

Blackstone Glacier – Accident Report

Whittier, Alaska

Date: 02 May 2018

Place: Upper Blackstone Glacier

State: Alaska

Reporting Agency: Chugach National Forest Avalanche Center

Fatalities: 1

Synopsis: 3 snowmachiners caught, 1 deployed an airbag and came to rest near the surface, 1 partially buried and 1 fully buried (with hand breaking the surface) and killed.

Avalanche code: SS-AMu-R3D2-U

Avalanche Details:

Type: Soft slab

Problem/Character: Unknown (storm slab suspected)

Crown Thickness: 24" average, max 36" (estimate)

Width: 200-300' (estimate)

Vertical Run: 500-1,000' (estimate)

Trigger: Snowmachine

Weak Layer: Unknown

Aspect: East

Angle: 40 degrees at crown

Elevation: ~5,000

Path Character: Terrain trap, gully

Debris: 8 – 10' deep (estimate)

Note: CNFAIC avalanche specialists were not able to visit the scene of the avalanche given the remote nature of the site and poor weather post-accident.

Accident Summary:

On Wednesday May 2nd a group of six snowmachiners left the Whittier trailhead at approximately 10:15am. They had a rough plan to meet up with another group of four riders (who were an hour behind) on the Blackstone Glacier for a day of sunshine and spring riding to end the season. All members of both parties were advanced riders and all were familiar with the area. Everyone in the original group of 6 carried avalanche transceivers and most carried shovels and probes. Two people in that group had avalanche airbags (Riders 3 and 4).

By early afternoon the complete group of 10 had met up, were playing, and riding in the same general area, although not necessarily all together. Around 3:30pm two riders from the group of 6 had departed en route back to the trailhead with the understanding that everyone was beginning to move that way. *Note: At this point, this accident summary assumes the group of 6 riders is now a group of 4 that were in the immediate vicinity of the avalanche.*

At approximately 3:40pm Rider 1 and Rider 2 crested over a sub-ridge and descended into a gully (Image 1) en route back to the trailhead. Simultaneously Rider 3 was side-hilling/ascending the same gully and crested above Rider 1 and 2. With three people on the slope at the same time and in fairly close proximity, it is unclear from where exactly on the slope the avalanche was triggered.

Rider 4 was out of the way in a safe zone, and witnessed the avalanche initiate and propagate about 200' above where Rider 3 was on the slope. Rider 4 described seeing Rider 1 and 2 disappearing and reappearing in the moving debris. None of the 3 Riders on slope saw or heard the avalanche until it hit them. Rider 3 (highest on the slope) was immediately thrown from his sled and was able to successfully deploy his airbag backpack. He came to rest mostly on the surface, with just his legs buried and separated from his machine by 50' or more. Rider 1 was about 10' behind Rider 2 when the avalanche hit them both from behind. Rider 2 describes getting spun 360 degrees on his sled as the debris hit him. He quickly realized he was in an avalanche, got his bearings and pinned the throttle in an effort to power out of and ahead of the moving debris. He described the next several seconds as diving under the snow then resurfacing before diving again. Rider 2 never separated from his snowmachine and came to rest near the toe of the debris still clutching his machine and buried up to his armpits/ neck with one hand free. Rider 2 and 3 were uninjured. All three machines were fully or mostly buried once the avalanche came to rest.

Rescue Summary:

Rider 2 was able to extract himself in less than a minute and scanning the debris, he saw Rider 3 (airbag deployed) on the surface and what he recognized as Rider 1's glove breaking the surface and still moving. Rider 2 was the first to make contact with Rider 1's moving hand and began digging toward where he thought his face was. Rider 2 was able to establish an airway (helmet strap off and cleared snow from Rider 1's mouth) within approximately 2.5 minutes of the initial burial. About this time Riders 3 and 4 were on scene and continued to help extract Rider 1. The group estimates that Rider 1 was on the surface and CPR underway in less than 5 minutes from the initial burial. CPR continued for 20-30 minutes until it was decided to send rider 2 to find a cell signal and make a 9-1-1 call. Rider 2 located the group of 2 who departed minutes before the avalanche. They had a working cell phone and emergency medical services were notified. Roughly 30-40 minutes after the avalanche, several other riders from a larger group began to show up on scene and offer resources.

Ultimately the 210th Rescue squadron helicopter was dispatched and launched from Anchorage (JBER Airforce base). CPR was continued as Rider 1 was transported onto the helicopter and flown to Providence Alaska Medical Center in Anchorage. Rider 1 was declared deceased upon arrival at the hospital.

