



Ritt Kellogg Memorial Fund Registration

Registration No. YM5J-ZZ786

Submitted Jan 10, 2018 11:04am by Nick Merritt

Registration

2018

Ritt Kellogg Memorial Fund

RKMF Expedition Grant 2017-18 Group Application

This is the group application for a RKMF Expedition Grant. If you have received approval, you may fill out this application as a group. In this application you will be asked to provide important details concerning your expedition.

**Waiting
for
Approval**

Participant



I. Expedition Summary

Expedition Name

Three Weasels on SkeeZles: Ski Mountaineering in the Chugach

Objectives

- Hone our winter backcountry, glacier travel, and skiing skills
- Return healthier than when we went in
- Maybe get on top of several peaks: Mt Fafnir, Mt Valhalla, Mt Thor, Mt Haley, Mt Gilbert-Lewis
- Get 15k vertical feet of skiing, and explore other unnamed surrounding peaks
- Spend a lot of time in the beauty of a totally rugged wilderness.

Location

The Central Chugach Mountains near the head of the Science and Nelchina glaciers, near the base of Mount Fafnir and Mt Valhalla. We will be dropped off by plane, and will make a basecamp or two as we climb and ski some of the surrounding peaks, and will then be picked up by plane.

Departure Date

May 24, 2018

Return Date

Jun 4, 2018

Days in the Field

12

Wilderness Character

The Chugach mountains are extremely wild in character. We will be more than 50 miles from any road for the majority of the trip, separated by rugged mountains, glaciers, and the ocean. It is doubtful that we will see much sign of humanity besides airlines travelling overhead or the occasional flightseeing plane, or perhaps another group or two out there. The Chugach Mountains contain no permanent residents and are free from human development, retaining their original primeval character.

II. Participant Qualifications

a. Participants' Graduation Date

Nick Crews, May 2018

Grace Ford, May 2019

Nick Merritt, May 2019

b. Medical Certifications

Nick Crews, expires January 2019

Grace Ford WFR expires July 2019, EMT expires June 2018

Nick Merritt, expires Jan 2018, Registered for recertification course March 2018

Does your group have adequate experience?

Yes

d. Training Plan

All group members have diverse and strong wilderness backgrounds. All Members have participated in both serious competitive athletics and self supported backcountry expeditions. From collective hundreds of days of skiing, climbing, backpacking, and camping, each member has the grit and the technical, navigational, risk assessment, and teamwork skills to lead or participate in a successful expedition. We have all previously traveled in the mountains together. All members have significant hours of practice digging snow assessment pits and assessing avalanche danger, which will be among the biggest hazards of the trip. Furthermore, all members have experience traveling on glaciers and building/teaching crevasse rescue systems. All members of the team have significant enough experience to complete this expedition safely and successfully. We all have much experience in the backcountry, however much preparation will need to take place before this trip. All members bring different skill sets and areas of expertise, which we will use to maximize the safety of the trip.

Preparation for this trip will include solidifying technical knowledge, and making sure all our systems allow us to move safely and efficiently. All team members will be spending 1.5 weeks together climbing and backcountry skiing in Alaska in January of 2018, and we will use this time to solidify our knowledge.

We plan to spend a large portion of our time in January practicing our crevasse rescue skills, so that in the case of an incident we will be able to respond immediately. All participants are familiar with the use of direct (z+c 6:1) and dropped loop (2:1) hauling systems, but we will practice these extensively as a team. We will also practice moving together roped up on glaciated terrain, reading glaciers, and skiing roped up. This day practice will happen in Turnagain pass, and up Crow pass on Raven and Jewel Glacier. Specific plans that we have (weather permitting during our 7 days together) include the Eklutna Traverse, a 35 mile ski traverse on glaciers in the Chugach, or the Bomber Traverse, a slightly shorter loop traverse on easier glaciers.

This time will also give us time to review our avalanche rescue skills. We will dig at least 10 pits together during that time, and practice at least 10 simulated avalanche rescues.

Throughout the spring we will continue to ski together in Colorado. We recognize that since there are no glaciers in Colorado we will be limited in this aspect, but we intend to ski some objectives in order to refine our safety techniques

and team dynamic. We can practice skinning, skiing, and avalanche safety in North Cheyenne Canyon. We can do these, plus work with ropes, self-arresting, running belays, and crevasse rescue at Glen Cove on Pikes. We will do longer trips up to Rocky Mountain National Park to work on steeper skiing and see some new terrain.

In terms of physical training, each member lives a consistently active lifestyle, but we will increase our chances of a fun and successful expedition by staying "ski fit" throughout the spring. Our exercises will include Long-Slow-Distance skis and runs, high elevation gain days (such as lapping the incline at a mild pace), and full body strength training. These kinds of workouts will help promote a body that can work efficiently for long periods and is resistant to athletic injury. Other training exercises will include hiking the Incline loaded packs and lapping Glen Cove or N Cheyenne Canyon skinning and booting.

III. Expedition Logistics, Gear and Food

e. Travel Plan

We will all fly into Anchorage on May 22, and then will meet at Nick Crews's house in Girdwood (40 minute drive away) where we will pack and plan. We will pack/prepare/get any last minute gear on the the 23rd and shop for food. Early on the 24th we will drive the 2.5 hours north to Sheep Mountain Lodge, where Meekin's Air Service is based, and hopefully get flown into basecamp that day.

