

Avalanche Accident Titus Ridge 3/25/2005
Sawtooth National Forest Avalanche Center Report
Janet Kellam, Director (208) 622-0095



Events Leading up to the Accident:

Skier #1 encountered skiers #2 & #3 at Prairie Creek trailhead. He invited them to ski with him out Titus Ridge, a different trailhead. It was an area that he knew well and would have good snow. Skier #2 & #3 had skied there previously but only once this past season. Skier #2 & #3 expressed concerns about snow stability, all of them had called the avalanche advisory that day. After about an hour of hiking, all skiers took one run from the ridge down to Titus Lake, (N-NE aspect) and skinned back out out. Some collapsing & whumphing was observed along the ridge. Two recent, natural slab avalanches and some sluffing were observed in the basin. No snow pit tests were performed.

The skiers moved further out the ridge and selected another run. Skier #1 mentioned that the snow was the best all season and he was planning to come back and ski steeper runs, especially before anyone else got to them. Skiers #2 & #3 expressed concerns about the snowpack and selected a lower angle route. They said that they placed some trust in skier #1's knowledge of the snow & terrain in that area but were concerned about conditions. There was one collapse with some cracking observed at this time. Skier #1 moved up the ridge and selected a steeper route. Skier #2 climbed up to skier #1 so skier #2 and #3 could have good visuals on skier #1. Skier #1 dropped onto the slope off of a smaller cornice, did a ski check with a brief pause and continued to ski down the fall line.

Skier #1 made several turns down the slope and was most likely at a slight breakover where the slope steepened, when he triggered the slide. Skier #3 reported seeing a fracture initiate and hollered "avalanche". Right after that skier #2 saw the upper slope fracture up to the ridgeline and skier #1 disappeared down the slope as a powder cloud erupted. As soon as the slide stopped, skier #1 was heard part way down the slope yelling for help and obviously hurt badly. Skier #2 and #3 were able to safely descend the lower angle route beside the slide path and reached skier #1 within minutes. Skier #1 was lying partially buried, head downhill and above the snow, hanging onto the branches of a sub alpine fir. His femurs were across the uphill side of the tree and obviously broken, one foot was spirally rotated and a tib-fib fracture apparent. Pelvic and spinal damage was suspected. The victim was conscious and in a lot of pain. He had lost both poles and one ski, which was later found towards the bottom of the debris. One ski remained on his foot; he was wearing non-releasable telemark bindings.

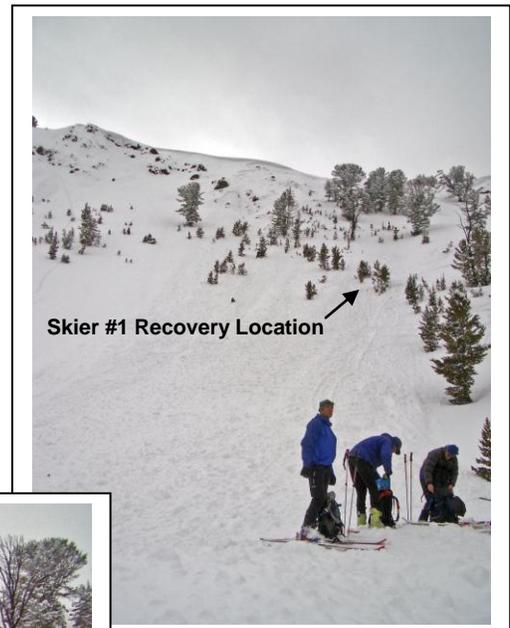
Search & Rescue Component:

Skier #2 & #3 descended approximately 350 feet to reach skier #1. They performed a rapid assessment and evaluated the situation. A level platform was dug beside the tree and they dug out and extricated #1 with a concern for possible spinal damage. Skier #1 was laid out in body alignment and the rotated foot was moved back into alignment as well. Skier #2 had recently completed a Wilderness First Responder refresher and was extremely competent. Skier #3 had some training and assisted until #2 could carry on monitoring & patient stabilization without help. Between the 3 skiers they

