

Cassin Ridge

Difficulty: Alaska Grade 5, 5.8, AI 4

Elevation gain: On route: 8,000'. From Kahiltna Base Camp: 13,100'

Total time: 16-24 days

Approach time: From Kahiltna Base Camp: 10-18 hours.
From the 14,000-foot Camp via the Northeast Fork: 9-16 hours; via the West Rib: 8-15 hours

Climbing time: Up: 3-7 days. Down: 1-2 days

Season: Mid-April to late-June, June is best

The Cassin is the quintessential technical climb of the Alaska Range. It is an elegant line that perfectly splits the enormous south face of the biggest mountain on the continent and is one of the most sought after climbs in the world. Many consider it a trade-route of the range, but judging by the actual number of ascents it has seen, it is still a modern testpiece and a lasting tribute to the visionary first ascensionists. The actual climbing is not that difficult by present technical standards. But the complete package of a long and dangerous approach, 8,000 feet of sustained climbing, high altitude, arctic cold and storms, and difficult retreat make this route a serious

endeavor. The quality of the climbing is absolutely classic. Bradford Washburn wrote that the route had “unequivocally excellent climbing from start to finish.” Both the rock and the ice on this exceptional route are superb.

FA: July 19, 1961; Riccardo Cassin, Luigi Aioldi, Luigi Alippi, Giancarlo Canali, Romano Perego, Annibale Zucchi.

History

It was only time before this amazing line was sought out. Washburn, the master of finding potential new lines in the Alaska Range, divulged in 1956 that this ridge was the “last and probably the most difficult and dramatic of all potential new routes on Mount McKinley.” So the call went out to alpinists around the world. In 1961 Ricardo Cassin of the Italian Alpine Club answered the call and in July of that year he and his team of six made international climbing history. Their climb was the 23rd ascent of the peak, but only the fifth route to be climbed. Except for Cassin and one other member of the team, it was their first trip outside of Europe. None of them was quite prepared for the extreme cold that the arctic weather brought. But they were prepared for the technical difficulties of the ridge, both with modern gear and talented

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Mark Westman at 16,700 feet on the Cassin. Photo by Joe Puryear

abilities. The climb was done expeditionary style, fixing ropes and hauling loads. Because of Washburn’s suggestion, the team started the climb from the East Fork of the Kahiltna, an approach rarely used these days. They started the climb in late June and over the course of three weeks they had shuttled their gear and established three camps on the route. Throughout their climb they were battered by gale force winds and heavy snowfall, but the persistent Cassin and his team continued upward progress. The six climbers left their final camp at around 17,000 feet on the morning of July 19. They climbed through bitter cold conditions for 17 hours until they finally reached the summit.

All of the team suffered from cold extremities. They were only using alpine gear designed for the Alps. One team member, Giancarlo Canali, suffered major frostbite and his swollen feet did not fit into his boots. Through much teamwork and tenacity, they escorted the injured climber down. At one point, Canali and his rope-mate slipped, but Cassin stopped them with his ice axe. Lower down, another teammate slipped and the belay did not hold, but Cassin was able to grab the rope

with his hand and stop them. Toward the bottom, Cassin was completely buried in an avalanche and he lost both his crampons, but continued down unharmed. The team eventually all made it to the safety of the glacier and was soon flown back to Talkeetna. For this epic ascent, the climbing community afterwards graciously bestowed the name Cassin to this “great central bulge” of Denali.

The second ascent of the Cassin was made in May of 1967 by a Japanese team. The Japanese made two important contributions to the route. One was the opening of the Japanese Couloir on the western flank of the lower buttress. This straightforward ice couloir bypassed a lot of more technical and meandering climbing. The Italians actually traversed into this couloir near its top, but avoided the ice and opted for the rock on its side. The entire couloir was overlooked by the Italians because at the time of their climb steep ice was deemed much harder than fifth class rock. The Japanese Couloir is now the standard route of ascent. The Japanese party also bypassed the third rock band above 16,700 feet, deviating from the ridge crest, but providing a much easier

The south face of Denali. The Cassin Ridge rises up the center from the left. Photo by Joe Puryear



and faster line. This too has become part of the standard route. The Japanese used a different approach for the climb as well. They headed up the Northeast Fork of the Kahiltna, which is much faster but much more perilous. This is now the standard approach for the climb.

