



Incident Report

Date of Incident: 2022-06-16

Stephan Mantler

HÁFJALL EHF. Dynjandi, 781 Hornafjörður, Iceland

1. General Information

Seriousness:	Severe Weather Rescue
Date of incident:	2022-06-16
Reported by	Stephan Mantler [REDACTED] (<i>SM</i>)
Place of incident	Hvannadalshnúkur / Öräfajökull ([REDACTED])
SAR Group:	Advance Snowmobile Team / First Responders [REDACTED]

Description of incident

–ALL TIMES APPROXIMATE –

On Thu Jun 16 at around 16:50 I (SM) received a notification from Icelandic Search & Rescue that a group of 14 hikers was in trouble and required wayfinding assistance on Hvannadalshnúkur. I went to the base of our local rescue team and after some discussion about the best way forward, we proceeded to equip ourselves for a response by snowmobile. I briefly returned home to pick up some additional equipment, including a handheld GPS device (Garmin GPSMap 66i) that included a recent track of the *Sandfellsleið* route as well as having satellite tracking capability. I also confirmed with the rescue coordinators that my own TETRA radio carries both the Search & Rescue channels as well as some tourism related ones, including one named *Ferdapj-Land* over which it would be possible to communicate with the stranded hikers if needed.

I then drove ahead to fetch some additional equipment and linked back up with the other responders at the base of F985 (up to Jöklašel). We continued to drive up to Jöklašel and unloaded and prepared our four snowmobiles. [REDACTED]

[REDACTED] we were on our way at about 20:45.

We drove northbound, circling around *Esjujöll* and *Mávabyggðir* down towards *Hermannaskarð*, north of *Öræfajökull*. Driving conditions were poor, with wet surface snow, freezing rain, wind and visibility of about 50-100m in parts. Still, we managed to keep a speed of 60-70kph for most sections of the drive.

We arrived at *Hermannaskarð* at 22:30 and continued up towards *Öræfajökull*, crossing over *Snæbreið* at 22:50. This section of the drive should be considered the most challenging, with steeper terrain, sideways slopes and a well-known crevasse area south/southeast of *Snæbreið* to consider.

Crossing down from *Snæbreið* in SW direction, [REDACTED] Visibility was very poor (no discernible features between snow and sky) when [REDACTED] essentially dropped from my view and [REDACTED] made a rapid stop, signaling caution. I slowly moved forward and we perceived that [REDACTED] had driven down a very steep but manageable slope, which we followed one by one. While not an outright cornice, it appears to me the prevalent northerly winds had deposited considerable snow into a steep flank that might prove difficult on the return trip, especially when carrying passengers.

We continued to drive – now back on the flat plateau at 1800m – towards the GPS coordinates we had received [REDACTED] which proved to be accurate. We quickly identified three emergency shelters, stopped and took a brief assessment of the situation. The time was about 23:30. We had approached the group from the side, but my initial reaction was that we should rearrange our snowmobiles directly upwind from the shelters, as an immediate improvised wind wall, which we did. We then checked on the status of the hikers, which all reported being cold and tired, but otherwise in acceptable condition, and divided up the food and fluids we had brought between them.

It was clear that none of the hikers was in any condition to continue to hike out, and the entire group would need to be evacuated. This could not be reasonably achieved on four snowmobiles. We would have to hunker down and wait for reinforcements to arrive, both

on additional snowmobiles and in closed vehicles to move as close as possible in order to minimize further cold exposure.

We relayed to the hikers that they would need to wait for a few more hours until further help arrived. Our next goal was then to improve conditions for the group. The ideal way would be to build a proper shelter, but it was clear that one large enough for 14 (or 18, including us) would take a very long time to build on the entirely flat ground we found ourselves in.

We decided to instead build a substantial wind wall, which would not take too much time and greatly improve the situation for the group. This was done by using snow shovels to carve out blocks roughly rectangular in shape and stacking them upwind from the existing shelters. Our snowmobiles would remain parked further upwind, creating an additional barrier and hopefully helping to direct the wind upwards and around the shelters. Once the wind wall was taller than the shelters, we went between the wall and the shelters and dug lower by a further 20-30cm. Then we helped the hikers from each shelter individually to move as close to the wall as possible, where there was dramatically reduced exposure from wind.

