# Mt. Shuskan fatality, 5-14-14

**Time and Date:** approx 10:15 am, 5-14-14
**Location**: Mt. Shuskan
**Number in Party:** 2 skiers/climbers
**Number caught:** 1 skier/climber
**Number killed:** 1 skier/climber
**Start Zone Elevation:** est 6800-6900 ft
**Start Zone Aspect:** northerly
**Location of subject relative to Start Zone:** 100-200' below, est 6700 ft
**Avalanche type:** Loose Wet
**Sliding surface:** In New
**Size:** unknown, likely D1.5-D2
**Avalanche Track:** Open slope, then confined
**Trigger:** Natural (N)
**Vertical Fall:** est 2600 ft
**Runout/Terrain Trap**: Below cliff bands onto Price Lake, est 4100 ft
**Debris depth and characteristics:** unknown, but debris not deep, victim found on top of debris
**First Report:** 911 called by surviving climber at 10:39 AM
**Recovery:** NPS located victim in the afternoon via helicopter recon, victim recovered 0800 the next day
**Avalanche safety gear carried by party (transceiver, shovel, probe, etc):** Both skiers carried transceivers, shovels, probes. They also carried ice axes and crampons.
**NWAC Forecast zone:** Washington Cascades near and west of the crest - north of Stevens Pass
**NWAC Avalanche Danger Rating in effect for start zone (above treeline):** Special avalanche advisory in effect, out of regular forecast season

**Comments from NWAC (Dennis D'Amico)**

We were very fortunate to sit down with the surviving climber and hear the first-hand account of two long-time climbing and skiing partners involved in the accident. The surviving climber also provided us with a detailed summary and annotated photos of the climb. The party of two were aware of the special avalanche advisory in effect from NWAC and had discussed the avalanche risks associated with their climb. From the survivor's account, a small but focused wet loose release found them in an exposed section of their climb. Attached are relevant freezing level and Mt. Baker station data; Wednesday was one of the warmest days that week with a sharp jump in the temperature of Panorama Dome station at Mt. Baker ski resort around the time of the accident. Also attached is the special avalanche advisory in effect which includes a summary of the snow shed cycle observed over the previous few days.

# Comments by surviving climber *(name withheld upon request)*

**Accident Summary**

Our plan had been to climb the north face of Shuksan and ski down the best available route depending on conditions. We had attempted the trip 10 days earlier with another friend, but very wet conditions held us to an approach recon mission that included a high point of 4400' on the east side of the White Salmon valley. On Wednesday, May 14th, we left the car at 5 AM and were at the saddle above Price Lake at 820 AM.

We looked at the north face of Shuskan and decided to get on the face and see how it felt in crampons. We found it climbable and not too soft, but it was early and we figured we'd ski down the White Salmon glacier. At that time, 9am-ish, the only slide activity on the route was small wet loose sluffs that involved up to the top 4 inches of snow and ran slowly but well. Recent wet loose avalanche debris was observed, likely from the day prior. We started climbing and we were un-roped for speed and to avoid dragging both of us down in a slide.

Around 1015 AM we were at ~6700 ft, just above the edge of the rock band that dominates the start of the route and about to head right, off the slope directly beneath the cliffs of the North Shoulder. When caught, we were at about 6700 ft with skis on packs and climbing with crampons and a single ice ax each. A point release 100-200 ft above caused a cascade of snow aimed at us. I moved 20 ft to the left and experienced the wet/heavy equivalent of spindrift and my glasses filled with snow. The deceased climber experienced heavier and more focused snow fall; he was in the self-arrest position for at least 75% of event, which lasted perhaps 30 seconds. After the avalanche passed, I looked up to find my partner missing. I did not see the resulting fall.

