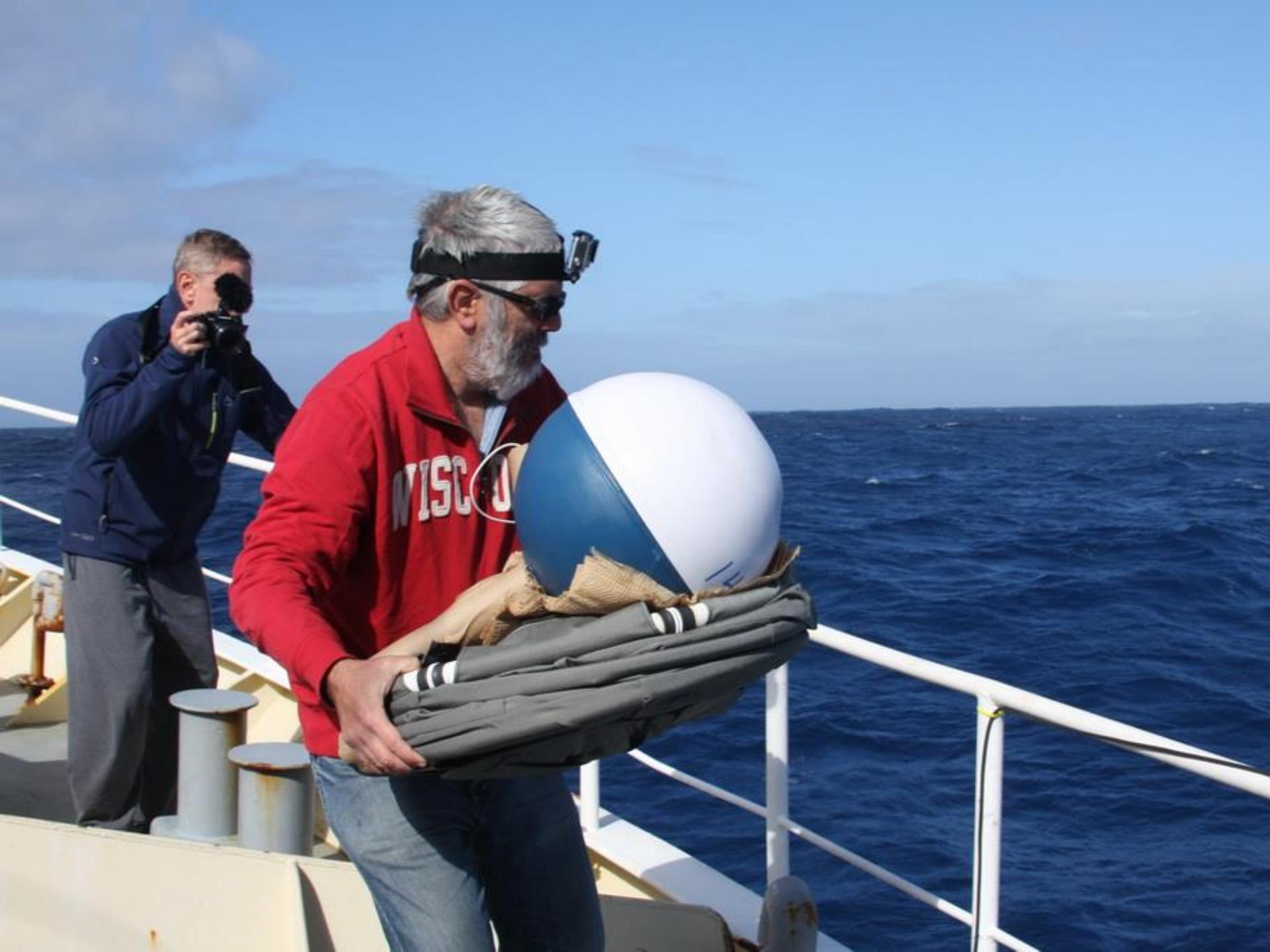




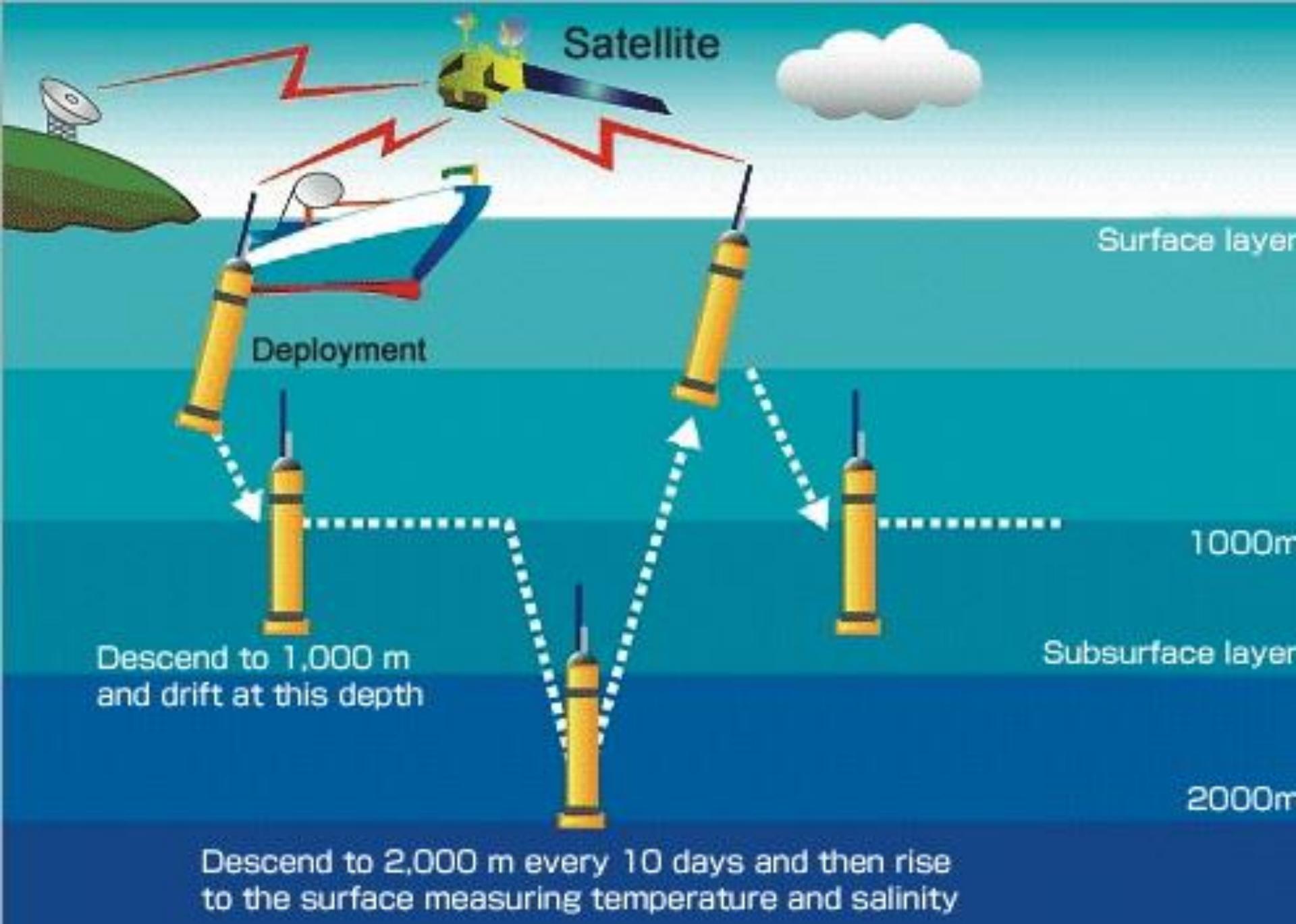








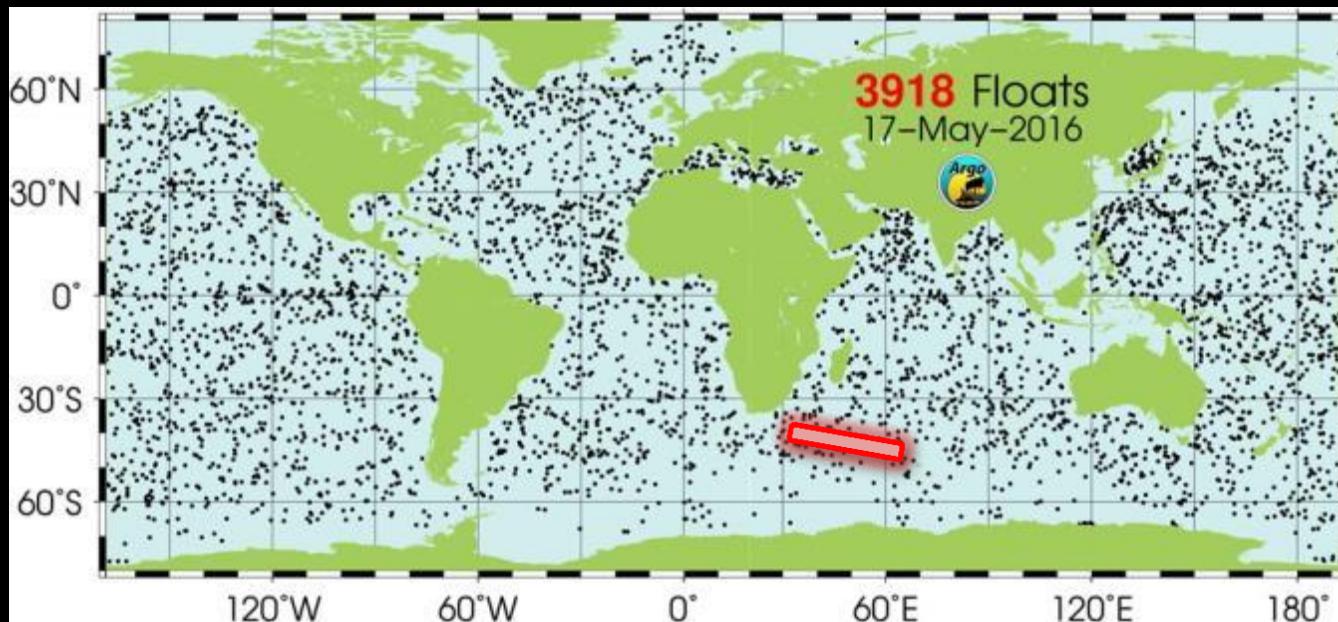
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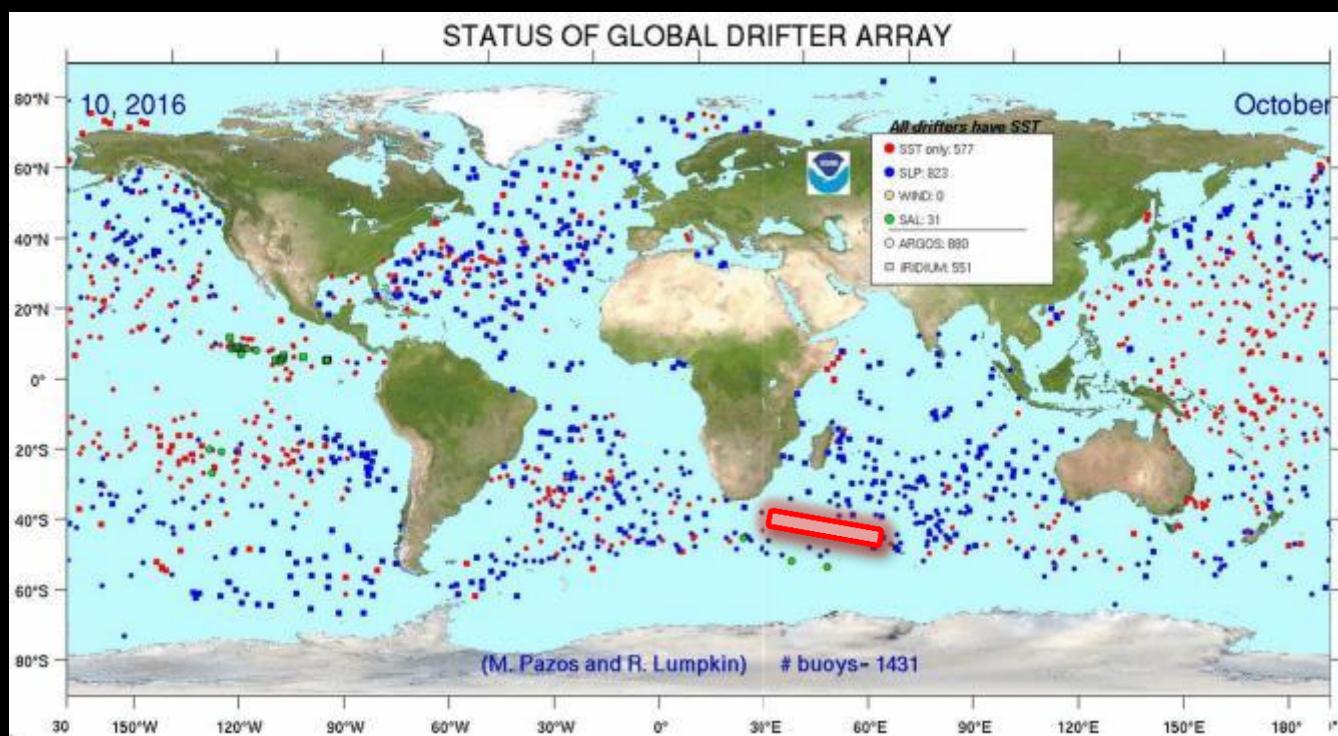


Source: Lamont  
Data 2013, NOAA, US Navy, NIMA, NSIDC  
Map: USGS, Wikipedia, Google

Latitude: 52° 48.770' S -69° 12.049' E - elev: 1854 m - area: 164 km<sup>2</sup>



WHOI Divers



NOAA drifters







Atlas Cove









Campsite

Personnel