Images:

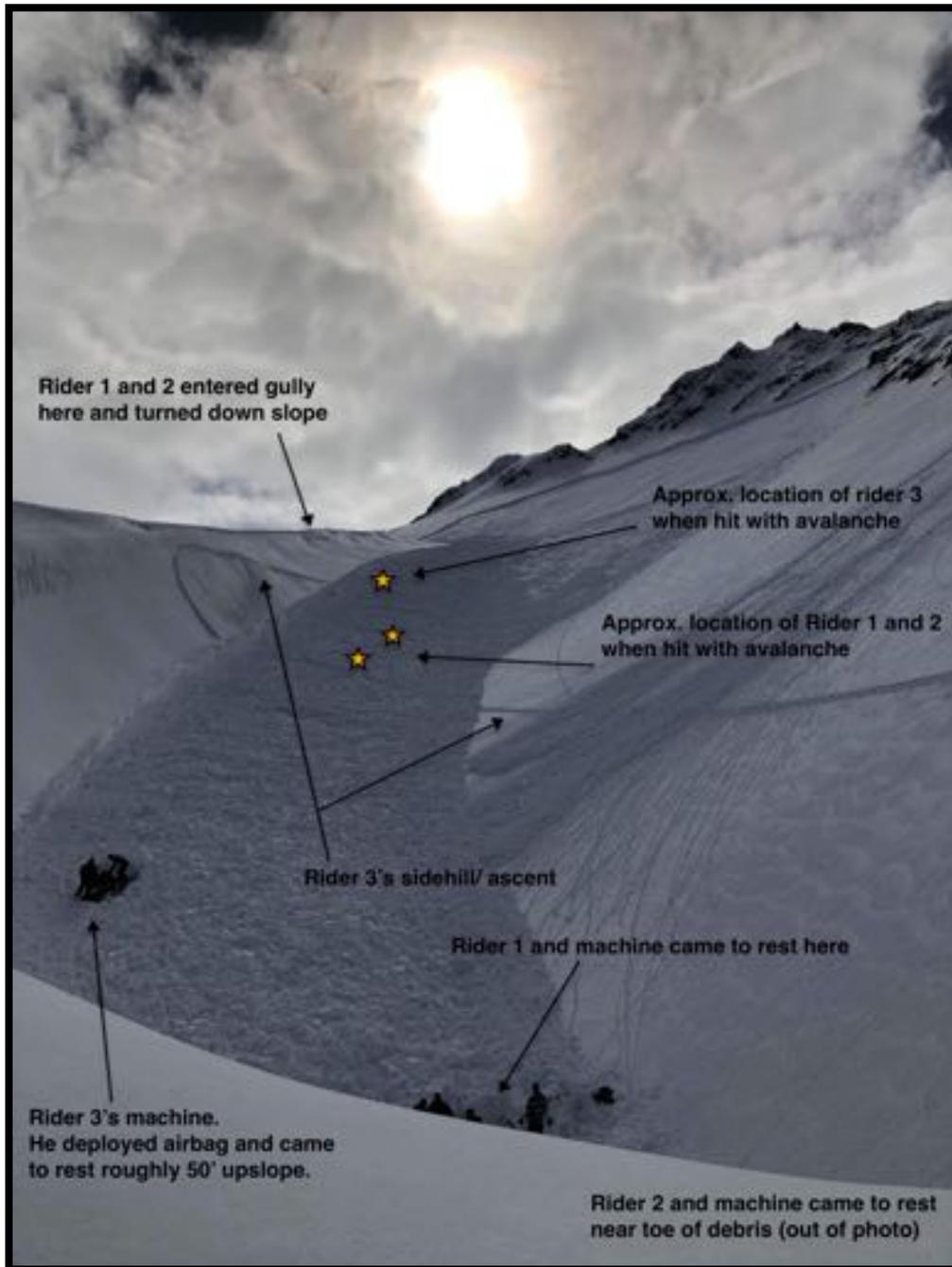


Image 1. Scene of the avalanche

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Image 2. Looking south toward the accident site on the day of the avalanche.



Image 3. Rider 1's snowmachine. Rider 1 was dug out in close proximity to his machine.

Image 4. Toe of the avalanche debris, looking down slope.



Image 5. View looking North over the Blackstone Glacier on the day of the avalanche.

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Image 6. Lookers' left side of the crown face 5-days after the avalanche.



Image 7. Lookers' right side of the crown face and bed surface 5-days after the accident. Note: a 4-day winter storm blew in the day following the avalanche. May 7th was the first break in weather post accident.