The Northeast Fork of the Kahiltna became known as the Valley of Death after a mysterious disappearance and a close call in 1980. A Canadian team of four people ventured up the Northeast Fork in July of that year. The team disappeared and an extensive and expensive search ensued. Their bodies were never found. Earlier that year on June 5, four climbers were camped underneath the Kahiltna Peaks when a massive avalanche broke off from above. The truck-sized debris came within six feet of their tent, but everyone escaped unharmed.

In the summer of 1976, a single bold and visionary climber soloed the Cassin. Little is known about Charlie Porter's climb, but his accomplishment was certainly ahead of its time. It is written in the 1977 American Alpine Journal, "With his usual reticence, Porter has given us no details." He apparently made an impressive 36-hour single push from the top of the Japanese Couloir to the summit. Another notable solo started on June 4, 1991. The legendary Mugs Stump left the 14,000-foot Camp in the afternoon and descended (partly on skis) the West Rib to the base of the route. He then climbed the route in a mere 15 hours and returned back to his camp in a record setting 27 and a half hours round trip.

In March of 1982, three competent Alaskan climbers not only made the first winter ascent of the Cassin, but the second winter ascent of Denali as well. The ascent was completed by Jonathan Waterman, Roger Mear, and Mike Young. Waterman stated they wanted to "push the limits by climbing alpine style on a technically difficult route in subzero conditions." On March 7, after eight days of climbing they stood on the top, unacclimatized and exhausted, but setting a standard for winter

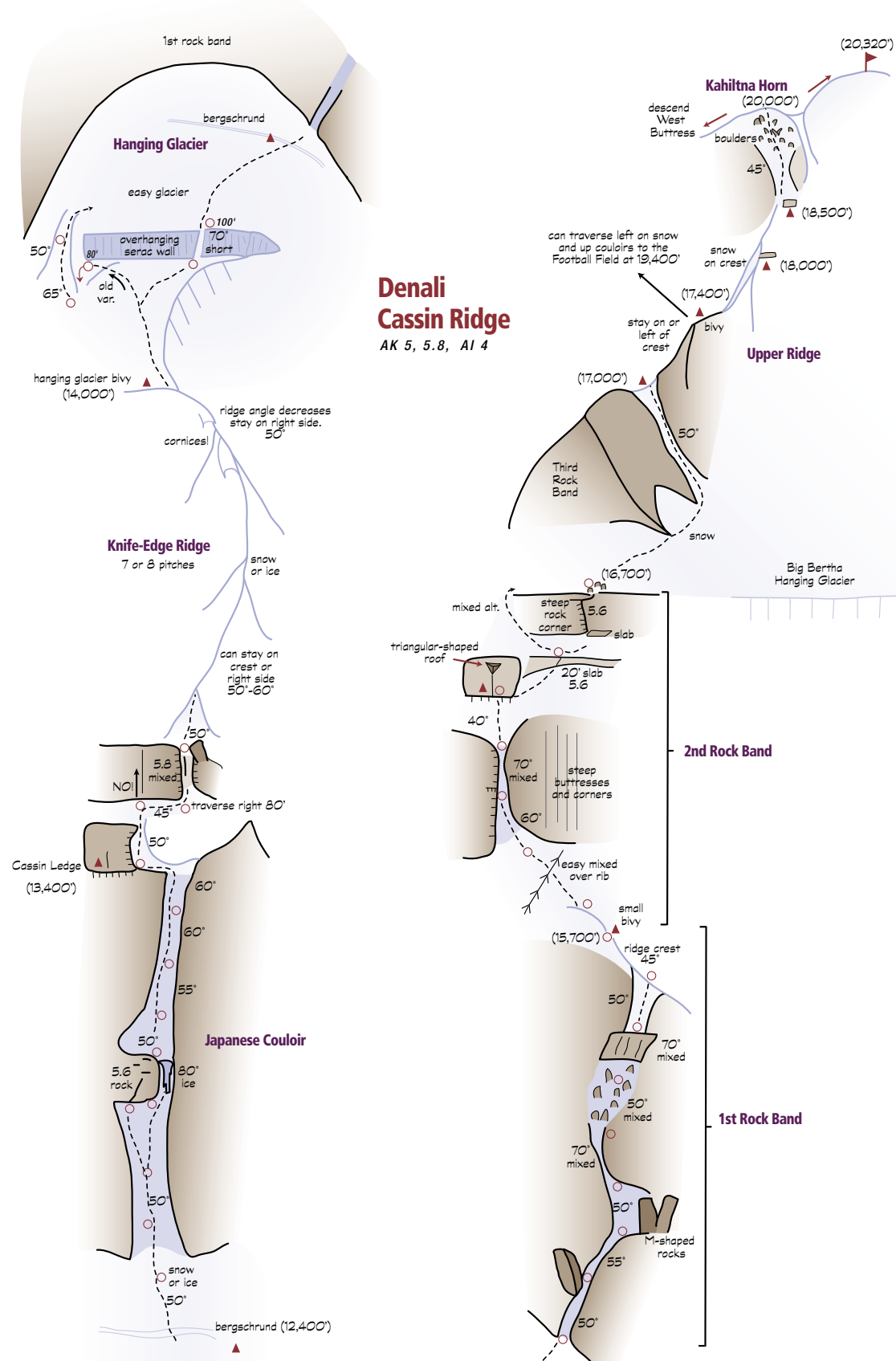
alpinism that few will ever match.