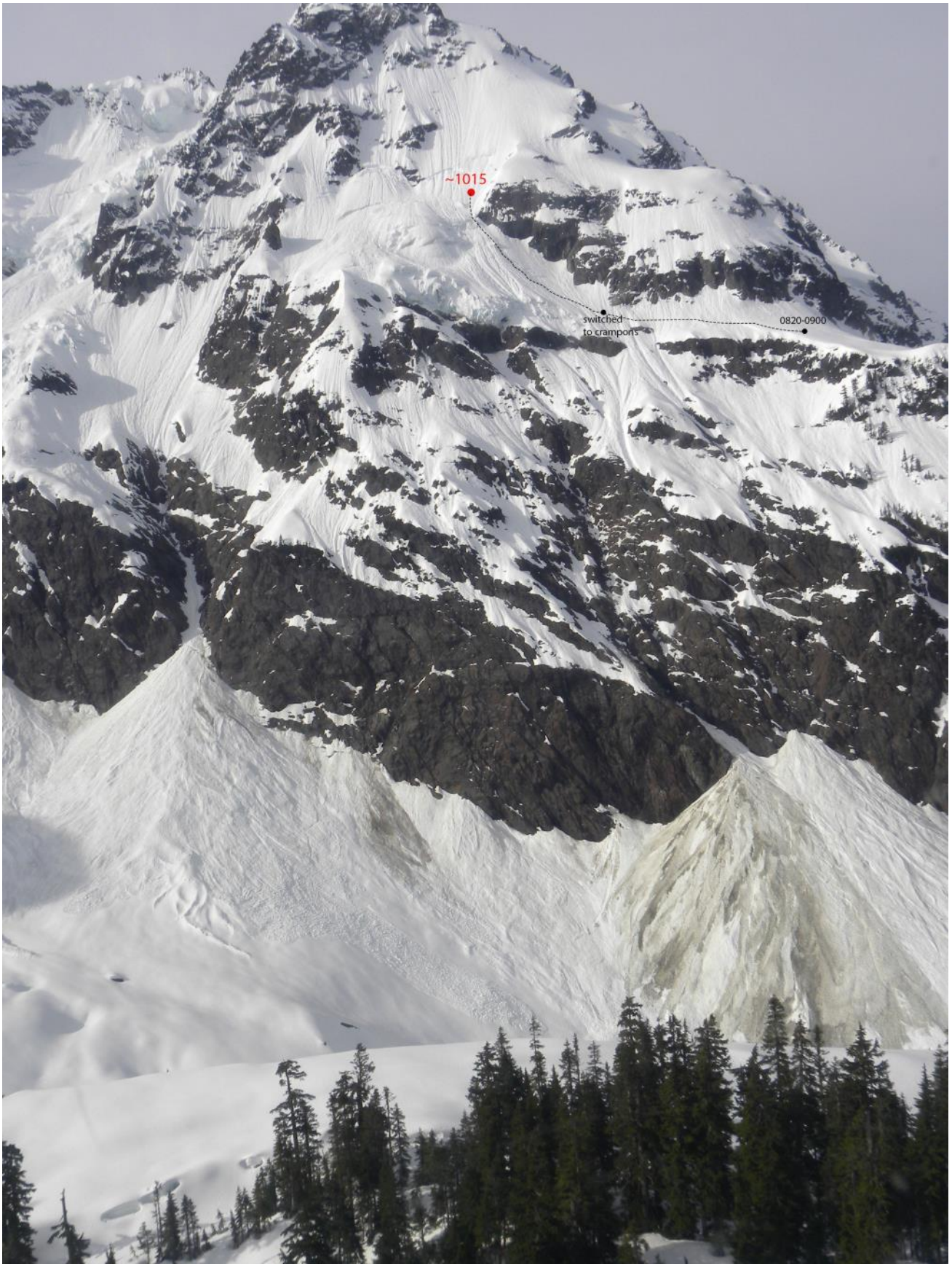
**Rescue Summary**

I visually surveyed the accident site and there were no signs of a burial or debris; all slide activity went further downhill. I switched my transceiver to search mode but was never within range to pick-up a signal (not including cell phone attempts). My partner was not visually seen on the slope of the accident or on the next slope below. I ran and down-climbed approx 400 vertical feet, then switched to skis, skied down another 400 ft to the start of the climb and called 911 (see photos attached). Below the lower slope, 800 vertical feet below the accident site were massive cliffs leading another 1800 ft down to Price Lake; a fall with virtually no chance of survival. After alerting 911, I skied to 4600 ft to the top of the cliff band above Price Lake without locating my partner. With no access to Price Lake, I boot-packed back up to the start of the route and re-engaged authorities. Helicopter reconnaissance occurred at 1530.
Following the helicopter reconnaissance, at 1615 I left the ridge between the White Salmon Valley and Price Lake and skied back to Mt Baker Ski Area. The helicopter team had quickly found my partner at the base of the mountain, just above the lake and conclusively determined that he had not survived the 2600 ft fall. Helicopter extraction of my partner occurred the next morning at 0800.

