

Date: 2012-01-03

Submitted By: Steve Karkanen, West Central Montana Avalanche Center

Place: Red Lion Area, Flint Creek Range

State: MT

Country: USA

Fatalities: 1

Summary: 2 snowmobilers caught, 1 buried and killed

Classification: SS-AM-D2-R3-O

Coordinates: 48.2846N X 113.1553W

\*\*\* FULL REPORT FROM THE WCMAC \*\*\*

View report and photos online at: [www.missoulaavalanche.org](http://www.missoulaavalanche.org)

#### SYNOPSIS:

On Sunday January 1, 2012, 20 year old Jasen Donald Kellogg from Butte, Montana died in an avalanche accident 7 air miles southeast of Philipsburg, Mt on the Pintlar Ranger District of the Beaverhead-Deerlodge National Forest. The location known locally as Red Lion is a popular snowmobile play area located in the Flint Creek range roughly halfway between Philipsburg and Anaconda, MT.

Jasen was riding with a group of family and friends on benched terrain below Towers Mountain when 2 riders in the group were caught by a large soft-slab avalanche that released on much steeper terrain above them. One of the riders was able to escape the avalanche but Jasen was caught and carried an estimated 150-200 feet. He was strained through trees and completely buried (about 2 feet deep) with a foot sticking out of the snow against a small diameter whitebark pine tree. Jasen's father and a third individual who were not caught quickly located Jasen and dug him out. He was not breathing and died from his injuries shortly thereafter. CPR efforts were initiated and continued after first responders and Life Flight helicopter personnel arrived on scene.

The second rider was knocked off his sled, partially buried and was able to quickly extricate himself with no injuries.

#### EVENTS LEADING UP TO THE ACCIDENT:

A group of family members and friends of the victim spent the day riding in backcountry terrain near the accident site. Snow conditions were deep enough to allow riding on some of the steeper terrain in this area which like the rest of the state has been plagued by a lack of snow.

The group had been high-marking other slopes earlier without incident and felt that stability conditions were “pretty good”. One member of the party had in fact climbed a steep slope that is adjacent to the avalanche site and was able to reach the ridge. Some members of the group talked about climbing Towers Mountain and decided against it due to the nature of the snow, which made climbing difficult, and the fact that the upper open slope was heavily wind loaded and would be a place where it would be easy to start an avalanche. The group was mostly split up and were riding the lower portion of the slope which is relatively flat with a series of benches that rise up to a rock/cliff band halfway up the slope.

While Jasen was riding onto one of the benches on the north flank another rider was at about the same elevation in the middle of the slope in a more open area. At about this time a large slab released and caught both riders. The rider in the middle of the slope was knocked off his sled, partially buried and was able to extricate himself. Jasen was caught, thrown off his sled, dragged through small trees and ended up buried against a small diameter Whitebark Pine.

Another rider at the very bottom of the historic runout zone saw the avalanche and yelled to Jasen’s father who was closest to the site. Both individuals were not involved in the avalanche and immediately went to the location where Jasen was last seen.

Jasen was rapidly located (within 5-6 minutes) by a foot sticking out of the snow about 40’ uphill from his damaged sled. He was buried 2-3 feet deep and was dug out in 2 minutes. He was not breathing, had turned blue and had obvious traumatic injuries. CPR was started immediately and continued until SAR and Life Flight Helicopter arrived. He never regained consciousness nor started breathing.

All members of the group had avalanche transceivers, probes and shovels. Some of the group have taken avalanche classes at least one thought he attended a Level 1 class several years ago.

#### SEARCH AND RESCUE:

A member of the party who had just left to return to the trailhead was contacted by the remaining individuals at the site and immediately contacted 911 then returned with other riders to the accident location. Georgetown Lake VFD, the Anaconda Fire Dept. and local SAR units were dispatched at 1508 and 5-6 personnel arrived on scene at 1538. Life Flight Helicopter was also dispatched at this time and arrived around 1600.