Today there are still the remains of tattered fixed ropes here and there. Near 18,000 feet there are old bags of pitons and ice screws and piles of fixed ropes. An admirable cleanup project conducted by the park rangers in 1996 cleaned up 200 lbs. of fixed ropes and trash out of the Japanese Couloir and off Cassin Ledge. Luckily most climbers have currently adapted an alpine ethic for climbing this route. Each year dozens of prospective climbers register with the NPS to do the Cassin. Only about 10 percent actually step foot on the route, and even less complete it. Climbers still find it very intimidating and most dislike the prospect of traveling up something called the Valley of Death. However, many climbers consider an ascent of the Cassin a career defining accomplishment.

Strategy

The route is no longer commonly done expedition style. Most parties acclimatize on the West Buttress route, and then wait for a spell of good weather to attempt the Cassin alpine style. Plan for a minimum three-week trip in the range. This allows for four to five days to reach the 14,000-foot Camp on the West Buttress. Seven days can be spent acclimatizing on this route by making trips to either the 17,000-foot Camp or the summit. Depending on the party strength and conditions, three to seven days are used to climb the route and descend back to the 14,000-foot Camp. One day will be needed to descend back to the airstrip. This allows one to five storm days. A longer trip will allow more leeway for choosing a good weather window. Some parties have taken over four weeks total to climb the route. I've seen too many fit and qualified parties run out of time because they thought they were going to blitz the route. Don't underestimate Alaskan weather.

There is of course a fine line between taking too much food and fuel and too little. Going as light as possible will definitely increase your chances of success, especially since good weather spells commonly don't last more than four to five days. Route-finding is generally



Denali Cassin Ridge
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straightforward, allowing much of the route to be climbed in low-visibility conditions. But beware; the south face of Denali is no place to be in a big storm. Only a couple locations on the route lend themselves to digging in a protected bivy. Most bivies are small and exposed.

Specific Hazards

Regardless of the approach used, climbers must enter the Valley of Death. Catastrophic avalanches are common here and climbers must accept a certain level of risk to travel into this area. The Japanese Couloir is prone to natural rock and ice fall, especially in the late afternoon sun.

