

Crystal Mt Dogleg Avalanche Accident

Date: 2/19/2012

Location: Crystal Mountain Backcountry. Dog Leg Peak.

Summary: One solo skier caught, stopped by tree, and partially buried; able to self-extricate but suffered life-threatening injuries.

Report prepared by Chris Morin, Snow Safety, Crystal Mountain Professional Patrol

Incident Narrative: On 2/19 a solo tourer left the top of the quicksilver lift at Crystal Mountain. He skinned to the top dogleg peak and skied a path just skier left of the highest point at 2pm. Within the first few turns the skier cut off a small slab. (AS-R2-D1.5-O).



Looking at the Skier L side of Dogleg. Crown is visible near the top of the frame



Looking up at Crown line, entrance tracks are marked.

Upon being caught the skier was able to self arrest on a tree about 150' down the slope. He was only lightly buried and was able to self-extricate himself from the debris piled on the tree.



Looking up towards crown, POR is marked on the left side

The skier lost one ski in the slide and suffered significant trauma upon being wrapped around the tree. He was able to slide himself down the debris, and then walk to the top of the Quicksilver lift (0.5 miles). Upon reaching the top of the lift Ski Patrol was contacted and were able to treat his injuries. He was airlifted to Harborview later that day.

The next day the crown of the avalanche was investigated and it was found to have failed on 15mm surface hoar. Test Results were ECT22Q1 and CT22Q1 at 50cm.

Snow Pit Profile

Observer: **Chris Morin**

Stability on similar slopes: **Very Poor**

PS15

Layer notes:

Dog Leg

Mon Feb 20 13:06:00 PST 2012

Air Temperature: **30 F**

Stability Test Notes:

