

= Frank Slide =

The Frank Slide was a rockslide that buried part of the mining town of Frank , Alberta , Canada . The province of Alberta was not created until September 1905 , more than two years after the slide . The community was still part of the Northwest Territories when the incident occurred at 4 : 10 am on April 29 , 1903 . Over 82 million tonnes (90 million tons) of limestone rock slid down Turtle Mountain within 100 seconds , obliterating the eastern edge of Frank , the Canadian Pacific Railway line and the coal mine . It was one of the largest landslides in Canadian history and remains the deadliest , as between 70 and 90 of the town 's residents were killed , most of whom remain buried in the rubble . Multiple factors led to the slide : Turtle Mountain 's formation left it in a constant state of instability . Coal mining operations may have weakened the mountain 's internal structure , as did a wet winter and cold snap on the night of the disaster .

The railway was repaired within three weeks and the mine was quickly reopened . The section of town closest to the mountain was relocated in 1911 amid fears that another slide was possible . The town 's population nearly doubled its pre @-@ slide population by 1906 , but dwindled after the mine closed permanently in 1917 . The community is now part of the Municipality of Crowsnest Pass in the Province of Alberta and has a population around 200 . The site of the disaster , which remains nearly unchanged since the slide , is now a popular tourist destination . It has been designated a Provincial Historic Site of Alberta and is home to an interpretive centre that receives over 100 @,@ 000 visitors annually .

= = Background = =

The town of Frank was founded in the southwestern corner of the District of Alberta , a subdivision of the Northwest Territories in 1901 . A location was chosen near the base of Turtle Mountain in the Crowsnest Pass , where coal had been discovered one year earlier . It was named after Henry Frank who , along with Samuel Gebo , owned the Canadian @-@ American Coal and Coke Company , which operated the mine that the town was created to support . The pair celebrated the founding of the town on September 10 , 1901 , with a gala opening that featured speeches from territorial leaders , sporting events , a dinner and tours of the mine and planned layout for the community . The Canadian Pacific Railway (CPR) ran special trains that brought over 1 @,@ 400 people from neighbouring communities to celebrate the event . By April 1903 , the permanent population had reached 600 , and the town featured a two @-@ storey school and four hotels .

Turtle Mountain stands immediately south of Frank . It consists of an older limestone layer folded over on top of softer materials such as shale and sandstone . Erosion had left the mountain with a steep overhang of its limestone layer . It has long been unstable ; the Blackfoot and Kutenai peoples called it " the mountain that moves " and refused to camp in its vicinity . In the weeks leading up to the disaster , miners occasionally felt rumblings from within the mountain , while the pressure created by the shifting rock sometimes caused the timbers supporting the mine shafts to crack and splinter .

= = Rockslide = =

In the early morning hours of April 29 , 1903 , a freight train pulled out of the mine and was slowly making its way towards the townsite when the crew heard a deafening rumble behind them . The engineer instinctively set the throttle to full speed ahead and sped his train to safety across the bridge over the Crowsnest River . At 4 : 10 am , 30 million cubic metres (82 million tonnes) of limestone rock broke off the peak of Turtle Mountain . The section that broke was 1 @,@ 000 metres (3 @,@ 300 ft) wide , 425 metres (1 @,@ 394 ft) high and 150 metres (490 ft) deep . Witnesses to the disaster claimed it took about 100 seconds for the slide to reach up the opposing hills , indicating the mass of rock traveled at a speed of about 112 kilometres per hour (70 mph) . The sound was heard as far away as Cochrane , over 200 kilometres (120 mi) north of Frank .

Initial reports on the disaster indicated that Frank had been " nearly wiped out " by the mountain 's

collapse . It was thought the rockslide was triggered by an earthquake , volcanic eruption or explosion within the mine . The majority of the town survived , but the slide buried buildings on the eastern outskirts of Frank . Seven cottages were destroyed , as were several businesses , the cemetery , a 2 @-@ kilometre (1 @.@ 2 mi) stretch of road and railroad tracks , and all of the mine 's buildings .

Approximately 100 people lived in the path of destruction , located between the CPR tracks and the river . The death toll is uncertain ; estimates range between 70 and 90 . It is the deadliest landslide in Canadian history and was the largest until the Hope Slide in 1965 . It is possible that the toll may have been higher , since as many as 50 transients had been camped at the base of the mountain while looking for work . Some residents believed that they had left Frank shortly before the slide , though there is no way to be certain . Most of the victims remain entombed beneath the rocks ; only 12 bodies were recovered in the immediate aftermath . The skeletons of six additional victims were unearthed in 1924 by crews building a new road through the slide .

