

# TOP BAND DINNER

## 160 CHALLENGE



By **JERRY WB9Z**

Created by Glenn Johnson W0GJ



# Bouvet 2018



Photo by KOIR, Feb. 3, 2018

Rank	Prefix	Entity Name
1.	P5	DPRK (NORTH KOREA)
2.	3Y/B	BOUVET ISLAND
3.	FT5/W	CROZET ISLAND
4.	KH1	BAKER HOWLAND ISLANDS
5.	B57H	SCARBOROUGH REEF
6.	CE0X	SAN FELIX ISLANDS
7.	BV9P	PRATAS ISLAND
8.	KH3	JOHNSTON ISLAND
9.	VK0M	MACQUARIE ISLAND
10.	FT5/X	KERGUELEN ISLAND



South Africa

1800 mi.

South America

Bouvet Island

1000 mi.

2700 mi.

Antarctica


**A very foreboding place...**



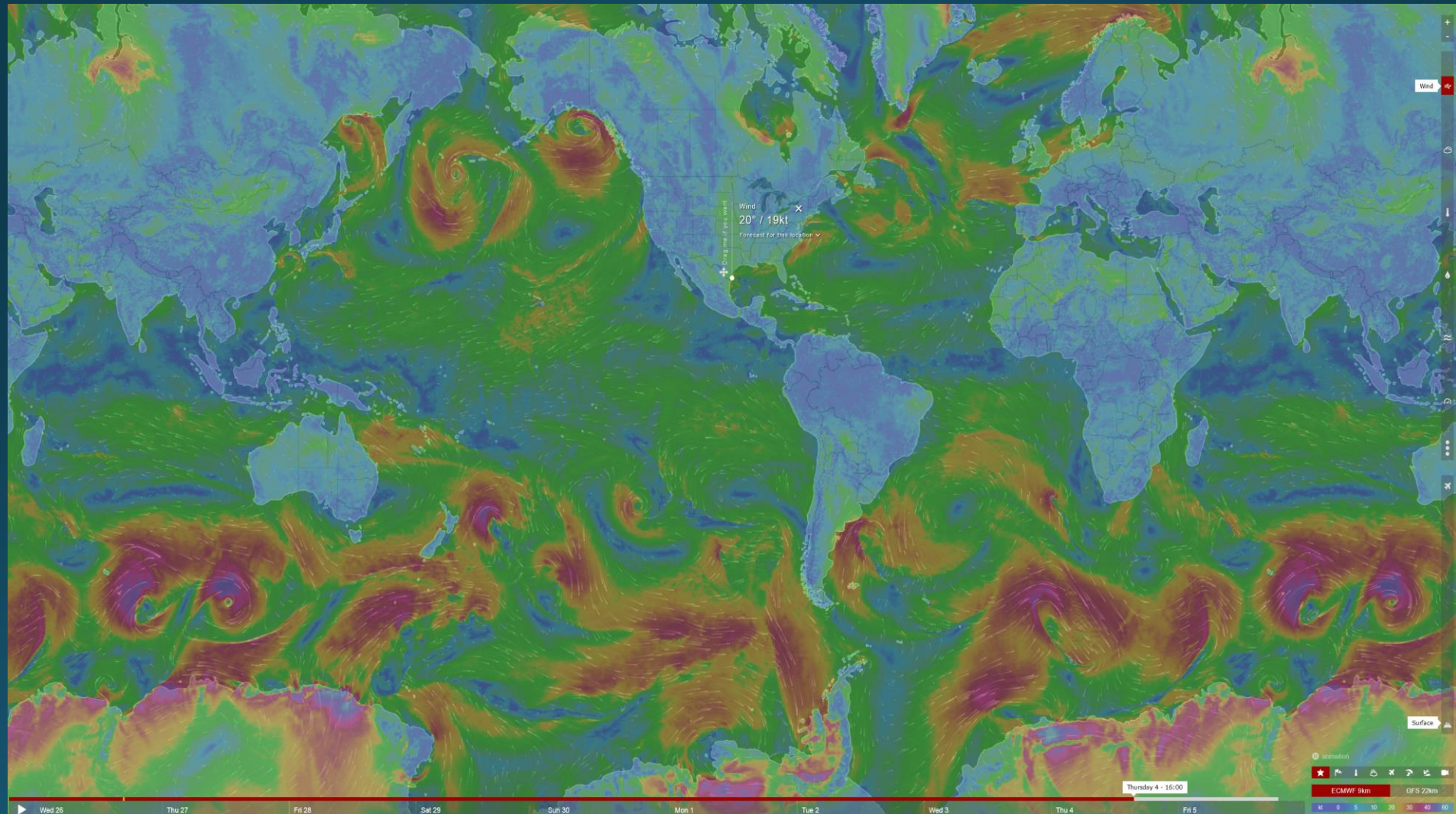
95+% covered by glacier



*South Atlantic Ocean*

1 km 

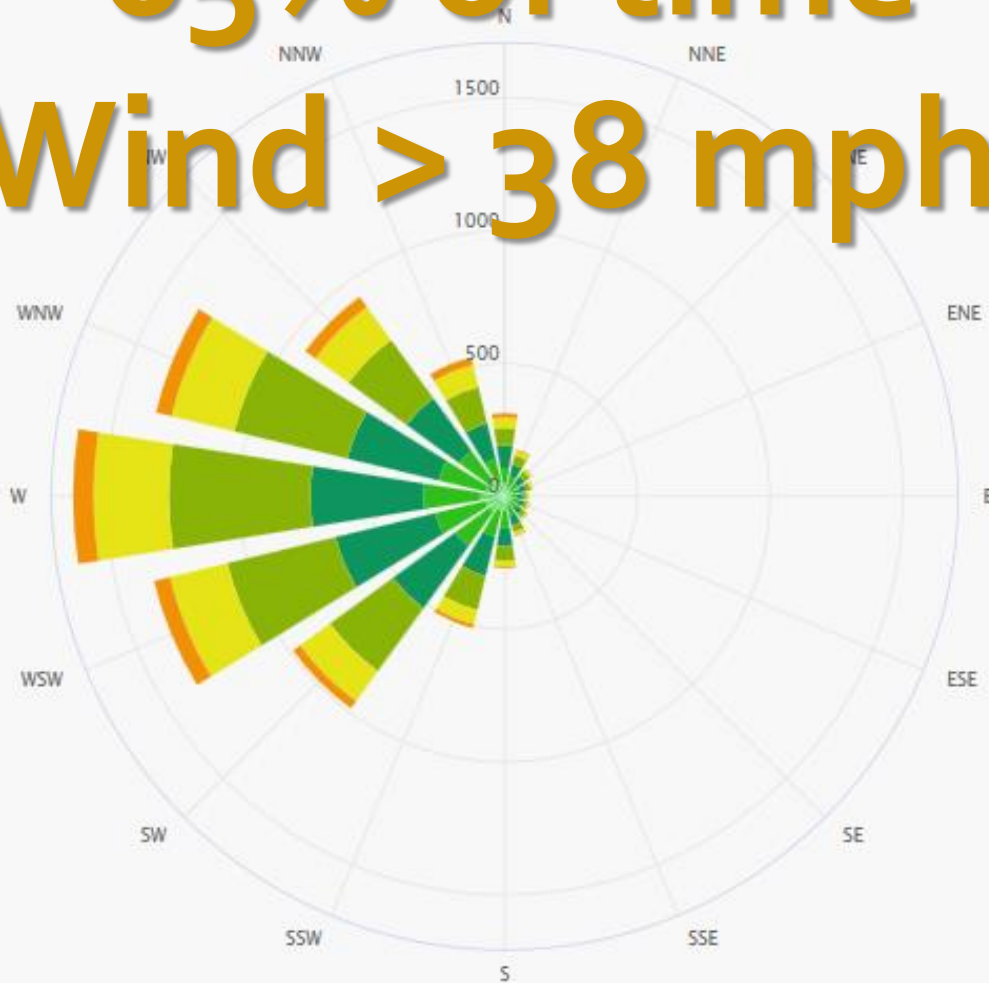
# Weather: 300 storms/year !



# Annual Wind Rose

Wind rose

**65% of time  
Wind > 38 mph!**



0 >1 >5 >12 >19 >28 >38 >50 >61 km/h





## 2006 Mountaineering Expedition Landing – on a CALM day!



# Helicopter ---our lifeline



# m/v Betanzos (home port-Punta Arenas, Chile)



# **Depart USA on January 9<sup>th</sup>**

**Arrive in Puenta Arenas January 10th**

- **Team member investment**
  - **Team share - \$18,500**
  - **Hotel - \$500**
  - **Travel \$2500 - \$4000**
  - **Clothing and baggage - \$2000 - \$2500**
  
  - **Each person had at least \$25,000 and as much as \$32,000**

# “Crew” & Safety Training

CUBIERTA ALTA

CUBIERTA CASTILLO

CUBIERTA SUPERIOR

NO.	DESCRIPCIÓN	UNIDAD
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100	ALTA	ALTA

CARACTERÍSTICAS PRINCIPALES

- ESLORA TOTAL
- ESLORA ENTRE PERPENDICULARES
- BANDA MUELDADE
- PUNTA A LA CUBIERTA SUPERIOR
- PUNTA A LA CUBIERTA BAJA
- ESLORA A PLENA CARGA
- AÑO DE CONSTRUCCIÓN
- CLASE DE CONSTRUCCIÓN
- CLASE DE CONSTRUCCIÓN
- CAPACIDAD
- CAPACIDAD
- BOTADEROS

