

Greenland Sea to Summit 2022 Technical Report



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1.0 Location and Dates

The entire expedition took place on the west coast of Greenland. The team began in the community of Uummannaq on June 29th and ended in Upernavik on August 30th.

2.0 The Team

Bronwyn Hodgins (29), Jacob Cook (34), Kelsey Watts (30), Zack Goldberg-Poch (30), Angela VanWiemeersch (32), Jaron Pham (27)



4.0 Trip Overview

Over 65 days, our team of six travelled ~450km along the west coast of Greenland via inflatable sea kayak and established new climbing routes on some of the huge granite cliffs rising straight out of the Arctic Ocean.

Beginning a short hop north of the Inuit community of Uummannaq, over the first month we paddled northwards along coastline and fjords. This journey also included a 20km overland pass, for which we packed up the kayaks, gear and food and carried everything across in three loads each, accumulating to about 100km of trekking.

On the northern side of the pass, we established three new climbs in alpine-push style, sometimes belaying the first pitch right out of the kayaks. This included a new 400m route by the ladies Bronwyn, Angela and Kelsey put up in a 50-hour push with an unplanned bivvy. (Time is a Construct 5.11A2 400m on Red Wall)

The biggest climb of the trip was the first free ascent of Qaersorsuaq (also known as Sanderson's Hope), a 900m face just south of the small town of Upernavik. Over ~20days the team established a new route "Sea Barge Circus" 5.11+ 900m, in Big Wall style camping on the side of the cliff for a week. Despite sitting through several days of rain and snow on the wall, the team managed to free climb every pitch on lead, arriving all together on the summit on August 21st 2022.