Cargo



1997 VKØIR  
2003 SHELTERS

1947 RESEARCH  
STATION

2016 VKØEK  
CAMP SITE















# Mawson Peak

2 miles up

Operations

Dormitory







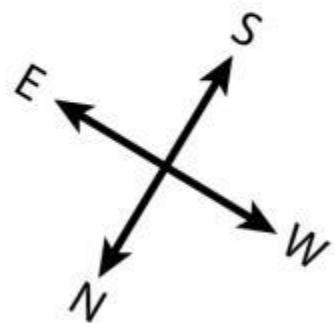
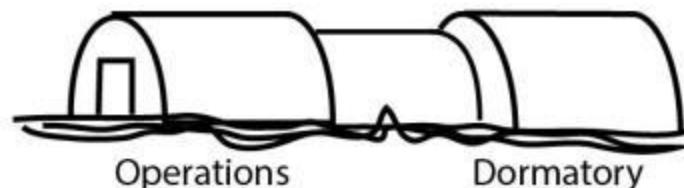
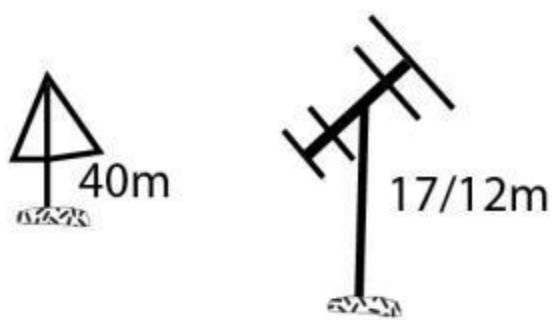
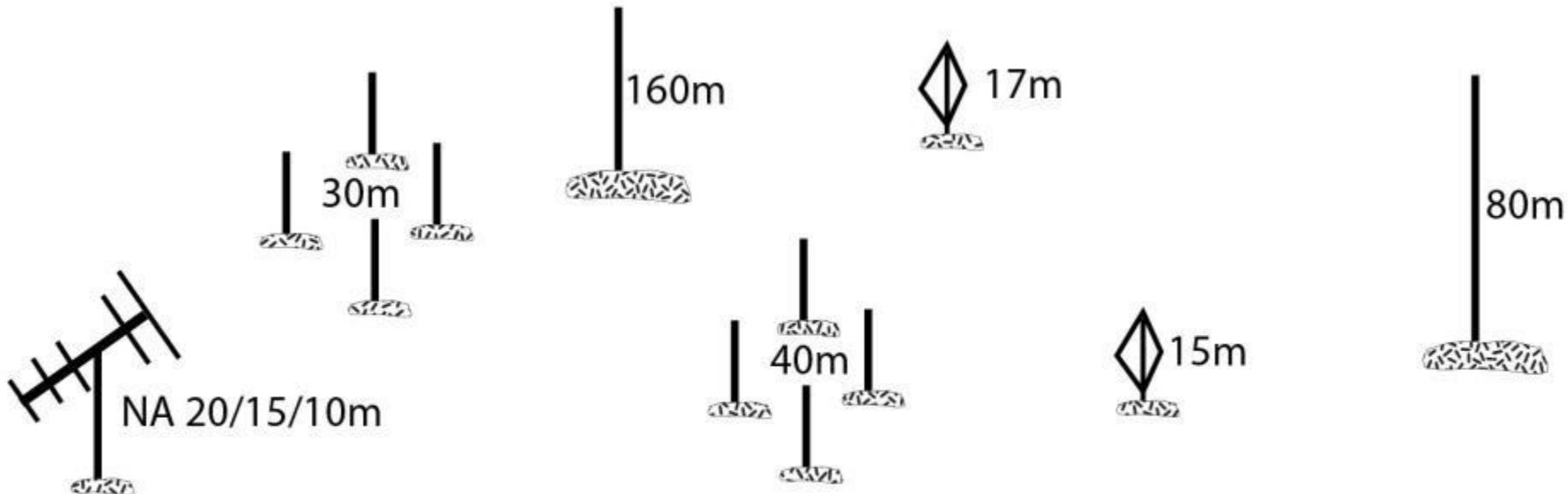












**VKØEK 2016**





VKØEK HEARD ISLAND 2016































# The end of penguins



Notice the feet!

























