

Justin Robinson and Wesley McCain climbed the North Face of Chair Peak on Tuesday, 15 January. Unconsolidated snow caused them to climb much more slowly than anticipated, and they found themselves re-entering Chair Peak basin at 4:45pm. They are both experienced climbers, ex-guides, and are familiar with the Snoqualmie Pass terrain, and therefore weren't concerned with routefinding the descent in the dark.

They were descending, unroped, at 5750' when Justin triggered an slab avalanche. He was carried approximately 500' downhill, partially buried, and suffered a fractured left wrist, left ankle, and left foot. Wesley was in the start zone, but able to "paddle" up and out and was not caught. He descended to Justin, they splinted his fractures, and Wesley dragged Justin down another 250' to the flat immediately west of the Thumbtack.

They called 911 at approximately 6:15, and contacted me at 6:40pm, requesting assistance. Myself and two friends arrived with the SMR hasty team at 10:30pm. SMR and ESAR lowered and dragged him to the cat-track, and we loaded him in the ambulance at 3:00am. He's recovering well, had two surgeries for his fractures, and is now resting at home. A full recovery is expected.

On Thursday, Forest McBrian and Dave Jordan (both also from PGS) skinned up to the slide path with me. Due to falling ice from Chair Peak we couldn't climb all the way to the crown, but were able to climb to the top of the debris and make observations from there.

The crown averages 15cm (10-20cm), 60m wide, on a +40 deg slope. The right flank is indistinct. The left flank contours the slope angle change on Chair Peak, descends 200' in elevation, and averages 25cm (20-30cm). The bed surface is the MF layer from 20130108, 0.5mm, K hardness. The slide layer was DF, 0.5mm, P hardness. We also found FC 0.5mm at the interface between the two layers, but were unable to confirm that they existed at the crown. The majority of the slide path is 35 deg. The debris zone ends at 5150' elevation (crown at 5750'), at 30 degrees.

Previous slides had exposed the MF layer in the middle of the basin, and had also work-hardened the surface lower down. Forest McBrian and Erin Smart had skinned up the climbers left side of the basin that same day at 9am heading to the South Shoulder, making their left-hand turns where conditions became too firm. They did not see any wind-loading taking place at that time, but Erin reported to me that she took note of blowing snow at the ridge top at 11am. Justin

and Wesley would have been protected from these winds until they topped out, and they reported they were unaware of the winds until the final pitch to the summit.

Alpental telemetry indicates that winds picked up from calm to 25mph NW that morning, and a high temp of 40 degrees F was reached at 1400 hours at 5470.

Our hypothesis is that the moderate winds created an isolated wind slab, and the temperatures allowed for quick settling and cohesion into a strong slab. Pits dug at 5000' in Pineapple Basin and Snow Lake Divide by a PGS AIARE 2 course showed a strong TG in the top 20cm from the MF layer to the surface, which may have created a small interface of FC that further weakened the bond between layers.

Chris Simmons

IFMGA/AMGA Mountain Guide



Photo taken by Justin Robinson, from the NE Ridge, looking back into Chair Peak Basin, at 0945 on 20130115. Ski team climbing towards the South Shoulder of Chair Peak. The right flank of the avalanche roughly follows the right side of the lower skin track visible. Note avalanche debris at bottom left. Climber's descent and start zone not visible.



View of Chair Peak Basin, from 5000'. Drag track by companion of victim visible from debris zone. East summit and East Face of Chair Peak visible in sunlight. Climber's descent is from the first notch left of peak.



View from top of debris zone, approximately 5350'. Climber's descent gully visible as the right-most notch. Bed surface visible.

