

SPECTRE TRANS-ANTARCTIC EXPEDITION 2017/18



Spectre Expedition Summary Report

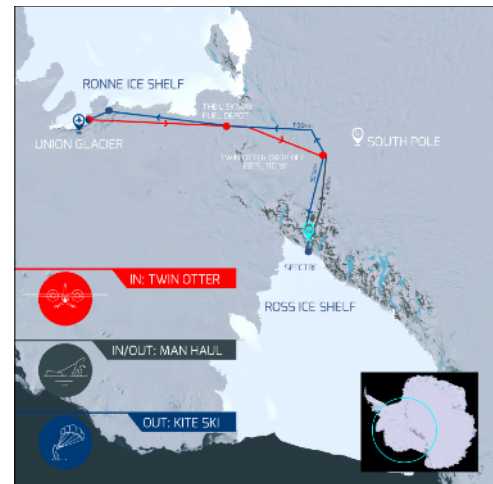
Location: Antarctica
Dates: 7/11/2017 - 16/01/2018
Prepared for: Mount Everest Foundation
Prepared by: Leo Houlding, Expedition Leader
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26 March 2018

SPECTRE TRANS-ANTARCTIC EXPEDITION 2017/18

Introduction

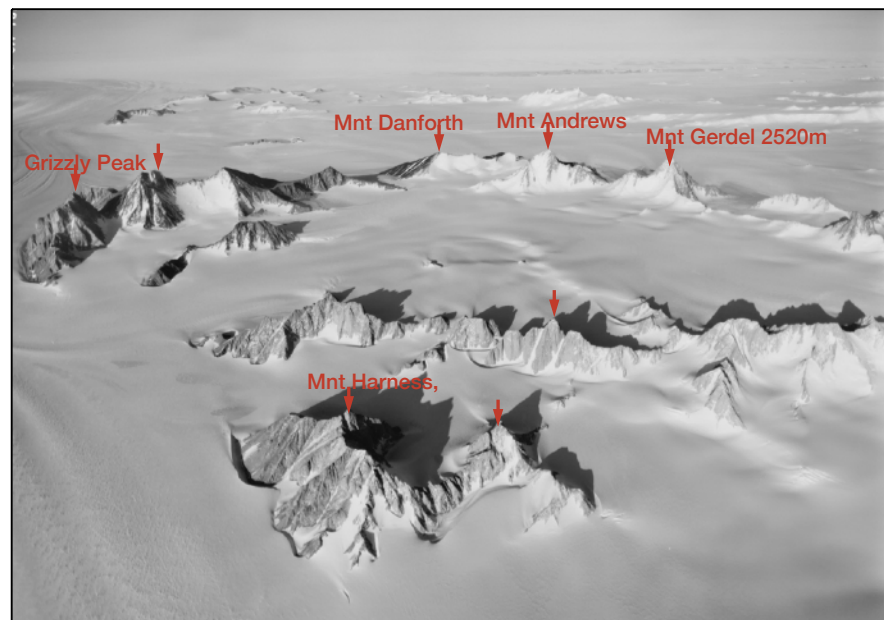
The Spectre, Trans-Antarctic Expedition was an ambitious, first of its kind project aiming to combine an unsupported, wind assisted journey of 1700 kms across the interior of Antarctica with exploration and ascents of the extremely remote and technical Gothic Peaks (including a peak called the Spectre), a subgroup of the Queen Maud Mountains situated at the southern end of the Trans-Antarctic mountains.



Gothic Peaks

The Gothic peaks are arguably some of the most remote summits on the face of the Earth.

The Spectre is located at (86° 12.255'S, 148° 28.294'W) making it by far the most southerly rock spire on the planet, less than 100kms from the worlds most southerly rocks.



