

2014/02/11 - Oregon - SW face of Cornucopia Peak, Wallowa Mountains

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Avalanche Details

- **Location:** SW face of Cornucopia Peak, Wallowa Mountains
- **State:** Oregon
- **Date:** 2014/02/11
- **Time:** 12:00 PM (Estimated)
- **Summary Description:** 5 backcountry skiers caught, 1 uninjured, 2 injured, 2 killed
- **Primary Activity:** Backcountry Tourer
- **Primary Travel Mode:** Ski
- **Location Setting:** Backcountry

Number

- **Caught:** 5
- **Partially Buried, Non-Critical:** 1
- **Partially Buried, Critical:** 1
- **Fully Buried:** 2
- **Injured:** 2
- **Killed:** 2

Avalanche

- **Type:** SS
- **Trigger:** AS - Skier
- **Trigger (subcode):** u - An unintentional release
- **Size - Relative to Path:** R4
- **Size - Destructive Force:** D2
- **Sliding Surface:** S - Within Storm Snow

Site

- **Slope Aspect:** S
- **Site Elevation:** 8200 ft
- **Slope Angle:** 36 °
- **Slope**
Characteristic: Ridgeline, Sparse Trees, Gully/Couloir

Avalanche Comments

Avalanche dimensions and type are based on witness accounts. Poor visibility, high winds, and several inches of snow hampered efforts to make necessary measurements. The avalanche was a soft slab that initially broke in storm snow, then stepped down to the ground. It was unintentionally triggered by skiers, was large relative to the path, and destructive enough to bury a person but not break trees (SS-ASu-R4D2-S). It started close to the ridgeline on a south-southwest facing slope near treeline. It ran about 1200 vertical feet, and ended in a gully that acted as a terrain trap.

Snowpack Summary

A shallow, weak early season continental snow pack developed after less than average snowfall in December was followed by a dominating warm, high-pressure system for 16 days at the end of January. A variable snow pack structure consisting of layers of facets and crusts developed. A week prior to the accident, an observer noted a snow pack structure consisting of 50 cm of faceted grains near the ground with 10 cm of recrystallized snow in the Jim Creek drainage, in the same vicinity of the accident on a similar aspect at 7000'. A significant weather change started on 1/29 as the jet stream finally dropped down over the western U.S. and began bringing a series of significant storm events to the area mountains. The Wallowas received over 45 cm of snow and 1.5" snow water

equivalent (SWE) with snow levels hovering near 7300'. A Wallowa Alpine Huts employee noted a 190 cm snow pack at Schneider Cabin (7200') on 2/4. A cold front on 2/2 brought cooler conditions to upper elevations with highs in the teens through 2/7. During this time, the winds were light out of the west and the mountains received another 15 cm of low density snow. A series of storms 2/6-2/9 brought another 45-60 cm and 1-2" SWE and moderate SW winds. A warm front on 2/9 and 10 cm of dense new snow created inverted density conditions in the upper snow pack. The warming trend continued through 2/11. Members of the accident party reported 15 cm of new snow in the morning and moderate SW winds throughout the night. Overall, close to 120 cm of snow with 4" of SWE fell at the Schneider Meadows SNOTEL (5400') since 1/29. All this new snow was resting on a very weak and faceted snow pack with several reactive crust/facet layers mid-pack.

Events Leading to the Avalanche

A group of six backcountry enthusiasts from the Seattle, Washington area arrived at the Wallowa Alpine Huts Carson House in Halfway, Oregon on Saturday 2/8/14 to go on a guided backcountry trip out of the Schneider Cabin for 4 nights, ending on Thursday, 2/14.

Sunday, 2/9: After a guide briefing, the group accompanied by two guides, were towed in behind snowmobiles then skinned towards the cabin, taking an alternate route due to stability concerns along the normal route. Arriving to the cabin around 1300, the afternoon included rescue practice and a short tour. The group backed off the ideal descent due to wind-affected snow and descended the safest way down back to the cabin.

Monday, 2/10: Sunny, clear skies in the morning. Tour group heads up side of Cornucopia Peak. Stability tests on a north aspect near tree line glean easy results with Q3 shears. Group skis north aspect into West Pine drainage using safe travel protocol: one at a time down 1000' vertical in pitches. Wind-affected snow big concern for guides but conditions permit for two more runs on a similar aspect before skiing a south aspect down to the cabin around 1630. Downhill travel protocol continued to be one at a time and no one interviewed observed any signs of instability throughout the day.