Wind deposited snow might eventually become a concern, but initially it might even be preferable in helping to hold the emergency shelter tarps down and reduce heat loss through ventilation.

Since the next hours would be very low activity, we proceeded to also have some food ourselves, and kept warm by taking turns constructing a simple snow shelter for ourselves. This was a trench sloping to about 1.2m depth followed by a small snow cave that would accommodate 1-2 people.

We also regularly checked on the condition of the hikers, supplying them with some additional food, fluids, and additional insulating and self-heating blankets.

Eventually additional rescue teams arrived on snowmobile, bringing more food and clothing which we distributed amongst the group. The decision was made to wait with evacuation until the approaching vehicles were closer to Hermannaskarð, thus minimizing exposure time of the group and ensuring they could be transferred into heated vehicles within the shortest possible time.

We started to load the hikers onto snowmobiles at 4:30am. Since we only had snowmobiles to transport 12 casualties at a time, the guides were left behind to be picked up at a later time by additional reinforcements that were on the way. All hikers were wrapped in as much clothing as was available.

I volunteered to be the tail driver of the group. Shortly after beginning the return trip, one other snowmobile from the group fell behind with engine issues and I stayed with him, making significantly slower progress than the rest of the group. Eventually we reached a point with good radio reception and coordinated with two other snowmobiles (██████████) to link up with us and take the hiker off the other snowmobile, lightening its load. At the same time reinforcements had arrived and arrangements were made to retrieve the remaining two guides.

The steep slope we had identified on the way in turned out to be less of an issue, thanks to one snowmobile being positioned at the top and giving us a good visual indication of the upcoming slope.

We continued onwards and met the waiting jeeps at Hermannaskarð at around 5:55am. The casualties were loaded into jeeps, and after a brief stop to refuel both responders and snowmobiles we backtracked our route, arriving back at Jöklašel at just after 8am without further incidents.

Actions taken by tour leader

(included above)

2. Personal information

Name of passengers

Group of 12 hikers, led by guides [REDACTED] ([REDACTED])

Description of injury

Hypothermia and exhaustion

Transferred to hospital? No

Transported by ambulance? No

Other type of transportation? Snowmobile, Superjeep

Police called to the scene? Police was participating in rescue operation

Other rescue teams involved: Numerous ICE-SAR (apx. 170 rescuers total)

3. Organisation

Was the insurance company notified? N/A (other company involved)

Actions taken in the wake of the incident Incident report summarized.

4. Subjective Commentary

I have delayed writing this incident report in the hopes of receiving an incident report from the guides involved, but at this time (two months later) do not believe it is still forthcoming.

While Hvannadalshnúkur is often described as a rather long but technically simple hike, this is indeed only true in good conditions. The remoteness and exposure of the environment should not be taken lightly.

The guides' explanation for the root cause of the incident was that their GPS device was malfunctioning, and they had subsequent navigational issues. Lost or malfunctioning devices are always a possibility but also the reason why multiple, independent devices should be always carried, and even more so between two guides.

In my own guiding, this is usually a handheld GPS device (Garmin GPSMap 66i), an outdoor wristwatch with fully functional GPS navigation (Garmin Fenix 5X), and a fully charged cell phone. In addition, the commonly carried TETRA radios also have GPS positioning but generally no built-in navigation (making their use for route finding more difficult but not impossible).

At the time of the incident, the GPS satellite network was fully operational and did not suffer any diminished service according to the U.S. GPS network information website (<https://www.gps.gov/support/user/>). In addition, the responding SAR teams were able to

fully utilize GPS navigation throughout the response and to the best of my knowledge one of the hikers' GPS watch provided accurate coordinates. Consequently, a second GPS device should have completely resolved this issue.

When the decision is made to hunker down and wait for assistance, it is crucial to build the best possible shelter and minimize wind chill. Neither of the guides was carrying a shovel, which would have been an essential tool for building a wind wall or snow shelter (difficult in flat open space, but certainly possible).

Overview Map

Track of the snowmobile response team.