# “Crew” & Safety Training



# “Crew” & Safety Training



# “Crew” & Safety Training





# “Crew” & Safety Training

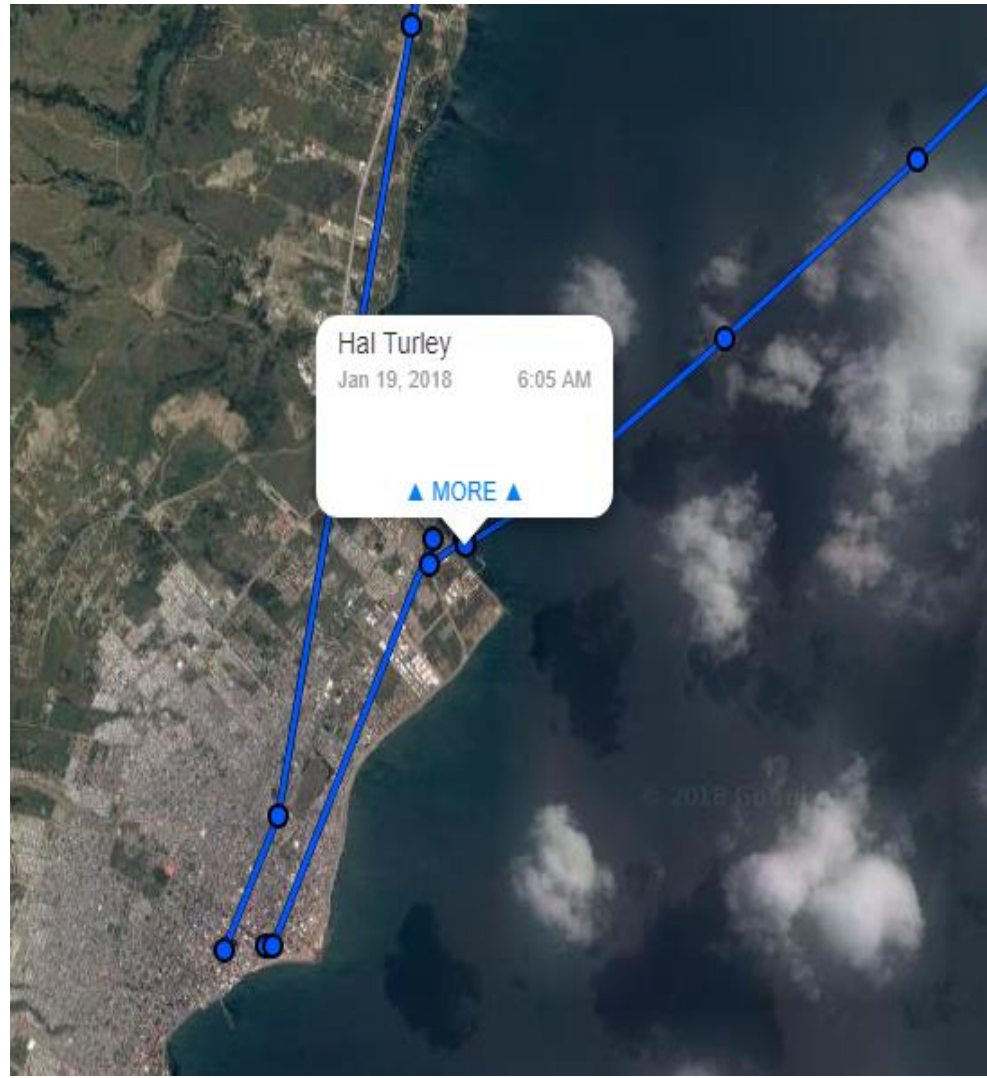


# Final loading





# Finally set sail January 19, 2018



# Making good time and past Falkland Islands

































NZOS

EVANCO

# ZYØZ

## BOUVET ISLAND

945 11 18 17 13 22 16 28 21 27 63 71 223 526 12 1228 18  
23 12 17 19 68 14 15 204 1524 6937 104031 25 10 12 353









# South Georgia











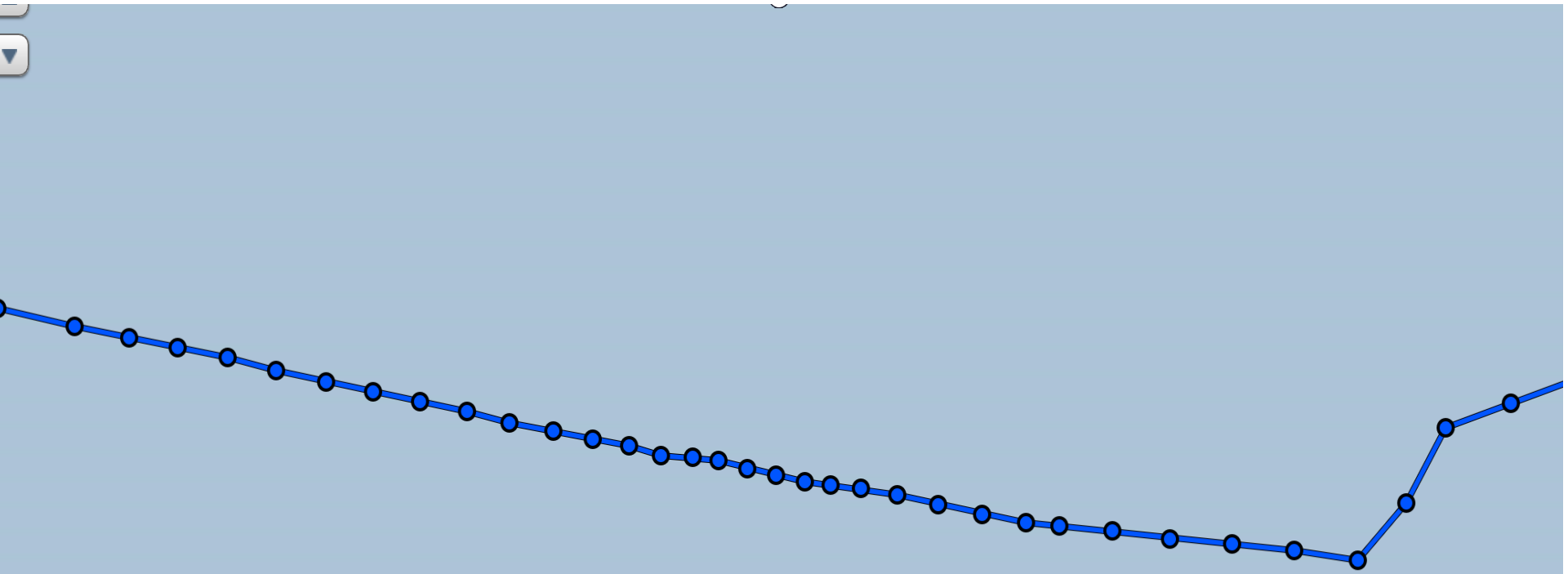






# Slow for storms

## Iceberg avoidance



























# Living Room - Before



# Living Room - After











# Approaching Bouvet Island

## January 30, 2018

Hal Turley

Jan 30, 2018

10:59:15 PM

Speed: 10.86 mph

Course: E

Elevation: -25.56 ft.