The closest human habitation is the extensive US base at the South Pole (90° 00.00S, 90°00.00W), 440km to the South. The closest logistics hub is the Union Glacier Camp (U.G 79° 46.164'S, 82° 51.924'W) and blue ice runway, 1060km Grid East. The great distance from this intercontinental logistics hub makes reaching the Spectre expensive, complex and committing by any means. The extreme southerly latitude present severe climatic challenges.



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Strategy

The complex strategy for this expedition was developed with extensive advice from Antarctic Logistics and Expeditions (A.L.E) who also provided the Antarctic logistics for the expedition. Although it is possible to fly and land directly at the foot of the Spectre, the long distance from both UG and ALE's fuel depot at Theils Ski-way (85° 4.969'S, 80° 47.392'W) require fuel depot flights to be undertaken. This makes the cost prohibitively expensive for all but the most heavily resourced expedition, interior flight logistics alone being in excess of \$300K for a single Twin Otter aircraft load.

The Spectre Expedition strategy was developed to limit the interior flight to time to a minimum, whilst trying to optimise the cost / time / feasibility balance.

After extensive consultation and study in-particular of Antarctic wind models an insertion point of 88°00.000S, 135°00.000W was chosen as the optimum start location. This is the maximum payload range, or point of no return from the Theils Skiway for a Twin Otter carrying our team of three passengers (PAX) and a total 650 kgs of equipment and supplies meaning no fuel flights were required.

A depot of consumables was deposited at this location for the out bound journey. Power kites were utilised for travel as much a possible enabling long distance, high speed travel with very heavy loads. Traditional man-hauling was carried out whenever travel by kite was not possible. To cover such distance with such loads leaving time for climbing would not be possible without the revolutionary tool of kite power.

65 day of food and fuel were carried but favourable winds conditions in the later part of the trip enabled completion in 51 days.



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Expedition Overview

The long and difficult expedition was completed safely, without resupply or rescue and achieved most of its objectives. 1650kms of technical and hazardous travel was undertaken by kite with exceptionally heavy loads (up to 180 kgs) often in considerably suboptimal conditions.

Technical ascents were made of the Spectre and neighbouring a summit in the Gothic Peaks.

Only 60km of man-hauling was necessary, far less than anticipated due to beneficial, unanticipated wind direction and surface conditions for one leg of the journey and significantly better than expected upwind performance resulting from the chosen combination of new wing technology in the form of high aspect ratio, high performance race kites and aggressive giant slalom world cup race skis.

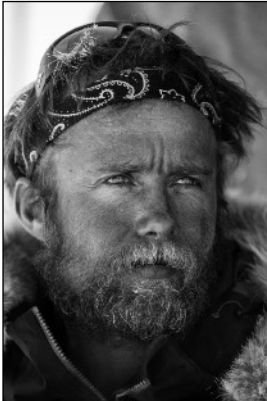
However exceptionally severe climatic conditions during the initial phase of the expedition hampered the schedule, significantly reducing the number of days available to explore the Gothic Peaks. The days in the mountains were further hindered by extremely unstable weather. As result of this and the exceptionally steep and difficult nature of the South Spur of the Spectre, an attempt was deemed certain to fail and too dangerous to try in the minimalist Alpine style for which the team were equipped.

Time constraints, poor weather and dangerously crevassed terrain also led the team to conclude that reaching the Ross Ice Shelf and hence Ronne was not a priority worthy of the risk and time implications.



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Expedition Team



Leo Houlding | 36 | Lakes, UK,

Expedition Leader, Climber/Alpinist/Skier/Kiter.

