

# CROWN BUTTE AVALANCHE FATALITY

Activity

Snowmobiling

Date

1/16/2009

2 snowmobilers caught, 2 buried, 1 killed

Synopsis

## SYNOPSIS:

Saturday afternoon at 1730 MST a group of five snowmobilers was riding in the mountains near Cooke City, MT just north of Daisy Pass. The victim was climbing a steep, north northeast facing slope on Crown Butte when he got stuck. While working to free his sled, it began tumbling down the slope. It tumbled 3-4 times before impacting a rock 50-100 ft below him. The slope then fractured about 75 ft above him. The resulting avalanche was estimated to be 300 ft wide and 1000 ft vertical. The crown height ranged from 2 ft to 15 ft, and the run out angle was 28 degrees. The four members in his party immediately conducted a very thorough beacon search but could not detect a signal. A search continued the following day, and he was located with an avalanche dog. He was found beneath 3 feet of snow with his beacon turned off. His snowmobile was partially buried approximately 50 ft downhill. US Classification of the avalanche is HS-AM-R5-D4-O.

GPS Coordinates from the toe of the debris:

N 45.05750

W 109.96004

Elevation of debris: 9,300 ft

Elevation of crown: 10,200 ft

Slope Aspect: 20 degrees NNE

Slope Angle in starting zone: 37-40 degrees

## WEATHER:

The weather data for this incident is from the Fisher Creek Snotel Site located approximately 1.5 miles northeast of the avalanche.

The last precipitation in the mountains near Cooke City occurred on Monday, January 12. Since daily advisories began on December 12, 2008, this area received snow on 30 out of 37 days and significant winds occurred during much of this time. Three days prior to this avalanche a large ridge of high pressure moved over the advisory area producing temperatures above freezing and clear skies on the day of the accident. The weekend of this accident was the first full weekend with clear weather since early December.

## SNOWPACK:

Snow depths at the accident site were highly variable; however, faceted snow crystals at or near the ground have been found on all aspects in this area. This layer of facets has been responsible for many natural and human triggered avalanches on nearby mountains such as Henderson and Scotch Bonnet. With nearly constant snowfall since this layer was buried in early December, no other weak layers have formed in the snowpack. This layer of facets was found with old, pencil hardness, wind slabs on top during our investigation on Sunday, January 18. The slope that slid faces north north east and receives wind drifted snow from westerly winds that load this slope both near the top and along one side.

The avalanche danger in the mountains north of Cooke City on the day of the accident was rated **CONSIDERABLE** on all slopes steeper than 35 degrees.

#### SEARCH AND RESCUE:

The avalanche happened at approximately 1730. The members of the party immediately conducted a through beacon search but detected no signal. One of them activated the 911 feature on a SPOT device. This action notified the International Response Center which contacted Carbon County who contacted Yellowstone National Park who contacted Livingston Dispatch. A Hasty Team provided the initial response that evening and did not locate the victim. The following day more rescuers were mobilized for probe teams, and two avalanche dog teams responded. By afternoon one of the dogs indicated a possible location, the handler probed in that spot, and she found him. He was extricated from the debris, packaged, and taken to the firehall in Cooke City.

Please contact me for more information or if you have any questions. I can be reached at 406-587-6984 or [mstaples@fs.fed.us](mailto:mstaples@fs.fed.us)

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