Initial news reports stated that between 50 and 60 men were within the mountain and had been buried with no hope of survival . In reality , there were 20 miners working the night shift at the time of the disaster . Three had been outside the mine and were killed by the slide . The remaining 17 were underground . They discovered that the entrance was blocked and water from the river , which had been dammed by the slide , was coming in via a secondary tunnel . They unsuccessfully tried to dig their way through the blocked entrance before one miner suggested he knew of a seam of coal that reached the surface . Working a narrow tunnel in pairs and threes , they dug through the coal for hours as the air around them became increasingly toxic . Only three men still had enough energy to continue digging when they broke through to the surface late in the afternoon . The opening was too dangerous to escape from due to falling rocks from above . Encouraged by their success , the miners cut a new shaft that broke through under an outcropping of rock that protected them from falling debris . Thirteen hours after they were buried , all 17 men emerged from the mountain .

The miners found that the row of cottages that served as their homes had been devastated and some of their families killed , seemingly at random . One found his family alive and safe in a makeshift hospital , but another emerged to discover his wife and four children had died . Fifteen @-@ year @-@ old Lillian Clark , working a late shift that night in the town 's boarding house , had been given permission to stay overnight for the first time . She was the only member of her family to survive . Her father was working outside the mine when the slide hit , while her mother and six siblings were buried in their home . All 12 men living at the CPR work camp were killed , but 128 more who were scheduled to move into the camp the day before the slide had not arrived ? the train that was supposed to take them there from Morrissey , British Columbia , failed to pick them up . The Spokane Flyer , a passenger train heading west from Lethbridge , was saved by CPR brakeman Sid Choquette , one of two men who rushed across the rock @-@ strewn ground to warn the train that the track had been buried under the slide . Through falling rocks and a dust cloud that impaired his visibility , Choquette ran for 2 kilometres (1 @.@ 2 mi) to warn the oncoming locomotive of the danger . The CPR gave him a letter of commendation and a \$ 25 cheque in recognition of his heroism .

= = = Aftermath = = =

Early on April 30 a special train from Fort Macleod arrived with police officers and doctors . Premier Frederick Haultain arrived at the disaster site on May 1 , where he met with engineers who had investigated the top of Turtle Mountain . Though new fissures had formed at the peak , they felt there was limited further risk to the town ; the CPR 's chief engineer was convinced that Frank was in imminent danger from another slide . Siding with the latter , Haultain ordered the town evacuated , and the Geological Survey of Canada (GSC) sent two of its top geologists to investigate further . They reported that the slide had created two new peaks on the mountain and that the north peak , overlooking the town , was not in imminent danger of collapse . As a result , the evacuation order was lifted on May 10 and Frank 's citizens returned . The North @-@ West Mounted Police , reinforced by officers who arrived from Cranbrook , Macleod and Calgary , kept tight control of the

town and ensured that no cases of looting occurred during the evacuation .

Clearing the Canadian Pacific Railway line was of paramount importance . Approximately 2 kilometres (1 @. @ 2 mi) of the main line had been buried under the slide , along with part of an auxiliary line . The CPR had the line cleared and rebuilt within three weeks . Intent on reopening the mine , workers opened passageways to the old mine works by May 30 . To their amazement , they discovered that Charlie the horse , one of three who worked in the mine , had survived for over a month underground . The horse had subsisted by eating the bark off the timber supports and by drinking from pools of water . The horse died when his rescuers overfed him on oats and brandy .

The town 's population not only recovered but grew ; the 1906 census of the Canadian Prairies listed the population at 1 @, @ 178 . A new study commissioned by the Dominion government determined that the cracks in the mountain continued to grow and that the risk of another slide remained . Consequently , parts of Frank closest to the mountain were dismantled or relocated to safer areas .

= = Causes = =

Several factors led to the Frank Slide . A study conducted by the GSC immediately following the slide concluded that the primary cause was the mountain 's unstable anticline formation ; a layer of limestone rested on top of softer materials that , after years of erosion , resulted in a top @- @ heavy , steep cliff . Cracks laced the eastern face of the mountain while underground fissures allowed water to flow into the mountain 's core . Local Indigenous peoples of the area , the Blackfoot and Ktunaxa , had oral traditions referring to the peak as " the mountain that moves . " Miners noticed the mountain had become increasingly unstable in the months preceding the slide ; they felt small tremors and the superintendent reported a " general squeeze " in the mountain at depths between 1 @, @ 100 metres (3 @, @ 600 ft) and 1 @, @ 500 metres (4 @, @ 900 ft) . They found that coal broke from its seam ; it was said to have practically mined itself .