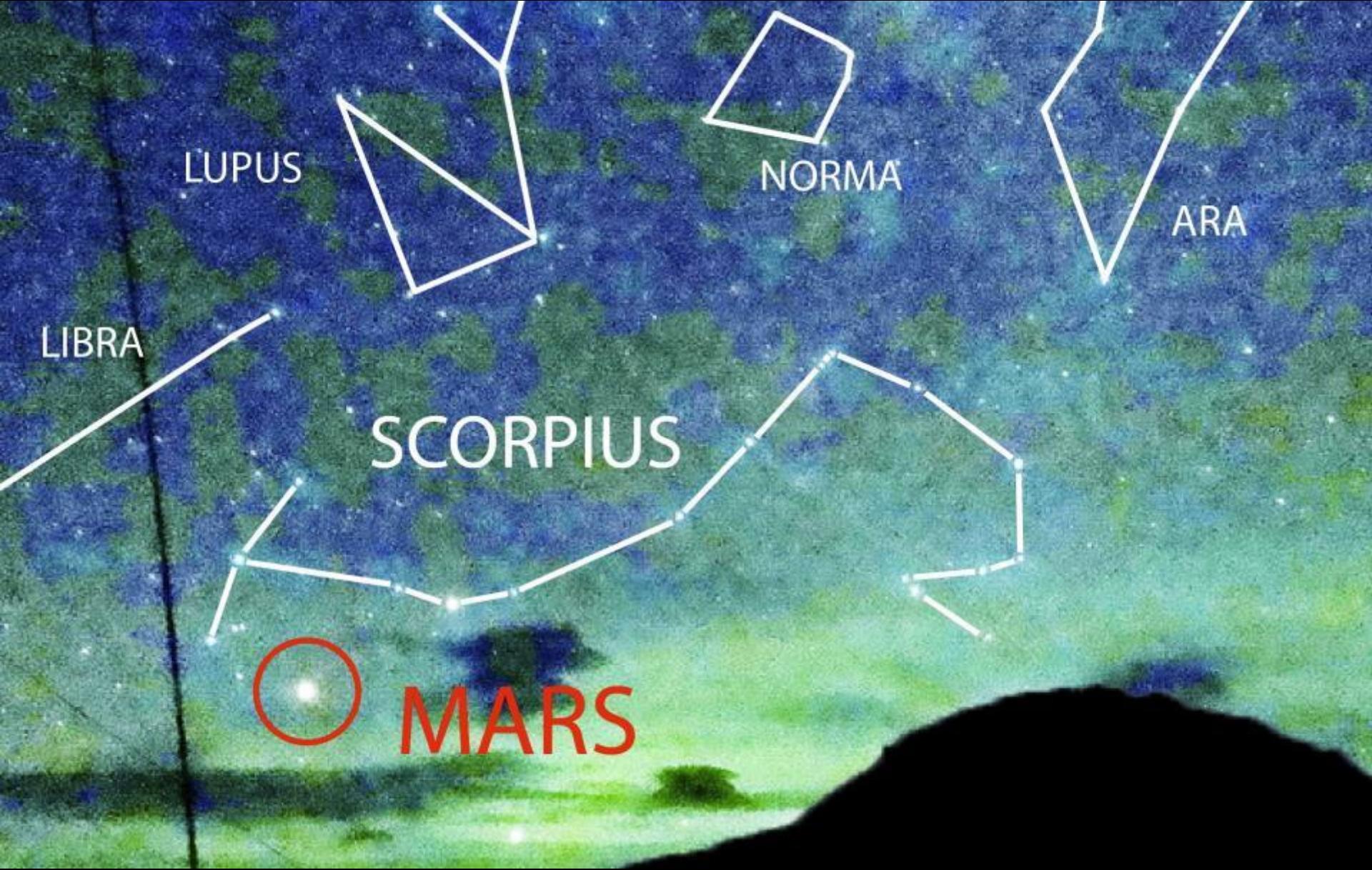








Eruption









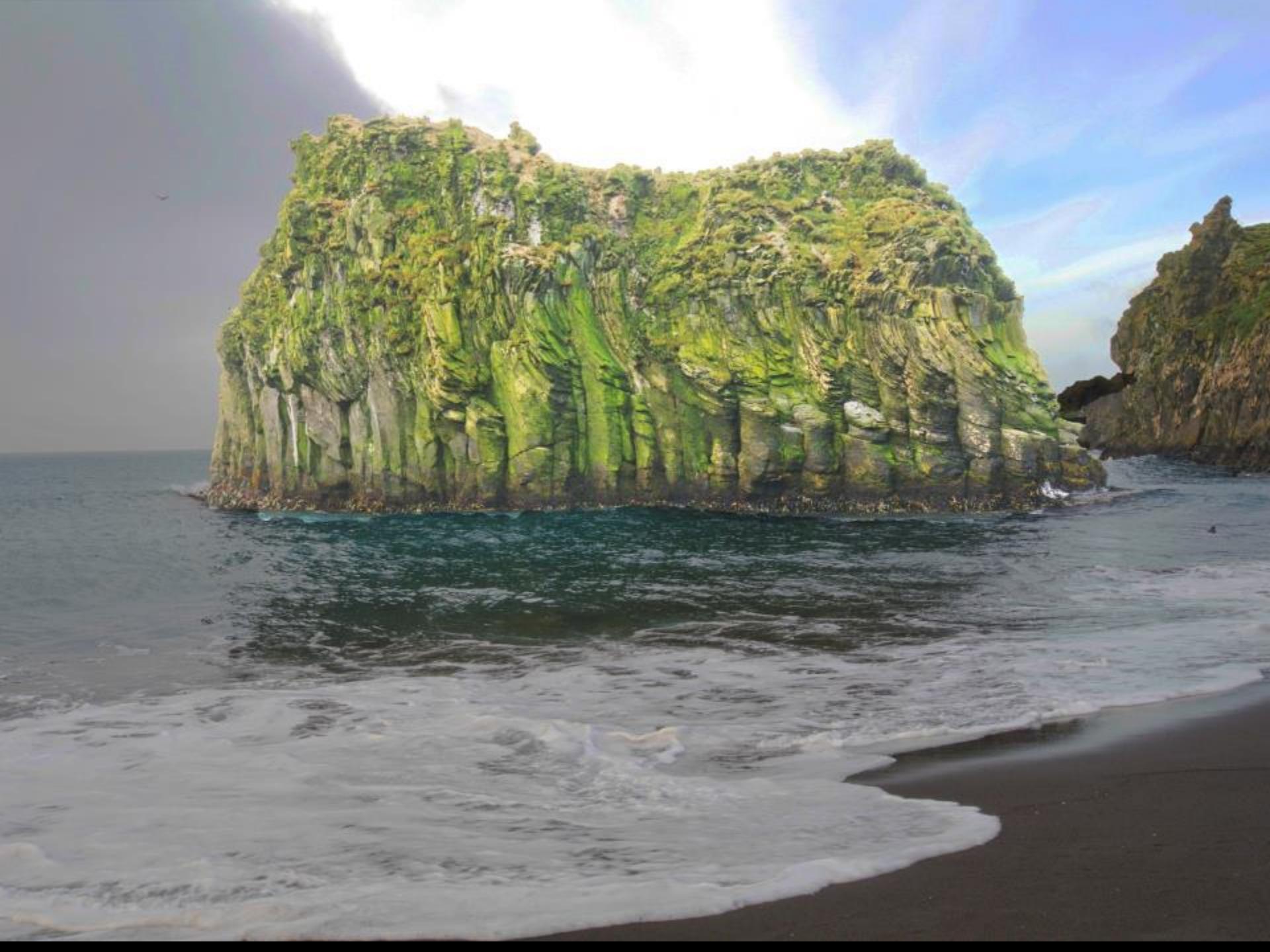












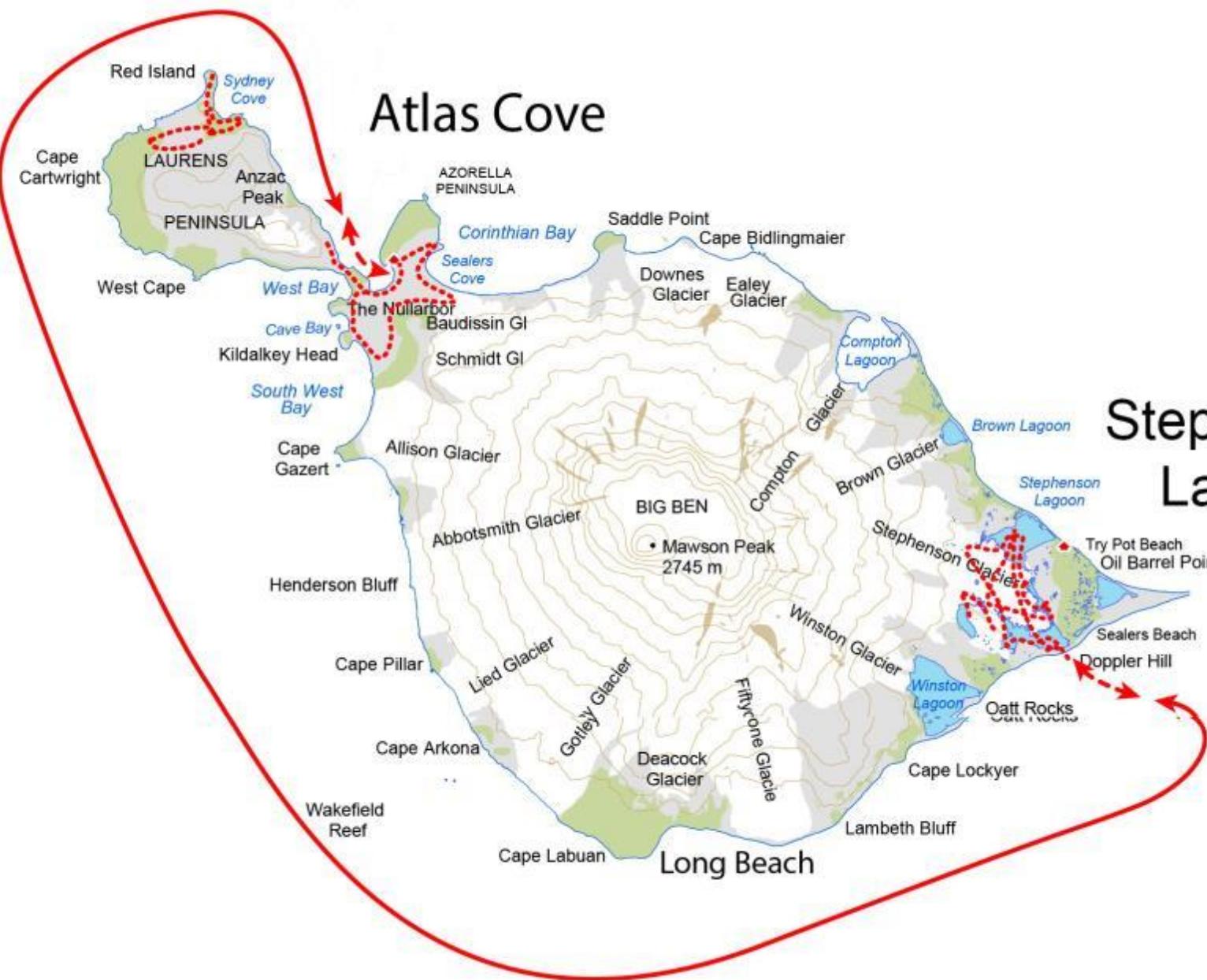








# Atlas Cove



# Stephenson Lagoon

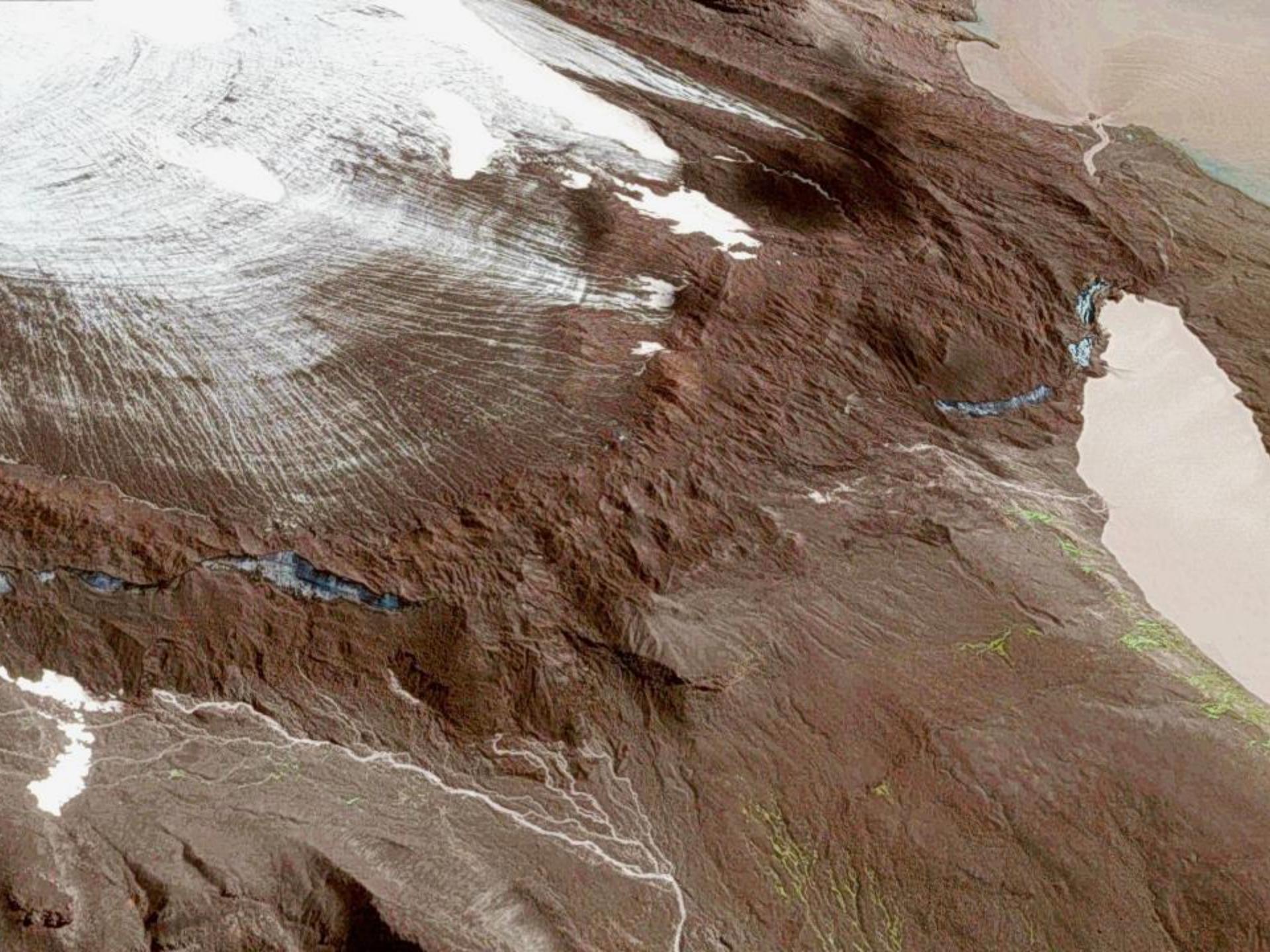






○ Ice slump







Blue gash



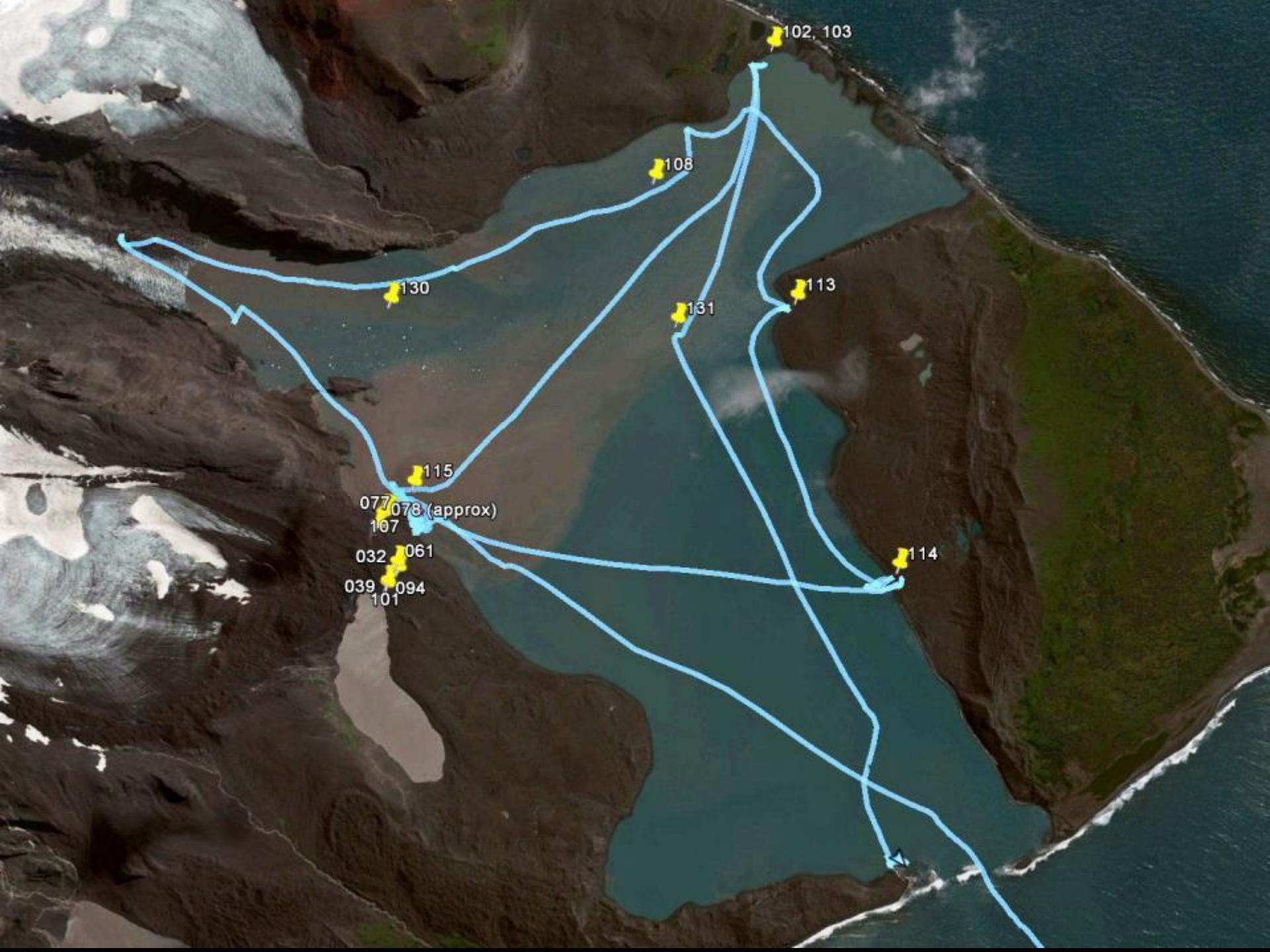
5/21/16

# Finding the entrance to the lagoon

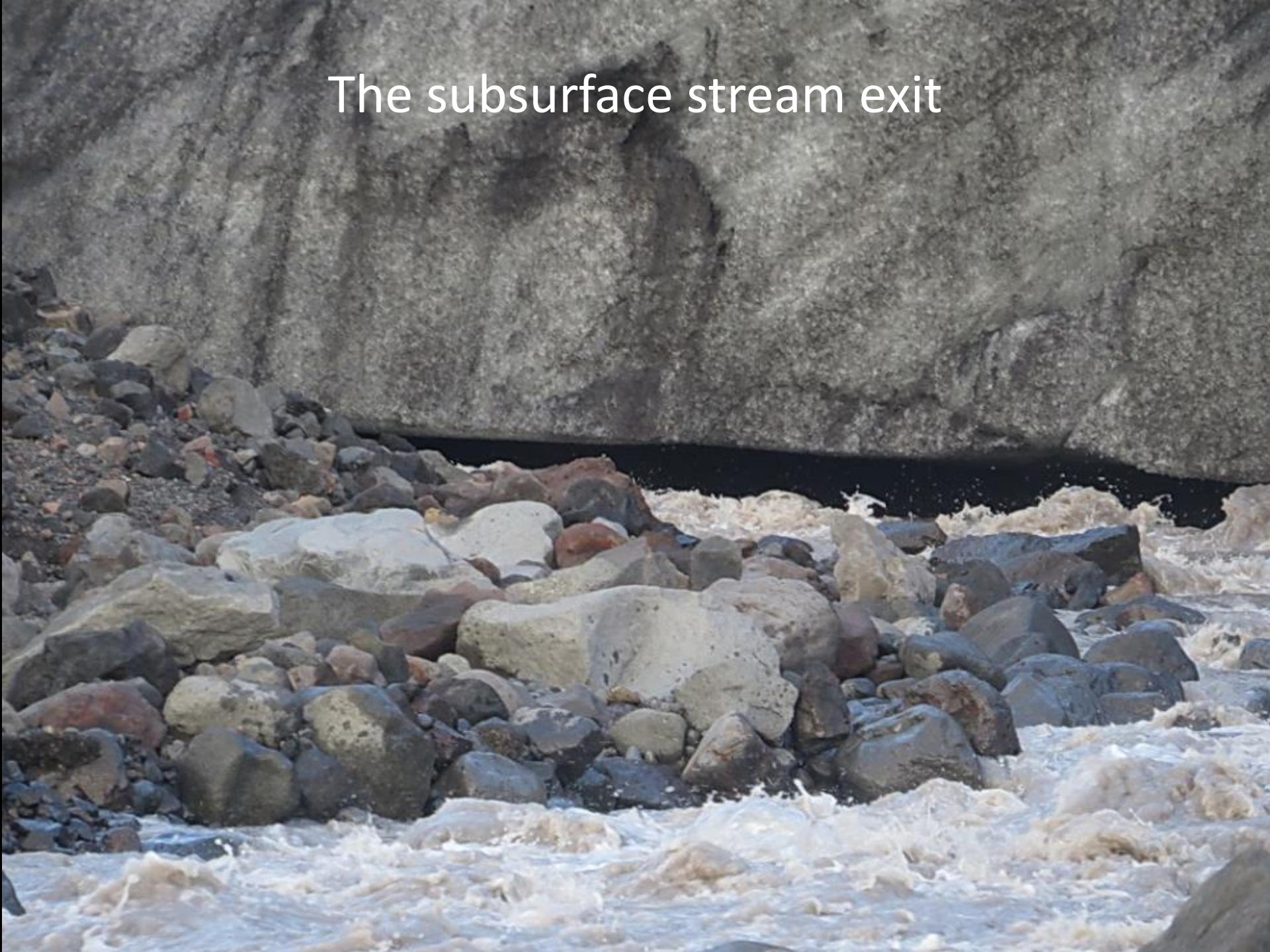