When we get picked up, we will be flown back to Sheep Mountain Lodge. Then we will drive back to Girdwood, and Grace and Merritt will fly back to Denver. They will be dropped off at the airport in Anchorage the day of their flights. Crews will stay in Alaska, so he's already home!

e. Expedition Itinerary

[RKMF_Itinerary.pdf](#) (5.1MB)

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Appendix A

Empty

No, we will not re-ration. We will bring all of our food in the original drop.

Food Storage

Appendix C

There are not too many wildlife concerns while up on the glaciers. We do have to worry about ravens/magpies/other birds and rodents, but we should not have to worry about bears. We will store all food in bags and containers that these animals cannot rip through or squirm into. If we leave camp for multiple days then we will consider burying food in the snow, and we will mark all food caches with wands.

f. Equipment List

[Full_Gear_List.pdf](#) (225KB)

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Appendix B

b. LNT Principles

Yes

Empty

Plan Ahead and Prepare: We will take in plenty of trashbags, and have planned out the rest of the principles.

Travel and Camp on Durable Surfaces: Since this expedition takes place on snow and rock, we will be minimizing our impact. The natural cycles of weather will erase any imprint we leave.

Dispose of Waste Properly: Since we will be base camping, we will pack out human waste in the Rest Stop provided by Meekin's Air Taxi. Additionally, we will make sure all trash is safe from winds.

Leave what you find: We will not take anything from the environment, and we will not leave anything that we brought.

Respect Wildlife: Birds/rodents scavenging food are the only major issue. We will ensure they cannot access our food.

Be Considerate of Other Visitors: We do not anticipate seeing other parties. If we do we will make sure to be respectful.

Cultural Concerns:

There is no longterm culture here.

IV. Risk Management

b. Objective Hazards

Glacier Travel/Living in a Glaciated Environment

In the terrain that we will be traveling in, crevasses are a given. We will move through this terrain in a manner as safely and efficiently as possible. Roping up for flat and uphill glacier travel will be mandatory, and we will be carrying ice axes or whippets with us at all times when we are roped up. We will use our best judgement about roping up in downhill sloping terrain, and will scout all potential ski locations for crevasses. Picking safe lines through icefalls and around bergschrunds will also be key.

All participants in this trip have received formal instruction in glacier travel. This does not mean however that we will take the risks associated with glaciers as any less serious. We have chosen to travel as a three person team in order to minimize the risk of a solo rescue situation. All team members know both direct and drop loop rescue systems, but we will practice these extensively before the expedition. In the case of a fall, we will use our best judgement to determine which system to use. Additionally, the first day of our expedition is built in to practice these skills, as well as to practice reading the glacier around us, and give us time to get used to this environment.

In terms of basecamp, when we arrive at either of our basecamps we will probe the area for crevasses, and only unrope when we are sure there are none in the area. Furthermore, we will choose to basecamp in areas that are free from dangers of rockfall or serac fall and avoid any avalanche runout zones. Because of this our basecamps may not always be in the exact location as they are indicated in the caltopo, but in the general area.

When traveling in glaciated terrain we will use either of the following systems:

2 30m, tied together to form 1 60 m

1 30m

We will use our best judgement of which system to use based on our understanding of the size of the crevasses in the area. When moving lower, there is potential for larger crevasse falls and it may make more sense to use the longer rope setup. When attempting to summit our objectives we will switch to the 30 m setup.

We will be spaced around 12m apart from each other on the lower glacier, and may shorten spacing to as short as 8m up high. The spare rope will be kept with the two end people, in mountaineers coils. Each person will be attached to the rope with a figure eight and two lockers. Each person will have their hip and foot prusik already set up on the rope. Skis and backpacks will be secured with leashes.

In case of an end-person fall:

We will self-arrest, and then attempt to establish communication and further assess the situation. The person in the hole will begin attempting self-evac, while the two topside will set up an anchor, possibly needed for hauling. The middle person will make themselves secure enough to hold the weight of the fallen, possibly throwing in a ski or screw as an aid. The end person will then slowly give them the weight, ready to re-self-arrest if needed. Then he will move back towards the center person, belaying himself in with a prusik and probing for further crevasses. He will probe around the center person to ensure the rescue area is safe of crevasses. Then he will build an anchor using screws and/or skis. Using a short prusik/microtrax attached crevasse-side of the middle person (so as to avoid having to pass a knot), he will transfer the weight from the middle person onto the anchor, and back this up with a munter-mule-overhand with a few feet of slack between them. Another anchor will then be built onto the first for redundancy. At this time the fallen climber is statically secured.

Now the one of the two topside climbers needs to go check on the fallen climber and pad the lip. They will remain tethered to the anchor either using a belay from their partner (with munter or belay device) or by sliding two of their prusiks down a fixed section of rope. After establishing contact, they will pad the lip using an axe, backpack, etc. If

necessary, this is when they will descend into the crevasse to provide urgent first aid or to prep the fallen for hauling (removing backpack and skis, administering chest harness).

If hauling is deemed necessary, we will either use a 3:1 if the fallen is unconscious, or use a drop-loop 2:1 if they are able to help haul themselves out. As they rise, the topside climbers will be sure to take up slack in any progress capture devices so that a large dynamic fall is not possible.

In case of a middle-person fall:

After arresting and communicating, the climber on the better side will build an anchor as the other holds the weight of the fallen. After transferring the weight to the anchor as described above, the end climber on the other side will attempt to rejoin the other end climber and the anchor, by very cautiously probing for crevasses, since it is impossible to give them a tight belay on the far side of the crevasse. After rejoining, the plan will continue as above, though the topside climbers might have to be much more efficient with their rope use. They can belay themselves to the lip by prusiking the taut line to the fallen climber, and with the extra tail the end climbers have, there should be enough to set up a 3:1 haul.