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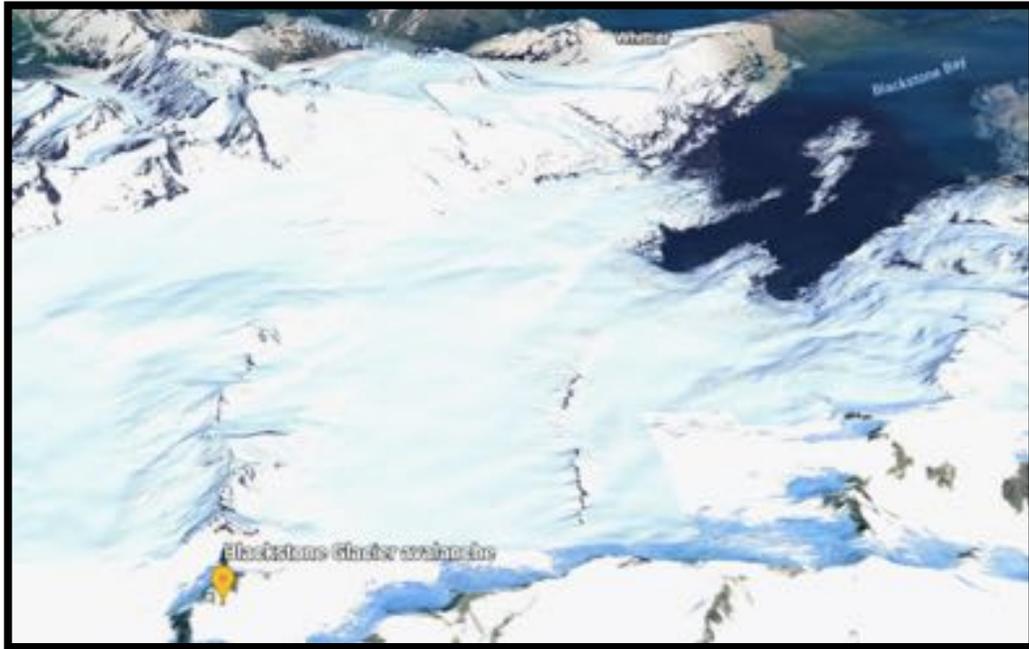


Image 8. Google Earth view of avalanche site

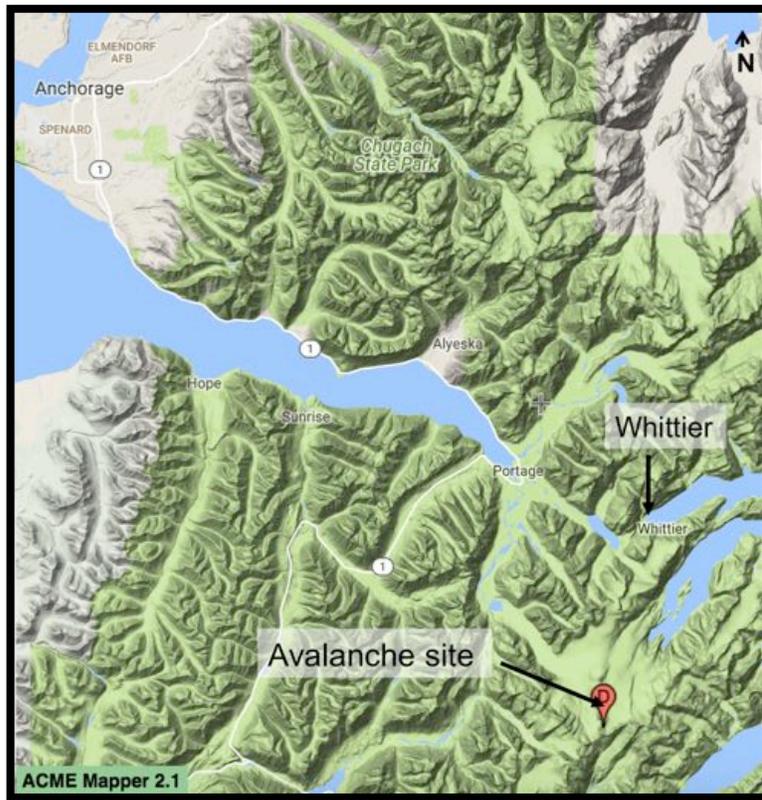


Image 9. Location overview

Snowpack and Weather History:

The site of the avalanche is in an area with no snow or weather stations nearby. The closest representative precipitation station is outside the town of Whittier near sea level (RWIS Whittier Access Rd @ Tunnel MP 6.5,), 15 miles North of the accident site. The closest representative ridgetop wind and temperature station is the Sunburst weather station at 3,812' in elevation, 20 miles to the Northeast.