# Entrance to the lagoon





# The subsurface stream exit







Slump





The slump







# Galcial ice, gin, and tonic





# The VKØEK Team



NP4IW

VK6CQ

KK6EK

HB9AXE

K2ARB

KM4MXD

W7XU

WJ2O

K3EL

UT4UD

NG2H

VK2BAX

N6TQ

AEØEE





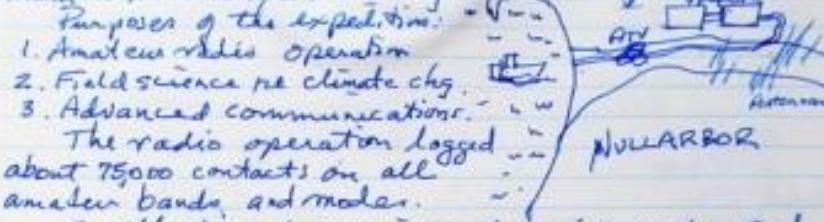




# The Heard Island visitors log

THE 2016 CORDELL EXPEDITION VK3EK  
Entry made 11 April 2016

Landed 22 March 2016 by small boat Atlas Cove. Campsite set up ca 300 m SE of ANARE ruins, on a relatively flat terrace ca. 50 m from the Nullarbor, elevation ca. 20 ft. Campsite used 2 airbeam tents, ca. 20x20 ft. An 4-wheel-drive ATV was used with wagons to transport all equipment from the Beach landing to the campsite. Personnel usually landed at wheel pt. ATV need to service the landing.