Avalanches

Avalanches are a major concern for us, as we will be traveling in steep, snow covered terrain. Where we are traveling and at that time of year, we could encounter the gauntlet of snow conditions, according to guides and pilots that we know who are familiar with the area: We could get full blown winter blizzards that can dump 10 feet of snow, or we could get rain, or we could have blazing hot sun with spring conditions. The one thing that we probably won't have to deal with is depth hoar, since by that time in the season any facets near the ground should have healed. Due to the massive volume of snow that falls in the high Chugach, there is the possibility for absolutely massive avalanches.

We will be aware of storm slabs after it snows or rains, sticking to non-avalanche terrain for at least 48 hours after the storm and 24 hours after the last sign of natural avalanches. We will plan ahead and not be caught on/under sunny aspects if the temperatures get high enough for wet slides. The hardest thing that we will have to deal with are old layers that we were not there to witness, due to past weather that we could not observe, which could set up recipes for deep and persistent slabs. To combat this danger, we will look at past weather and satellite data leading up to the trip so we have some idea what could have happened, and then once we arrive we will dig numerous snow pits in varied locations. We will dig these deep so that we can have a long history of the past. Once we settle in and think we have a better idea of the past snow conditions, we will continue to dig pits as the weather and snowpack change.

We will be aware of avalanche terrain when we camp, travel, and approach, not just when skiing. Though we will use all of the tools at our disposal to make safe decisions choosing which terrain to ski and when, we cannot 100 percent eliminate the risk of avalanche. For this reason, when skiing pitches that we assess to carry a higher risk of danger, we will ski sections one at a time to minimize the risk of a multiple burial situation, rendezvousing at safe zones along the ascent or descent.

Weather

The weather in the Central Chugach can be extreme in May/June. Massive blizzards, rainstorms, gale-force winds, and hot sunshine could all be possible. We will be able to get updated weather forecasts using our inreach device, and should also be able to use the SAT phone provided by the air service to get weather forecasts. We also plan on bringing 5 days worth of extra food in case we are unable to be picked up from basecamp 2 due to weather.

Altitude

At our basecamp of 6k feet, altitude shouldn't be much of a problem, but if we attempt to summit some of the 12k peaks, then we will start to be concerned. We will monitor for symptoms of altitude sickness, and will plan for rest days so that we have time to acclimatize. All participants have past experience at altitude, and have encountered no difficulties.

Rockfall

Our objectives for the trip do not include a significant rockfall hazard, and given the depth of the snowpack, we will likely encounter little exposed rock on the gradient of terrain we will be frequenting, but we will still take measures to

mitigate any rockfall danger we encounter. Gullies that can channel rock fall, and loose rock slopes will be avoided, and when traveling on loose rocky terrain, we will travel in a formation that prevents us from knocking debris on each other.

Activities

Our primary activities will include ski touring, snow climbing, and ski descending. These activities carry a standard risk of athletic injury, but in a glacial/high alpine environment our primary concerns for serious injury and death are avalanches and crevasses. There is an inherent risk associated with backcountry snow sports, and it is our job as members of an expedition to do all we can to minimize that risk. During tours especially, but possibly on some descents, crevasses will be significant hazard. We will minimize the risk of injuring by choosing terrain wisely and skiing roped up when appropriate. Another danger that is very specific to terrain and snow conditions is fall danger. While snow climbing and skiing, the consequences of a fall vary greatly between snow conditions and terrain. We can minimize the risk of injury due to falls by using whippets/ice axes when skiing and climbing, and by roping up on steep or exposed terrain. Each piece of terrain will need to be assessed to determine if it can be skied/ climbed unroped, roped up, or climbed/skied at all.

Wildlife

As previously stated, we do not expect to encounter much wildlife aside from rodents and birds. We will camp according to LNT principles to minimize our impact on what wildlife we find, and minimize its impact on us.