Lat: -54.481748

Lon: 2.965771

▼ LESS ▼



# 80 mph winds

## 40-50' breakers



























# Storm intensifies February 1



**30 minutes later...**

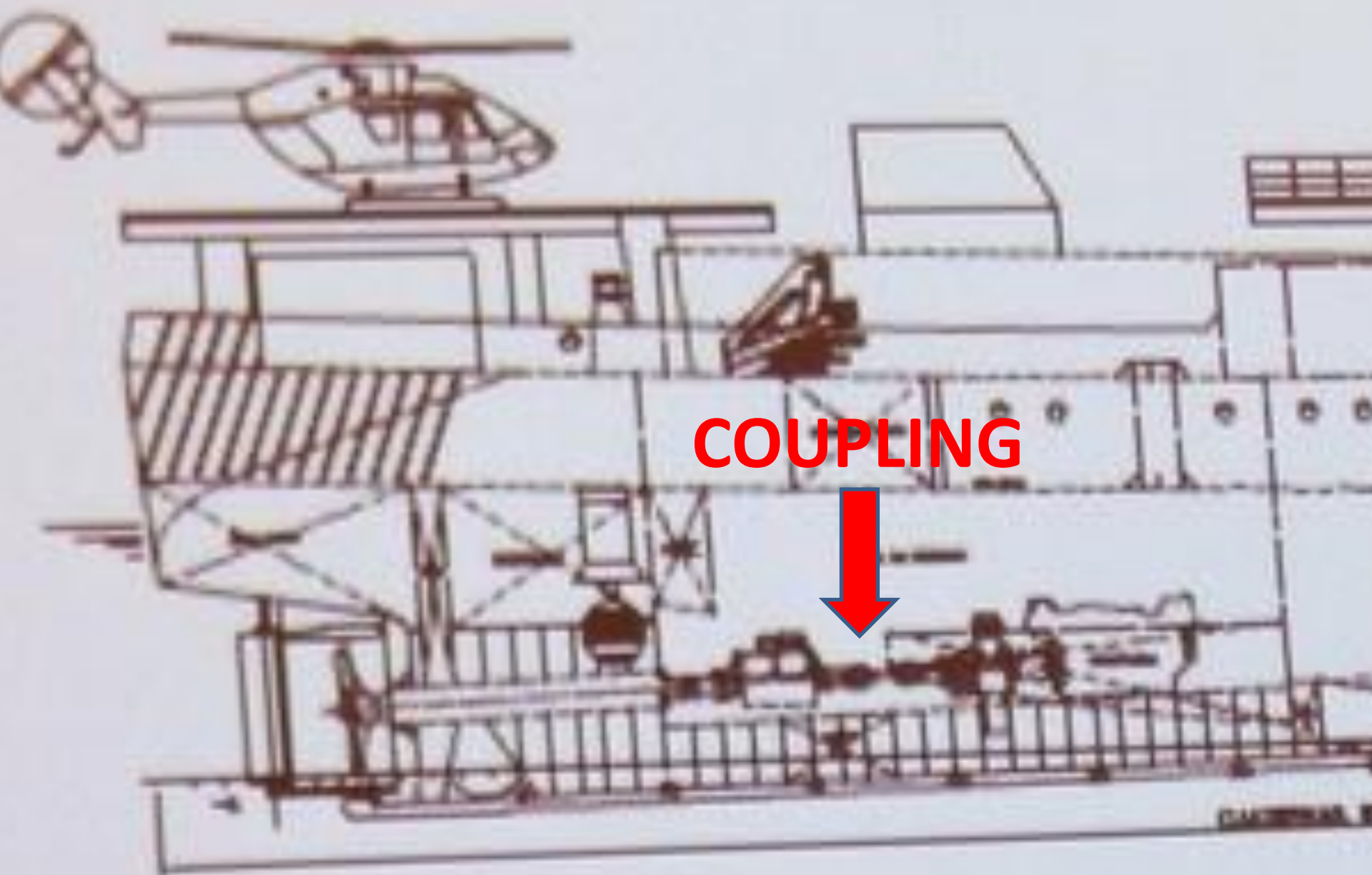


# Day Three

- **Two short 2 hour windows**
- **Helicopter limitations exceeded (swells)**
- **Gale force plus winds predicted next four days**
- **Clouds & fog moved in rest of day**
- **Winds picked up at sunset**
- **Anchors (2) could not hold position**

# 11:45 pm Day 3

- **Under power, trying to hold position near island, away from icebergs**
- **One of two engines fail**



**COUPLING**



The next 24 sure don't look good for moving onto the rock.

Day	Local Time	Dir	Speed/ Gust	Temp/ Feels Like	Humidity	Pressure	Cloud Amount	Precip Amount	Weather
Sat 03 Feb	00:00	↘ WNW	26 / 50 mph	35 / 22°F	96%	992 mb	99%	0.01 In	☁
	03:00	→ W	25 / 50 mph	34 / 21°F	93%	993 mb	100%	0.00 In	☁
	06:00	→ W	25 / 49 mph	34 / 21°F	91%	994 mb	75%	0.00 In	☁
	09:00	→ W	24 / 38 mph	35 / 23°F	90%	995 mb	93%	0.00 In	☁
	12:00	↘ WNW	21 / 28 mph	37 / 26°F	92%	995 mb	70%	0.00 In	☁
	15:00	↘ WNW	23 / 30 mph	38 / 27°F	95%	993 mb	100%	0.00 In	☁
	18:00	↙ NW	22 / 33 mph	37 / 26°F	96%	991 mb	100%	0.00 In	☁
	21:00	↙ NNW	20 / 40 mph	36 / 25°F	98%	988 mb	100%	0.01 In	☁
Sun 04 Feb	00:00	↙ NNW	24 / 50 mph	31 / 18°F	97%	984 mb	100%	0.01 In	☁
	03:00	↓ N	28 / 58 mph	31 / 17°F	97%	977 mb	100%	0.02 In	☁
	06:00	↙ NNW	36 / 75 mph	31 / 16°F	95%	970 mb	100%	0.22 In	☁
	09:00	↙ NW	31 / 65 mph	31 / 17°F	94%	967 mb	100%	0.02 In	☁
	12:00	→ W	27 / 57 mph	31 / 17°F	94%	967 mb	100%	0.01 In	☁
	15:00	↘ WNW	24 / 51 mph	31 / 18°F	91%	968 mb	98%	0.00 In	☁
	18:00	↘ WNW	28 / 60 mph	31 / 17°F	92%	967 mb	100%	0.00 In	☁
	21:00	↘ WNW	30 / 62 mph	31 / 17°F	88%	967 mb	100%	0.01 In	☁



# Dawn Day 4

- Severe storms predicted for next 4 days
- Concern if 2<sup>nd</sup> failure, run aground/icebergs
- If team on island, extraction impossible???
- Captain declares **MISSION ABORTED FOR SAFETY**