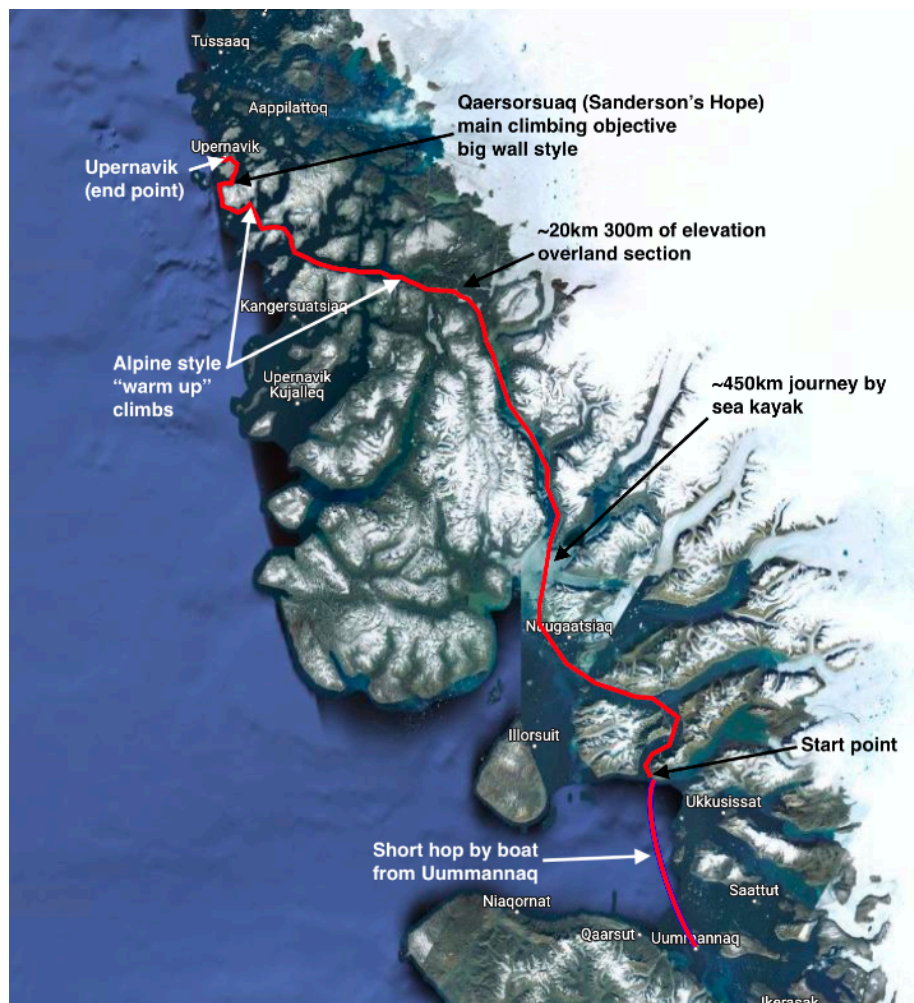


5.0 Technical Details

5.1 Route Map and Itinerary

Due to a slight delay in the arrival of our shipment of food and gear, we opted to take a short boat ride from Uummannaq on July 5th to set us on schedule. From July 6th-16th we kayaked north past the abandoned community of Nuugaatsiaq (due to lasting hazard after a fatal tsunami in 2017) and up to the northern tip of Ukkussissat Fjord. July 16th and 17th we dragged our kayaks upstream through tidal mud flats and from July 18th-24th we portaged ~20km across land connecting a series of small lakes, the larger of which we paddled across. Each leg of the portage required three loads per person, meaning we covered about 100km by foot.

After the portage we continued north, establishing three new lines and repeating an existing one, all in alpine style pushes and sometimes belaying the first pitch directly out of the kayaks! We arrived at our major objective, Qaersorsuaq, on August 5th. Kelsey, Jaron, Angela and Zack continued another ~15km to Upernavik to collect our cache of food and big wall gear, while Jacob and Bronwyn started climbing and fixing rope up the bottom part of the wall. On August 16th we all committed to a wall push and all team members stood on the summit on August 21st. We then rappelled the face and kayaked to Upernavik on August 27th.



5.2 Summary of Ascents

FA "Sea Barge Circus" 5.11+ 900m on Qaersorsuaq by Bronwyn Hodgins, Jacob Cook, Jaron Pham, Zack Goldberg-Poch, Kelsey Watts and Angela Van Wiemeersch over 20 days (7 days camped on the wall for the summit push) in August 2022 (72.715596, -56.102135 <https://goo.gl/maps/ByHx5DRrnGBSnaK37>)

FA "Time is a Construct" 5.11 A2 400m (with sections followed cleanly up to 12d) by Bronwyn Hodgins, Kelsey Watts and Angela Van Wiemeersch over a 50-hour push on August 1st/ 2nd 2022 (72.656650, -55.881293 <https://goo.gl/maps/XXVgc1Z8ByXkuW3u5>)

Repeat "Seagull's Garden" 5.11+ 400m (FA in 2011 by Nico Favresse and Ben Ditto), repeated by Jacob Cook, Jaron Pham and Zack Goldberg-Poch over a 28.5-hour push (Also on Red Wall, see above)

FA "Wears Your Paddle?" 5.11- 250m by Bronwyn Hodgins, Jacob Cook and Kelsey Watts on July 26th 2022 (72.500043, -54.636297 <https://goo.gl/maps/Us7WGNR5r2FYvUtz8>)

FA "Fish are Friends" 5.9+ 200m Jaron Pham, Zack Goldberg-Poch and Angela Van Wiemeersch on July 26th 2022 (72.489148, -54.597502 <https://goo.gl/maps/b5vtKmq5L9nNfJW57>)



5.3 Climbing Mission #1



When we reached the ocean on the north side of the portage, we immediately noticed the change in landscape. The huge and chossy granite walls to the south had been replaced by beautiful red granite domes. We allowed ourselves a well-deserved rest day and then climbed two of these domes across from our camp, in two teams of three. Angela, Zack and Jaron established "Fish are Friends" 5.9+ 200m (topo shown on the left), while Bronwyn, Kelsey and Jacob put up "Wears Your Paddle?" 5.11- 250m (topo below).