Photos taken by NPS, annotations by surviving climber/skier

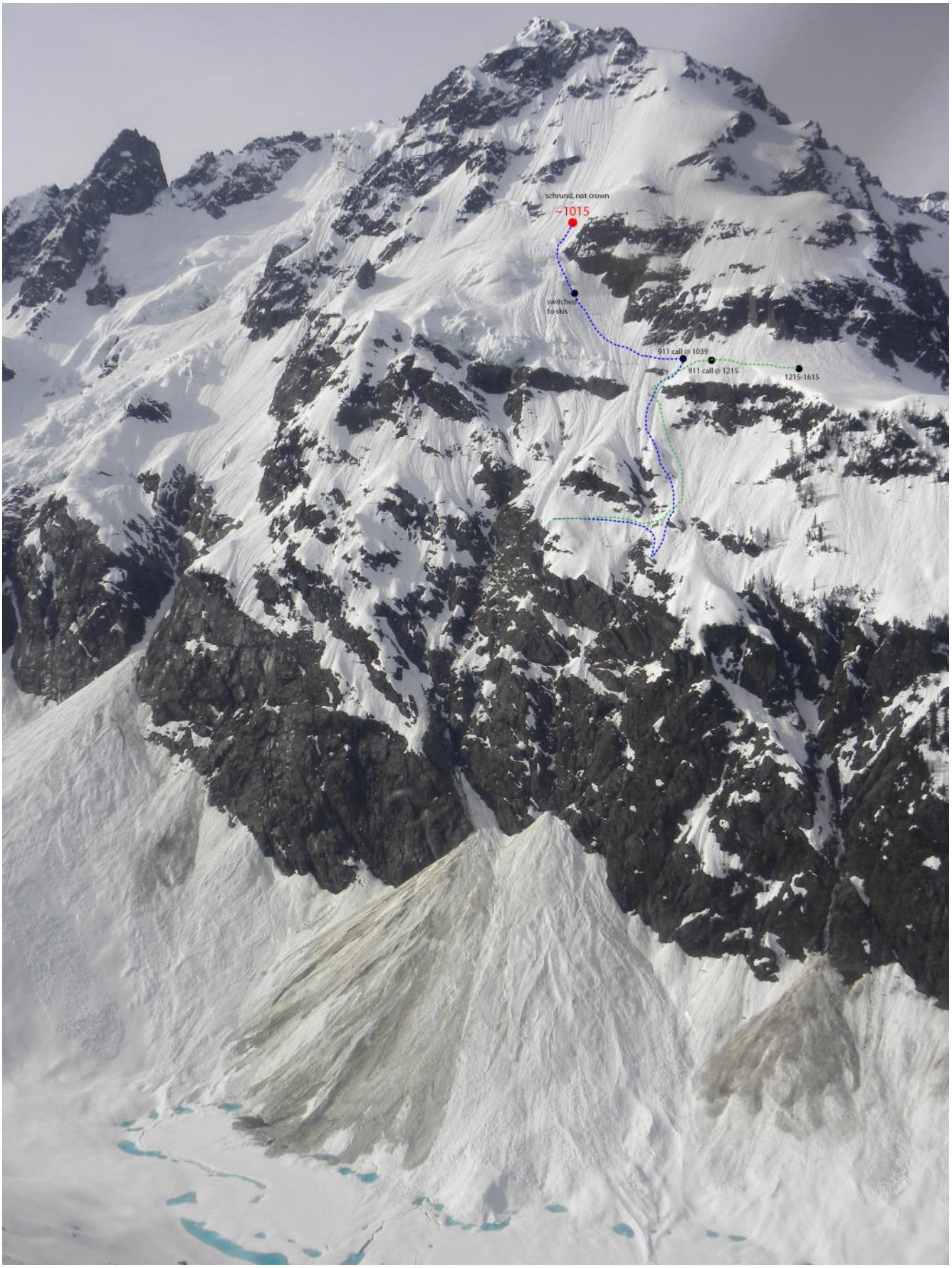
Ascent route

● = Location party was caught by avalanche

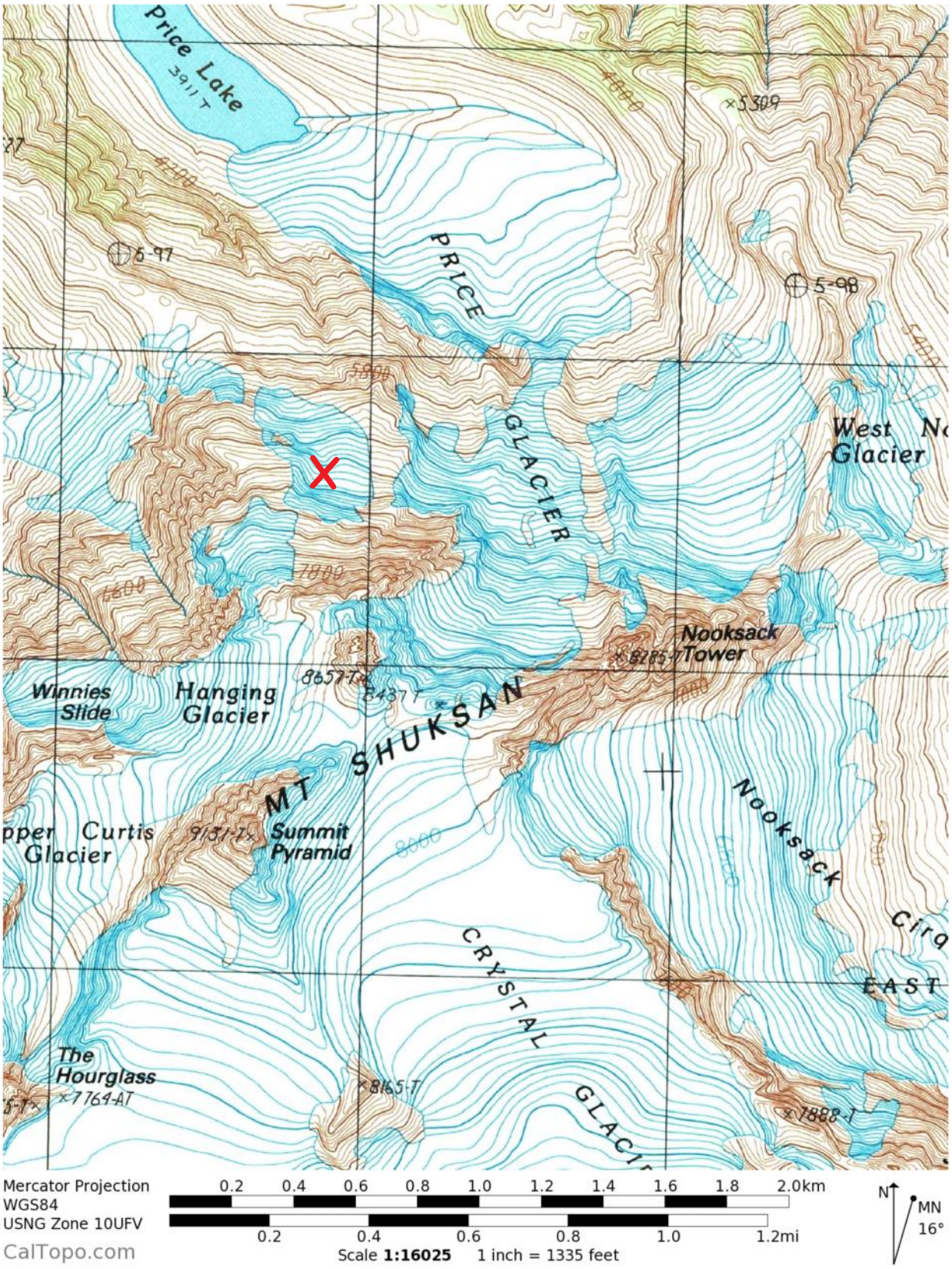


2nd climber/skier descent and search routes

● = Location party was hit by avalanche



X = approx location party was caught



# WA Cascades near and west of crest - north of Stevens Pass

## Avalanche Special Advisory

Issued: Tue, May 13, 2014 at 2:30 PM

**Issued: 2:30 PM Tuesday, May 13, 2014** by Dennis D'Amico

NWAC avalanche forecasts apply to backcountry avalanche terrain in the Olympics, Washington Cascades and Mt Hood area. These forecasts do not apply to developed ski areas, avalanche terrain affecting highways and higher terrain on the volcanic peaks above the Cascade crest level.