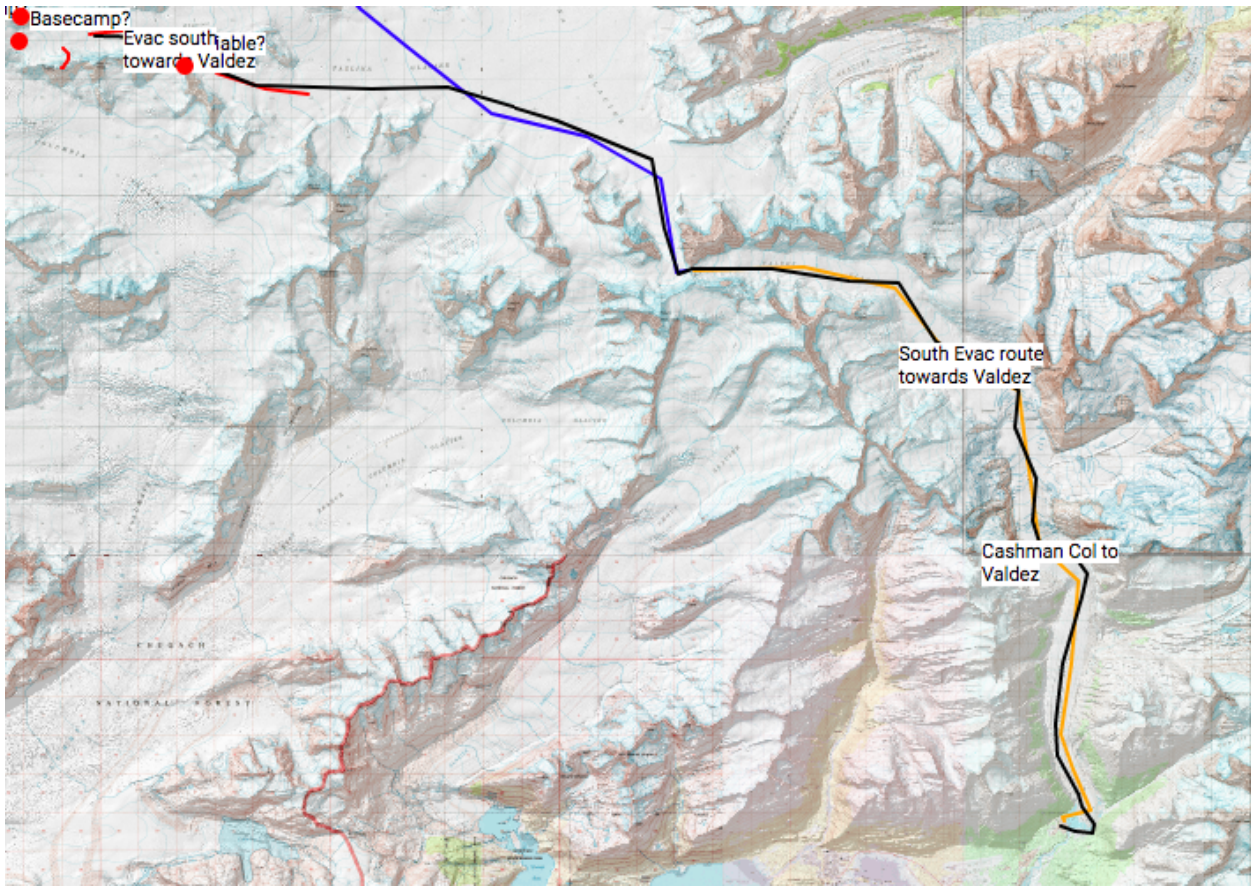
Evacuation Plan

Evacuation Plan

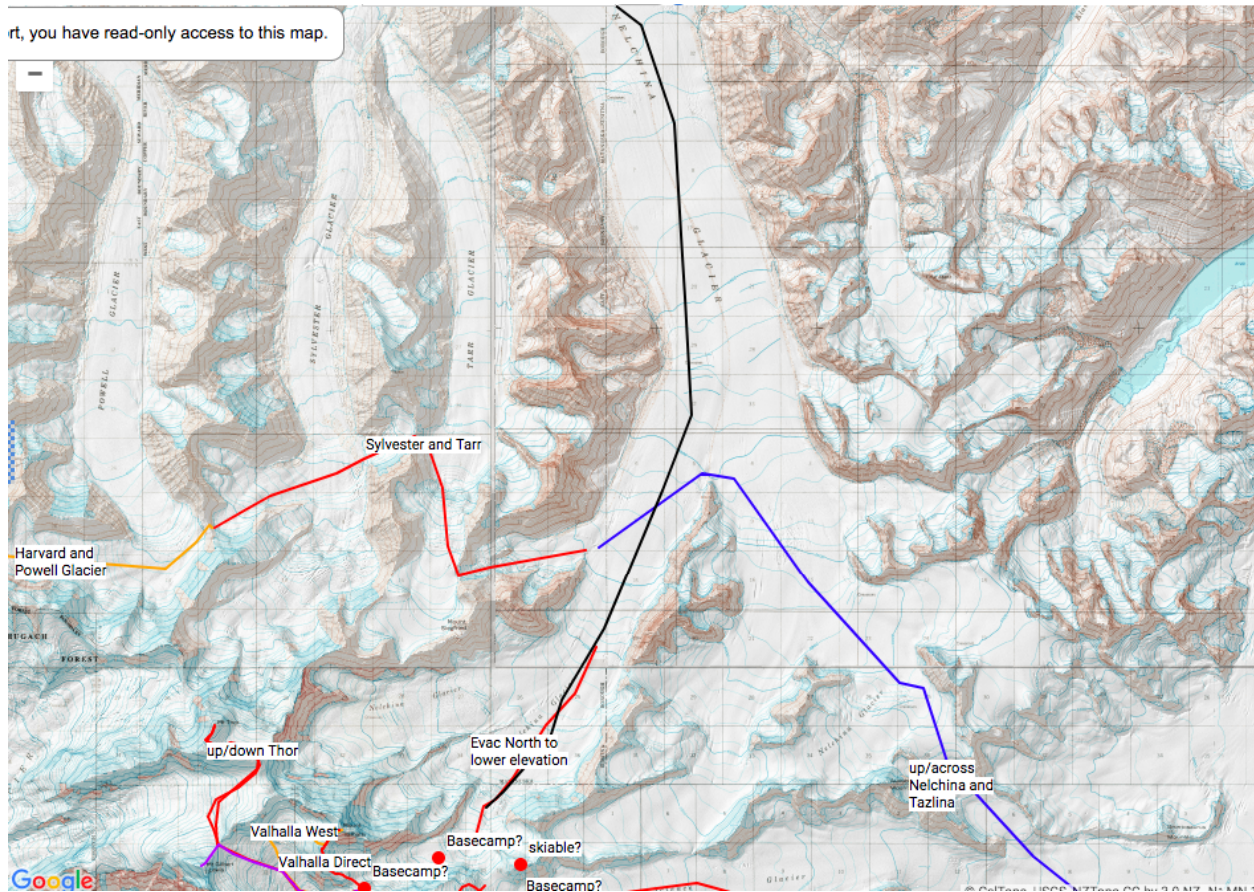
We are deep enough in the Chugach that an evac by airplane (helicopters/medevac also have the range from Valdez, Girdwood, or Sheep Mtn Lodge) is probably the fastest/safest/most reliable form of evac if it is necessary. In case of emergency we will contact search and rescue using our SPOT, sat phone, or InReach and find a location suitable for an aircraft landing, which would be an large area which is flatter, free of crevasses, has an open approach, ideally with good contrast to avoid flat light (we can scatter materials to aid with the pilots depth perception if necessary), and without too deep of snow so we can take off again (we can pack it out on our skis). As we wait for the aircraft/weather window, we will establish a comfortable camp and provide care to the injured member. This evac point could be at our dropoff point, but Mike Meekins says that weather often comes in from the south and sits over the southern part of the range, so it often is possible to travel down the (easy, downhill) Nelchina Glacier to the north to get to better weather and lower elevations. Of course, we could also move down the Science Glacier towards Valdez if that would be better.