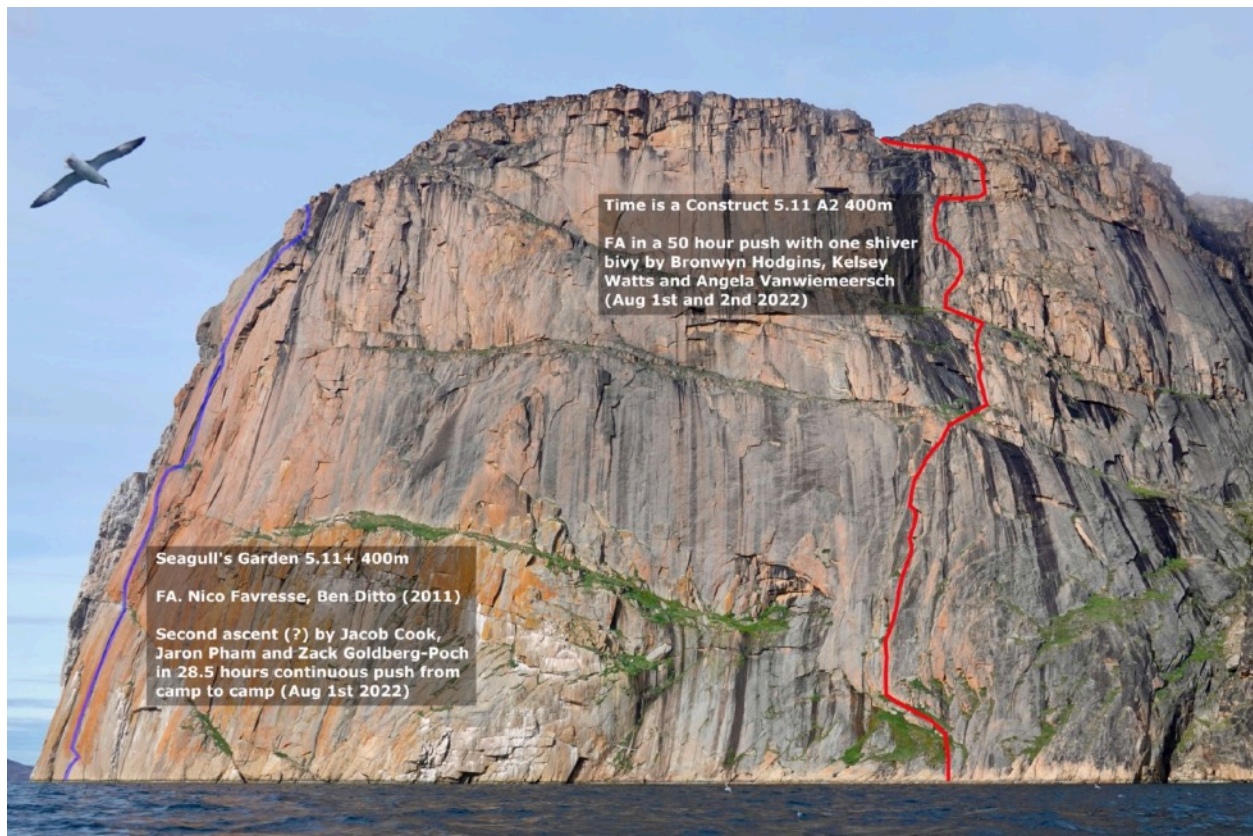


5.4 Climbing Mission #2

We rounded a point and froze awe-struck at the majestic red cliff rising straight 400m out of the ocean. It's no wonder the few teams of climbers who had explored this area by sailboat had already established some lines on this face, known as "Red Wall" by climbers, but "Agparssuit" by the locals, which translates to "Where the gulls stand in a row."

The rock quality was phenomenal. We scoped some lines and then camped on a beach about two kilometres away to rest and prepare. Two days later we all paddled across to Red Wall. The boys repeated a stunning continuous crack system up the central prow in a 28.5-hour push from camp. This route "Seagull's Garden" 5.11+ had been established by Nico Favresse and Ben Ditto when they accessed the cliff via sailboat in 2011. Beginning their route was particularly tricky. Jacob aid climbed about ten meters in his dry suit and water shoes and the other two followed on jumars. Then the three of them hauled the kayak to the low anchor, deflated the boat and stashed it there. The rest of the route was climbed free and on sight. From the top, the boys hiked down to our campsite in the bay west of the wall.