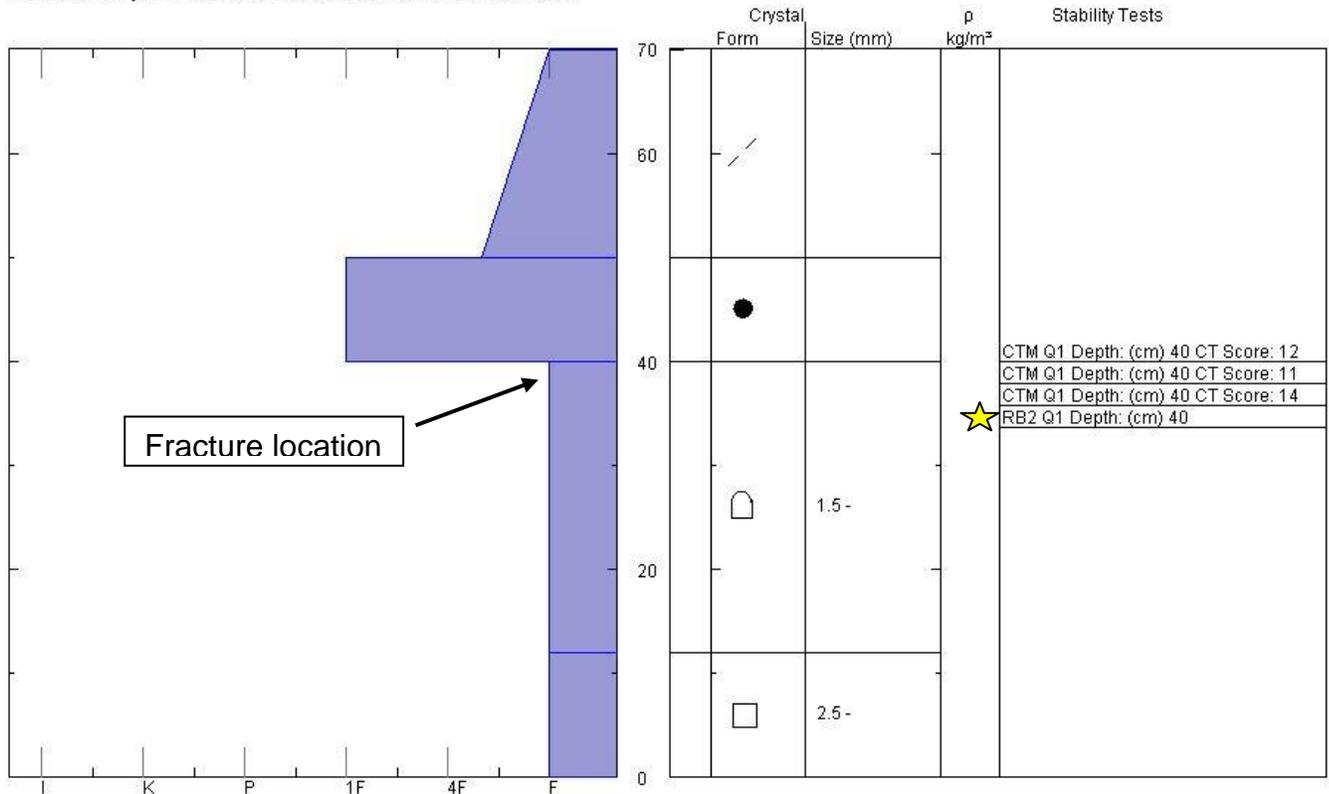
had a light weight thermarest pad, bivy sac, space blanket, trauma first aid kit, some 4mm cord and extra clothing including puffball pants and a down vest. The previously clear weather began to break down into snow squalls and storm cells.

Skier #3 chose to ski down the canyon on lower angle terrain, breaking trail to Galena Lodge where there was a telephone. The other option was to climb back up the slope and return along the ridge to the trailhead and drive seven miles to Galena Lodge. There was a concern about the slopes above and adjacent to the avalanche that had not slid that he would have to hike up. The debris remained very soft and it would have been extremely difficult to hike directly up the slide path. Skier #3 reached Galena Lodge before 4:00PM, approximately an hour & ½ after the accident occurred. He alerted 911, and the Sun Valley Heli-Ski group and Ketchum Fire Department was activated.

A well- coordinated and difficult rescue ensued that involved flying in serious mountain weather and alpine terrain. Several trips were made in & out of the rescue site to drop off a paramedic with gear, and three Heli-Ski guides to assist with the transport and to prepare a safer landing zone for the patient pickup. The patient was air lifted from the accident site and transported to the Ketchum hospital before 6:30pm. Life Flight was on standby at the hospital to fly the patient to the Boise Trauma Center. The skill, decision making and response on everyone's part undoubtedly saved the man's life. Last report 3/29/05 he was in serious but stable condition.



Snow Pit Profile Observer: **Chris Lundy** Stability on similar slopes: **Poor** Stability Test Notes: Layer notes:
Waltcher Slide Crown Date/Time (24h) **20050326 1330** Air Temperature: **C** **40: partial block**
Smoky, ID Co-ord: **W N** Sky Cover: **sky < 2/8 covered**
 Elevation (ft) **9700** Slope: **33** Precipitation: **None**
 Aspect: **65** Wind loading: **no** Wind: **Calm**
 Activities: **Collapsing, localized. Recent act on sim slopes.**
 Notes: **Crown profile of Waltcher avalanche that occurred 20050325**



Additional Avalanche Data:

Aspect: 60*
 Slope Angle Starting Zone: 34*
 Steeper terrain around rocks in bed surface, 38* measured at a breakover where the slide was believed to be triggered
 Vertical Fall: 500ft. 9,750ft to 9,350ft. Width: 140 ft.
 Fracture Line averaged 1 ft. deep, maximum 2 ft. deep
 Established avalanche path due to flagged trees and prior years observations
 Avalanche broke at top of facet layer and ran on faceted snow

Weather and Snow Data: See attached Avalanche Advisory 3/25/2005

Sawtooth area snowpack aprx 50-60% of average:
 Mid-January, February & early March had very little snowfall (21" Titus total)