Gear

Take six to eight ice screws, five to six cams to 2", one set of stoppers, and two to four pickets. Rope selection has many alternatives. A team traveling very light and fast may only need one 165 or 200-foot rope, if all pitches are lead with a pack and retreat is doubtful. Two 200-foot double or twin ropes allow a good safety margin for leading and retreating and allow an extra line to haul a pack on if needed. The

average climber considering this route will be able to lead a great deal of the climb even with a heavier pack. Bring two ice tools per person.

Snowshoes can be very useful up the Northeast Fork for the approach. Use a lightweight pair that you can put on your pack and carry up the route. An additional two lbs. of weight on your pack may seem like a lot, but they are sure going to be useful when a storm dumps six feet of snow while you are camped at the bergschrund, and you need to walk back out. If conditions are good or a trail is broken, you may be able to walk in. While useful for acclimatizing on the West Buttress, skis are not recommended for the approach because they would be difficult to retrieve after the climb. Some parties purposely break a trail to the Safe Camp or to the base of the icefall with skis, return to the 7,800-foot Camp, and then walk back over the broken trail when it is cold and firm. One other option involves climbing up the West Buttress and the West Rib Cut-Off and descending the West Rib. The bottoms of the two routes are very close together, necessitating only crampons for traveling. This option should

only be considered for very advanced teams that wish to move fast.

Many climbers will bring extra comforts for the West Buttress route that won't go along for the Cassin. These can be a real moral booster if pinned down for many days, waiting for the weather. Consider bringing a larger base camp tent in addition to the small bivy tent. Some climbers even bring two sleeping bags, a lighter one for the route and a heavier one for the approach.

Most parties will leave a cache at the 14,000-foot Camp on the West Buttress. This generally includes a few days of food and fuel, the base camp tent, and the rest of the heavy amenities that are not necessary. It can also be a good idea to leave the climbing gear, climbing food, and fuel for the route in a cache at the Northeast Fork. This allows lighter loads to be carried up the West Buttress. Unfortunately, there has been reported theft of caches at the Northeast Fork in recent years, so use your best judgment.

Camps

The following is a list of recommended locations to camp for this route. See the West Buttress Route for other camp locations.

Safe Camp (9,450 feet): Located on the Northeast Fork of the Kahiltna, this is a relatively crevasse-free area. The camp is threatened by only the most catastrophic avalanches. It may not be such a safe place during a storm. The camp sits on a rise in the center of the glacier, set back from the ominous north face of East Kahiltna Peak. Use good judgment when camping here.

Bergschrund (12,200 feet): Just under the bergschrund, there is a small serac that provides a small area to camp. Although it doesn't seem threatened by icefall, past pictures suggest that the entire base of the Cassin and even Kahiltna Notch can be decimated by avalanches off the South Face.

Cassin Ledge (13,000 feet): This is a very small ledge underneath a huge rock buttress at the top of the Japanese Couloir. Many



Mark Westman atop the crux gully above Cassin Ledge. Photo by Joe Puryear

are disappointed upon seeing it for the first time, but with a little work, camping here can be a fun experience. Try gathering some surrounding snow to fill in the bouldery ledge. The ledge is barely wide enough for a small single-wall tent, although two may fit end to end. There are good rock anchors on the wall above.

Hanging Glacier (14,000 feet): Just after the end of the knife-edge ridge, this is the route's most comfortable camp. A large and safe location big enough to accommodate several tents and possibly dig a snow cave.

Hanging Glacier Bergschrund (14,700 feet): This small bivy site is reached just before the first rock band. With a little work it can provide a decent protected bivy, but it is not as comfortable as the Hanging Glacier camp just a few hundred feet lower.

Top of First Rock Band (15,700 feet): This is a small exposed location between the two rock bands that may require chopping out a platform. This makes a good intermediate camp to split up the two rock bands.

Middle of Second Rock Band (c. 16,400 ft.):

A small ledge beneath a small triangular shaped roof after the crux provides a small bivy location. An excellent finger crack in the wall provides good anchors.

Top of Second Rock Band (16,700 feet):

At the top of the technical difficulties, this spot is low angle but very exposed. It may be possible to chop out a good platform next to the rocks, but it is recommended to continue to the upper ridge for a more protected location.