Meanwhile the girls set off on a new line on the unclimbed right part of the wall. In a 50 hour push with an unplanned bivvy, they established "Time is a Construct" 5.11 A2 400m (with sections followed cleanly up to 12d). The 24-hour daylight and the seemingly never ending climb added to the feeling of timelessness as they pressed on for the summit. (See both route lines on the topo below)



Climbing Mission #3

Our major climbing objective was to make the first free ascent of Qaersorsuaq, also known as Sanderson's Hope, rising 900m straight out of the Arctic Ocean. The cliff had been successfully aid climbed twice before, by an Italian team (in 2000) and a Canadian team (in 2002).

We set up camp across the two-kilometre-wide channel, facing the wall so we could study the formation and choose a line. Our team chose to climb a new line on the right part of the wall, following nearly continuous cracks from sea to summit. There were two blank crack switches in the middle of the wall, which posed major question marks. We then spent the next ten days climbing the lower half of the route, leaving fixed ropes in place and stocking a wall camp at about 600m height where there was small natural ledge.

Several days of rain slowed our progress on the lower half of the wall. With the temperatures dropping, we knew we didn't have long before the cliff could become covered in ice and snow as the short summer season ended. The Italian team had spoken of climbing through rime ice in the upper pitches in late August. The weather continued to look unstable, but we decided to commit to the wall regardless, since we could wait out a storm in our expedition flies over the portaledges.

We jumared a final load to our high camp and, seeing as the sun was still shining, Kelsey, Zack and Angela pushed the ropes three pitches higher before we settled into our ledges for the night. We sat out two storms, with a small window in-between where we attempted a push for the summit but were forced to bail in a blizzard.

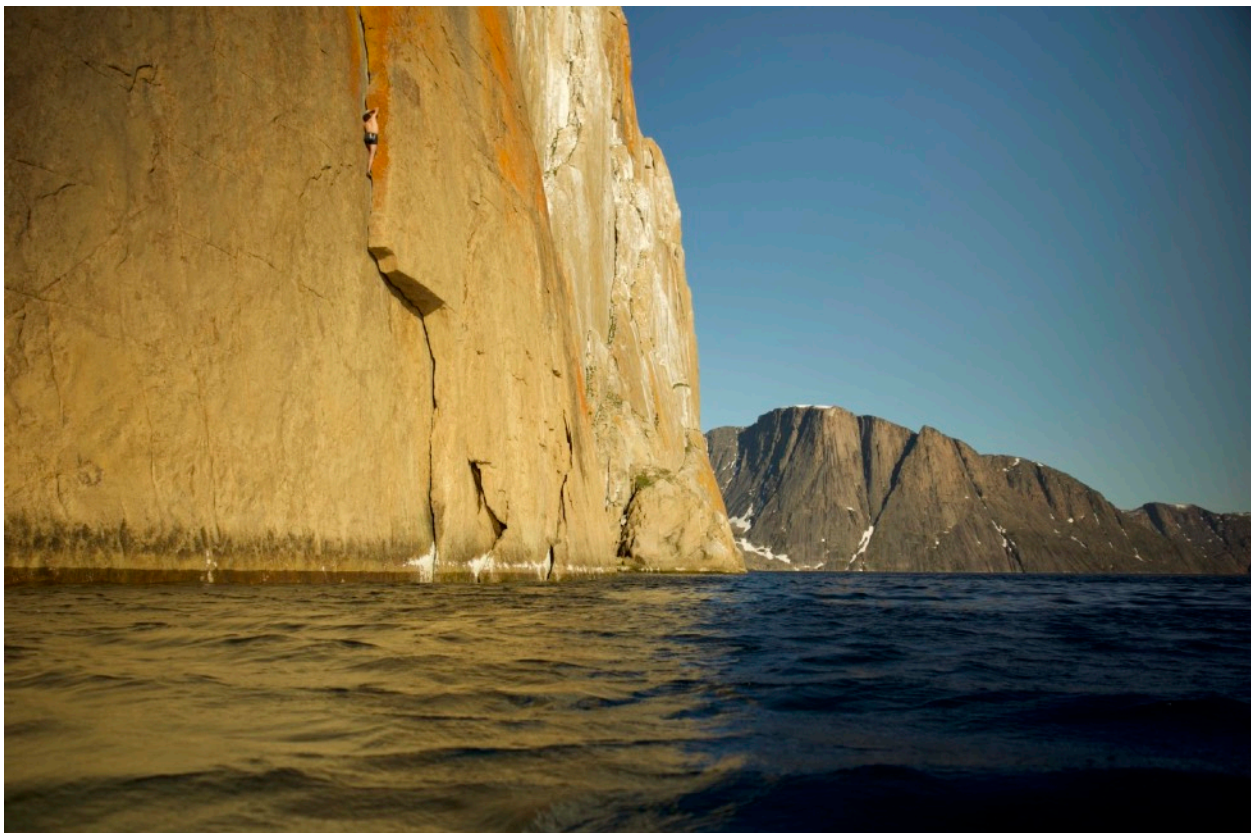
On Wall Day 5, the rain and snow stopped but the rock was soaked and camp was engulfed in a thick cloud. Jacob announced that he wanted to climb, and Kelsey and Bronwyn joined him pushing the rope higher with numb fingers on wet rock. At the top of the third pitch; however, we miraculously popped out above the clouds and were greeted with sunshine. We were above the storm! We radioed for the other three to ascend the ropes, and then all six of us pushed for the summit. The entire route went free at 5.11+, with the crux pitch being a wildly exposed slab crux followed by a steep hand crack right to the very summit! We went from our wall camp to the summit and back in a continuous 24-hour push on August 21st. (See topo below)