An unusually warm winter , with warm days and cold nights , was also a factor . Water in the mountain 's fissures froze and thawed repeatedly , further weakening the mountain 's supports . Heavy snowfall in the region in March was followed by a warm April , causing the mountain snows to melt into the fissures . GSC geologists concluded that the weather conditions that night likely triggered the slide . The crew of the freight train that arrived at Frank shortly before the disaster said it was the coldest night of the winter , with overnight temperatures falling below ? 18 ° C (0 ° F) . Geologists speculated that the cold snap and rapid freezing resulted in expansion of the fissures , causing the limestone to break off and tumble down the mountain .

Though the GSC concluded that mining activities contributed to the slide , the facility 's owners disagreed . Their engineers claimed that the mine bore no responsibility . Later studies suggested that the mountain had been at a point of " equilibrium " ; even a small deformation such as that caused by the mine 's existence would have helped trigger a slide . The mine was quickly re @- @ opened , even though rock continued to tumble down the mountain . Coal production at Frank peaked in 1910 , but the mine was permanently closed in 1917 after it became unprofitable .

The slide created two new peaks on the mountain ; the south peak stands 2 @, @ 200 metres (7 @, @ 200 ft) high and the north peak 2 @, @ 100 metres (6 @, @ 900 ft) . Geologists believe that another slide is inevitable , though not imminent . The south peak is considered the most likely to fall ; it would likely create a slide about one @- @ sixth the size of the 1903 slide . The mountain , continuously monitored for changes in stability , has been studied on numerous occasions . The Alberta Geological Survey operates a state @- @ of @- @ the @- @ art monitoring system used by researchers around the world . Over 80 monitoring stations have been placed on the face of the mountain to provide an early warning system for area residents in case of another slide .

Geologists have debated about what caused the slide debris to travel the distance it did . The " air cushion " theory , an early hypothesis , postulated that a layer of air was trapped between the mass of rock and the mountain , which caused the rock to move a greater distance than would otherwise be expected . " Acoustic fluidization " is another theory , which suggests that large masses of material create seismic energy that reduces friction and causes the debris to flow down the

mountain as though it is a fluid . Geologists created the term " debris avalanche " to describe the Frank Slide .

= = Legends = =

Numerous legends and misconceptions were spawned in the aftermath of the slide . The entire town of Frank was claimed to have been buried , though much of the town itself was unscathed . The belief that a branch of the Union Bank of Canada had been buried with as much as \$ 500 @, @ 000 persisted for many years . The bank ? untouched by the slide ? remained in the same location until it was demolished in 1911 , after which the buried treasure legend arose . Crews building a new road through the pass in 1924 operated under police guard as it was believed they could unearth the supposedly buried bank .

Several people , telling amazing stories to those who would listen , passed themselves off as the " sole survivor " in the years following the slide . The most common such tale is that of an infant girl said to have been the only survivor of the slide . Her real name unknown , the girl was called " Frankie Slide " . Several stories were told of her miraculous escape : she was found in a bale of hay , lying on rocks , under the collapsed roof of her house or in the arms of her dead mother . The legend was based primarily on the story of Marion Leitch , who was thrown from her home into a pile of hay when the slide enveloped her home . Her sisters also survived ; they were found unharmed under a collapsed ceiling joist . Her parents and four brothers died . Influencing the story was the survival of two @-@ year @-@ old Gladys Ennis , who was found outside her home in the mud . The last survivor of the slide , she died in 1995 . In total , 23 people in the path of the slide survived , in addition to the 17 miners who escaped from the tunnels under Turtle Mountain . A ballad by Ed McCurdy featuring the story of Frankie Slide was popular in parts of Canada in the 1950s . The slide has formed the basis of other songs , including " How the Mountain Came Down " by Stompin ' Tom Connors , and more recently , " Frank , AB " by The Rural Alberta Advantage . The Frank Slide has been the subject of several books , both historical and fictional .

= = Legacy = =

Curious sightseers flocked to the site of the slide within the day of the disaster . It has remained a popular tourist destination , in part due to its proximity to the Crowsnest Highway . The province built a roadside turnout in 1941 to accommodate the traffic . Town boosters unsuccessfully sought to have the site designated as a National Historic Site in 1958 . It was later designated a Provincial Historic Site of Alberta . The provincial government designated the slide area a restricted development zone in 1976 , which prevents alteration of the site . In 1978 , a memorial plaque was erected . The Frank Slide Interpretive Centre , within sight of the mountain , was opened in 1985 . A museum and tourist stop document the Frank Slide and the region 's coal mining history . The site receives over 100 @, @ 000 tourist visits annually .

Though Frank recovered from the slide and achieved a peak population of 1 @, @ 000 shortly thereafter , the closure of the mine resulted in a longstanding decline in population . Frank ceased to be an independent community in 1979 when it was amalgamated into the Municipality of Crowsnest Pass along with the neighbouring communities of Blairmore , Coleman , Hillcrest and Bellevue . Frank is now home to about 200 residents .