Adventure professional. Experience organising major expeditions. Significant first ascents and repeats over 26 years climbing in Alps, Yosemite, Greenland, Baffin Island, Patagonia, Himalaya & Antarctica. 5 years kiting in Lakes, Alps, Norway & 1000 mile Greenland kite expedition in 2016. Impressive adventure TV & Film resume including Wildest Dream Everest IMAX, Asgard Project, Last Great Climb, Discovery Channel Lost Worlds, BBC Fierce Earth & Top Gear



Jean Burgun, | 35 |, Haute-Alps, France,

Climber/Alpinist/Skier/Kiter. Mountain Hut custodian, Rope Access worker, 25 years climbing & Alpinism. 6 years kiting. Extensive experience in Alps, Dolomites, Yosemite, Patagonia. Accomplished hard free, aid, ice, mixed & Alpine climber. Ex-member of french youth alpinist team. Very experienced random- snowkiter including solo Norway expedition. "The Spectre represents for me the core of what I looked for all my life. The meeting point between my childhood dreams and the alpinist/kiter I became."



Mark Sedon / 47 / Wanaka, New Zealand.

Skier/Kiter/Photographer & Cameraman. IFMGA Climbing & Ski Guide with 20 years of climbing and skiing in the NZ, Europe, South America, North America, the Himalayas and Antarctica. 15 years kiting. A passionate and experienced adventurer with numerous first ski descents, new ice routes and also many new rock routes. "To me the adventure is a combination of all the skills I've built up over the years. What an opportunity!"

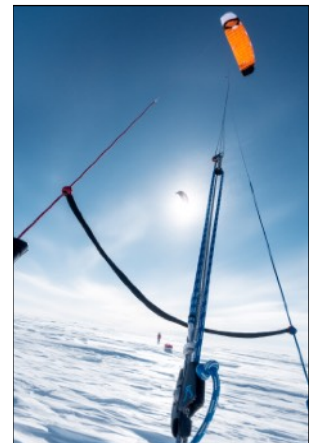
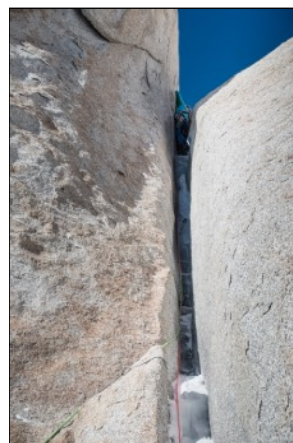
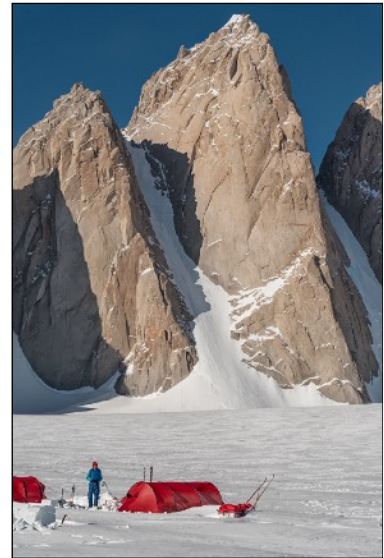
One of the originally proposed team members, Camilla Ringvold, opted out in Feb 2017 well in advance of the expedition. Another member, Matt Pycroft the expedition cameraman and photographer, was reluctantly forced to drop out late in proceedings in August 2017 upon discovering his Father had contracted an imminently terminal disease. He was replaced at short notice by New Zealander, Mark Sedon.

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Ascents

An ascent of the Spectre (2020m) was made to the summit by a significant variation to the Stump route of the first ascent climbing the North face to the North West ridge involving around 750m of climbing. Following an initial steep snow couloir climbed unroped, the route was a complicated line that zig-zagged extensively up the face involving short pitches of difficult mixed climbing (upto Scottish VII, 7) interspersed with steep, unprotected snow ramps and gullies.

An ascent was also made of the North face of the unnamed first spire of the Organ Pipe Peaks with the suggested title of Alpha Tower (approx 1750m). The route was around 350m in length and involved sustained difficulties up to Scottish VIII, 7 and a 10m 5.11/A3 off width, ice chimney.



Climbing Notes

As previously highlighted it was not without regret that the primary climbing objective; the South Spur of the Spectre was deemed too unsafe to attempt in the conditions encountered with the equipment at hand.