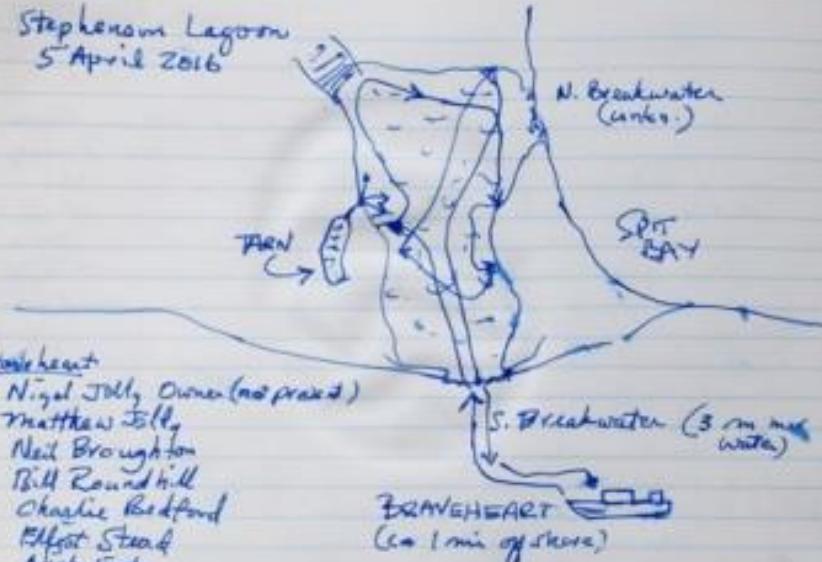


A 3-day visit to the Spit Bay area enabled us to enter Stephenson Lagoon by small boat (3 m water at entrance @ high tide). A collection of soil and water samples, and some rocks, were made.

The communications was enabled by 3 Inmarsat BGAN® terminals, and several sat. phones (incl. Iridium). With wifi all members of the team had open access to the internet. This was used to provide extensive public coverage of the expedition, much of it in real time.

Various members of the team made photo-documentation walks from camp. Two members made a 3-day field trip to Lawsons Peninsula.

Stephenson Lagoon  
5 April 2016



## BRAVEHEART

Nigel Jolly Owner (not present)  
Matthew Jolly  
Neil Broughton  
Bill Roundhill  
Charlie Bedford  
Elfoot Stead  
Nick East

## Credit TEAM:

Exped. Mgr Robert Schneider K3EAK  
Radio Dr. Dave Lloyd K3EL  
Fred Botton KM4MXD  
Adam Brown K2ARB  
Hans-Peter Blattner H09BXE  
Alan Cheshire VK6CQ  
James Colletto AB7A  
Dave Farnsworth W7ZD  
Vadym Ivliov UT2LUD  
Kenneth Kerr NG2TH  
Gavin Marshall VK2BAX  
Bill Mitchell AE0EE  
Carlo Nasimento N7TIC  
Alistair Thompson W7XKE

*Robert Schneider*  
*David Lloyd*  
*Fred Botton*  
*Adam Brown*  
*Hans-Peter Blattner*  
*Alan Cheshire*  
*James Colletto*  
*Dave Farnsworth*  
*Vadym Ivliov*  
*Kenneth Kerr*  
*Gavin Marshall*  
*Bill Mitchell*  
*Carlo Nasimento*  
*Alistair Thompson*  
*Alistair N. Thompson*







The gear  
comes  
home

# Studying the specimens



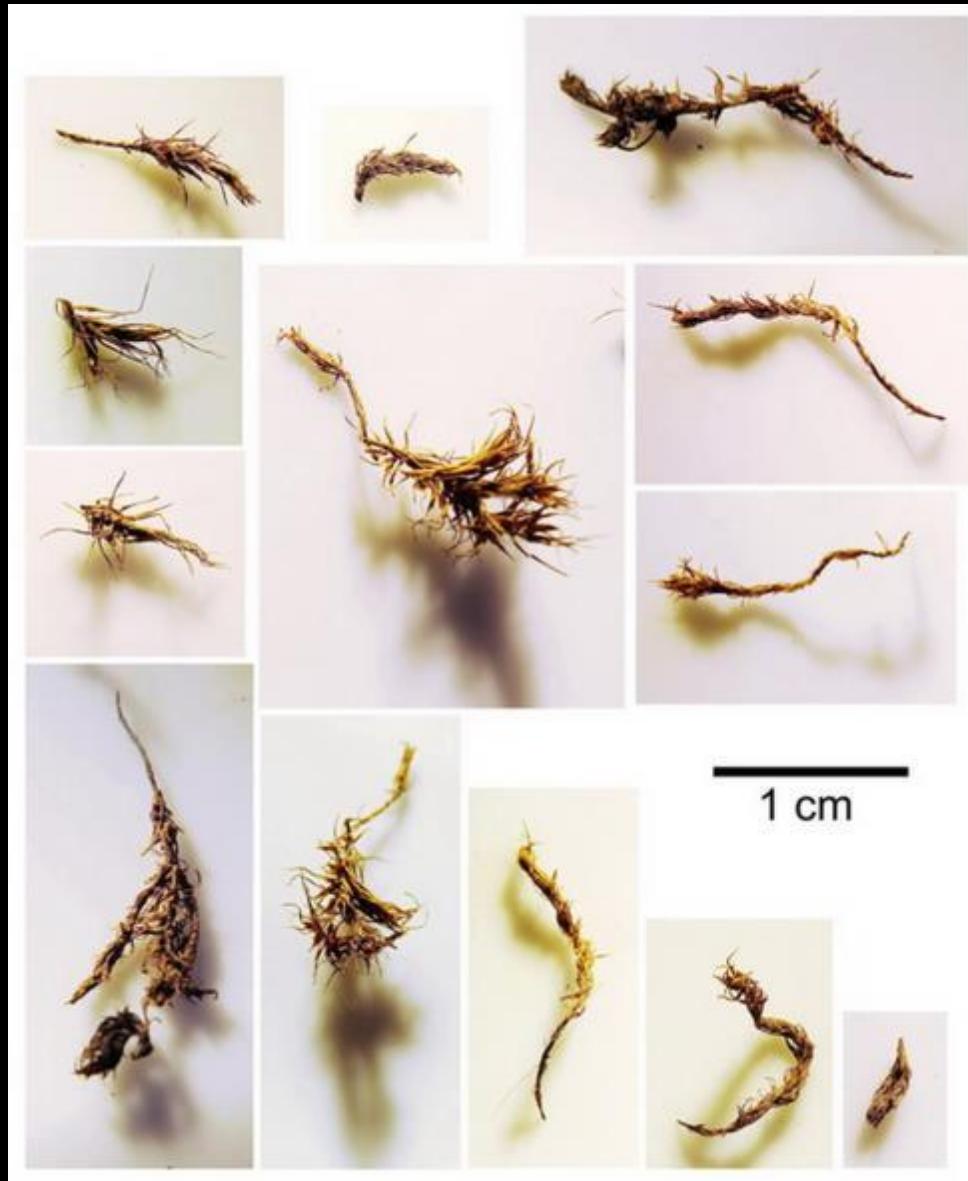


1 mm gravel

Olivine crystals



# Unidentified fibrous plant



# WINGLESS FLY

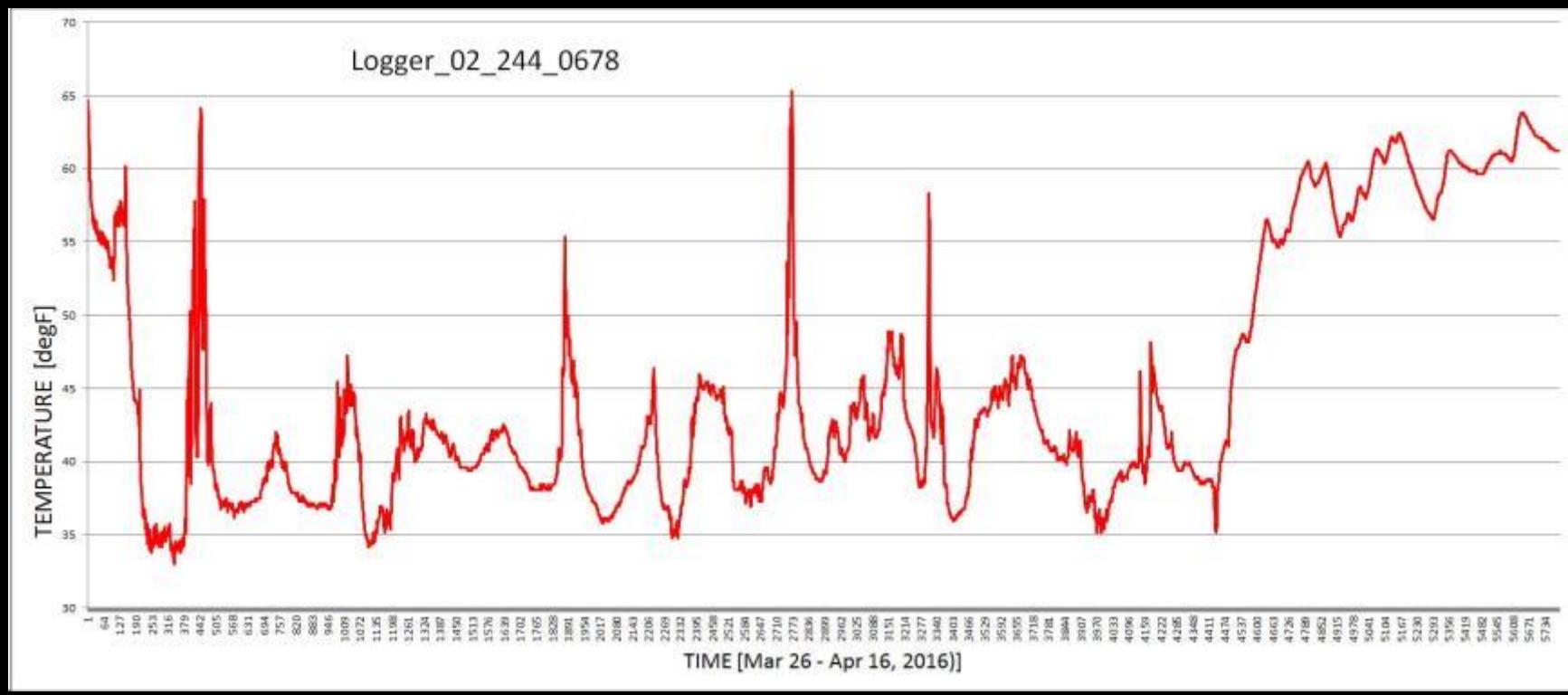
(*Anatalanta aptera*)

