climbed down to him, and saw there was nothing he could do for him. He climbed back to the col between Mounts Deltaform and Tuzo, then descended the north side on very exposed terrain. That required numerous rappels and downclimbing on loose mixed ground. He reported the accident at Moraine Lake, and his partner's body was recovered by helicopter by the Parks Canada Warden Service.

Analysis:

This is a multi-day alpine traverse on peaks in the 3000 meter to 3500 meter range, and requires extensive mountaineering experience. The background of these two climbers was mostly rock climbing. The terrain where the accident occurred is loose and exposed mixed fourth class, typical of the Canadian Rockies. Though technically not difficult, it is potentially dangerous, and requires extreme care and experience, since generally it is not easy to protect. In this case, the climbers decided to travel unroped, which is not unusual on such terrain. (Source: Banff National Park Warden Service)

FALL ON ROCK, INADEQUATE PROTECTION (PULLED OUT) Alberta, Rocky Mountains, Lake Louise, Back of the Lake Crag

C.T. and R.W. were climbing a 5.9 route at the Back of the Lake on September 27, 1993, when C.T. fell while leading. His last piece of protection, a wire stopper with quickdraw, pulled out and he fell 15 meters, fracturing ribs and a shoulder. While awaiting help, his partner was able to lower him to a ledge. The victim was lowered to the ground, then evacuated by the Warden Service with a helicopter.

Analysis

The victim was wearing a climbing helmet at the time he fell, and it may have saved him from head injuries, as the fall involved a pendulum onto the rock. One other factor to consider is that at practice areas, climbers seem pressured to climb faster and harder, inevitably with less attention to placements. (Source: Banff National Park Warden Service and Orvel Miskiw)

AVALANCHE, POOR POSITION, IGNORING HAZARDS TO OBTAIN OBJECTIVE

British Columbia, Selkirk Mountains, Bruins Pass

On March 17, 1993, Fritz B. (33), from Austria, and Herbert F. (50), from Germany, skied up Connaught Creek toward Bruins Pass after checking in at Rogers Pass Ranger Station and reading weather and avalanche forecasts. They had planned this trip the previous day while viewing the area from Little Sifton, judging the snow conditions would be better there than in some other areas.

Upon ascending into the bowl below Bruins Pass, they chose to travel east and north through it, as that route was indicated on their map while other routes were obscured by low cloud and snow. In the upper basin, they traveled high on the east side, staying close to rock outcrops to minimize avalanche potential.

The final section required steep Z-tracks, and Herbert, in the lead, was beginning a kick turn into the final 15 meters to the col, about 30 meters ahead of his partner, when the snow settled and both men were caught in moving snow almost immediately. Herbert was carried about 800 meters downslope in the fast main flow and buried at least a half

meter deep with his head down the slope and face down. Fritz was caught in a slower-moving mass from the shallower pack to the side, and carried approximately 300 meters, remaining on the surface. He conducted a beacon search, found and dug out his partner in an estimated 15 minutes, attempted to resuscitate him, then skied out to Rogers Pass to report the accident.

Fritz suggested that his partner might still be alive, and a three-member ground team was initially dispatched to the scene while air support was being arranged. Rescuers were hampered by poor visibility and continuing high avalanche hazard. The victim was located from the air, and teams moved in to his position with avalanche spotters in place; he was found to be dead. The body was placed in a toboggan and transported 800 meters downslope before evacuation efforts were abandoned because of avalanche threat to the rescuers.

The following day, the avalanche hazard remained high, with much activity to size class three, so a decision was made to wait for predicted breaks in the weather and fly to the scene, but the break did not come until late afternoon when the light was failing, and the evacuation was postponed overnight. It was completed on the morning of March 19. Shortly after the evacuation, the fracture-line profile team initiated a class three avalanche which over-ran the evacuation site.

The Coroner determined that the cause of death was asphyxiation; several rib fractures on the left side were attributed to resuscitation efforts. Fritz stated there had been no snow in Herbert's breathing passages, so it is assumed that snow pressure had prevented adequate chest expansion.

Analysis

Both of these men had 20 years of mountaineering and ski touring experience, and were well-equipped and knowledgeable, although neither had taken formal avalanche training. The previous week, they had several disagreements with guides in an area adjacent to the Park, as they wanted to ski slopes which the guides felt to be unsafe at the time, due to the prevailing snow conditions.

During the two days Herbert and Fritz had been in the Park, they took advantage of snow and weather information available there, and discussed routes with local skiers and Parks staff. They triggered avalanches, and allegedly were concerned about the final slopes they ascended. After using safer slopes, they moved onto the wind-loaded 35° slopes over smooth, loose shale with seepage areas, and the leader carried his final traverse into the snow pillow building on the lee side of the col.

The accident was caused by pushing to attain an objective despite awareness of high hazard resulting from bad snow conditions and steep slopes. (Source: Mt. Revelstoke and Glacier National Parks Warden Service)

FALL IN CREVASSE, INADEQUATE EQUIPMENT, INEXPERIENCE British Columbia, Rocky Mountains, Mount Robson

C.C. and W.R. were descending Mount Robson (3955 meters) on August 5, 1993, after climbing the Fuhrer Ridge. As they were crossing the Robson Glacier, W.R. cut too close to the edge of an open crevasse and collapsed the lip. He fell about 20 meters and pulled his partner within about 15 meters from the edge before reaching a snow platform. W.R. was not injured and had voice contact with C.C., but W.R. could not get out on his own, and C.C. was unable to extricate him.