A port-a-ledge with expedition fly enabling a wall style ascent and crucial shelter in high winds and severe weather may have provided sufficient safety margin for an attempt to be deemed viable. It would also reduce the dependency on vertical hanging belays, which severely restrict blood flow to the lower leg greatly increasing the chances of cold injuries to the toes and feet in the extreme cold temperatures of the Gothic Peaks given the slow pace of climbing over such steep, difficult terrain. However taking onto account the 1700km that all equipment had to be transported the decision was made early in the planning process to commit to a light weight Alpine Style approach. Stable high pressure was critical to this approach and did not materialise during the time in the Gothic's. Next time we will bring a ledge!

Also of note although the fact that the expedition did not carry any form of drill or bolts certainly increased the potentially commitment, complications and difficulty of any climbing in the Gothic Peaks it was felt that this was not a critical deciding factor and given stable weather and / or more big wall specific equipment ascents could have been made of the most difficult lines and faces.

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Itinerary

Trip Day	Exped day	Date	Brief	Description		
1		Nov 7	Fly	Home - Punta Arenas via Santiago	Kiting Days	24
2		Nov 8	Fly	Travel (Leo delayed 24 hours)		
3		Nov 9	Fly	Arrive Punta Arenas late	No Travel Days	12
4		Nov 10	Punta	Preparation		
5		Nov 11	Punta	Preparation	Man-Haul	4
6		Nov 12	Punta	Preparation		
7		Nov 13	Punta	Preparation	Spectre Climb	10
8		Nov 14	Punta	Preparation		
9		Nov 15	Fly	Fly Punta - Union Glacier Antarctica	Fly	1
10		Nov 16	Union Glacier	Preparation		
11		Nov 17	Union	Preparation		
12		Nov 18	Union	Weather delay / Preparation		
13		Nov 19	Union	Weather delay / Preparation		
14	1	Nov 20	Flight	sunny, 12kts E, -33c, wind 12kts E, windchill -46c camp1		
15	2	Nov 21	No Travel	-28c snowy and whiteout 15/20kts> no movement		
16	3	Nov 22	No Travel	-30c snowy, wind 25/30kts gusting 40kts. no move		
17	4	Nov 23	No Travel	-25c 15kts flatlight no move		
18	5	Nov 24	Kite	-25 then -32c flat light clearing in eve. 32km 20kts E crosswind		
19	6	Nov 25	Kite	-25c 50km (32km in sastrugi NP, 18km on the road, convoy, 15/20kts E		
20	7	Nov 26	Kite	-25c 28km on the road til cache B 20/25kts Easterly wind		
21	8	Nov 27	Kite	-25c 10km on the road 25/30kts		
22	9	Nov 28	Kite	-20/-25c 45km until graves nunatak (icefall)20/25+kts		
23	10	Nov 29	No Travel	- 25c 25kts rest day flat light in the morning then better		
24	11	Nov 30	No Travel	-20c rest day 20kts in the morning clear in the afternoon		
25	12	Dec 1	Kite	-20c 68km on scott glacier until crevasse camp. blue sky, 20 then 15 then 25kts		
26	13	Dec 2	Kite	-20c 6km roped up til promised land then kite til cache C crevasse+pulk. 20kts		
27	14	Dec 3	Spectre	pulk fixing at cache c, clear weather, warm and no wind		
28	15	Dec 4	Spectre	3,2km to BC, 200mD+.		
29	16	Dec 5	Spectre	reco on sanctuary glacier. Clear but supercold and windy		
30	17	Dec 6	Spectre	mixed weather, windy, rest day at BC		
31	18	Dec 7	Spectre	Spectre climbing, clear then overcast. 22H BC to BC, windy til 30kts+ just after being back		