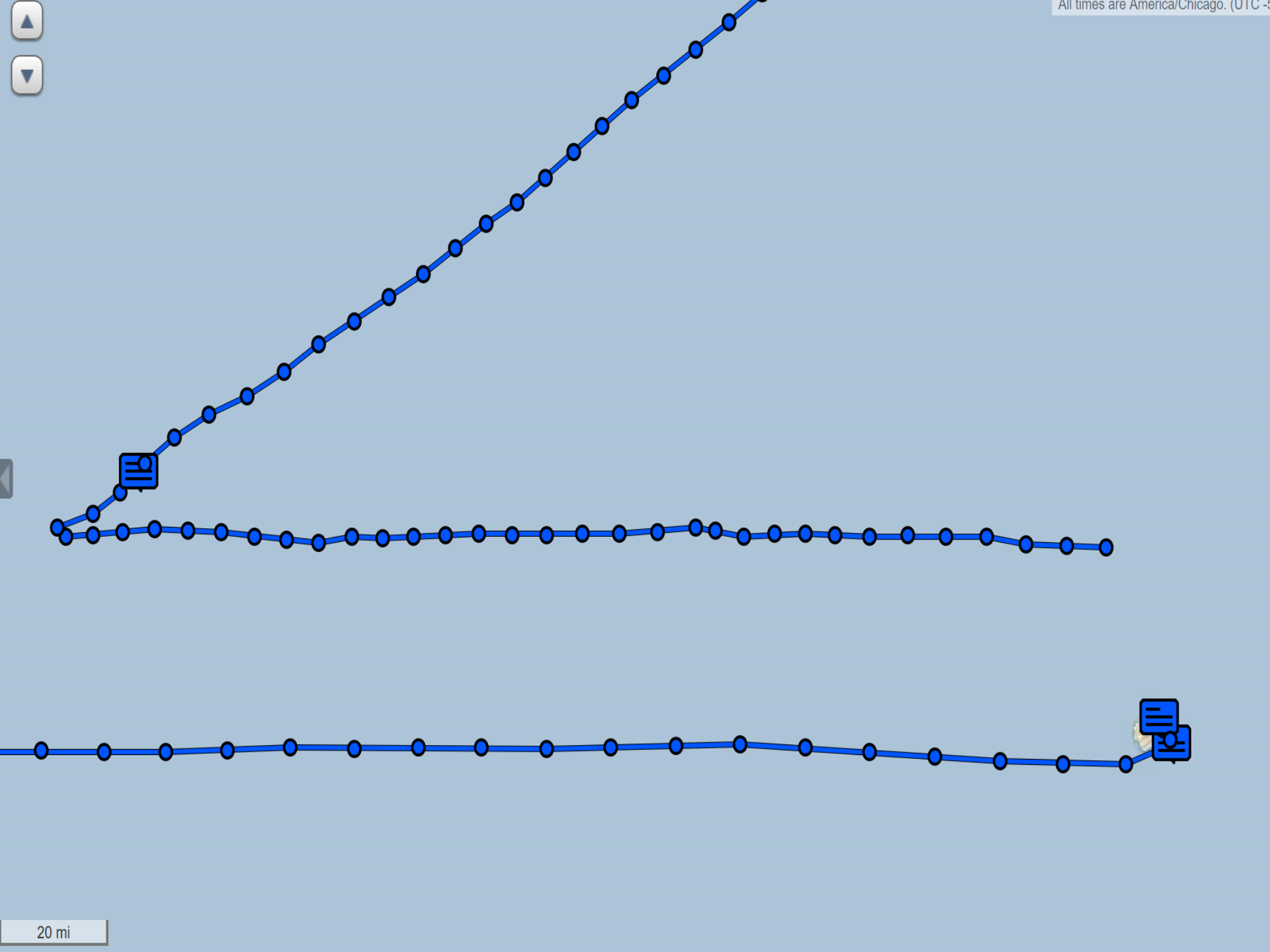
**MISSION:  
ABORTED**

# Day 4 – toward Chile

- **One engine 5-6 kts max speed**
- **Heading INTO wind & INTO current**
- **Planning 4-5+ weeks to return to Chile**

# 6:45 am “Day 5”

- **Coupling fails on remaining engine**
- **Adrift for a few hours to replace with an old “spare” (...that just happened to be there!)**
- **Captain decides to head to Cape Town**
  - **Downwind & with current**
  - **Avoiding ice fields**



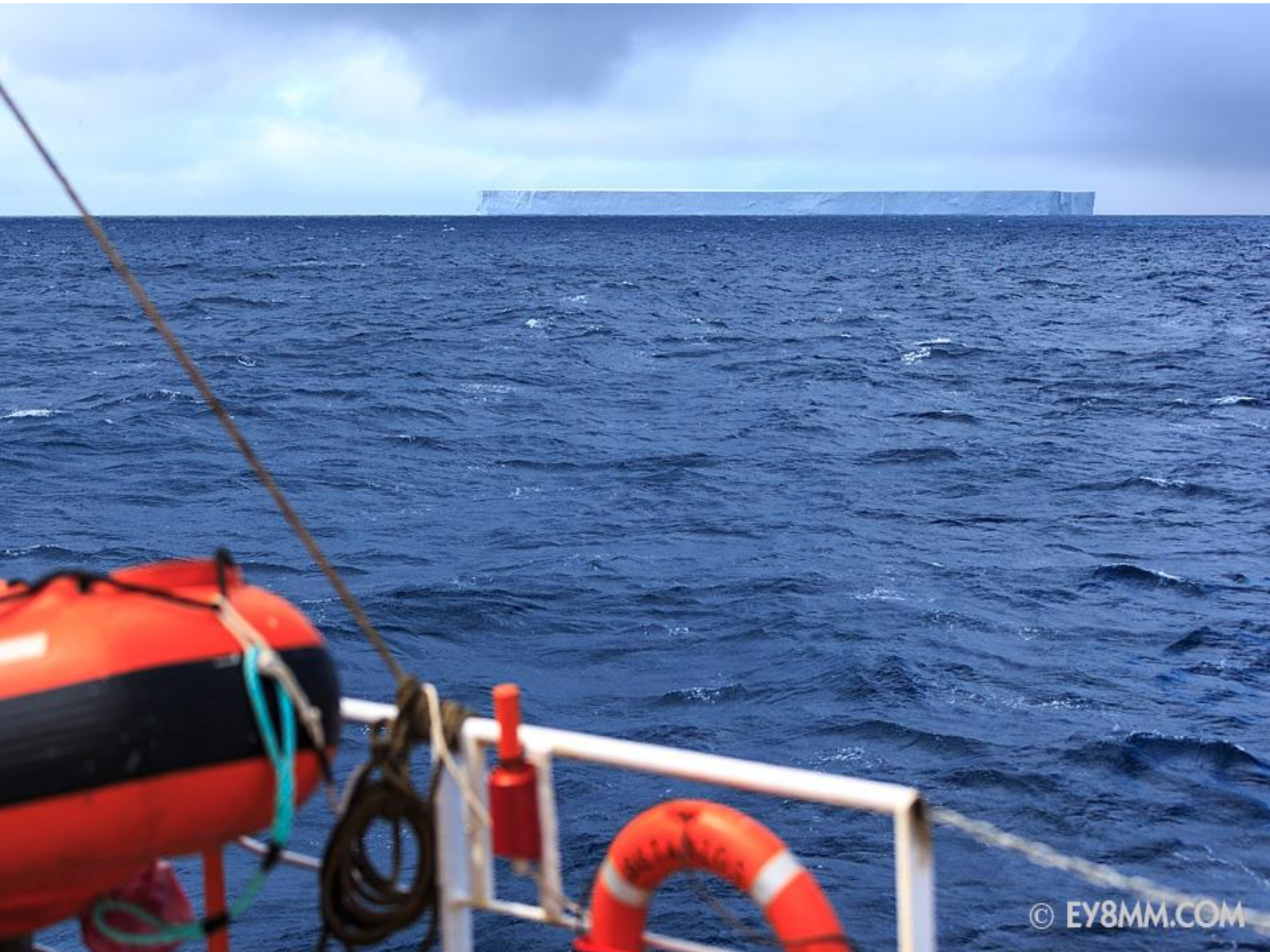
20 mi

# Cape Town – 1900 miles

- **One engine with old coupling**
- **Forward boat speed 2-3 kts**
- **Total 4-5 kts with current & wind behind us**
- **What else could go wrong?**