Climbers' descent gully







Companion's approximate location at trigger

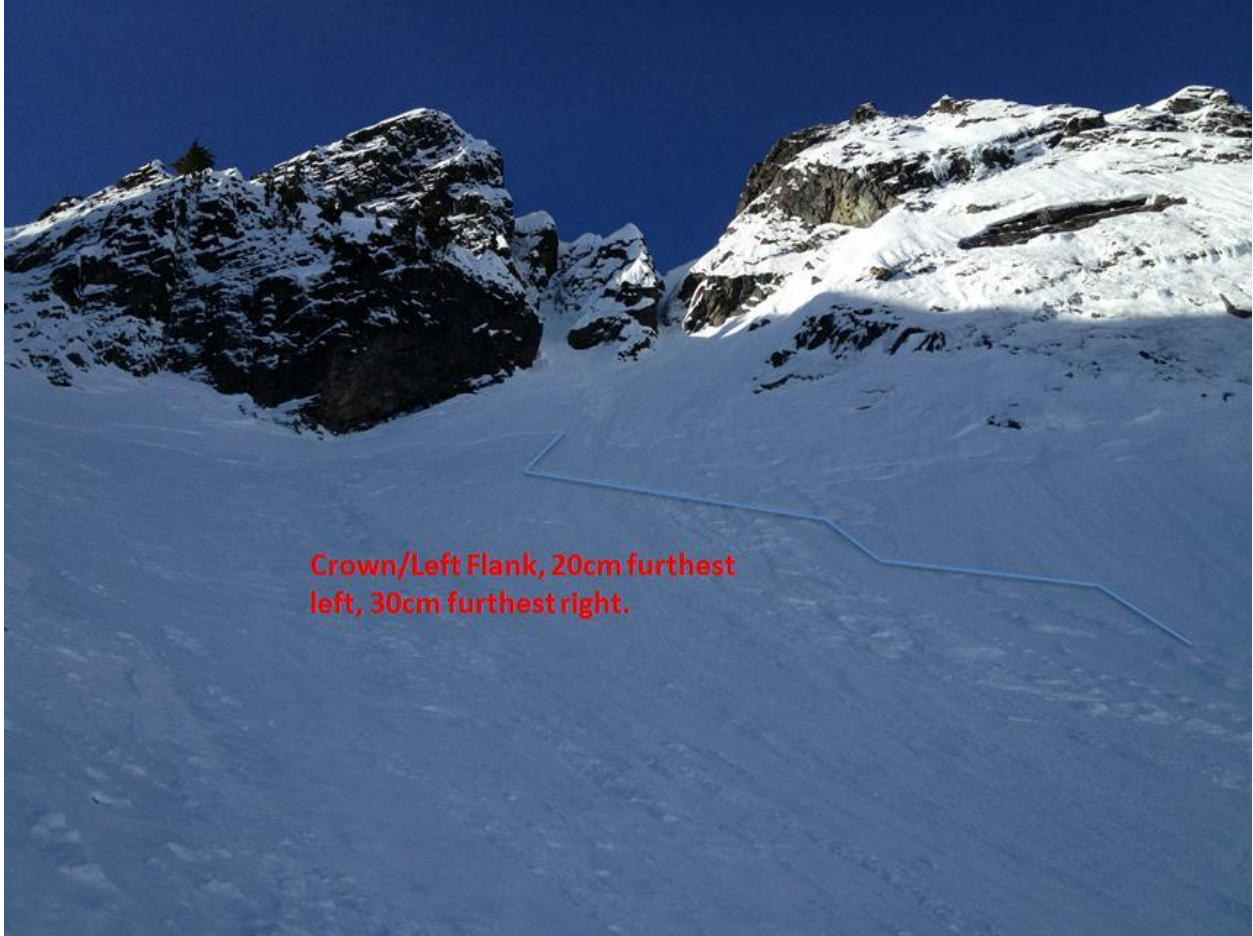
X

X Victim's approximate location at trigger

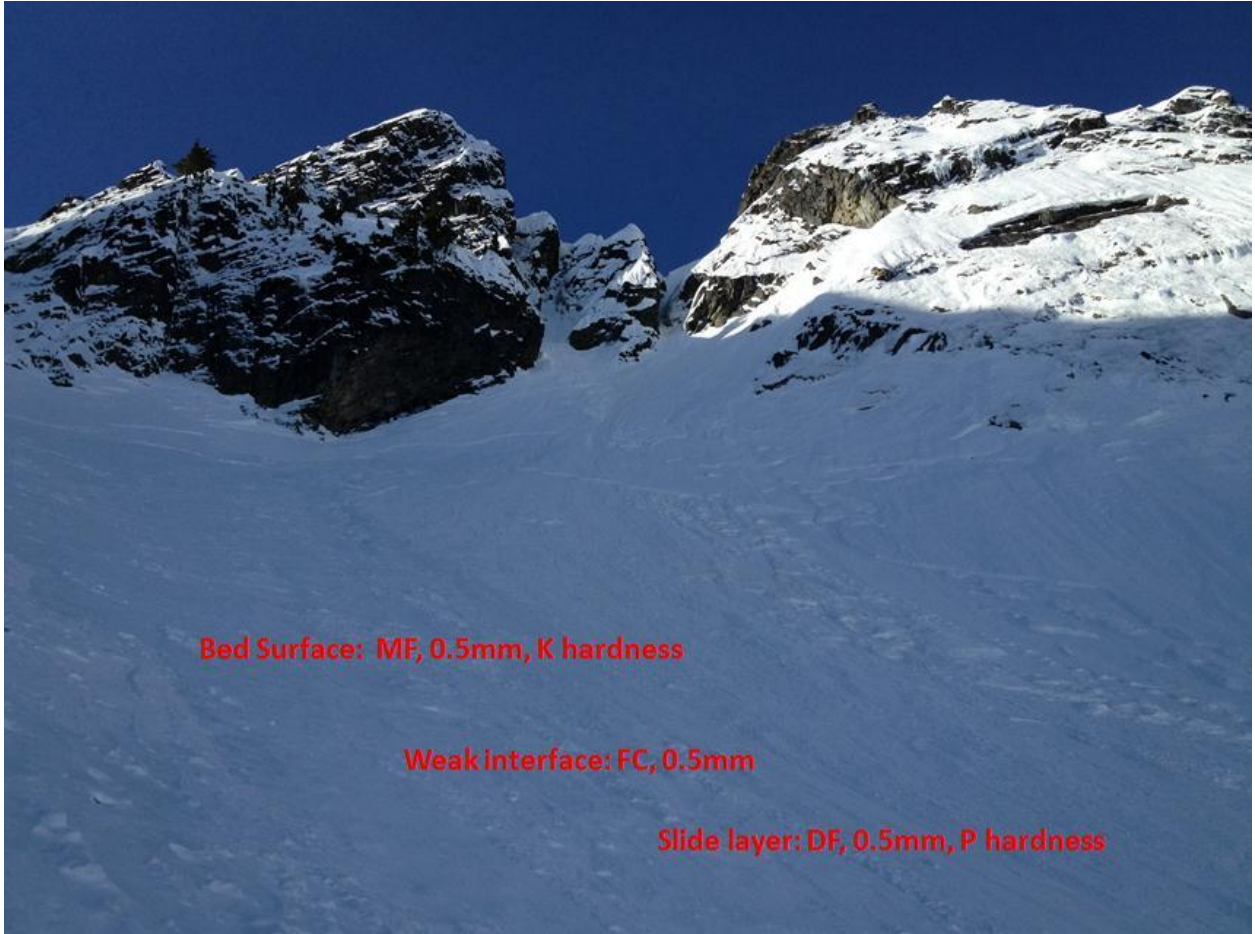




Crown – 20cm furthest right,  
diminishing to the left



Crown/Left Flank, 20cm furthest left, 30cm furthest right.



**Bed Surface: MF, 0.5mm, K hardness**

**Weak interface: FC, 0.5mm**

**Slide layer: DF, 0.5mm, P hardness**