It is also possible for snowmachines to travel from Valdez to the south (<https://www.stockalpine.com/posts/mt-thor-of-the-chugach.html>) or from the Nelchina Glacier to the North. A ground rescue could be mounted that way.

The final option would be self-evac. We would either travel the 25 miles north down the Nelchina Glacier to a ATV path at the base, or we could try the 40 mile evac towards Valdez. The Nelchina route is much shorter and easier though.



Potential Self Evac Route from basecamp 1



Potential Evac Route from Basecamp 2 north

We will all have AAC memberships which will include \$12,500 in rescue insurance, which will be valid on our trip, which means we will not be incentivized to take additional risks by self-evacuating because of financial concerns.

Special Preparedness

[REDACTED]

e. Emergency Resources

We are on the northern border of the Chugach National Forest. The closest ranger station is in Girdwood. We will communicate using the sat phone, or indirectly via text on the InReach.

Glacier Ranger District Office

P.O. Box 129 Forest Station Road

Girdwood, AK 99587

(907) 783-3242

According to Tim Charnon, the head ranger for the Girdwood Ranger Station, the SAR agency for that area is the Alaska State Troopers, reached by 911.

The nearest/best hospital is in Anchorage:

Providence Alaska Medical Center

3200 Providence Drive

Anchorage, AK 99508

Phone 907-562-2211

Phone 907-562-2211

Emergency Communication

SPOT PLB

Garmin InReach

Sat Phone that comes with the Meekin's Air Taxi

V. Budget

Budget

[BUDG.pdf](#) (130KB)

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Appendix D

Transportation

3340

Food and Fuel

638.62

Maps and Books

0

Communication Device Rental

0

Permits/Fees

0

Gear Rentals

0

Total Funding Request

1326.21

Cost Minimization Measures

All of us will be flying to AK out of Denver, CO, avoiding the cost of flying from their hometowns. Crews will remain in AK after the rip, saving a \$200 airfare. We will stay at Crews's house in Girdwood to avoid housing costs, and avoid transportation fees by using the Crews's car. We are using as much personal gear and gear borrowed from friends as possible in order to have zero rental costs. Our fly in service is the gold standard for Chugach service and has fair pricing. Food purchases will be done in bulk at Costco Wholesale. Any unused funds will be graciously returned to the RKMF.