# Engine Manifold Fail









**Iceberg 1500M long, 3 miles east**





# Radio!!!





# 3G9A/mm

Band	CW	FT8	LSB	RTTY	USB	Tot	Accum
5		123				123	123
7	3229	379	1	131		3740	3863
10		3				3	3866
14	2975	1159		53	2	4189	8055
18	615	51				666	8721
21	636	986		2		1624	10345
Total	7455	2701	1	186	2	10345	10345



# Cape Town !!!









COMMUNICATION BY  
AMATEUR RADIO  
SOUTH AFRICAN RADIO CLUB

SA2982

SA2982



SA2982











FlexRadio

FlexRadio

FlexRadio

FlexRadio

FlexRadio

FlexRadio

FlexRadio

3YØZ  
BOUVET ISLAND







AROUND THE WORLD

IN

44



DAYS

# WORLD COUNTRIES AND CAPITALS





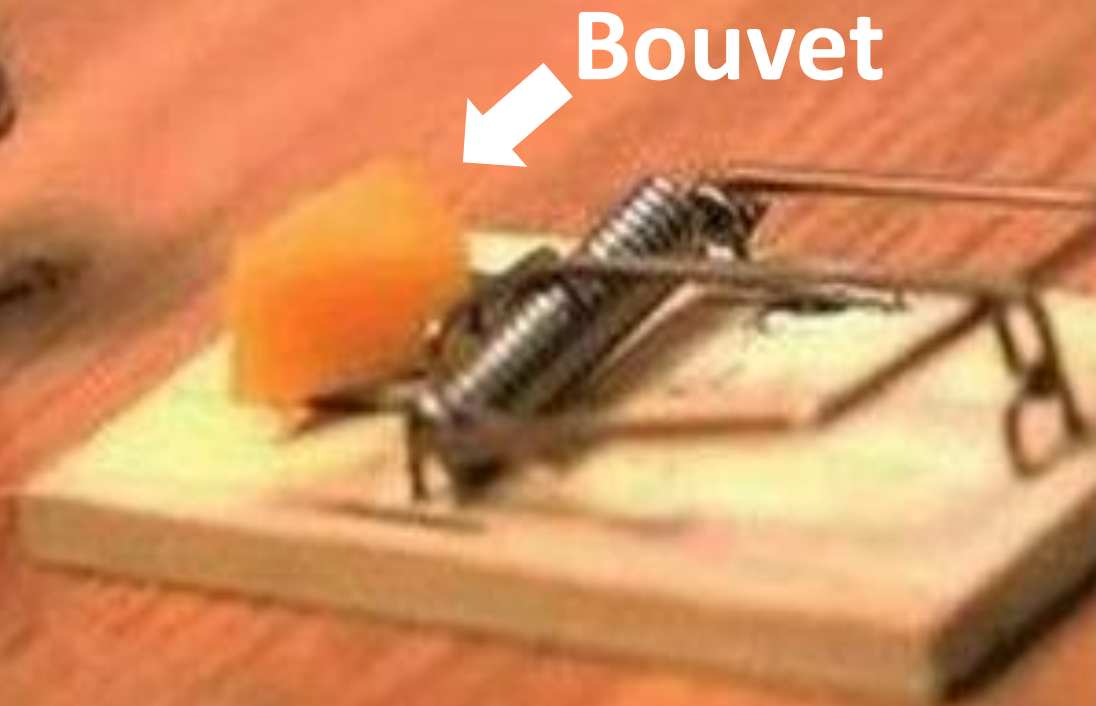
↑  
Us

← Bouvet

We never did get the cheese!



↑  
Us



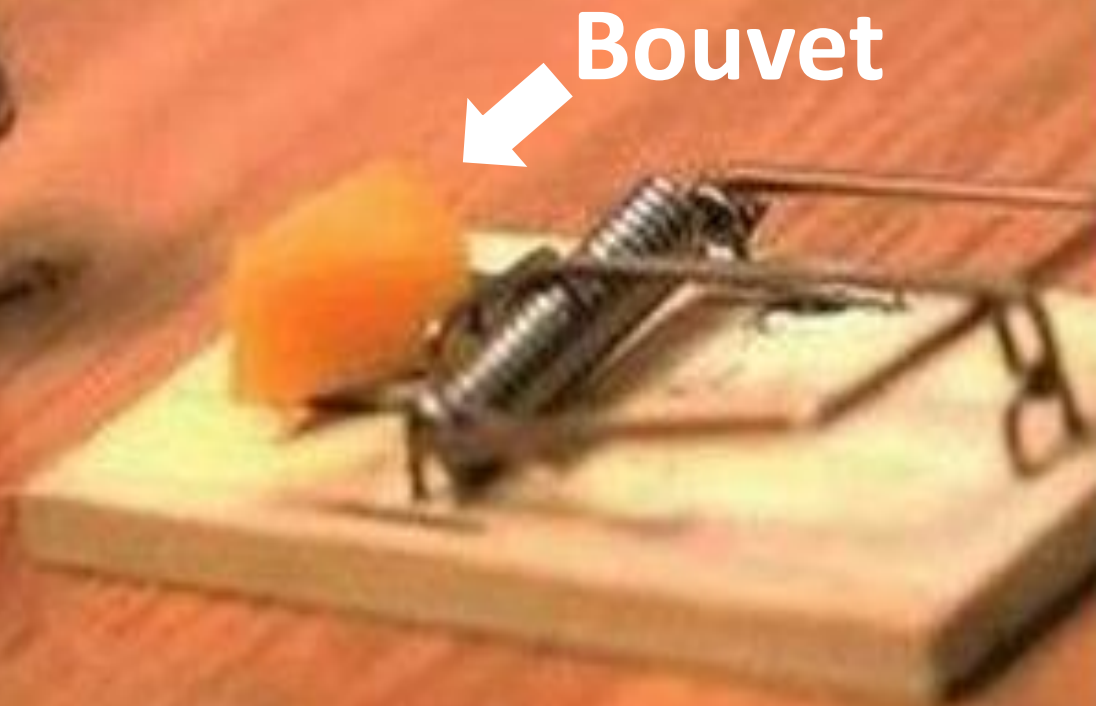
← Bouvet

We never did get the cheese!