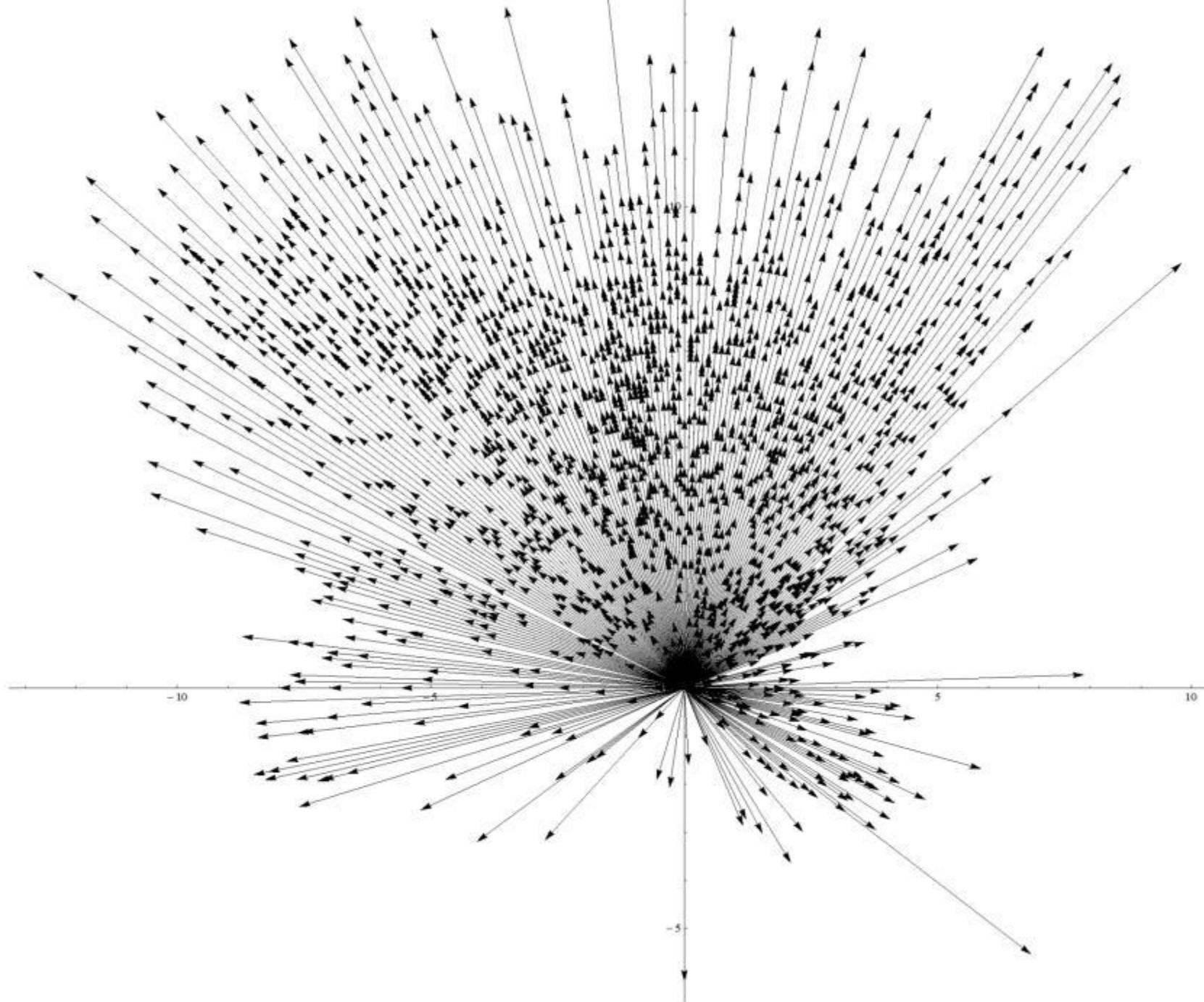
Heard Island

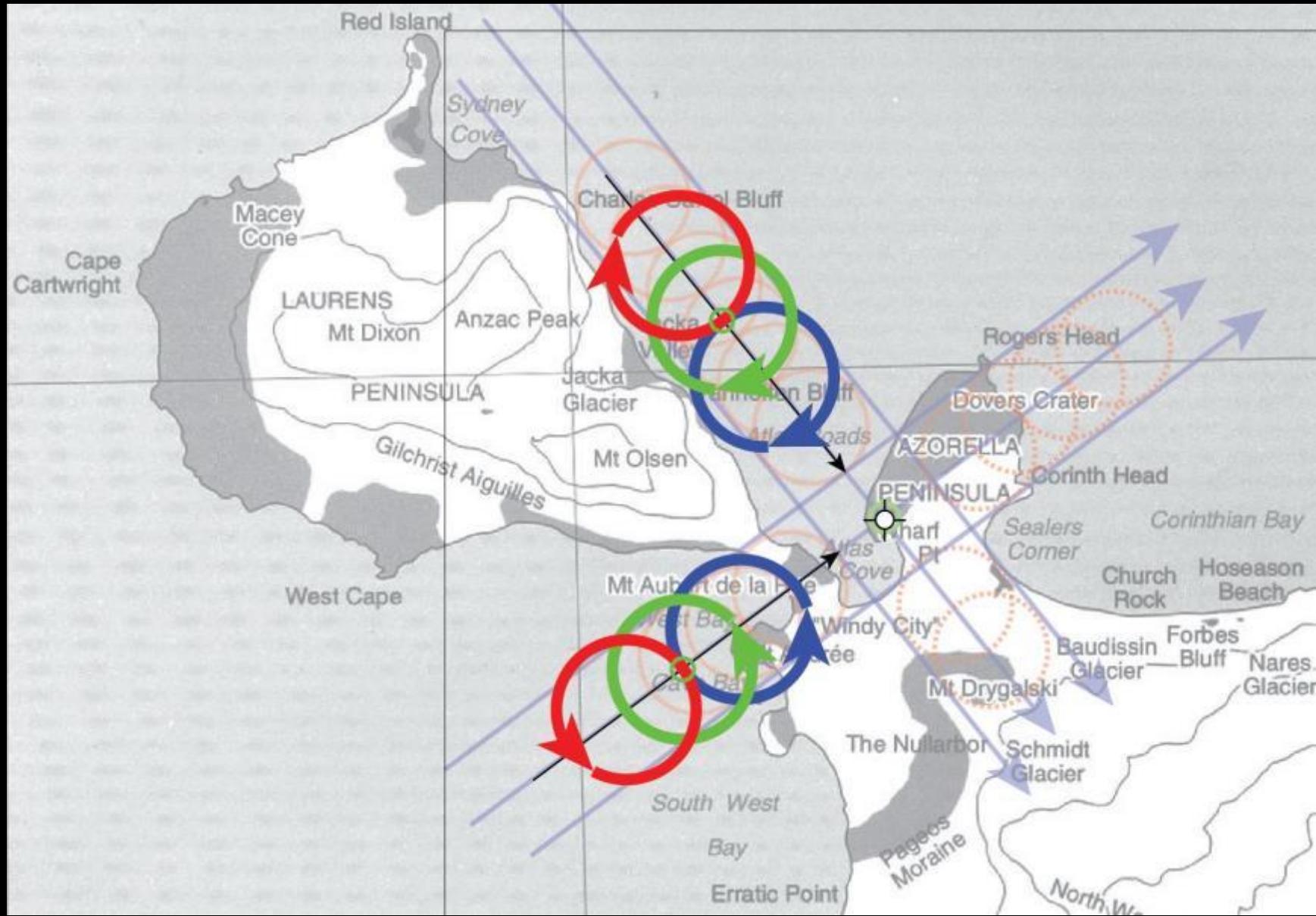


Reference









# THE ONLINE AUDIO LOG

The screenshot shows a web browser window displaying the Heard Island Media website at [media.vk0ek.org](http://media.vk0ek.org). The page features a large banner image of a snow-covered mountain peak under a blue sky. Below the banner, the text "HEARD ISLAND" and "The 2016 Cordell Expedition" is displayed. A sub-header "Discovering Life in the Extremes" is on the left, and "VKØEK" with the tagline "Linking the Remote in Realtime" is on the right. The main content is a table titled "Recording", listing 15 entries with columns for "Recording", "Time", and "Summary". Each entry includes a "Listen" link. At the bottom of the table, it says "Date: 04/10". The footer contains links for "HOME", "ABOUT", "TEAM", "NEWS", "NEWSLETTER", "DXA", "DXL", "SOUVENIRS", "RESEARCH", "FAQ", "DOCUMENTS", "SPONSORS", and "DONATE".

Recording	Time	Summary
<a href="#">Listen</a>	2016-05-06 23:45:35	Final Expedition Summary (3:35)
<a href="#">Listen</a>	2016-04-24 00:05:11	BBQ party by NXDXG. Leaving Fremantle.
<a href="#">Listen</a>	2016-04-22 10:01:56	Team in hotel, resting, cleaning.
<a href="#">Listen</a>	2016-04-22 04:28:37	Expedition cargo unloaded. Specimens cleared.
<a href="#">Listen</a>	2016-04-21 22:54:53	At dock in Fremantle. Beginning customs, unloading.
<a href="#">Listen</a>	2016-04-19 10:59:33	Calm seas, easy ride. ETA Fremantle Apr. 22 AM.
<a href="#">Listen</a>	2016-04-17 05:31:08	1000 nm from Fremantle. Live satphone call to Intl DX conf.
<a href="#">Listen</a>	2016-04-16 03:49:11	Continuing underway. Rough seas last night.
<a href="#">Listen</a>	2016-04-15 08:13:39	About halfway toward Fremantle. Sea state reasonable.
<a href="#">Listen</a>	2016-04-14 04:44:29	Cruising toward Fremantle. Team resting.
<a href="#">Listen</a>	2016-04-12 05:24:59	All crew and cargo evacuated. Braveheart has left HI.