The next day (after 12 hours collapsed in the portaledges), we rappelled the route and cleaned our ropes, leaving only the minimum gear as rap stations on the way down. Bringing all our belongings down the face (to our stashed kayaks) and then across the channel, we returned to base camp via a 28-hour push and within minutes of the start of the next storm. In total our team hand drilled 5 bolts, 4 at belays and one on lead to protect the very last pitch. At other anchors we left behind rappel stations of nuts and cord at roughly 60m intervals to descend the wall.



Deep Water Soloing

Along the kayak route, Jacob established two deep water solo routes. One was overlooking a small lake in the middle of the portage and the other was an impressive fist crack at the base of Red Wall, he climbed to around 20 meters before jumping off into the ocean! Lots more potential for this! (Photo below)



6.0 Preparation and Logistics

We began preparation for the trip the previous September. Jacob and Bronwyn dreamed up the idea and Jacob headed up the extensive bout of research over the autumn months. Our team was established in early winter by which point we had begun forming a clear route and objectives. In March we committed to the trip, purchasing flights and setting the plans in motion.

Late April we began packing all the food and equipment which we loaded onto two pallets in Vancouver on May 6th to be shipped as cargo, first by truck and then by boat to Uummannaq, Greenland. The shipment was overseen by Eimskip, a freight logistics company based in Nuuk, Greenland. In the spring we tested the new kayaks to make a more accurate itinerary and figured out our safety response plan (see Appendix) as well as all other logistics.

We flew to Illulissat arriving on June 28th and promptly took a 10-hour, 300-km motorboat ride with Kaj Henningsen of Illulissat Water Taxi to Uummannaq. We camped above the town by the lower lake, while we sourced final supplies including a shot gun and ammunition for polar bear protection, fuel for the stoves, and fishing gear. We picked up our shipment from the Royal Arctic Line (several days delayed), organized and inventoried everything and then loaded some of it back onto the ship to Upernavik (as a supply cache for later in the trip).

Since we were a little behind schedule and to avoid a major open crossing, we opted to take a short boat ride with Paluk Kreutzmann of Uummannaq Seasafaris, to where he left us on a beach north of the town (see map above). From here we paddled north, ultimately to Upernavik where we picked up our supply cache 35 days later.

At the end of the trip, we flew out of Upernavik. But first we spent a couple days drying all our gear out on the docks and then palletizing it to be shipped back to Canada. We then hopped on a series of flights, eventually bringing us to Copenhagen, where we enjoyed a few days in the city (planned into the itinerary in case the small flights had delays) before flying home.

7.0 Hazards and Risk Management

7.1 Rescue in the event of an Emergency

Our team did extensive research into the rescue response available. Greenland Search and Rescue is operated by the national police with headquarters in the capital, Nuuk. From our research it seems the rescue response is quite well established, perhaps since the Greenlandic people often travel far distances on the land and sea — for instance to hunt and fish — and the country also sees many international expeditions each year.