*The next Avalanche and Weather Weekend Outlook will be issued this upcoming Thursday afternoon, May 15th.*

**The Bottom Line**: New snowfall received late last week will be susceptible to warm temperatures and solar effects through Thursday. Extra caution is advised for those backcountry travelers pushing above treeline near and west of the Cascade crest, including the higher volcanoes, during this warm stretch.

# Snowpack Analysis:

Roughly 1 to over 2 feet of snow accumulated along the west slopes of the Cascades and Mt. Hood above about 5000 to 6000 feet late last week. From last Thursday, May 8th through Saturday morning, May 10th, 1.5 inches of water was recorded at Mt. Baker and Snoqualmie Pass, 2-2.5 inches at Crystal and Paradise MRNP, and 3.5-5.5 inches at stations on Mt. Hood! Less precipitation fell in the Hurricane Ridge area of the Olympics, east of Cascade crest, and at lower elevations in general.

Natural and skier triggered wet loose slides were commonly seen Sunday, even on non-solar slopes above treeline. Most slides were point releases that entrained new snow, but one shallow (D1) wet slab was skier triggered in the Mountain Loop area Sunday illustrating that isolated slabs are still possible. Brisk easterly winds near the Cascade crest Monday helped locally mitigate the wet loose likelihood. However, ski cuts produced wet loose avalanches up to size 2 on solar slopes above 5000 ft at Chinook Pass Monday. Washington Pass DOT reported only small wet loose slides in the Washington Pass area Tuesday.

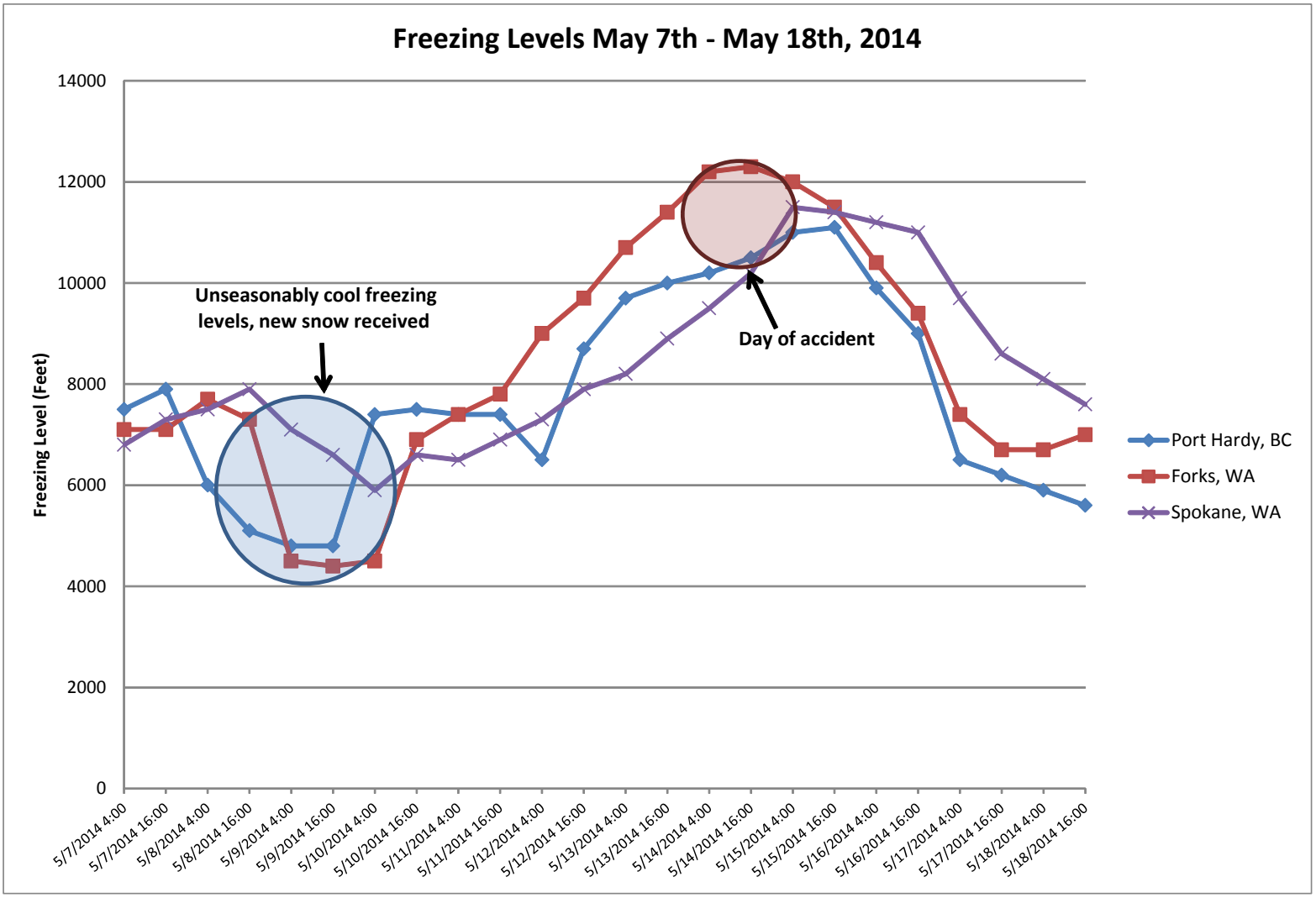
# Detailed Forecast for Wednesday:

