## ACCIDENT REPORT Troll Wall July 2019



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Two Czech climbers, aged 44 and 45, fell to their death while trying to climb the Troll Wall in Romsdalen, Norway. The accident most likely took place sometime between July 26th and July 28th, 2019.

The two climbers had planned to climb the Rimmond Route, and supposedly set out on July 25th. Their families reported them missing on July 29th in the morning, and a search and rescue operation was initiated. They were spotted from helicopter on the ground below the Troll Wall without any signs of life later the same day. A complex rescue operation was undertaken, where the deceased climbers were finally lifted out on August 2nd. The location is exposed to rockfalls, and in order to minimize risks, the rescuers did not give priority to studying the equipment in order to gain clues about what had happened during the accident.

Without any eyewitnesses, one cannot exactly determine what happened that triggered the accident, but pieces of information observed at the site can still indicate what could have taken place.

The two climbers were both tied into a set of double ropes. Both climbers were wearing both a sit harness and a chest harness as well as helmets. A small backpack was found, as well as hammer and pitons. One of the climbers was wearing his climbing shoes as well as gear for protection on his harness and was obviously lead climbing when the accident occurred. The other climber was wearing his approach shoes and was close to an equalized sling (indicating a belay anchor), thus probably being attached to this while belaying the first climber. There were 3-5 pieces of protection on the rope between the two climbers when they were found. Several of the carabiners were open and twisted, as well as a locking carabiner that had been bent open. During the accident, all pieces of protection as well as the anchor must have ripped out, leaving the two climbers without any protection.

The fact that several carabiners in the safety chain were found open and twisted, as well as the locking carabiner that had been bent open, indicates large forces at play, meaning larger forces and more energy were released than in a normal lead fall. The most plausible explanation is that a large, but loose piece of the mountain, most likely attached to the chain of safety has fallen out for some unknown reason. Given this scenario, both the gear and the belay point can be ripped out, and carabiners can become deformed, due to the large forces at play. Subject only to the forces of gravity, they fell and probably died instantly on impact with the ground.

The climbers were found approximately 80 meters from where the Rimmond Route starts. It is estimated that they were 200-300 meters above ground when the fall occurred.

During the last twenty years, there has been a series of large rock falls/avalanches in the Troll Wall. This has affected many of the routes. It is estimated that one third of the Rimmond Route is affected by this. Parts of the route is "missing", there are lots of loose rocks on the shelves, and one will also have to climb in loose terrain on the way up. The climbers had visited the Troll Wall before; therefore, it is believed this information was known to them. One possible explanation for the accident has been given, but it is important to stress that we do not know for certain what really took place on the day of the accident.

Climbing the Troll Wall is a serious undertaking. Given the rockfalls/avalanches and loose terrain just adds to the seriousness. Any climber daring to climb the Troll Wall should be aware of this and be fully prepared for what awaits. One should also know that due to the dangers from rockfalls, helicopters cannot fly too close to the wall, and a rescue operation may be impossible due to the safety of the rescuers.



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