**SAFETY FIRST !**



↑  
Us



←  
Bouvet



**THANKS FOR  
YOUR SUPPORT!**

**3YØZ**

**Bouvet Island**

**54°S 3°E**

*FlexRadio Systems®*  
Software Defined Radios

**The Most Remote Place on Earth**

**January 2018**

**[www.bouvetdx.org](http://www.bouvetdx.org)**



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**For your generous \$upport  
and prayers/concerns  
as we limped home!!!**

A roll of paper is mounted on a white plastic spindle. The paper is partially unrolled, with a jagged, torn edge hanging down. The words "PLAN B?" are written in black marker on the exposed portion of the roll. The background is a light-colored, textured wall.

PLAN B?



**BE PREPARED**

YOU HAVE NO IDEA WHEN THE STORM WILL ENSUE

Bleep

# **Bouvet IS DANGEROUS PLACE!!!**

- **There is never “good” weather**
- **Only short windows**
- **Summer maybe better**
- **Winter maybe better, but more pack ice**
- **Shore landings impossible**

**Google: “Tre Dager ved Bouvetoya”**

**(“Three Days on Bouvet”)**

# Next time?

- **Pick ideal time for weather conditions (HA!)**
- **Smaller footprint on island**
  - One shelter
  - Smaller team
  - Smaller antenna package
- **Package loads for helicopter trips**
- **Need contract manager in charge**
  - Ship
  - Helicopter
  - On Island support

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# The 160 Antenna Challenge....

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- **Lightweight**



# The 160 Antenna Challenge....

- **Lightweight**
- **Strong**

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- **Lightweight**
- **Strong**
- **Durable**

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- **Good bandwidth**

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- **Easy to tune**

# The 160 Antenna Challenge....

- **Lightweight**
- **Strong**
- **Durable**
- **Good bandwidth**
- **Easy to tune**
- **Deployable by 3-4 hams**