An upper level ridge parked over the west coast will lead to dry and very warm weather this week. Freezing levels should climb to between 11000 to 12000 feet Tuesday and peak between 12000 and 13000 feet Wednesday and Thursday. Winds are generally forecast to be on the lighter side during this stretch. A cooling trend may begin Friday as cooler onshore flow develops and the upper level ridge shifts east, with further cooling and unsettled weather over the weekend as a cool upper low moves over the area.

Wet loose, cornice failures and isolated wet slabs above treeline near and west of the Cascade crest and Mt. Hood will be the primary avalanche concerns through Thursday. As freezing levels rise mid-week, look for heavy recent snow received at higher elevations to become more likely to avalanche. Less avalanche activity is expected east of the Cascade crest and at lower elevations.

Wet snow deeper than a few inches, pinwheels and small natural wet loose avalanches usually precede larger wet loose snow avalanches. Wet loose avalanches should mainly stay within the most recent snowfall but we can't rule out large or very large avalanches entraining wet snow below. Avoid steeper slopes during peak heating, give cornices a wide berth and be wary of terrain traps where even a

recent snowfall but we can't rule out large or very large avalanches entraining wet snow below. Avoid steeper slopes during peak heating, give cornices a wide berth and be wary of terrain traps where even a small but powerful wet loose avalanche can become deep very quickly.


Freezing Levels May 7th - May 18th, 2014
Freezing Level (Feet)
14000
12000
10000
8000
6000
4000
2000
0
Unseasonably cool freezing levels, new snow received
Day of accident
5/7/2014 4:00
5/7/2014 16:00
5/8/2014 4:00
5/8/2014 16:00
5/9/2014 4:00
5/9/2014 16:00
5/10/2014 4:00
5/10/2014 16:00
5/11/2014 4:00
5/11/2014 16:00
5/12/2014 4:00
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5/17/2014 4:00
5/17/2014 16:00
5/18/2014 4:00
5/18/2014 16:00
Port Hardy, BC
Forks, WA
Spokane, WA

Northwest Avalanche Center
Mt Baker Ski Area, Washington

Wind gages unheated and may rime
24 hr board not regularly cleared in spring
Total snow erratic