32	19	Dec 8	Spectre	Sleeping, rest at BC mixed weather, windy		
33	20	Dec 9	Spectre	rest at BC, mixed weather, windy		
34	21	Dec 10	Spectre	Overcast, windy and cold, reco at base of mt Arkenes. WTF are we doing here ?		
35	22	Dec 11	Spectre	Alpha tower climbing, sunny, no wind and mild on sanctuary glacier (windy at BC) 12h BC to BC		
36	23	Dec 12	Spectre	Rest at BC, mixed weather, windy		
37	24	Dec 13	Man-Haul	Left BC, 11km manhauling on scott glacier. Sunny no wind		
38	25	Dec 14	Man-Haul	manhaul on Scott G until junction with griffith (promiseland)12km C2C, at least 15km travelling, windy -15/-20c		
39	26	Dec 15	Man-Haul	18,2km C2C, 10h manhauling. Clear first , then deteriorating (more cold and wind -15/20c crevasses everywhere. One fall. Camp onto the only snowpatch of the day		
40	27	Dec 16	Man-Haul	8km C2C(!!!!WTF?), 6h manhauling. Long dogleg westward to escape crevasse field. Sunny -15/-20c 15/20kts. Camp on robison G.		
41	28	Dec 17	Kite	36km tacking (115km total) C2C on robison glacier, 100km travelling. Clear, -15c wind 20kts then decreasing. Camp on cal plateau.		
42	29	Dec 18	No Travel	1,3km kiting. Pitched tent 2times. Wind 5 to 10kts on/off. Warm in the evening		
43	30	Dec 19	No Travel	rest day. Snowy in the morning, then clear and cold. No wind.		
44	31	Dec 20	Kite	46km C2C kiting upwind, 116km travelling, clear to overcast wind 10 to 20ktsSE		
45	32	Dec 21	Kite	126km 36km offroad to cache B, 90km on the road. Sunny in the morning, then stormy (25/30kts), sundogs at night. Around -20c		
46	33	Dec 22	Kite	30km on the road to cache A. Sunny 15/20kts ESE		
47	34	Dec 23	No Travel	rest day. White out -25c 15kts E		
48	35	Dec 24	No Travel	rest day. Overcast then sunny. -23c 10kts E slowly turning ESE.		
49	36	Dec 25	Kite	93km 10h upwind kiting (140km travelling) mostly sunny. Around -20c, 10/15kts?? ESE		
50	37	Dec 26	Kite	10km 4h flatlight, snow during night		
51	38	Dec 27	Kite	Broke/set up camp twice , drone filming, flat light then fantastic full parhelia. Wind turned SE at night 101km in 6h to escape2 (11pm>5am) -15c		
52	39	Dec 28	Kite	16km lightwind SE 3h travelling		
53	40	Dec 29	No Travel	restday, snowy/flatlight wind E		
54	41	Dec 30	No Travel	same		
55	42	Dec 31	Kite	32km superlightwind ESE. Sunny around -15c		
56	43	Jan 1	Kite	20km in the morning then snow and Easterly wind		
57	44	Jan 2	Kite	25km in the morning, 35km downwind in the afternoon sunny		
58	45	Jan 3	Kite	187km downwind, sunny. 15/20kts		
59	46	Jan 4	Kite	110km down then crosswind. 20 to 3kts		
60	47	Jan 5	Kite	201km 12/18kts. Sunny. Sastrugi at beginning and 2/3. wonderland at the end.		
61	48	Jan 6	Kite	135km in 5h (magic 81°S!) with 12m 15/25kts SO then 19km with 9m (around20kts S) after 3sails to horseshoe. Mostly sunny.		
62	49	Jan 7	No Travel	overcast, snowy, low clouds, possible to travel but not to film so restday		
63	50	Jan 8	Kite	same, better in the afternoon, lightwind from S 30km		
64	51	Jan 9	Kite	sunny. 25Kts in the morning getting lighter. Filming. Horseshoe valley, shoeck col, hend glacier, hend col. 6Km manhauling to UG. Don't remember kms.		
65		Jan 10		UG		
66		Jan 11		UG		
67		Jan 12		UG		
68		Jan 13		UG		
69		Jan 14		UG - Punta Arenas 9pm - Amazing light		
70		Jan 15		Punta Arenas - Santiago		
71		Jan 16		Santiago - Home		
72		Jan 17		Arrive Home		