All team members purchased travel insurance in their home countries, which included rock climbing and mountaineering. There is an option to purchase insurance directly through the Greenland Government by registering your expedition (note this takes many months for processing). Expeditions across the icecap or along more remote coastlines require registration; however, for the area we travelled registration is recommended but not required.

Although slow, a rescue by motorboat would be possible from many locations on our journey. We also noted that helicopters regularly service the communities along the coastline, and would be a faster (albeit expensive) rescue evacuation option. **Refer to the Appendix for our complete Emergency Response Plan**, including our expedition first aid kit, emergency devices carried by the team and contact information for the local and national rescue options.

7.2 Hazards and Risk Management on the Ocean

We took considerable polar bear precautions. We had a shot gun and slug ammunition, with Jaron on the team being well versed in shooting (a background in recreational hunting with his family). The rest of us were trained in gun safety and shooting in the spring. We also had a trip-wire fence which we placed around our camp every evening, equipped with blank shotgun shells which produced a loud warning bang. Lastly we each carried bear spray, as an immediate defence. Luckily we saw no polar bears, which was not unsurprising as they tend to retreat from the coast in the summertime and are not commonly seen in that area around that time of year.

Travelling on the ocean, our major concern was hypothermia if someone should fall into the frigid waters. Our inflatable kayaks were very stable - no one capsized/rolled at any point - and our route for the most part was sheltered from the open ocean, meaning that we avoided major wind and swell. The only day of open coastline kayaking was on day 34 rounding the corner to arrive at Qaersorsuaq, and our largest open crossing was only about 8km. We also wore dry suits when in the kayaks.

The icebreak in the fjords we travelled through was very late this year due to a long and cold winter. Leading up to the trip there was concern that the ice may not break up sufficiently to allow safe passage. The biggest danger with partially broken up sea ice (called pack ice) happens when you are between the pack and the open ocean and, if the pack is moving toward the ocean, you may not be able to escape. It can also trap you against the shore and force you to wait (or portage) until a favourable wind blows it away. Luckily the ice broke up sufficiently in the couple weeks before we arrived.

We also saw many icebergs collapse near us, especially during the heatwaves in July. As a rule of thumb, it's wise to stay twice the distance away from an iceberg as it is tall.

Lastly, during the first week of our kayak we travelled through a tsunami hazard advisory zone, deemed as such after a fatal tsunami struck the small town of Nuugaasiaq in 2017. The slope was still currently considered unstable, and the town remains abandoned after the original evacuation. We felt like the probability of this occurring while we kayaked past was sufficiently low that we decided to take the risk; however, we did camp on higher ground as recommended by locals and chose a route that did not go directly past the slope in question.

7.3 Hazards and Risk Management on the Cliffs

On the cliffs our biggest concern was rock fall. We chose cliffs that were of the best rock quality in the area (and chose the area originally based on knowledge that the rock quality was quite good). We have considerable experience as a team choosing long rock climbing objectives in a remote environment, and did our best to choose lines with minimal overhead

hazard and safety as a top priority. We understand how to recognize poorer rock and climb cautiously through such terrain if required. Our priority was to return home safely.

We brought a hand drill and a few bolts on our climbs, as a last resort to get ourselves out of desperate situations. When rappelling we left as little gear as possible that would still allow us to descend safely down the face.

Every climber carried a Rocky Talkie radio, which we used extensively to communicate both within a party and between parties. When the team was separated, we would do periodic check-ins to make sure we were all OK. Each team carried an Inreach and one team would carry the marine radio.

We were concerned with hyperthermia on the cliffs, especially if the weather turned poor, or in the event of an injury. We carried large down jackets, rain shells and emergency bivvy bags on all alpine-style climbs. On the big wall we carried large down jackets and rain shells, and also had the added safety that we were always able to rappel or jug to our wall camp for shelter if needed. We carried small first aid kits on all alpine-style climbs, and a fairly extensive kit on the big wall.