| MM/DD | Hour PST | Temp F 5020' | Temp F 4210' | RH % 5020' | RH % 4210' | Wind Min 5020' | Wind Avg 5020' | Wind Max 5020' | Wind Dir 5020' | Hour Prec. 4210' | Total Prec. 4210' | 24 Hr Snow 4210' | Total Snow 4210' |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15 | 0 | 59 | 53 | 32 | 43 | 3 | 4 | 6 | 304 | 0.00 | 0.00 | 1 | 175 |
| 5/14 | 2300 | 59 | 52 | 32 | 45 | 0 | 2 | 5 | 272 | 0.00 | 0.00 | 1 | 182 |
| 5/14 | 2200 | 59 | 52 | 33 | 48 | 0 | 1 | 3 | 257 | 0.00 | 0.00 | 0 | 176 |
| 5/14 | 2100 | 57 | 52 | 42 | 52 | 0 | 0 | 0 | 88 | 0.00 | 0.00 | 0 | 163 |
| 5/14 | 2000 | 58 | 53 | 46 | 52 | 0 | 1 | 4 | 197 | 0.00 | 0.00 | 1 | 144 |
| 5/14 | 1900 | 61 | 55 | 40 | 51 | 0 | 3 | 6 | 314 | 0.00 | 0.00 | 0 | 148 |
| 5/14 | 1800 | 64 | 55 | 34 | 49 | 0 | 1 | 6 | 237 | 0.00 | 0.00 | 0 | 133 |
| 5/14 | 1700 | 66 | 60 | 36 | 42 | 0 | 3 | 6 | 273 | 0.00 | 0.00 | 0 | 240 |
| 5/14 | 1600 | 66 | 61 | 34 | 41 | 1 | 5 | 9 | 221 | 0.00 | 0.00 | 0 | 147 |
| 5/14 | 1500 | 65 | 63 | 35 | 40 | 1 | 5 | 8 | 187 | 0.00 | 0.00 | 0 | 132 |
| 5/14 | 1400 | 65 | 63 | 39 | 41 | 1 | 5 | 8 | 218 | 0.00 | 0.00 | -0 | 132 |
| 5/14 | 1300 | 62 | 62 | 45 | 44 | 4 | 8 | 13 | 189 | 0.00 | 0.00 | -0 | 133 |
| 5/14 | 1200 | 64 | 61 | 43 | 45 | 0 | 3 | 7 | 206 | 0.00 | 0.00 | -0 | 190 |
| 5/14 | 1100 | 66 | 59 | 39 | 48 | 0 | 1 | 4 | 126 | 0.00 | 0.00 | -0 | 253 |
| 5/14 | 1000 | 66 | 57 | 38 | 50 | 0 | 2 | 6 | 127 | 0.00 | 0.00 | 0 | 143 |
| 5/14 | 900 | 59 | 55 | 48 | 54 | 1 | 3 | 6 | 117 | 0.00 | 0.00 | 0 | 220 |
| 5/14 | 800 | 58 | 54 | 49 | 56 | 4 | 5 | 7 | 121 | 0.00 | 0.00 | 0 | 193 |
| 5/14 | 700 | 57 | 52 | 51 | 57 | 0 | 3 | 7 | 96 | 0.00 | 0.00 | 0 | 237 |
| 5/14 | 600 | 58 | 51 | 47 | 60 | 0 | 1 | 4 | 92 | 0.00 | 0.00 | 0 | 260 |
| 5/14 | 500 | 54 | 49 | 56 | 67 | 0 | 2 | 4 | 94 | 0.00 | 0.00 | 0 | 178 |
| 5/14 | 400 | 51 | 47 | 65 | 68 | 1 | 3 | 6 | 106 | 0.00 | 0.00 | 0 | 189 |
| 5/14 | 300 | 52 | 49 | 64 | 67 | 0 | 0 | 4 | 183 | 0.00 | 0.00 | 0 | 193 |
| 5/14 | 200 | 52 | 48 | 63 | 69 | 0 | 1 | 6 | 152 | 0.00 | 0.00 | 1 | 188 |
| 5/14 | 100 | 52 | 49 | 62 | 68 | 0 | 2 | 6 | 148 | 0.00 | 0.00 | 1 | 189 |
| 5/14 | 0 | 52 | 48 | 66 | 69 | 0 | 0 | 2 | 129 | 0.00 | 0.00 | 0 | 191 |
| 5/13 | 2300 | 53 | 49 | 62 | 67 | 0 | 0 | 1 | 203 | 0.00 | 0.00 | 0 | 190 |
| 5/13 | 2200 | 52 | 48 | 62 | 69 | 0 | 1 | 3 | 56 | 0.00 | 0.00 | 0 | 191 |
| 5/13 | 2100 | 51 | 48 | 65 | 72 | 1 | 4 | 7 | 100 | 0.00 | 0.00 | 0 | 173 |
| 5/13 | 2000 | 51 | 50 | 67 | 67 | 3 | 6 | 11 | 110 | 0.00 | 0.00 | 0 | 158 |
| 5/13 | 1900 | 55 | 52 | 57 | 62 | 0 | 2 | 6 | 266 | 0.00 | 0.00 | 0 | 179 |
| 5/13 | 1800 | 58 | 52 | 50 | 59 | 0 | 2 | 6 | 245 | 0.00 | 0.00 | 0 | 154 |
| 5/13 | 1700 | 60 | 56 | 45 | 52 | 1 | 4 | 7 | 212 | 0.00 | 0.00 | 0 | 192 |
| 5/13 | 1600 | 60 | 59 | 46 | 47 | 2 | 6 | 9 | 207 | 0.00 | 0.00 | -0 | 226 |