Upper Ridge (17,300 feet), (17,700 feet):

At the top of the couloir that regains the ridge is a small exposed col. This makes an okay spot but a better spot is located just a bit further in a higher col (17,700 feet). This makes a good final camp before the summit bid. There are some higher spots that afford exposed bivies next to boulders at 18,100 feet and 18,700 feet.

Approach**Northeast Fork Approach**

From Kahiltna Base Camp (7,200 feet), follow the West Buttress route 5.5 miles to the base of Ski Hill (7,800 feet). Here is the junction of the Northeast Fork (a.k.a. Valley of Death). Alternatively, if you are starting from the 14,000-foot Camp, descend back down the West Buttress route to the same spot. The Northeast Fork will require tenacity and good decision making to arrive at the base of the Cassin unscathed. It is extremely inadvisable to enter the valley until 24 to 48 hours after any snowfall—more if it was a big storm. The valley is flanked on both sides with hanging glaciers and seracs. In places, the seracs are higher up one side than the width of the valley. Avalanches can sweep the entire valley floor and up the other side. While you can mitigate the amount of time you are in supreme danger, you must accept the unavoidable risk of traveling into this awesome and rewarding place. Many parties travel through the valley at night to reduce avalanche danger. However, serac fall can happen at any time day or night.

Turn northeast and ascend into the valley. The first three miles are not exceedingly dangerous or crevassed. Take the best path through the center of the glacier. At 9,000 feet, there is a spot between two buttresses on either side of the valley that provides a relatively safe place to take a long break. The best place to rest or camp on the glacier, dubbed Safe Camp, is reached at 9,450 feet, in the middle of the glacier.

From here keep ascending east toward the big ice-fall and crevasses that split the glacier end to end. The valley starts to narrow and the danger is perceived to increase. The icefall can be quite difficult and has turned back many parties. Generally it is best to bear toward its middle at the start. It may then be necessary to climb into and out of several large crevasses while trending right toward the south side of the glacier. The route changes season to season and within each season. Use your best judgment and move quickly. Once atop the icefall (10,600 feet), the base of the West Rib is due north. A spot on the west side of the West Rib Couloir is a safe spot if you need break, but it is a bit out of the way and it's not that far to the base of the Cassin. Head up and toward the South Face of Denali. In this area there are multiple ice cliffs, between one and five thousand feet above you. Traverse left around several crevasses then head back right to the bergschrund near the base of the Japanese Couloir.

West Rib Approach

From the 14,000-foot Camp, ascend the West Rib Cut-Off to about 16,000 feet on the West Rib. Descend the rib by down-climbing and rappelling. Refer to the West Rib route for more route details. From the base of the rib, walk quickly to the base of the Cassin. While this may seem a safer and maybe faster option, consider the inherent difficulties in descending 5,000 feet of steep snow and ice. Time wise, it is probably only a couple hours faster, and there is still acute danger when traversing to the base of the Cassin.



Joe Puryear approaching the first rock band. Photo by Mark Westman

Route**Japanese Couloir**

At the base of the Japanese Couloir (12,300 feet), cross the small bergschrund. Climb four pitches of snow or ice at an angle of 50-degree. Above, the couloir splits, presenting two options. On the right is a short step of steep ice (up to 80 degrees) or on the left is moderate and protectable rock (5.6). Climb either one, then continue four more rope lengths, using ice and rock pro, up the steepening couloir (up to 60 degrees). Just below its top, traverse left for 30 feet. From here look left and behind you (west) and you will see the tiny Cassin Ledge beneath a steep wall (13,400 feet). From the right side of Cassin Ledge, climb a pitch of snow straight up to the big rock wall above. Don't be tempted up by the old fixed lines. Instead, make an exposed traverse right for half a rope length until an easier looking gully appears around a corner. Climb this rock crux (5.8) and belay off slings up and right.