VI. Expedition Agreement**Expedition Agreement**[RKMFExpeditionAgreement_A....pdf](#) (344KB)

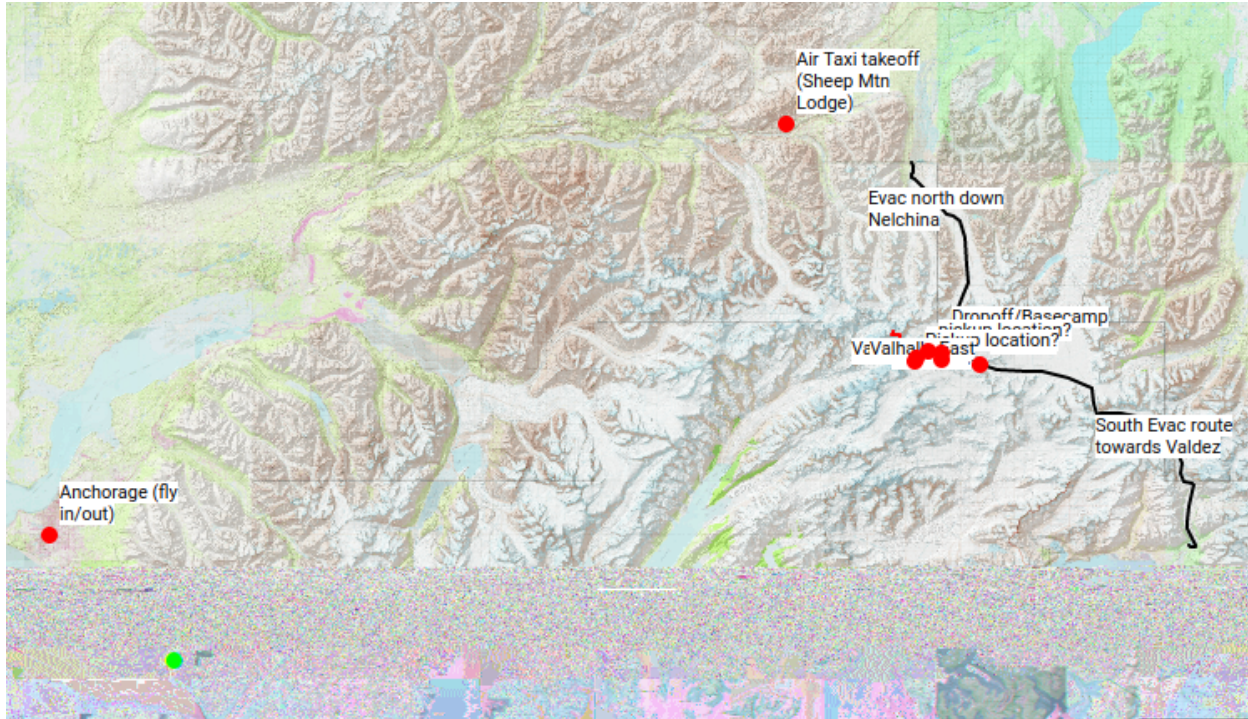
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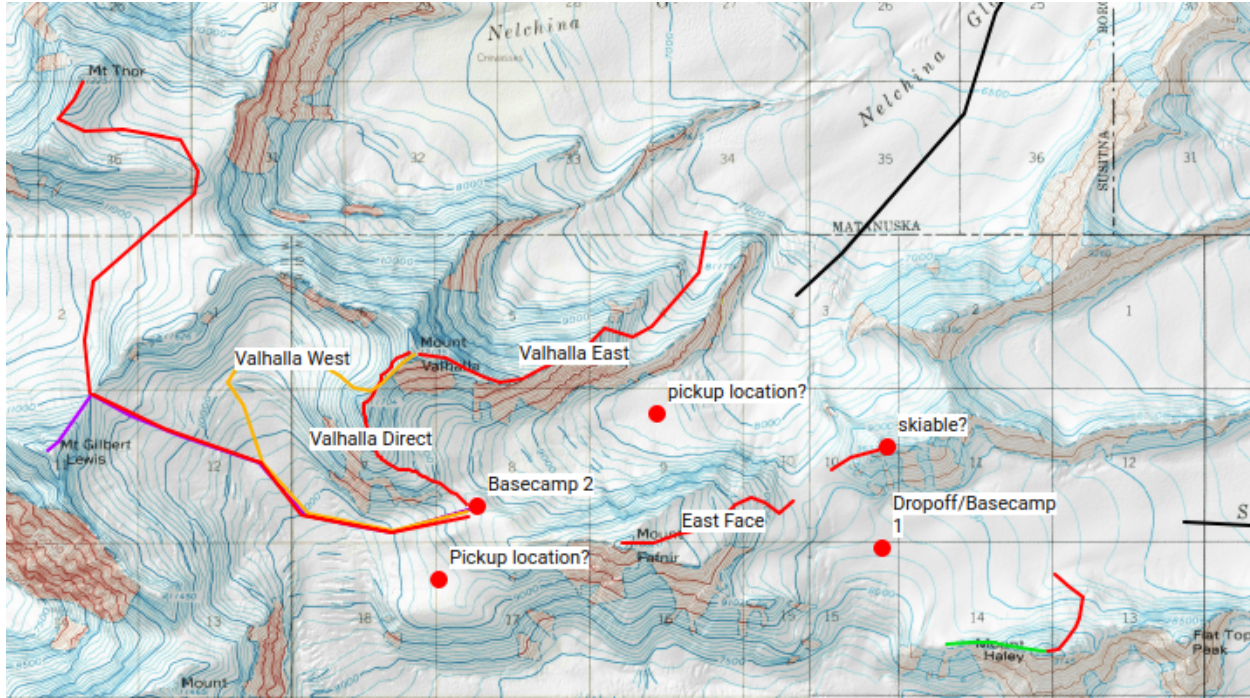
Appendix E

Appendix A- Itinerary

Itinerary

A publicly viewable annotated interactive map of the trip can be found at <https://caltopo.com/m/RQRH>. Here are screenshots of an overview of the area, followed by a zoom in of the drop zone and surrounding peaks, possible basecamp locations, and routes up selected peaks





Here is our day by day itinerary. More info about each climb is given later. Our itinerary is very flexible due to weather concerns. While we would like to attempt every mountain on our list, this could be impossible given the variability of the weather. We have built in rest/weather days to our itinerary. Objectives generally are ordered in terms of easier to harder throughout the trip. For each day we will have lots of daylight: At the beginning of the trip we will have all but two hours during the day of civil twilight, and by the end of the trip we will always be in civil twilight, with full daylight lasting from 4am until midnight.

- May 22: We fly from Denver to Anchorage on the day after CC graduation and drive to Nick Crews's house in Girdwood, 40 minutes away.
- May 23: pack and prepare, get whatever supplies we need in Anchorage
- Day 1/May 24: wake up early and drive to Sheep Mountain Lodge on the Glenn Highway, where Mike Meekin's Air Taxi is based out of. Fly out that morning/afternoon. Build primary basecamp, get situated
- Day 2/May 25: skills practice and attempt skiable peak 9633 northeast of Fafnir
- Day 3/May 26. Attempt Mount haley
- Day 4/May 27. Attempt Mount fafnir
- Day 5/May 28. Rest/weather
- Day 6/May 29. Move to valhalla base camp
- Day 7/May 30. Attempt Thor
- Day 8/May 31. Rest/weather
- Day 9/June 1. Attempt Gilbert Lewis
- Day 10/June 2. Rest/weather