8.0 Valued Support

Our expedition received invaluable support from sponsors and grants, without which this trip would not have been possible. Even with extensive funding, we still paid a portion of expenses out of pocket. (See table below)

FUNDING SUPPORT FROM	Funds provided
Rab Equipment (sponsor)	20 000 GBP
Wild Country (sponsor)	6 000 USD
Coros (sponsor)	5 000 USD
John Laughlin Memorial Fund (Alpine Club of Canada)	15 000 CAD
Mount Everest Foundation	2 250 GBP
Andrew Croft Memorial Fund	1 200 GBP
British Mountaineering Council	450 GBP

The trip received some free equipment/products from: Rab, Wild Country, Kokopelli, Level Six, Edelweiss, Hyperlite, Hornby Organic, Heather's Choice, Voltaic Systems and Rocky Talkies.

Expedition cost came to approximately **76 000 CAD** (final budget calculations still awaiting the cost of the shipment of gear back to Canada, which has been delayed and has not yet arrived at the time of completing this report. But our best prediction at this point is the trip will cost each team member between 1000 and 2000 Canadian dollars from their own pocket.

9.0 Media/Outreach

A major objective of the expedition was to create a film. Our 25min adventure documentary is currently featured as part of the Brit Rock Film Tour 2022, which premiered on Nov 2nd 2022. The documentary was entirely self-filmed (with the majority of the footage shot by Jaron Pham and Jacob Cook) and then edited and produced by Alastair Lee. After the tour, the film will be submitted to prestigious international mountain film festivals and then after two years it will become available for free on YouTube.

Jacob and Bronwyn were interviewed about the trip on the Enormocast climbing podcast and The Mountain People podcast. Our trip was also featured in international climbing media including: Planet Mountain, UKClimbing, Grippd and Climbing, and the story will be published in the Canadian and American Alpine Journal print editions. Jacob is presenting the documentary at the Kendall Film Festival on November 19th in the UK, and it is likely Jacob and Bronwyn will do more presentations locally and/or abroad.

We took many professional quality photos of the trip, many of which have been distributed to media channels and supporting brands. We have written social media content and blogs for supporting brands to share on their channels and will continue to share stories and imagery on our personal social media outreach (@jacobcookclimbs @bronwynhodgins @jaronpham @angela_vanwiemeersch).



Appendix - Greenland Sea to Summit Emergency Response Plan

Communication procedure in case of emergency

Minor (not immediately life or limb threatening)

1. Sea and Stone Team messages ALL Emergency Coordinators with information and requests. *(This will appear as individual messages as the InReach does not support group messaging.)*

Emergency Coordinators are expected to contact each other and coordinate between themselves who will do what.

(This setup is to provide redundancy in case someone is unreachable or does not have the ability to provide assistance.)

Major (life or limb threatening emergency)

1. Sea and Stone Team presses the SOS button on InReach.
2. Sea and Stone Team will attempt to reach emergency services using their VHF radio (Channel 16).
3. Sea and Stone Team messages ALL Emergency Coordinators with information and requests. *(This will appear as individual messages as the InReach does not support group messaging.)*

Emergency Coordinators are expected to contact each other and coordinate between themselves who will do what.

(This setup is to provide redundancy in case someone is unreachable or does not have the ability to provide assistance.)

4. Sea and Stone Team messages GEOS and the individual's travel medical insurance provider to indicate they have initiated an emergency response.

(Both companies should offer financial coverage in event of an emergency, however both require that they arrange the rescue/medical transport. From conversations with these companies it seems that both contacting them and the Greenland rescue services at the same time is the best procedure.)

5. Emergency Coordinators contact all of the following:
 - a. All the relevant Emergency Contacts
 - b. Greenland Police (who will arrange search and rescue) (or other rescue contact)
 - c. GEOS
 - d. The individual's travel medical insurance provider

('c' is a backstop; this organization will have already been alerted directly by the Sea and Stone team via InReach SOS, however the Sea and Stone team requests that the Emergency Coordinators also check in with this organization in order to double check that communications were received and/or advocate for faster rescue and/or provide them with detailed updates.)

Rescue resources

Greenland Police:

Contact the police station in Nuuk. They will arrange the SAR response.

Their resources:

Small helicopters and boats based in Uummannaq and Upernavik. Bigger helicopter dispatched from Kangarluuaq.