<a href="#">Listen</a>	2016-04-11 09:29:56	Campsite completely clean and we are leaving.
<a href="#">Listen</a>	2016-04-11 08:36:32	Campsite packing nearly completed. Hail storm.
<a href="#">Listen</a>	2016-04-11 06:59:28	Striking camp; one tent down. Expect exit this afternoon.

# THE NEWSLETTERS

<p>The HEARD ISLAND Project VK0EK</p> <p>EXPLORATION IN THE SOUTHERN OCEAN - APRIL 2016</p> <p>W</p> <p>W</p> <p>A</p> <p>A</p> <p>THE TORONTO-QSO INFORMATION FOR THE EXPEDITION</p> <p>THE HEARD-20 A 10-DAY EXPEDITION EXPERIENCE</p>	<p>HEARD ISLAND The SOUTHERN OCEAN</p> <p>VK0EK</p> <p>CONFIRMING VHF WITH FREQUENCIES REPORT</p> <p>MAIN AND OTHER BUREAU RESULTS FOR THE EXPEDITION</p> <p>THE TORONTO-QSO INFORMATION FOR THE EXPEDITION</p> <p>THE HEARD-20 A 10-DAY EXPEDITION EXPERIENCE</p>	<p>HEARD ISLAND The SOUTHERN OCEAN</p> <p>VK0EK</p> <p>CONFIRMING VHF WITH FREQUENCIES REPORT</p> <p>MAIN AND OTHER BUREAU RESULTS FOR THE EXPEDITION</p> <p>THE TORONTO-QSO INFORMATION FOR THE EXPEDITION</p> <p>THE HEARD-20 A 10-DAY EXPEDITION EXPERIENCE</p>	<p>HEARD ISLAND The SOUTHERN OCEAN</p> <p>VK0EK</p> <p>CONFIRMING VHF WITH FREQUENCIES REPORT</p> <p>MAIN AND OTHER BUREAU RESULTS FOR THE EXPEDITION</p> <p>THE TORONTO-QSO INFORMATION FOR THE EXPEDITION</p> <p>THE HEARD-20 A 10-DAY EXPEDITION EXPERIENCE</p>	<p>HEARD ISLAND The SOUTHERN OCEAN</p> <p>VK0EK</p> <p>CONFIRMING VHF WITH FREQUENCIES REPORT</p> <p>MAIN AND OTHER BUREAU RESULTS FOR THE EXPEDITION</p> <p>THE TORONTO-QSO INFORMATION FOR THE EXPEDITION</p> <p>THE HEARD-20 A 10-DAY EXPEDITION EXPERIENCE</p>
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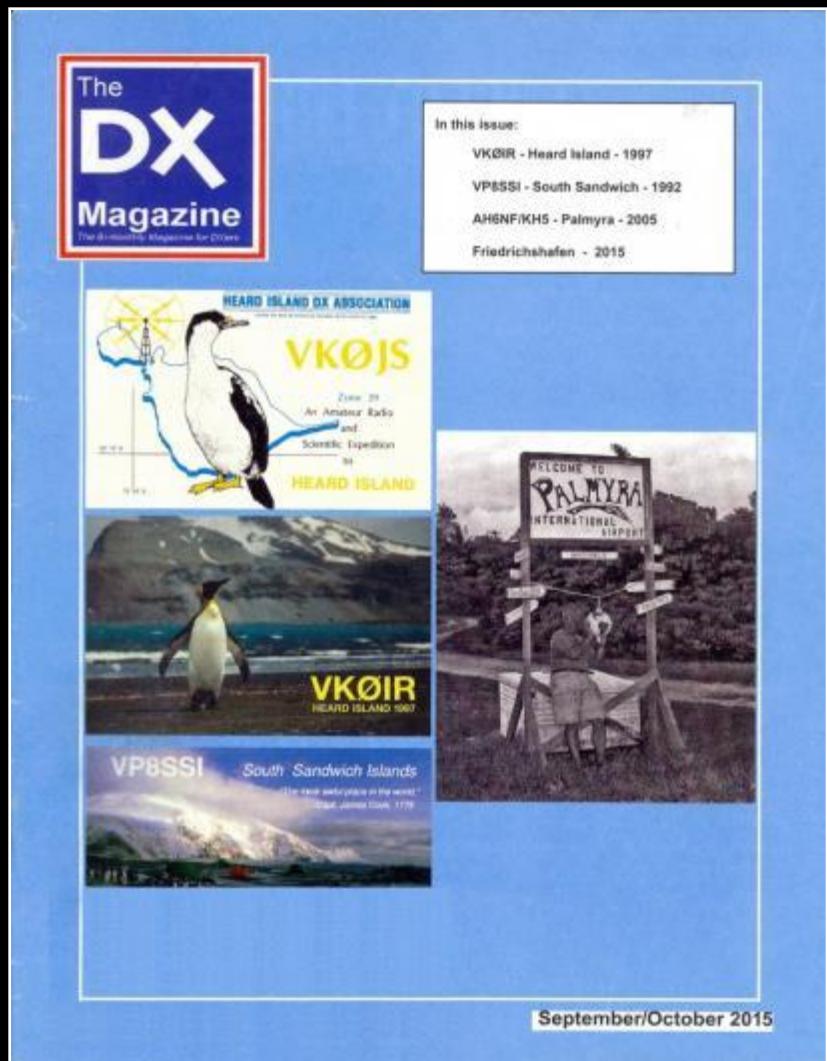


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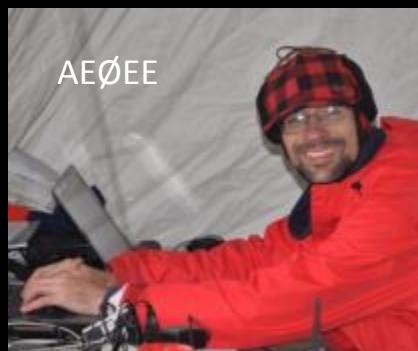
# VKØEK HEARD ISLAND 2016

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# ARTICLES



# The 14 men







# Heard Island 2016

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Explorers Club  
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