Day 11/June 3. Attempt Valhalla

Day 12/June 4: Move to pickup location, fly out, drive back to Girdwood

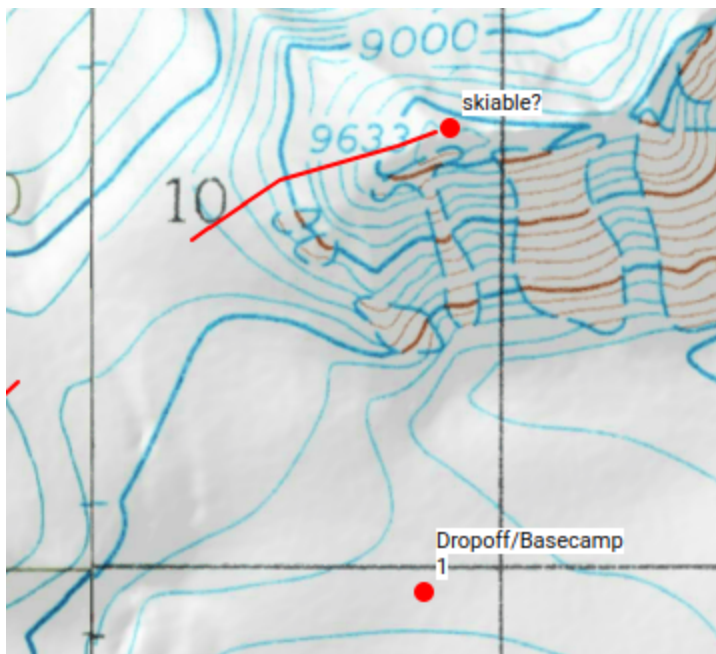
Day 1: We will fly onto the Science Glacier to build our primary basecamp and get situated with the area. On the fly in, we scout locations for our second basecamp and our pickup for the end of the trip. We will design our camp to be weatherproof, and choose a basecamp free from any hazards.

Day 2: peak 9633

We will become familiar with the area's terrain, weather, and snowpack. We will do a few beacon searches on the flat glacier as well as practice some self-arrest and crevasse rescue with some real crevasses, backed up by an permanent snow anchor. If time permits we will attempt to climb and ski peak 9633, a small 1000 foot peak less than a mile away from either of the two lower camps.



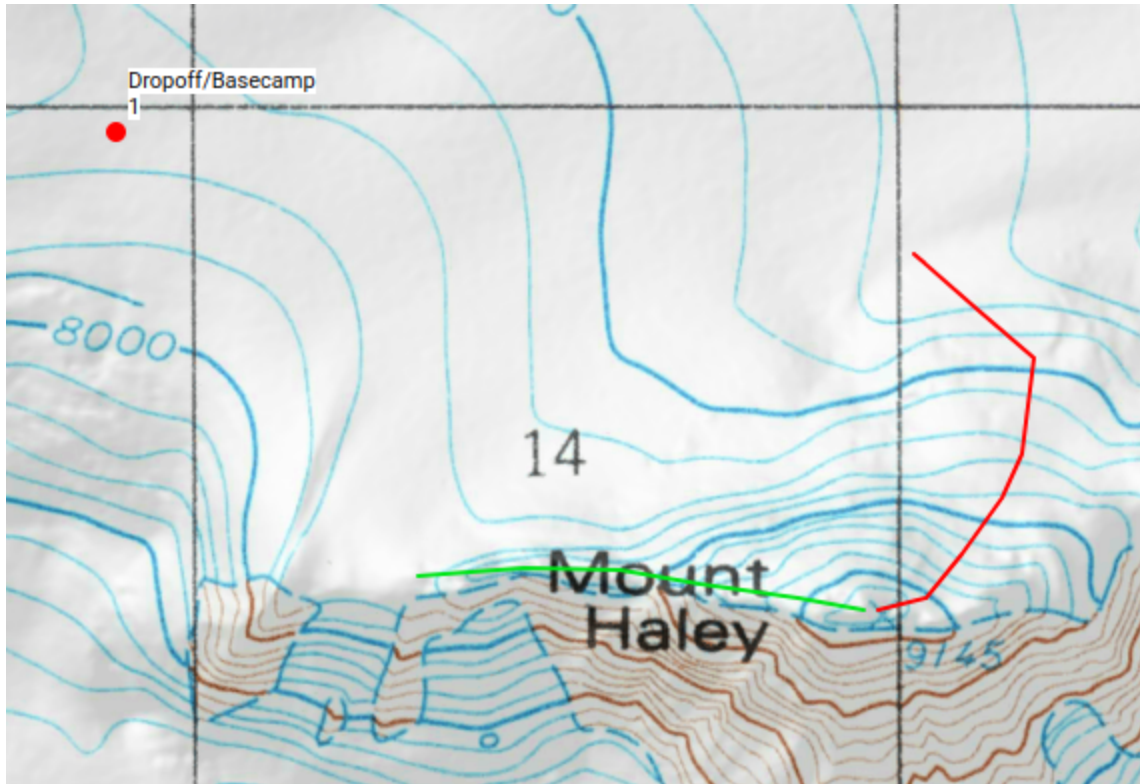
Looking Northeast from summit of Fafnir at peak 9633, one of our warmup objectives



Day 3: We will attempt Mt. Haley via either the west ridge, or the east route. This route is shorter than some of our other objectives, so we have chosen to start with it. We have read trip reports for both, in the picture below you can see the tracks for the east route approach. The east route potentially has less steep snow. Per a NOLS expedition report we may encounter some steeper climbing on the West Ridge. We will scout this objective from our basecamp and make an informed decision on which route to ski. To descend our route we will reverse our ascent route or ski the other route. In case we need to bail we will reverse our ascent route back to camp. This is about 1500 feet of elevation gain and about a mile approach. Potential hazards on this route include crevasses, avalanches, and steep snow travel.