#### WEATHER AND SNOWPACK:

A Forest Service LEO, a Pintlar Ranger District volunteer avalanche specialist and 2 avalanche specialists from the West Central MT Avalanche Center visited the site on 01/03/12 to document

the accident. Time and terrain constraints prevented capture of a detailed crown profile however pits were dug on both flanks close to the burial site and higher on the slope. The profile is representative of conditions seen in the general area for the past several days.

The avalanche site is located at the northern end of the Flint Creek range that runs north-south between Philipsburg and Deerlodge, MT. This island range is one of many in southwest and west central Montana that is outside an avalanche center forecast zone.

The closest SNOTEL site is Warm Springs SNOTEL #850 located 1 drainage to the south at 7800 feet. This station recorded 27 inches of snow on the ground at the start of the holiday storm on December 28. By the storm's end on December 31 it recorded 40 inches of snow on the ground. The station received 2.3 inches of snow water equivalent during the same time frame.

There is no mountaintop anemometer near the avalanche location but the entire area had been experiencing very high W-SW winds for the duration of this storm.

Snow pit profiles recorded at the site on January 3, 2012 show 60cm of fist hard faceted snow with a 1 finger hard 5cm layer at 30-35cm. The storm snow and wind formed a 4 finger to 1 finger hard slab from 60 to 85 cm with light fist hard snow from 85cm to the surface at 110cm. A thin pencil hard sun crust was evident at the surface on sun exposed slopes in the area.

The bed surface is the 1 finger hard layer at 35cm. Mixed facets and buried surface hoar crystals are found at this layer.

The Gallatin NF Avalanche Center in Bozeman and the West Central MT Avalanche Center in Missoula have been watching a condition develop within the snowpack where early season snow was affected by a lack of precipitation and clear weather that allowed the bottom half of the snowpack to metamorphose into facets. This weakness has been plaguing the mountains of Montana this winter.

The weather began to turn on December 28 with heavy snow and high winds which brought the snowpack to it's breaking point in many areas of the west. Four avalanche centers in the northern Rockies issued warnings for high avalanche danger during the Christmas - New Years holiday week.

There were 2 avalanche fatalities in the Cooke City area on Saturday December 31. The West Central MT Avalanche Center had issued an avalanche warning that ran from Thursday December 29 until it was cancelled at midnight New Years Eve and the Gallatin NF Avalanche Center continued an avalanche warning that was issued on December 30.

CONCLUSION:

Although the group was riding on low angle terrain and made a conscious decision not to ride up onto the steeper wind loaded terrain below Tower Mountain, the snowpack was stressed to the point where it is likely that disturbance from below was enough to initiate collapse of the snowpack which then propagated over a long distance onto the steep and heavily loaded slope above them.

Since no one actually witnessed the initial collapse and propagation of this event, it is difficult to be 100% certain of what caused this avalanche. We do know that under these kind of weak snowpack conditions it is possible to trigger an avalanche from what would appear to be safe terrain. Under conditions like this, it is important to be situationally aware of not only the slopes steeper than 30 degrees, but also of where one is located in relation to an avalanche path. This very weak snowpack with significant depth hoar is somewhat unusual for western Montana. It isn't going to get better anytime soon and will become deadly once again when it does start snowing.

No one made any mistakes on this day, everyone was well prepared and mindful of what could happen on steep, open and wind loaded terrain. This is a tragic event for those who were out riding on a beautiful New Years Day. Our thoughts and prayers are with Jasen's family and friends.

Special recognition goes out to members of the Georgetown Lake and Anaconda Volunteer Fire departments for their efforts during a very difficult New Years weekend. Their services were required the day before on the opposite side of Tower Mountain where a snowmobiler had suffered a fatal heart attack. Also many thanks to Greg Vauthier, Devon Hart and Ryan Carlyle for taking time away from their work to lead us into the accident site on January 3.

Steve Karkanen  
Director  
West Central Montana Avalanche Center  
Lolo National Forest  
406-329-3752  
[www.missoulaavalanche.org](http://www.missoulaavalanche.org)