

Not All Clouds Are Lined In Silver

by Bob Kirkby © 1996

My visiting relatives snoozed in the spare room as I eagerly showered in anticipation of a morning of flying. The night before we had agreed on a sight-seeing flight into the Rockies this morning since the miserable weather of the past week had finally broken.

While they arose and prepared for the day I called Flight Services for a weather briefing. The Flight Service Specialist rattled off the FA, FT and SA for me (this was before the days of METAR and TAF) and I noted nothing of consequence with the possible exception of a warm front running east-west north of Red Deer. The forecast was for it to move south to lie 80 north of Calgary by 1900 Zulu. If all went well we would be back home long before 1900, so I filed a flight plan, leaving sufficient time for the relatives to have breakfast and load up.

On schedule, we departed runway 16 and headed for Seebe, the point at which the TransCanada highway enters the mountains on its way to Banff. There we turned south for a leisurely flight down the Kananaskis valley. The weather was CAVOK with a little chop now and then to remind us where we were. The trip down the valley was enjoyed immensely by my passengers, whose total mountain experience to-date had been a drive to Banff. Half an hour later we exit'd the mountains at the Highwood pass and headed straight for my home strip on the east side of Calgary.

As we approached home base from the southeast I could see a solid bank of cloud running east-west a few miles north of the aerodrome. Crossing the Bow river I dropped down to 4500 feet in order to stay under the Calgary Terminal airspace and at the same time flew under a developing cloud base about 1500 feet above us. As we approached home I kept an eye on the cloud base above and the visibility ahead.

At 5 miles out I could clearly see the ground at least 5 miles beyond home base so I suspected the cloud bank descended to the ground at that point. I felt assured that the visibility around the aerodrome was still good and should be for the five more minutes it would take to land. Since the weather was perfectly clear behind I had the option of turning around and landing elsewhere if necessary.

I had another choice at this point, I could line up with runway 34 and come straight in on final or I could overfly to check the wind sock. Although the winds had been negligible all morning I thought it best to verify the wind direction before choosing a runway because of the approaching front. So I headed for mid-field from about 2 miles southeast. Again I scanned the clouds and concluded that the base was about 500 feet above and it descended to ground level about 5 miles north of the airfield.

As we neared mid-field I could see the windsock hanging limp on its pole and decided to join a right downwind for runway 34. I banked right to cut across the runway and suddenly noticed that my left wing tip disappeared. ACK! This was no time for a clipped wing mod. At the same time wisps of cloud, appearing from nowhere, floated by only a few feet above the windshield. I quickly reduced power and prop pitch, nosed over for a 500 foot circuit height and called for a seatbelt check for landing.

Once settled on the downwind I had another look around at the cloud base and could now see it sloping upwards toward the south.

On right base, when looking south in the direction of the diffused light source, I could see the cloud definition, but when I looked north I could not discern the sloping clouds but could only identify where they reached the ground a few miles away.

On the ground my passengers de-planed, talking excitedly about the flight and the spectacular mountain scenery they had witnessed. I did not tell them that we almost had to execute a rate one turn in clouds and land someplace else.

Later when they had left for home I dug out my "Flying the Weather" book and read up on warm front cloud patterns. Sure enough there was a diagram on page 47 of exactly the cloud formation I had encountered. I have reproduce the diagram in Figure 1 and added in my aerodrome and airplane approaching from the south. The insidious part of the scenario is that the light conditions (diffused and from behind) made it almost impossible to identify the bottom edge of the cloud layer. I didn't think about the down-sloping cloud layer because it paralleled my line of sight, which was telling me that visibility was good for several miles beyond my target. Of course, I should have known better.

In addition to learning what to expect from a warm front, one must also keep in mind that fronts can move much faster or slower that predicted, especially in Alberta. In this case it was several hours ahead of schedule!

Fly safe, and stay out of the clouds.

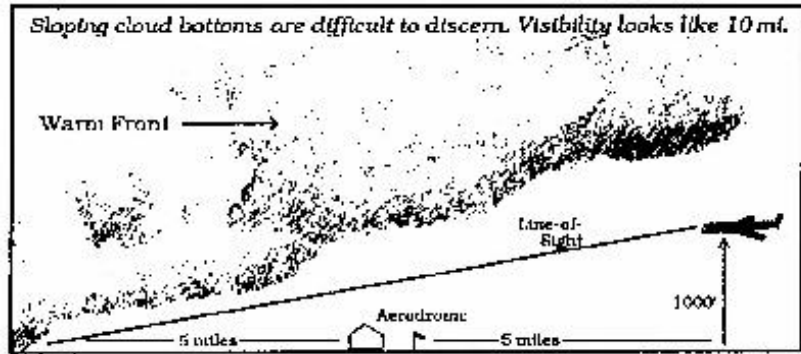


Figure 1