Tuesday, 2/11 (DAY of ACCIDENT): Snowing with 4" of new snow, and windy in morning. Left cabin at 0900, plan is to ski 2 runs on south aspect then head to east aspect. First run on south aspect (off Cornucopia) wind compacted with cross-loading evident across the slope, in thin ribbons. Subject 1 notes wind compacted pillows were tested with no results, no signs of instability noted. Downhill travel protocol is stated to follow Subject 1's tracks, 5-10 turns apart. Group ascends same skin track up to ridge then follow the ridge further to the northwest approximately 1/4 mile. No signs of instability observed, yet signs of wind loading noted. Subject 1 performs a quick shovel shear test with STH-35 cm-Q3 (south) and communicates to Subject 8 it looked good.

RUN of ACCIDENT: At the top of ridge, Subject 1 communicates to clients to stay out of obvious avalanche path, adjacent and left of planned descent, which is obscured by poor visibility. Downhill travel protocol is to follow Subject 1's tracks traversing to the right, traveling 5-10 turns apart, or 5-10 seconds between, dependent on varying accounts. Subject 1 gives clear directions to follow his traverse right, to go slow enough that if Subject 1 stopped the group could stop uphill of Subject 1, until the group got into the low angle trees. Subject 1 wanted to ensure all skiers would be on the tree ridge rather than get sucked left towards the gully. Group is gathered on ridge just right of avalanche path. Subject 1 ski cuts across the starting zone on the convexity, then turns left before descending down the middle of a 100 foot wide apron right of slide path. Subject 1 sees the second skier following him and then 1 took the run all the way down to the regrouping area in an open clearing. Subject 2 descends "fall line" from ridge top location, through a line of trees, along the edge of the no-go zone. Subject 8 restates to follow lead guides tracks, Subject 3 skis just left of Subject 1's tracks, Subject 4 taking a line left of 3's and following closely behind. Subject 5 follows pattern skiing left of 4's. Subject 6 takes a line to the right of Subject 1's tracks. Where Subject 7 and 8 descended is unknown. Subject 3 passes Subject 2 and arrives at the bottom of the planned ski run. Subject 1 gets a radio call from Subject 8 that a slab had broken.

Accident Summary

Subject 1 could see “the next few skiers on the slope get hit by debris ... though they got taken off their feet it did not appear they had been taken very far. Then I could see the avalanche traveling at high velocity sending a powder cloud flying through the gully to the east of us.” During the rescue, Subject 1 noted the crown line was 5 to 6 turns down slope from his initial ski cut. He estimated dimensions as less than 30 cm deep and less than 100 m wide.

Rescue Summary

Subject 1 and 3 were at the bottom of the run. Subject 1 established voice contact with Subjects 2, 4, 5, and 6. Subject 6 was not caught in the avalanche. Subject 2 had been partially buried-critical, face-down in the debris, but able to push up, and was uninjured. Subject 4 had deployed an avalanche airbag, and was unburied on the surface of the avalanche debris but sustained two broken legs and a shoulder injury. Subject 5 was partially buried, with head above the debris, and sustained a broken leg.

Subject 1 and 3 immediately put skins on and climb up the slope. Subject 1 instructs 3 to start searching down the slope while 1 heads uphill to begin his beacon search. Subject 3 skins up to 4 and 'marks' 4's position with transceiver, and begins searching downhill. Subject 3 shouts out he has a signal and probes, finding a soft object 1.4 m below the surface of the snow. Using strategic shoveling techniques, they clear Subject 7's airway in approximately 10 minutes after the avalanche. Subject 7 does not respond to rescue breathing. Subjects 1 and 3 begin searching for Subject 8. Subject 3 gets a beacon signal 150' below Subject 7's location. They get a probe strike 150 cm down. Using strategic shoveling techniques, Subject 8's airway is uncovered approximately 20 minutes after the avalanche. Both buried victims suffered obvious and severe trauma.

Subject 1 skins to the ridgeline where there is cell service. He calls Wallowa Alpine Huts who initiate a rescue. Several hours after the avalanche, a helicopter reaches the scene and lands some rescue supplies but is unable to evacuate the injured skiers. Weather will prevent any other helicopter evacuation on 2/11 or 2/12.

Staff from Wallowa Alpine Huts reach the accident site in the afternoon with additional supplies. The injured Subjects are stabilized and sheltered on the avalanche debris. Subject 1 remains with them overnight. Search and Rescue are unable to reach the site with snowmobiles or snowcats, but stage vehicles overnight.