50-51.5: Problematic Layer

Crystal, WA

Co-ord: **N W**

Sky Cover: **sky 8/8 covered**

Elevation (ft) **6850**

Slope: **35**

Precipitation: **Snow < 0.5 cm/hr**

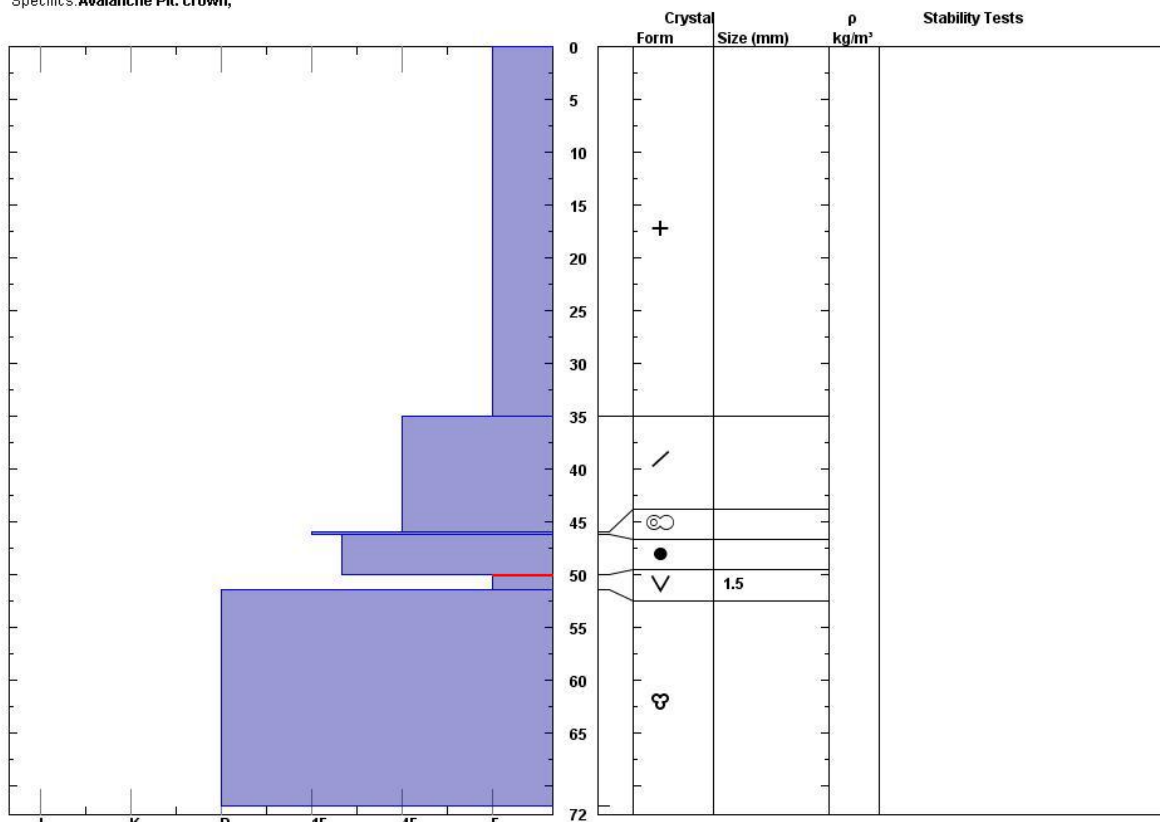
51.5-72: Multiple Crusts

Aspect: **345**

Wind loading: **previous**

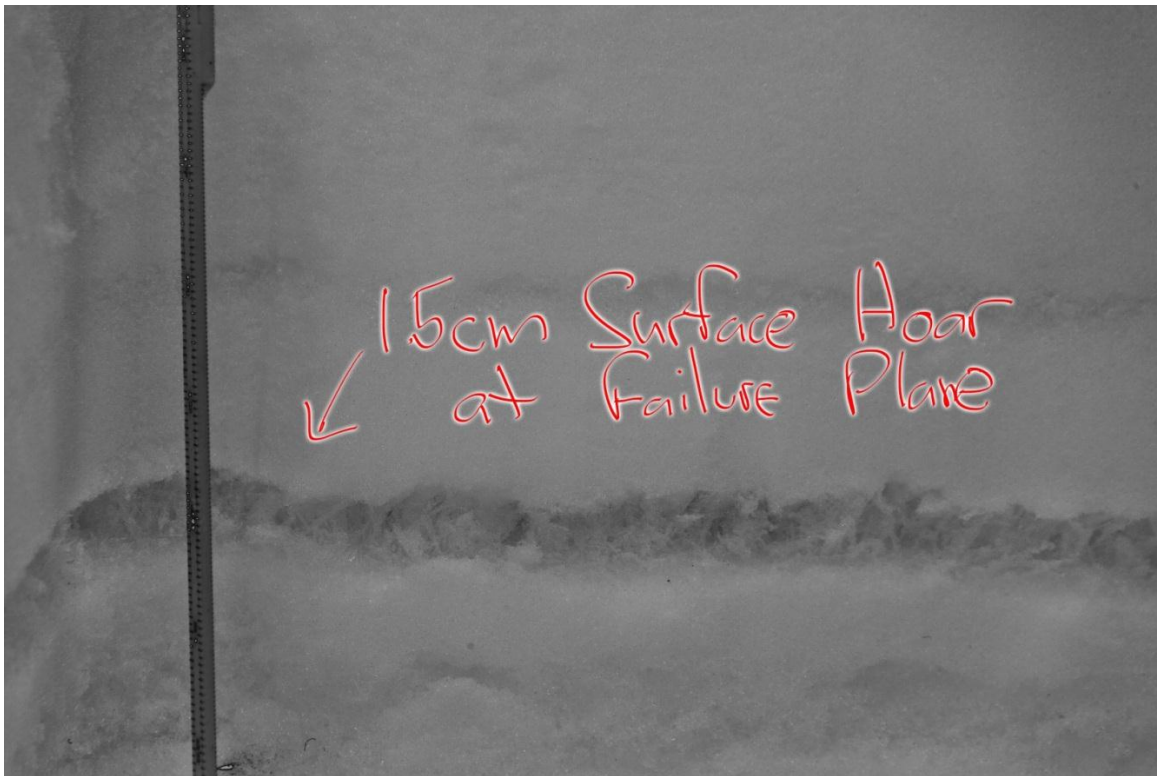
Wind: **NW Light Breeze**

Specifics: **Avalanche Pit: crown;**

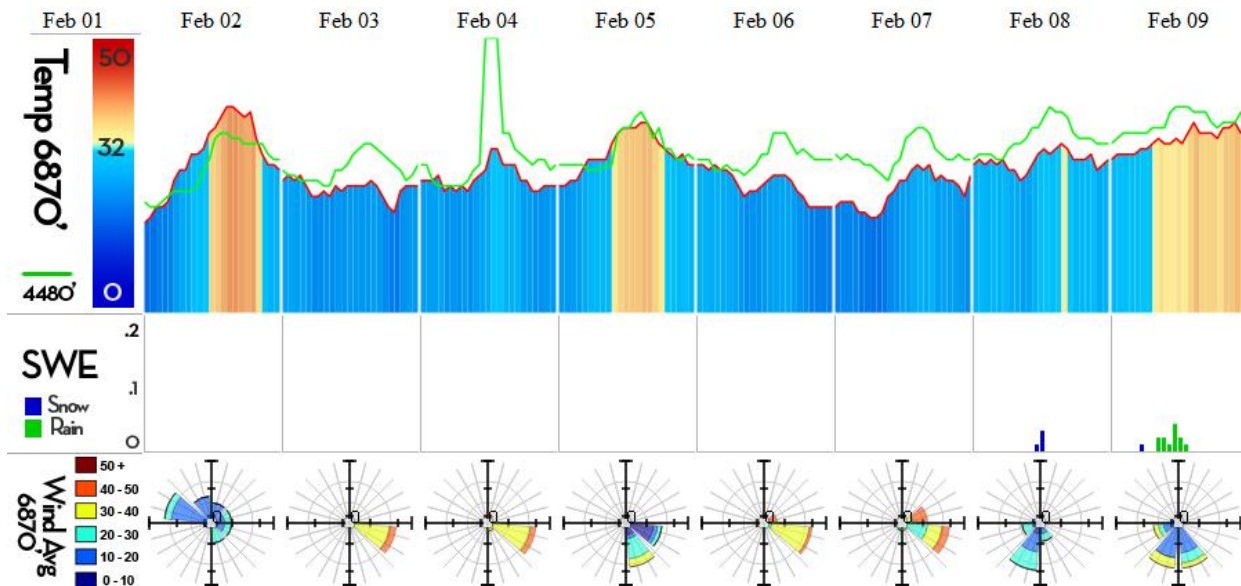


Notes: 16-24" crown depth, 70' across. AS-SS-R2-D2-O. Solo tourer popped out a slab on second turn from the ridge. Victim was carried a little over 100' down the slope before stopping on a tree. The victim was able to self rescue and transport himself to the Crystal Ski Area where he was treated for serious injuries



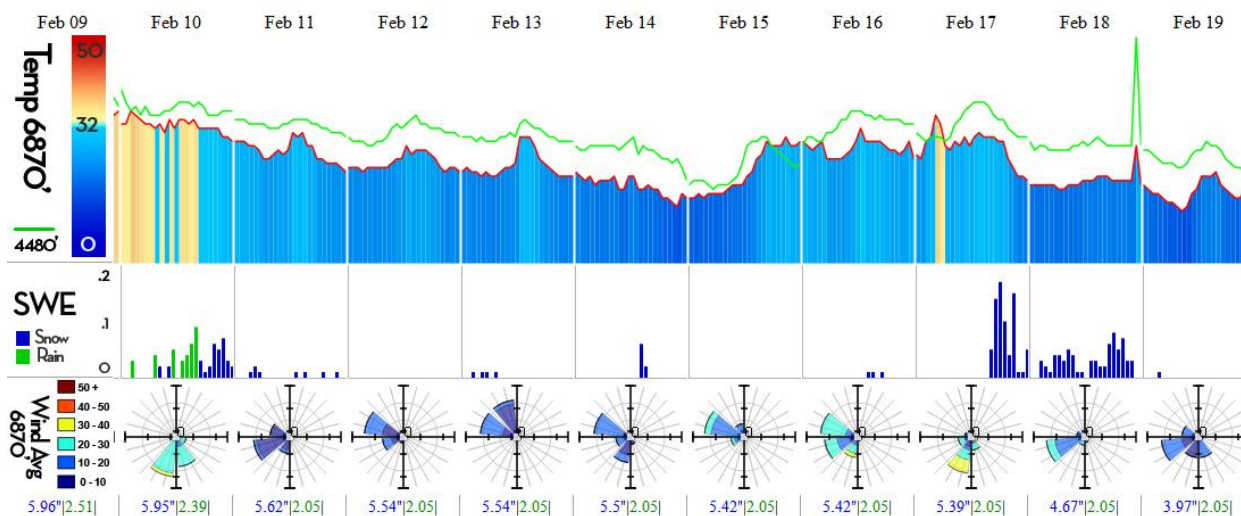


This surface hoar at 50cm was built during a 6-day high pressure stint from Feb 2nd-Feb7th. It was then buried by a small amount of snow on Feb 8th, allowing it to survive a warmup the next day



Weather from Feb2nd-Feb9th at Crystal Mountain

From Feb 8th – Feb 19th, 2" of SWE accumulated, with the biggest storm being the two days before the accident on the 19th. Clearing on the 19th allowed for better visibility and touring the day after the storm.



The surface hoar involved in the accident had been mentioned in the NWAC avalanche forecast over the past several days, specifically being seen at Stevens Pass. Another accident on the same day occurred only a couple miles NW of the above incident and also likely failed on the same layer. However, few people touring that day were aware of the persistent hazard. This may have been partially caused by the fact that the surface hoar in the area was very pockety, and would not be found in snowpits at most sites. Regardless of the underlying structure of the snowpack though, the hazard due to the previous snowfall had been rated as high by NWAC, putting skier triggered avalanches as certain in avalanche terrain.