

## **Sawtooth National Forest Avalanche Center: Avalanche Accident Report Snowmachiner Fatality 2/28/2003 Apollo Creek-Baker Creek**

- See attached 2/28/2004 avalanche advisory and 2/24/2004 press release for snowpack descriptions.
- The attached pit profile illustrates the weak layers in the snowpack and sliding surfaces.
- Attached photo page illustrates accident site and snow layers

### Series of events:

Snowmobile rider was highmarking a mostly east facing 30 to 50 degrees slope/cirque at the head of the Apollo Creek drainage.

The rider was on the slope alone. He had been alternating highmarking w/a fellow rider. When one rider got as high as he could the next would follow his track and try to go higher. Each rider had taken 2-3 runs on the slope. When one person was on the slope, the other would wait in a "safe" location off to the side of the toe of the slope. Three other companions were waiting farther off to the side and they were not involved in the high marking

The rider triggered an avalanche at about mid-slope at the apex of his high mark (he was beginning to turn across the slope) w/a reported crown depth of about one foot. The fracture occurred on buried surface hoar beneath one foot of new snow from 2/26

The snowmobile, rider and moving snow triggered a deeper buried surface hoar layer (2.5 to 3 feet deep) seconds after the original avalanche was triggered. The fracture propagated to the top of the ridge on the deeper weak layer and triggered a second avalanche. The second avalanche entrained the previously undisturbed upper half of the slope, hit the original crown line and dug down and swept away the original bed surface.

The rider and the snowmobile traveled through a group of trees (fragments from the machine were found stuck in several trees)

The victim's companions located him w/their beacons in an estimated 10 minutes and extricated him from under 6 feet of debris in an estimated 25 minutes. He did not respond to CPR and showed signs of massive trauma.

The companions rode to the last seen point and searched downhill.

The victim was located about 25-30 feet down slope from his machine.

The machine's handlebars were barely visible on the surface and the searchers saw them but proceeded uphill (on their machines) to the LSP and then searched down.

The victim's companions left the body at the scene at about 5pm and rode to the trailhead and notified authorities. The body was recovered w/a helicopter the following day (Sunday 2/29)

The riders were using good travel techniques but obviously underestimated the instability (the Sawtooth Av Ctr had issued a special announcement to the local media warning of the instability and the day's advisory had a special heads up for the snow machiners)

The victim was male, 29, from Kimberly, Idaho (80 miles south of Ketchum)

Jeff Halligan, Jake Amadon and Doug Abromeit did a slope profile on Mon 3/1.

Janet Kellam returned to the site on Tuesday 3/2 and did a pit profile in undisturbed snow mid slope and adjacent to the believed trigger point.



For Immediate Release: February 24, 2004  
Sawtooth National Forest Avalanche Center  
Contact: Janet Kellam, Director  
208-622-0095, [jkellam@fs.fed.us](mailto:jkellam@fs.fed.us)

## **BACKCOUNTRY SKIERS & SNOWMOBILERS WILL ENCOUNTER DECEPTIVE & POTENTIALLY DANGEROUS AVALANCHE CONDITIONS THIS WEEKEND**

The mountains of South Central Idaho currently have a snowpack that can be dangerous for backcountry users venturing onto or into steep terrain. The Sawtooth National Forest Avalanche Center continues to receive reports of human triggered avalanches, even multiple days after the most recent snowstorms. This is because the snowpack has several weak layers that lie 1 to 3 feet beneath the snow surface. The current conditions are similar to the type of snowpack that produced the large, fatal avalanches in Canada last winter.

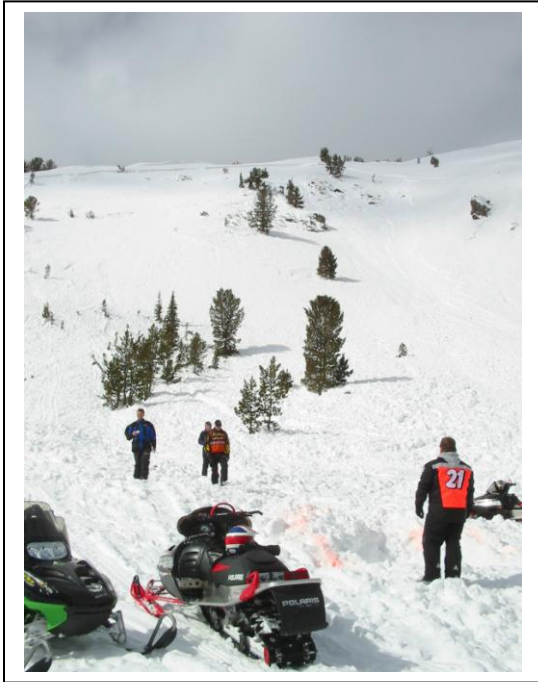
Often, with this type of deep slab instability, slopes may appear to be stable. There can be multiple tracks on the slope before they avalanche. It may take a larger trigger, multiple people grouped up, or a person crossing over a slightly weaker spot in the slope that will cause the avalanche to fracture & slide. Because the surface slab of snow is quite dense, these avalanches may be triggered from an adjacent slope or ridgeline, or from a low angle slope or a flat beneath a steeper slope. The fracture lines may propagate for long distances and the slides can become very large & deadly.

This avalanche danger is not everywhere, but it is widespread and very difficult to discern. The best recourse for people traveling into the backcountry is to stick to low angle slopes and to be conscious of how steep the slopes are next to you or above you. Any slope that gets steeper than approximately 30 degree slope angle will have the potential to be an avalanche slope. 30 degrees is about as steep as an advanced intermediate to expert ski run.

Fortunately, we have lots of safe, lower angle backcountry terrain in South Central Idaho for snowmobiling, skiing, snowboarding and snowshoeing. This avalanche danger does not apply to developed ski areas, which have their own snow safety programs. However, this avalanche danger *does apply* to any out of bounds slopes that are accessed from a ski area.

Check [www.avalanche.org](http://www.avalanche.org) for an avalanche advisory that may be closest to you. There are a number of locations in Idaho that do not have avalanche advisories, and local conditions may vary, but the information can still prove to be helpful if you are headed into the hills. Carry appropriate backcountry gear and avalanche rescue gear and check the local weather forecast. Any new snowfall before this weekend will increase the avalanche danger.

# APOLLO CREEK-BAKER CREEK Avalanche Fatality Feb 28, 2004



Looking up from burial site & sled site



Avalanche  
Crown Face at  
top of Fracture



Looking down from top of  
slide path



Examining  
Snowpack  
adjacent to  
trigger point



Block releasing on top of  
buried surface hoar layer 3  
ft deep-mid slope pit profile