

**Boulder Mountain Avalanche Accident, March 13,
Preliminary Report**

The Canadian Avalanche Centre and all CAC staff extend sincere condolences to families and friends of the victims. We wish for a speedy and full recovery of those who were injured.

In addition, we express our gratitude, appreciation, and admiration to all those who responded to the incident. This includes professional members of the Canadian Avalanche Association, members of the Association of Canadian Mountain Guides, Selkirk-Tangiers Heli-Skiing, CMH Heli-Skiing, Alpine Helicopters, Selkirk Mountain Helicopters, teams from Parks Canada, Revelstoke Mountain Resort and Kicking Horse Mountain Resort, SAR teams of the Provincial Emergency Program, RCMP, and people who were on site or in the vicinity at the time. Probably there are others that we do not know about. If we have failed to mention anyone here, our apologies. Let us know and we'll revise this information as soon as possible.

The only reason this accident has not gone down in the history books as Canada's worst avalanche accident is luck, coupled with the quick initial response. Without either, the outcome of this incident would have been much worse.

Information about exactly what happened is still incomplete and some of what we have been told is unsubstantiated. We have been too busy here at the centre to prepare a comprehensive report but we now have enough information to provide this overview of what we know at this time.

The avalanche occurred on a feature known as "Turbo Hill" on the afternoon of Saturday, March 13, 2010. It was associated with an informal and unsanctioned snowmobiling event that includes highmarking as part of the activities. Reports indicate that as many as 200 people attended the event, many of whom were observing from the track and/or runout zone of the avalanche path shown below.



Photo: Chris Armstrong

**Turbo Hill, approximately 50° 59' 29" N 118° 27' 13" W, 18 km west-northwest of Revelstoke.
Photo taken on March 16, 2010.**

Technical details are (courtesy of BC Coroners Service):

- Avalanche Type: Persistent Slab
- Size 3
- Elevation at fracture line: 2170m
- Start zone aspect: Northeast
- Start zone incline: 30-50 degrees
- Track incline: 45-25 degrees
- Fracture line width: 150 metres on slope above accident.
- Comments:
 - Stepped fracture. At site of profile, initial failure 73cm down on surface hoar (suspect February 24th layer) with main bed surface 91cm down on surface hoar (suspect February 8th layer).
 - Numerous other avalanches noted in the area.
 - Fracture line continued across multiple features to adjacent slopes, doubling or more the fracture line width noted above. Some nearby avalanches likely sympathetic releases.
- Fracture line depth: 30-100cm
- Failure layer: Surface hoar.
- Elevation at toe of deposit: 1840 metres
- Deposit length: 500-600 metres
- Deposit width: 140 metres
- Deposit depth: average 2.5 metres, maximum 5 metres.

The trigger mechanism remains unconfirmed, but eyewitnesses report snowmobiles were highmarking on the slope at the time of the avalanche. We feel it is safe to assume this avalanche was human triggered by snowmobiling activities.

Based on the photo above and the technical details, this avalanche fits the profile of many avalanches that have occurred in regions across British Columbia in recent weeks. This condition led to Special Public Avalanche Warnings (SPAW) being issued for the three weekends prior to the incident, and the SPAW that was issued for southern regions of the Columbia mountains for the weekend of March 13/14.



Photo: Chris Armstrong

**Turbo Hill avalanche runout zone.
Photo taken on March 16, 2010.**



Photo: Chris Armstrong

Turbo Hill avalanche runout zone.
Photo taken on March 16, 2010