Knife-Edge Ridge

The next section is the Knife-Edge Ridge. This can consist of brutal hard blue ice,

snow over terrible ice, or anything in between for about eight rope-lengths. The ridge starts off steep and sharp, then lies back with cornices. Protection can vary dramatically. Reports contrast from having sinker screws all the way to not being able to place any protection but for two poor pickets near the end. For the first several rope-lengths, it may be possible to climb directly on the ridge crest. Higher up, the ridge becomes corniced with the cornices overhanging to the west (left). Here it is best to traverse on the east (right) side of the crest. The ridge eventually dead ends into the hanging glacier and the biggest camp on the route (14,000 feet).

Hanging Glacier

Climb the easy glacier up to the infamous ice headwall. Currently this once formidable obstacle can be passed by a conspicuous break on its right side. Climb through this short step (up to 70-degrees) then up the low angle glacier. This new passage appeared in the spring of 2000, and may disappear as the glacier moves and changes. Prior to this there were two options to overcome this barrier. One was to ascend the 60 to 80-foot gently overhanging wall



directly, using aid or free climbing. This is a difficult but straightforward endeavor. The other option was to climb up and left from the camp to the left most edge of the wall. From here it is possible to make an 80 foot V-thread rappel into an ice gully below. The gully is steep for the first bit, then eases off and climbs around the hanging glacier. Exit right to the lower angle glacier above. This variation is exposed to icefall. Once on the glacier above the ice headwall, make a rising traverse right looking for a gully that cuts into the rock band above. This right-slanting gully is several hundred feet below the apex of the hanging glacier and is marked by a prominent prow-shaped rock on its left side. At the top of this gully a set of M-shaped rocks can be seen with some imagination. Near the top of the glacier, cross the small bergschrund (14,700 feet).

First Rock Band

Climb the ice gully (up to 55 degrees) in two pitches using ice and rock pro. This leads to a small bowl left of the so-called M-shaped rock. Climb straight up a pitch to a rock wall at the base of a tight gully on the left. Climb this difficult mixed chute (70-degree mixed). Then climb up and right for two pitches through moderate ice gullies and boulders. A short difficult mixed section (70-degree mixed) is climbed in a pitch. One more pitch leads to a left-trending snow arête between the two rock bands. Climb this for a pitch up to a small bivy at the base of the second rock band (15,700 feet).

Second Rock Band

From the bivy, traverse up and left over a small rib for two pitches to avoid the intimidating climbing above. Look for a main weakness and gully to the left. One crux pitch (70-degrees mixed) will lead to easier mixed terrain above. The next pitch leads to a big rock with a noticeable small triangle-shaped roof. Here there is a small ledge and good belay and possible bivy. The next pitch traverses right, then up a short and stubborn snow-covered slab (5.6). Next traverse right and mantle onto another sloping slab, then up a beautiful left-leaning dihedral (5.6). Another option is to climb

out left then back right on easier mixed ground. This takes you to 16,700 feet and the end of the technical climbing.

Upper Ridge

The terrain here is a broad plateau that is not very steep. Climb out and right onto the broad slopes of the southeast face above Big Bertha, then back up and left in the first couloir. Watch the avalanche conditions on this slope. This bypasses the third rock band and leads back to the ridge crest (17,300 feet). Follow the bouldery ridge, bypassing obstacles on the left. Many variations exist here. Pick the path of least resistance and try to stay on good ice or snow. Between 18,400 feet and 18,700 feet, the ridge is broad and snowy. Above this, the ridge becomes less distinct. Follow snow or ice slopes up and slightly left into a depression with easy mixed terrain. This turns into a face that is climbed directly to the top of Kahiltna Horn (20,120 feet). Drop your pack and run up the ridge (east) to the summit.

Descent

Descend the West Buttress route. If descent is necessary from the route, rappel and down-climb the line of ascent. There are many fixed anchors, but if you are high on the route, expect to lose all of your rack and then some. The most difficult section to retreat is the knife-edge ridge. If the ice conditions are bad, rappels will be difficult and down-climbing scary. Before starting up this section, make an honest assessment as to your party strength. It is only 11 rappels to the ground from here.