After a short period of clear skies in mid-April, a pattern of weather events occurred during the two weeks prior to the accident. Beginning on April 17th and lasting through May 1st, a series of storm systems impacted the region of Western Prince William Sound, which includes the accident site. There were four main precipitation spikes during this period: April 18th, 22nd, 24th and 29th (see graph below). Total precipitation

at sea level was 10.8" (rain), which can equate to well over 100" of snowfall at the higher elevations near the site of the accident (~5,000'). Precipitation tapered off substantially for the three days prior to the avalanche with an estimated 3-8" snowfall for those three days. Precipitation stopped midday on May 1st and skies began to clear overnight and continued to clear the day of avalanche, May 2nd.

Ridgetop winds during the 2-week series of storms were generally Easterly and very strong during storm peaks. This is the common flow direction for the area and Riders in the area on May 2nd reported evidence of significant wind effect from these storms. The winds then made a shift to the West midday on May 1st, in conjunction with the clearing skies and remained Westerly until midday on the day of the accident. The strength of the Westerly wind is unknown, although comparison with Sunburst weather station shows a likely moderate strength.

Based on slab depth (2' estimate) and density it is most likely this avalanche was composed of a layer of storm snow from the end of the storm cycle. Riders did report about 2' of storm snow on a "crusty layer" the day of the avalanche. It is

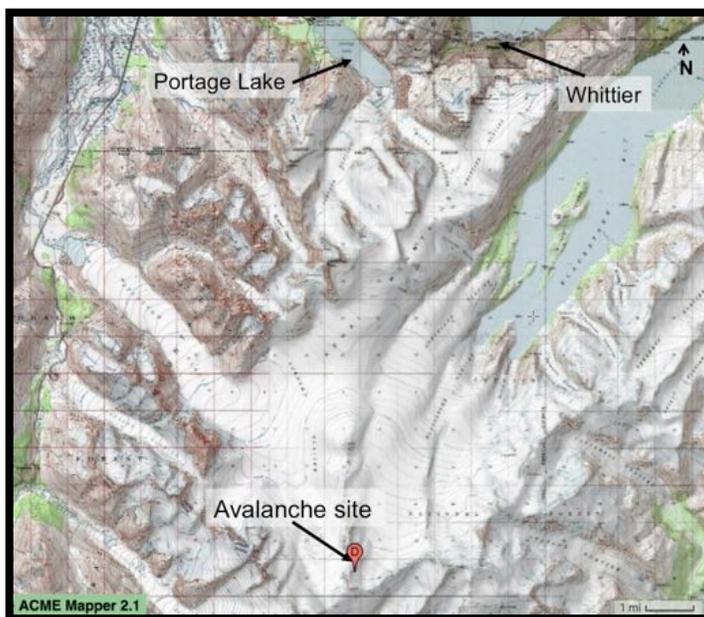
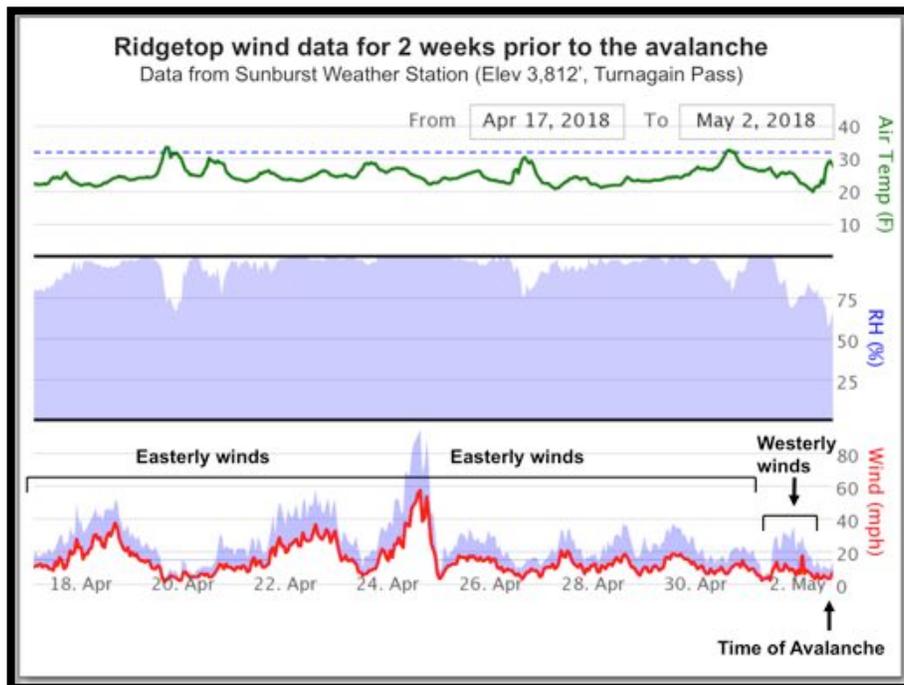
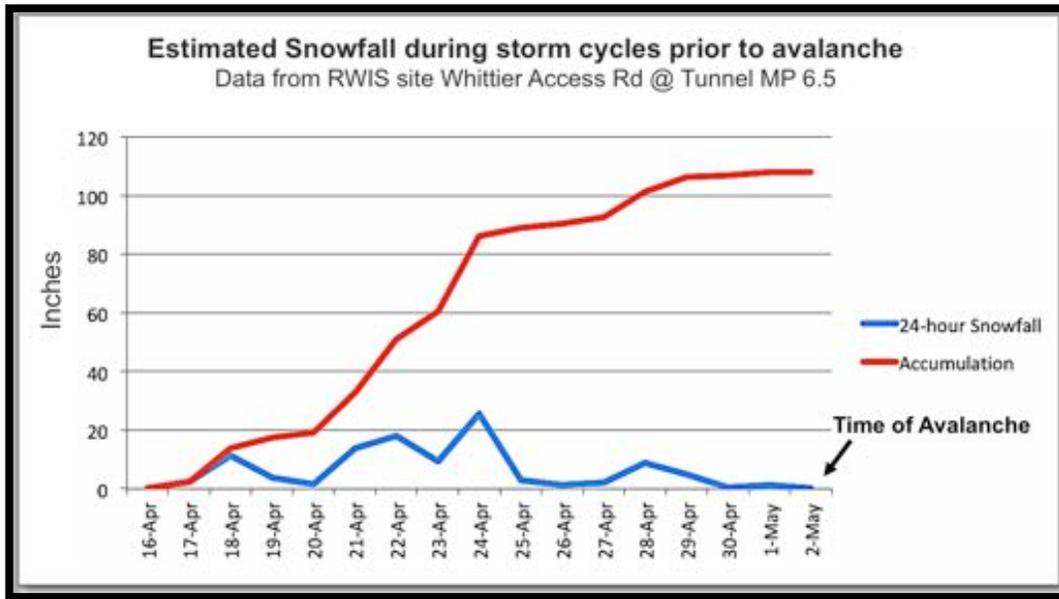


