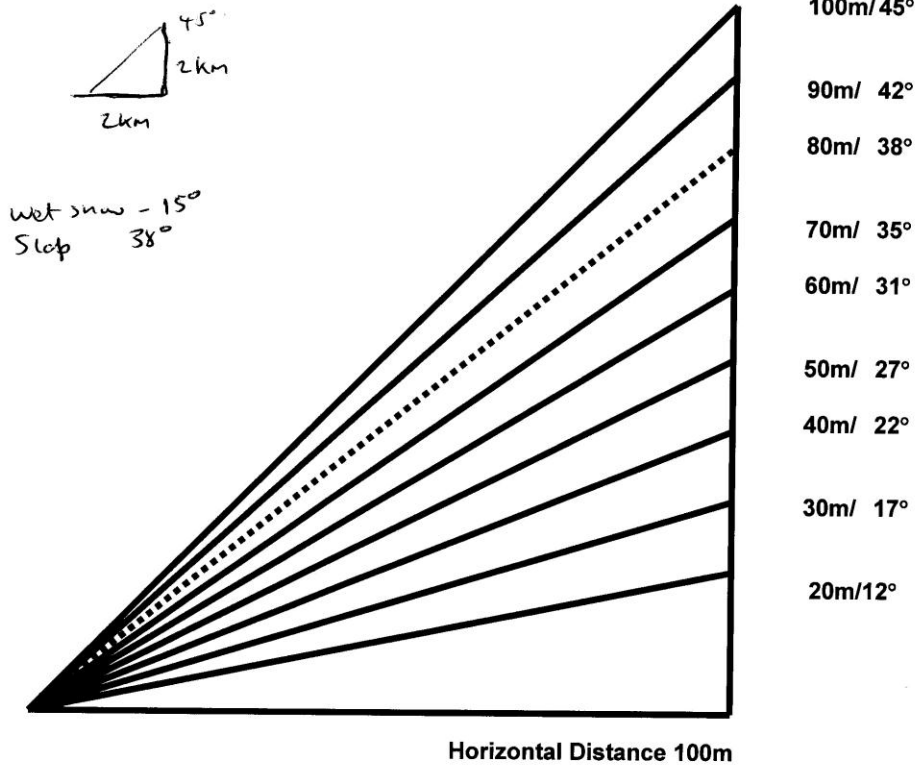


**Avalanche**

**Angle of Slope**



From the above it can be seen that once you start to ascend or descend slopes that are measured from the map to have:-

A vertical gain of  $\frac{1}{2}$  the horizontal distance travelled

the angle of slope is around 27°

Caution is required, these, and steeper slopes are more likely to AVALANCHE!!

Slopes of 38° are statistically more likely to produce slab avalanches, but be aware well before this angle of slope. Wet snow avalanches can occur at angles as low as 15°!!

So, if a slope has a vertical gain of  $\frac{1}{2}$  the horizontal distance covered, start to watch out, you are entering the most likely Avalanche terrain.

Don't forget, you can be avalanched standing on flat ground such as in the valley bottom, or worse still, whilst standing some distance up the other side!

**Avalanche**

**What Slope to Ski?**

Angle of slope for a skier is everything, it can provide a memorable run where you and your friend make perfect 'Eights', or it can be a worry from start to finish because of the threat of avalanche, or indeed it might be so slow that you have to pole yourself along in deep soft snow on a shallow angled slope.

**What angle of slope is desirable?**

If conditions are firm, even icy, then it will be easy to glide across even the shallowest of slopes, but most skiers would quite rightly keep clear of 30 degree slopes.

With a fall of new snow providing a thick carpet of powder snow, slopes of 20 – 30 degrees will provide great runs without a high risk of the slope avalanching.

On a slope of 10 degrees with deep new snow, you might have to resort to a straight run or even poling if you are first.

Over 30 degrees and you are venturing into terrain that is more susceptible to avalanche and a fall could have a serious outcome if you fall over when the snow is firm under foot.

The variables are many, such as, depth of snow, density of snow, wetness / dryness, head or tail wind, crust, slab or ice. Add to this list, variables that relate to your skis, your weight, the kit you are carrying and your previous experience and it is easy to see that it is a tall order to come up with the perfect slope all the time.

What you can do is remember the slopes and the conditions that gave you the most pleasure, refer to the map, and note how many metres of vertical descent you made over a horizontal distance of 500m. Then when you are planning a future tour / off piste run, you might be able to pick the plum out of the basket of choice.

**Angle of Slope**

Each of the following angles of slope is calculated with a horizontal distance of 100m and various vertical drops over that distance, each measured in meters.

Horizontal distance	Vertical drop	Angle in degrees
100m	20m	12 deg
100m	30m	17 deg
100m	40m	22 deg
100m	50m	27 deg
100m	60m	31 deg
100m	70m	35 deg
100m	80m	38 deg
100m	90m	42 deg