Lipps - Near Miss Avalanche Incident  
Dec 29th, 2016

**Location:** Lipps Ridge, Turnagain Pass, Alaska  
**Date:** 12-29-2016,  **Time:** 1315-1330  
**Report by:** Chugach National Forest Avalanche Center Staff  
**Contact:** staff@chugachavalacnhe.org, website: cnfaic.org

**Synopsis:**  
Skier triggered avalanche on the lower Southwest aspect of Lipps ridge. Three skiers caught while ascending on skins. All were carried around 300’, 2 ended up on the surface of the debris and one skier partially buried. Everyone ok, lost gear.

**Avalanche Details:**

Avalanche Code: HS/SS-ASu-D2-R1-I/O  
Trigger - Skier  
Aspect – SW  
Angle – Estimated 35-40 degrees  
Elevation - 2300'  
Crown Depth – estimated 1-2'  
Width – estimated 300'  
Vertical Runout – estimated 500'  
Weak Layer – Suspected facets  
Debris depth – Estimated 3’ by party, possibly deeper in spots

**Events:**

On Thursday, December 29th, a party of three skiers (Skier A, B and C) skinned up the common route from the Bertha Creek pullout toward the SW shoulder of Lipps ridge. While they were working their way up through the alders they encountered whumping. They were concerned with the snow stability. Skier B comments: “We discussed terrain choices and safety several times on the way up. We definitely felt signs of instability including whumping and collapsing lower down in the alders”. The group dug a snow pit just above alder line to assess the snowpack and had a CT 21 that failed near the bottom of the pack in weak faceted snow. They also performed an improvised Rutchblock test that was 3’ wide and not cut on the back, it released in the same layer after “a couple of jumps”. Skier B: “I think at the time I felt comfortable with those results. We decided to go a little bit further uphill to ski from a level bench, then a little bit further uphill. I think the pit was in an area of deeper snow and if we had skied from there it would have been fine. But just above the snow was shallower and therefore much more reactive.”
After deciding they were only going a little bit further up the lower rolling terrain, still quite low on the ridge, the avalanche released. The skiers were roughly 20 feet apart from each other on the skin track. The crown was at an elevation of 2,300’ (for reference, the top of the ridge above this point is ~3,300’). Images below.

Skier A was in the lead at the time of release and “felt like I triggered the slide. I took a step and heard a big whumph as I felt like I dropped a couple inches, followed by a zipper/cracking sound going away from and in front of me diagonally uphill right before the slide. I didn't see the crack, but heard it propagate away from me. I looked up to see the snow sliding our way and turned downhill to try and outrun it. It caught me in just a few seconds.”

Accounts of being in the avalanche

Skier A: “I started off pointing downhill and didn't really feel like I got pulled under. It felt more like I was being overtaken by waves of heavy and light snow and got scooped up. I think I stayed pretty much on my back for the entire slide and did not tumble. I took about 5 breaths throughout it as I was able to. I would be near the top, then covered up, then on top again repeatedly.”

Skier B: “I started out on my back, then flipped once onto my stomach with my head downhill. I didn’t really feel like I ever got sucked under. Snow was sliding over me but I felt that I stayed close to the surface.”

Skier C: “Saw the initial wall of oncoming snow, pointed skis downhill and swam easily on my back about halfway before I was forced forward head first (face down) in the wave. Switched to breaststroke and was able to clear much snow away from my face. Near the bottom of the runout my second ski ejected so I was able to tuck my head and roll placing my feet under me. As the slide slowed to a stop I stood up about 20 feet from the bottom of the debris field, buried to my waist.”

No major injuries were incurred; two skiers reported minor tweaking to a knee. Each skier lost one ski and a total of 5 poles were lost along with some hats and gloves. All skiers make it back to their vehicle safely and on their own power after 2.5 hours of difficult post-holing.

Two skiers read the avalanche forecast that morning and all three discussed the forecast on the drive to the parking lot, as well as during the ascent. One of the three skiers had a Level 1 avalanche course. All three skiers had avalanche rescue gear (beacon, shovel and probe). Skier B had a Snowpulse airbag that was not deployed (handle was zipped in pocket). Skier A had Marker Tour F10 bindings (one ejected, ski lost), Skier B had Dynafit Vertical ST bindings (one ejected, ski lost) and Skier C had Solomon Guardian 16 bindings (both ejected, one lost, one ski found on surface).

Search Initiated:
A backcountry user in a vehicle observing the area saw the three skiers ascending. A little later, the observer looked back and saw a powder cloud, tracks leading into the avalanche and no people. The observer then drove to a callbox and alerted 911 of the avalanche. An Alaska State Trooper was dispatched from Seward along with a Forest Service Law Enforcement Official who alerted the Chugach National Forest Avalanche Center. Shortly after the arrival of authorities, the skiers returned to their vehicle.
**Weather:**
On the day of the avalanche skies were overcast and temperatures were 10-15 F. Ridgetop winds were light and variable at the Seattle Ridge weather station (2,400’). No precipitation.

**Snowpack History:**
The avalanche occurred on the fourth day after a two-day storm added 16-24” of new snow to this area (Dec 24-25). CNFAIC forecasters have not been to the site, but from knowledge of nearby zones, the storm snow likely fell onto a variety of faceted snow layers and surface hoar. This weak foundation as a whole was the result of many cold/clear periods in the early season and mid-December. It is believed that the slab was composed of the Dec 24-25 storm snow and possibly snow from earlier in December. Slab thickness was 1-2’. The weak layer is suspected to be faceted grains near the bottom of the pack and possibly mid-pack in places.

**Avalanche Danger:**
The CNFAIC avalanche danger was rated CONSIDERABLE in the Alpine and MODERATE in the Treeline band. This avalanche occurred where these two danger ratings meet. Advisory link: [http://www.cnfaic.org/advisories/current.php?id=1413](http://www.cnfaic.org/advisories/current.php?id=1413)

**Media:**

*We are very grateful for the willingness of these three skiers to share this experience and their photos for others to learn from.*
Photo 1. Avalanche seen from the Seward Highway on Dec 30th (Heather Thamm).

Photo 2. Closer view of Photo 1 with Skier locations.

- 3 Skiers caught in this zone ~20’ apart on skin track
- Skier A and B ended up on surface ~25’ apart
- Skier C partially buried 50’ from toe of debris
Photos 3. GPS track of skier B on the ascent route, straight line where caught and carried ending up on surface, then descent route.

Photos 4. Looking up at crown, photo by Skier A.
Photos 5. View of Skier B looking up at debris and crown from stopping place.
Photos 6. Improvised Rutcblock test failed after “a couple jumps” (photo Skier B).

Photos 7. Beginning the difficult walk out with one ski each, photo by Skier A.