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Spectre Expedition Accounts

EXPENSES			INCOME		
ALE Logistics	£	141,103.54	Berghaus		£96,000.00
ALE Bond	£	69,827.82	MEF Grant		£50,000.00
Equipment	£	34,213.11	Wally Herbet Award		£50,000.00
Camera / Tech Kit	£	26,921.39	Scarpa		£8,000.00
Insurance	£	10,800.00	Sea to Summit		£3,164.29
Communications	£	4,304.32	ASK4		£20,000.00
Flights	£	5,027.34	Outward Bound Trust		£9,000.00
Freight	£	6,549.99	First Net		£2,400.00
Consumables	£	2,904.53	Leo Houlding		£75,565.43
Accommodation	£	1,348.68			
Training	£	2,000.00			
VAT	£	9,129.00			
TOTAL	£	314,129.72	TOTAL	£	314,129.72
PENDING COSTS					
Sponsors contractual Film Post-Production	£	15,000.00			
RECOVERED COSTS					
ALE Bond	£	69,827.82	Returned to Leo		£44,827.82
			(Leo Net Cost)		£20,737.61
TOTAL COST		£259,301.90	TOTAL INCOME	£	259,301.90

Financial Impact of Team change

This team change had a significant impact on the expedition budget as originally Matt Pycroft was to provide all the camera equipment as well to cover the post production costs.

Between Mark & Leo there were sufficient camera skills to deliver on contractual sponsorship obligations but no professional quality camera equipment resulting in significant hardware expenditure late in the preparation stage.

The team change has also impacted the budget for the post-production of the film as services will have to be contracted out resulting in unforeseen expenditure the expedition is contractually obliged to deliver to both financial and equipment sponsors.



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Insurance & Bond

Insurance was very difficult to secure given the location and nature of the activities to be covered. ALE require medical evacuation cover of \$300K. This is significantly more than most of the few insurers who will cover such activities will provide. Some lack of clarity around the precise interoperation of medical evacuation / search and rescue / medical expenses including repatriation required extensive investigation. Most insurers, brokers and lawyers seemed to cautiously conclude that the interior aviation logistics would class as a rescue and not be covered under medical expenses including repatriation. The Intercontinental Antarctica flight was less conclusive and may be considered a medical expense following proper medical assessment at Union Glacier medical clinic.

The French Alpine Federation do cover all actives and locations but eventually it became clear their policy was limited to €30K of rescue cover. The Austrian Alpine Club would not provide cover. Nor any of the 30+ Insurance providers contacted. The BMC having recently reviewed their expedition insurance were willing to provide cover to any UK residents. Unfortunately two of the three expedition members are not UK residents.

Eventually comprehensive medical evacuation cover explicitly stating all the intended activities and locations was secured through a very cooperative broker that usually specialise in TV and film insurance called Quartz Insurance Brokers based in Bristol.

On top of medical evacuation insurance, a refundable non-medical evacuation bond of \$100K was required to be paid in advance.

Conclusion

The Spectre Expedition successfully confirmed the hypothesis that long distance, polar travel can be combined with high technicality climbing utilising modern kite wing technology. Of particular note was the upwind kiting performance. Optimum climbing around the Gothic Peaks is likely to be late December/January. Armed with the experience and knowledge gained a return expedition is planned; next time kiting all the way from Union Glacier and returning via the route travelled on previous trip. A port-a-ledge & fly will be carried. It will be significantly more difficult than the Spectre Expedition but Leo & Jean believe it to be possible and are motivated to return. Mark has declined the invitation, vowing in future not to answer phone calls from Leo.