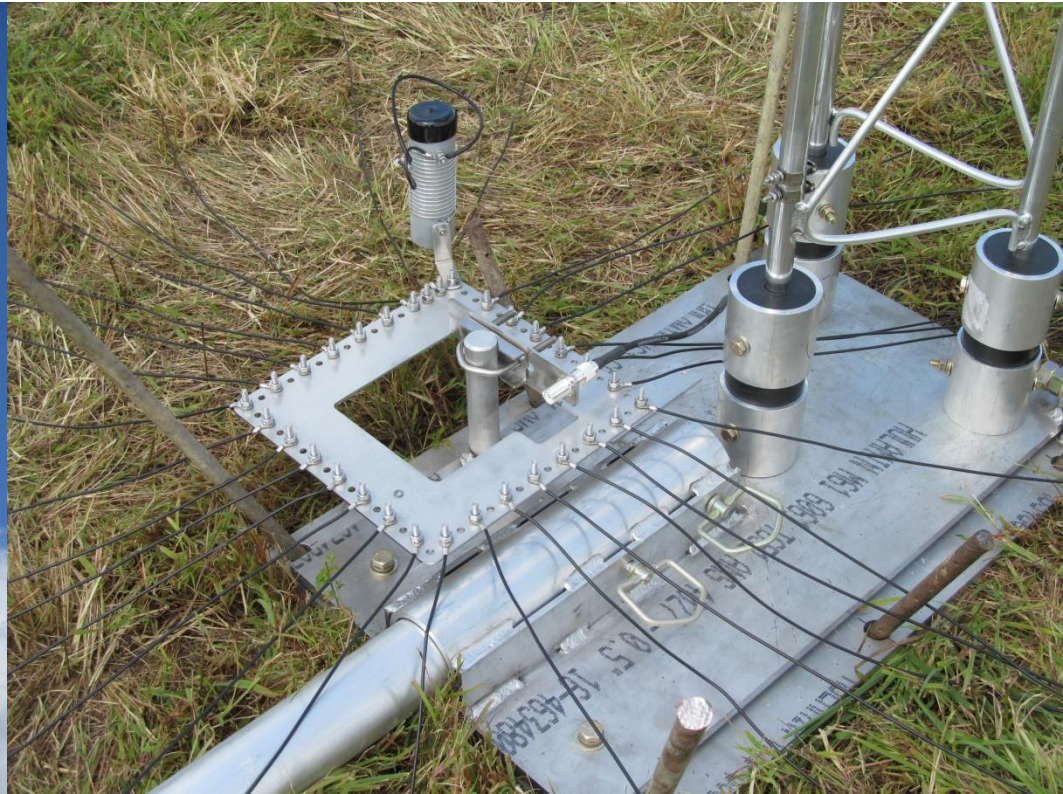
# What works



# What works



# DX Engineering's new Design



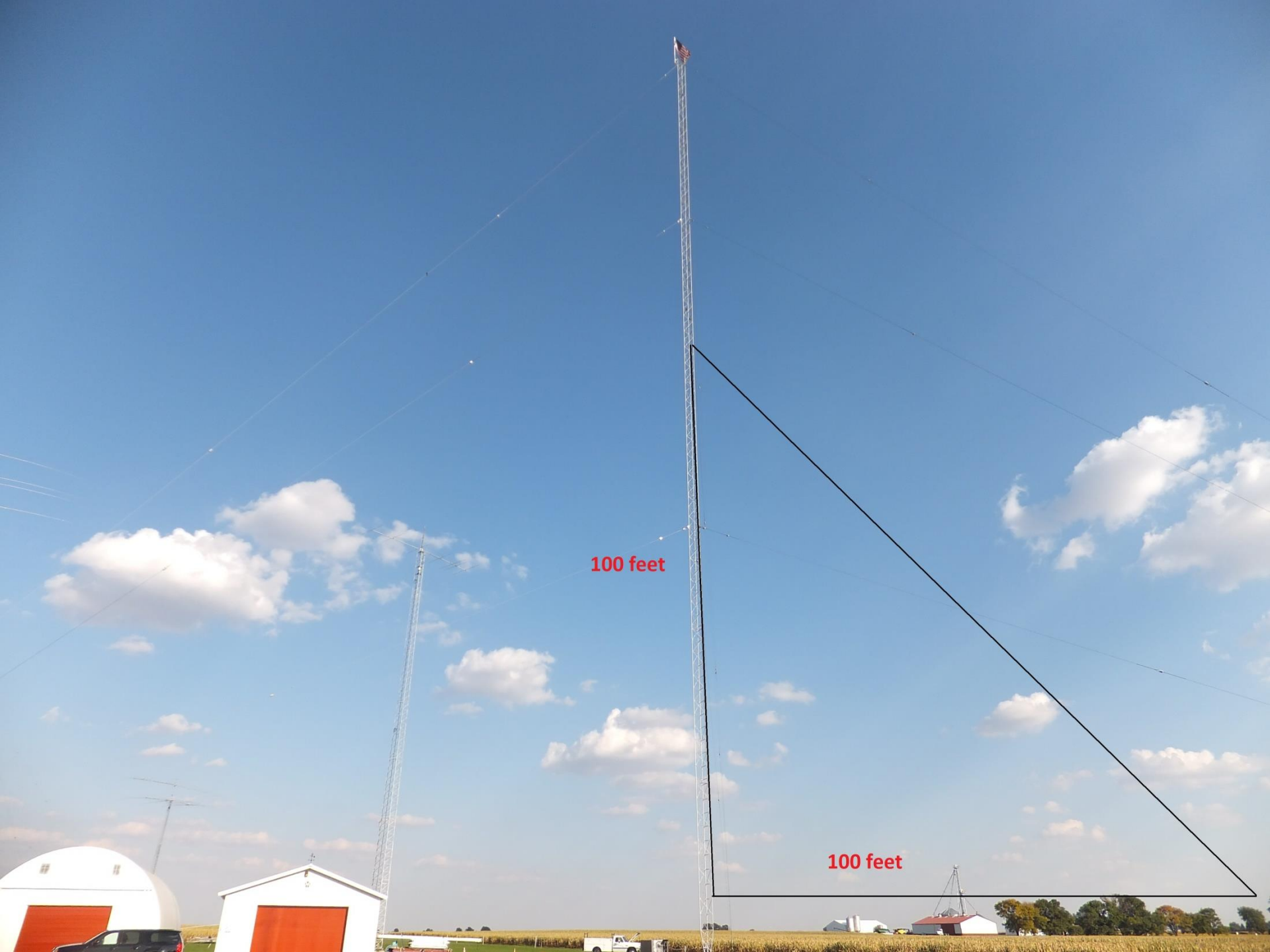


Contact me at:  
JerryWB9Z@Gmail.com

**What's your reward?**







100 feet

100 feet









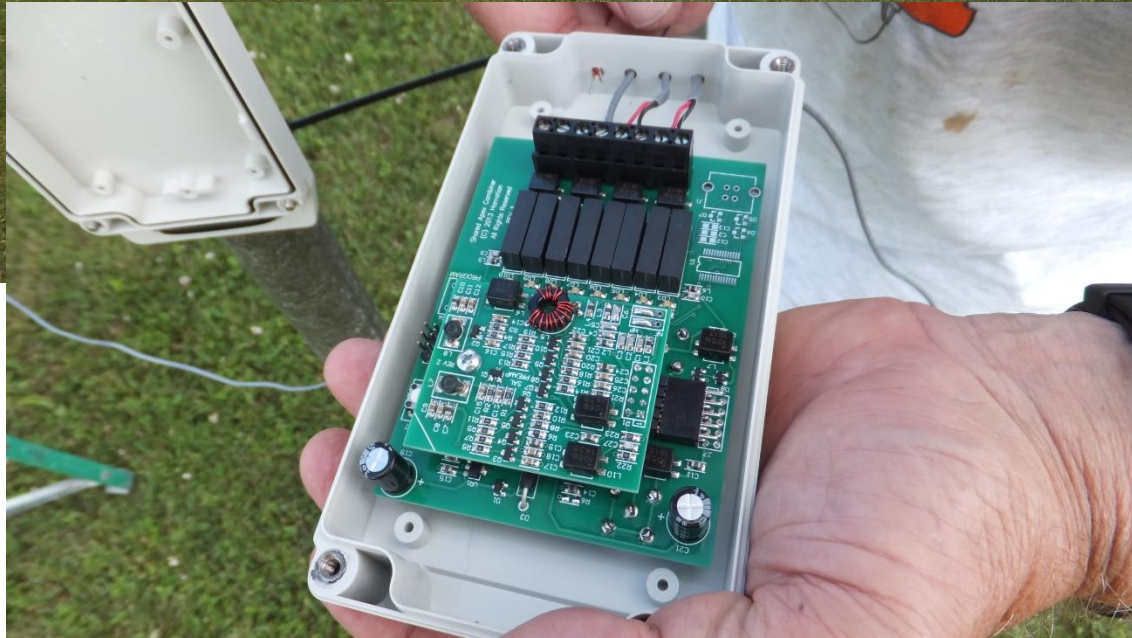




DX  
10.13.0  
10.13.0  
10.13.0









# **ON4UN's 10 Commandments of Low-Band DXing**

- 1. When DX station answers someone else – DO NOT CALL!**
- 2. Listen Carefully. He may change his QSX.**
- 3. Do NOT transmit on top of station answering.**
- 4. Learn your equipment, so you know exactly where to place your transmit signal properly on frequency.**
- 5. If you have limited resources on 160, focus on your receive antenna capability.**
- 6. ALWAYS send your full call.**
- 7. Use proper and consistent spacing when sending your call on CW.**
- 8. Send the DX station's call if you are in doubt about who you are working.**
- 9. Listen to the DX station's report and match his sending speed.**
- 10. Listen...listen....listen!**