Baker County Search and Rescue personnel, including Wallowa Alpine Huts staff, paramedics, and members of Anthony Lakes Ski Patrol, reach the accident site the morning of 2/12. They began the slow process of evacuating Subjects 4 and 5. The injured skiers reach the hospital the evening of 2/12.

Media

Images



Figure 1: The avalanche ran on the sparsely treed slope and into the gully in the middle of the photograph.



Figure 2: The avalanche ran into the gully.

Approximate Locations 2/11/14
Map by: Max Forgens
February 19th, 2014

Little Eagle Avalanche Accident

Approximate Location of Subjects after avalanche came to rest

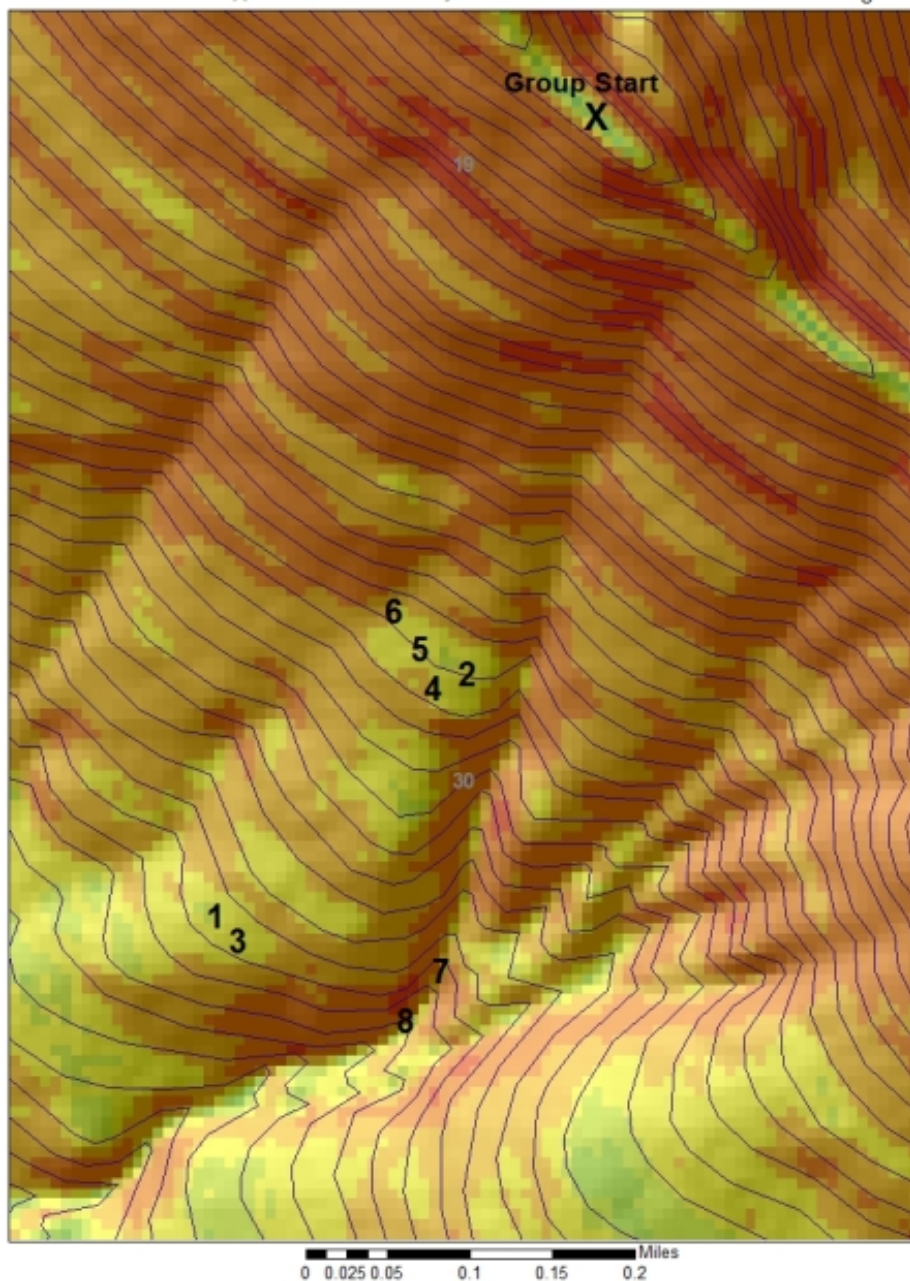


Figure 3: Topo map showing the group's location. Shading indicates slope angle.