Big natural avalanches on Flathead Pass

Flathead Pass
Bridger Range
2/15/2020
Code
HS-N-R4-D3-O
Elevation
8000
Aspect
NE
Latitude
45.96840
Longitude
-111.02100
Notes

"Quick Obs from a tour up to the skiing just south of Flathead Pass [2/17/2020]. We headed that direction for some low-angle protected tree skiing and, instead, found evidence of a widespread natural avalanche cycle from 2~3 days ago.

There were 3 main avalanches with similar characteristics: HS - N - R4 - D3 - O.

- Crowns topped out around 8000’ with large amounts of hanging snow (on steep slopes) above. Interestingly, the crowns connected down slope as low as 7800’ and jumped from tree to tree along convexities. The avalanches’ crowns ranged from 100’ wide to over 500’ wide.

- The avalanches failed on 4F- 1.5mm facets above the Thanksgiving crust, which was substantially harder than I have seen in the southern Bridgers.

- The avalanches stepped down to well-developed depth hoar (below the crust) in a few locations.

- The average crown depth was ~140cm where we felt safe looking (near bottom of crown) but was significantly more shallow near some trees.

- Conducted a quick crown profile and some tests. The standout results are PST 25/120 END x3 (we conducted the PST at a spot where the weak layer was buried 120cm deep) on the persistent weak layer with no notable results in two separate location ECTs and additional deep tapping…).

- The debris piles extended to previous old-growth maximums (extending the path of at least one avalanche) and had many snapped trees up to 10” in diameter deposited within."

Number of slides
3
Number caught
0
Number buried
0

Avalanche Type
Hard slab avalanche
Trigger
Natural trigger
R size
4
D size
3
Bed Surface
O - Old snow
Problem Type
Persistent Weak Layer
Slab Thickness
140.0 centimeters
Vertical Fall
500ft
Slab Width
500.00ft
Weak Layer Grain type
Faceted Crystals
Weak Layer grain size
1.50mm
Weak Layer Hardness
4F-
Images
Flathead Crown Profile - 17 Feb
Natural avalanche near Flathead Pass
Slab Thickness units
centimeters
Single / Multiple / Red Flag
Multiple Avalanches
Advisory Year
19-20