Phone: +299 70 14 48

GEOS:

Emergency Operations (IERCC)

+1-936-582-3190

+1-855-444-2937

Benefits Support (IERCC)

+1-888-460-4554

TuGo:

From Canada and USA: 1-800-663-0399

Outside North America and Mexico: (global toll-free) 800-663-00399

BCAA:

From Canada & US: 1.833.560.0522

Outside N. America & Mexico (Global toll-free*): 800.464.71111

Worldwide (collect**): 519.325.1567

GeoBlue:

1-855-481-6647

customerservice@geo-blue.com

Person with a boat in Ummannaq:

Paaluk Kreutzmann

Might be able to access us if we are on the South side of the portage. Though unlikely in the final fjord due to water depth. Cost is likely not covered by insurance, but could be helpful for non-emergency situations or potentially a faster response than another service.

Phone: +299 56 59 82

Email: info@uummannaqseasafaris.gl

Person with a boat in Upernavik:

Nikolaj

Might be able to access us if we are on the North side of the portage. Cost is likely not covered by insurance, but could be helpful for non-emergency situations or potentially a faster response than another service.

Phone: +299 27 08 20

Email: info@kayak-north.com

Proactive responses

We will periodically check in via InReach message. If no messages are received in over 7 days that is the point to be concerned:

1. Message the Sea and Stone Team via InReach to ask for an update. Wait 1 additional day for a response.
2. Contact all other Emergency Coordinators and Emergency Contacts to see if messages have been received.
3. Contact Greenland Police and explain the situation/request a search.

Emergency Coordinators: REMOVED FOR PRIVACY

Name	
Phone number	
Email	
Relationship	

Name	
Phone number	
Email	
Relationship	

Name	
Phone number	
Email	
Relationship	

Name	
Phone number	
Email	
Relationship	

Communication Devices Carried by Team:

- InReach x 3
- VHF radio (Standard Horizon HX300)
- Rocky Talkies (small walkie talkies for local intergroup communication)

First Aid Kit Carried by Team:

Item	Quantity packed	Notes		
MEDS				
digestive meds				
senna root laxative		chill		
womens laxative		medium core , dose = 1-2		
anti diarreah				
imodium				
anti nausea (zofran)				
pepto bismol				
zomotidine				
gravol	50			
Pain Killers	quantity			
ibuprofen				
Tylenol	50			
ibuprofen suppository	1			
hydroocodone	a few			
HARD CORE PAIN MEDS				
Eyes, Ears and Throats				
polysporinn ear drops				

cipro ear drops				
ear flushing device				
numbing eye drops				
inhalers				
cold and flu				
day time				
night time				
emergen-C	1			
Antibiotics	dose per day	days	use	notes
Ciproflaxin x 2	1	7	infection	
Cephalexin	4	7	skin infection	
Metrenindazole	3	lots	giardia	
teva-norflocacin	2	7	UTI	
Soltrim	2	10	UTI	take both together
Prednisone	3			4mg, start with 3 then ween each day
Azithromycin	1		travellers diarea, pneumonia	
Apo-sulfatrim	2		UTI	
topicals				
polysporin				
hydrocortisone			rashes	
antifungal x 2				
afterbite			bug bites	
abreva			cold sores	
Fucidin			empetego	

mupirocina			empetego	
EPI KIT	Quantity	Notes		
epi				
syringes and needles				
benadryll				
Wound care				
numbing solution x2				
small guage needle and syringe				
scalpul				
flushing syringes				
Wound prep kit				
Wound covering kit and bandaides				
tooth kit				
sterile dressing				
Tourinquet				
shears/scissors				
sprains, etc				
Sam Splints x 2				
tensors x 3				
triangle bandage				
Other	Quantity	Use		
gold bond		foot fungus prevention		
toothpaste	120mL			
matches, lighter		in with the meds kits		

water tabs	46 x 25L tabs & 104 x 1L tabs	went in with the water filter		
wall skin kit				
skin kit (lotion, etc)?				
climb on	full 28g			
baby wipes	100			
files	8			
nail clippers				
OUCH POUCH (minor wounds)				
medical tape				
gauze				
tensor bandage				
bandaides				
second skin bandaides				
polysporin				
hand sani wipes				
super glue				
tylenol and advil				
lip balm				
sharpie and pen				
STERI STRIPS				
que tips				
five hand warmers				