Image 10. Topo map overview of terrain and avalanche site.

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possible the Westerly winds the day prior added additional wind drifted snow to the slab shortly before the avalanche. This wind loading coupled with direct sun on the slope for much of the day may have increased the instability of the snowpack on this Easterly aspect. The weak layer of the avalanche is unknown, however it is suspect that there were buried crusts from springtime warm temperatures that may have occurred mid storm cycle.



Avalanche Forecast:

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There is no avalanche forecast for this area. The closest forecast covers Turnagain Pass, issued by the Chugach National Forest Avalanche Center (CNFAIC). The CNFAIC's last forecast of the season was on April 26th. On April 28th a 'Springtime Avalanche Tips' bulletin was issued for the remainder the season. On May 1st, a day before the accident, the CNFAIC posted a Facebook message warning backcountry travelers of heightened avalanche danger region wide.

Media:

<https://www.adn.com/outdoors-adventure/2018/05/03/rider-buried-when-snowmachiners-caught-in-avalanche-on-glacier-near-whittier/>

<https://www.adn.com/outdoors-adventure/2018/05/04/recent-avalanches-plus-unpredictable-conditions-prompt-warning-stay-out-of-the-mountains-for-now/>

<http://www.ktuu.com/content/news/Group-of-snowmachine-riders-caught-in-Blackstone-Glacier-avalanche-481590971.html>

<http://www.ktva.com/clip/14322186/snowmachiner-dies-in-avalanche>

*We would like to express a sincere thank you to the group involved in this avalanche. Their willingness to share the events and several photos to compile this report was invaluable.

Report compiled by: Chugach National Forest Avalanche Center staff

Reporting Agency website: cnfaic.org

Contact: staff@chugachavalanche.org