Mt. Haley
viewed from
Science
Glacier-note
ski tracks

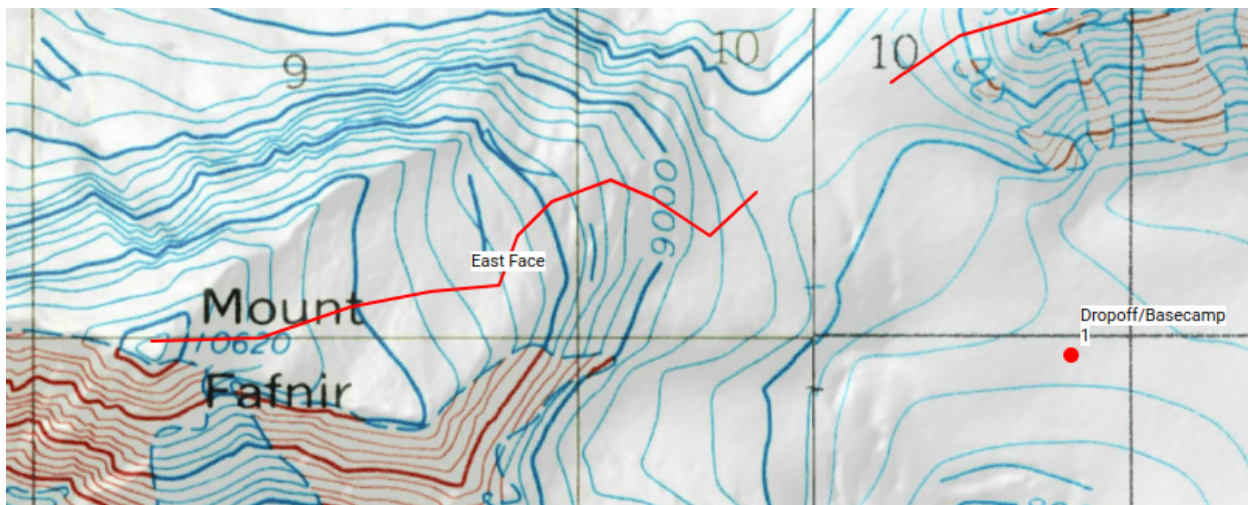


Caltopo of Mount Haley with west (green) and east (red) routes marked

Day 4: Attempt Mt. Fafnir via the East ridge. Below is a photo of Mt. Fafnir viewed from the East. Per a NOLS expedition report we can expect this route to be heavily crevassed in late May, so this will be our biggest hazard. From an AAJ on Fafnir: "We climbed up a small icefall east of our mountain, wending our way through a series of small crevasses, and continued on behind the peak of the snow pass at the head of the Science Glacier. The rest of the long climb up the broad northeast shoulder was not difficult, and we reached the summit at 4:30 P.M.—nine hours after leaving camp." We plan to descend by reversing our ascent route up the East ridge. If we need to bail we will simply reverse our ascent route back to camp. This is about 2000 feet of elevation gain over 1.5 miles.



Fafnir viewed from the East. On the right you can see travel up the head of the Nelchina Glacier is possible



Caltopo Showing potential route from basecamp up Mount Fafnir.

Day 5: weather/rest day

Day 6: Move to Valhalla Base camp:

In order to be within range of Thor, Gilbert-Lewis, and the southern route of Valhalla, we will move basecamp to higher elevations to the west. Plus, this will also give us a bit more adventure by forcing us to move, we won't just be sitting where the plane dropped us off. We will

use sleds to haul all of our gear in one trip. We will travel up the Nelchina glacier and pass through the col between Valhalla and Fafnir. Judging from pictures included below, this looks possible, and not too crevassed. To get to the col from the head of the Science glacier we have to gain about 2k feet over about 3.5 miles. We may either set up camp at the col, or we may pass over the other side and stop on a bench on the other side or in the middle of the glacial ramp. We think this glacial ramp is suitable because it is where an expedition camped in a 1958 AAJ article

(<http://publications.americanalpineclub.org/articles/12195809202/North-America-United-States-Alaska-Chugach-Mountains>), and where a party of two hauled sleds as they completed a traverse of the Chugach in 2005

(<http://publications.americanalpineclub.org/articles/12200519702/North-America-United-States-Alaska-Neacola-Mountains-Chugach-Mountains-Ski-Traverse>). We will ensure that we are out of avalanche runout zones here. If possible, we will try to make this close to our plane pickup location, found during dropoff.

Day 7: Attempt Gilbert Lewis

Gilbert Lewis is a longer, easier peak that will have spectacular views to the south. We will skin 2k feet/2 miles up the glacial basin from basecamp to the col on the northeast side of Gilbert Lewis. Judging from pictures below and from the AAJ articles above, this shouldn't be too hard. It is 3.5k feet gain and 5 miles roundtrip.

Then we will skin/boot 1.5k ft/.5 miles up the northeast summit ridge. The same AAJ article linked above has this to say about this ridge: "We reluctantly turned back from both the relatively easy Mount Edison (11,600 feet) and Mount Gilbert Lewis (11,900 feet) because of dangerous wind-slab conditions. Only 300 feet from the summit of Gilbert Lewis we heard two loud cracking sounds and felt the snow jerk under our feet. We were fortunate to be able to climb off the mountain rather than to be carried down by an avalanche." So, it sounds like the ridge is not technical, but there is avalanche danger. Therefore we will be very picky about snow conditions for this attempt.

We will descend the same route.

Day 8: Rest/weather

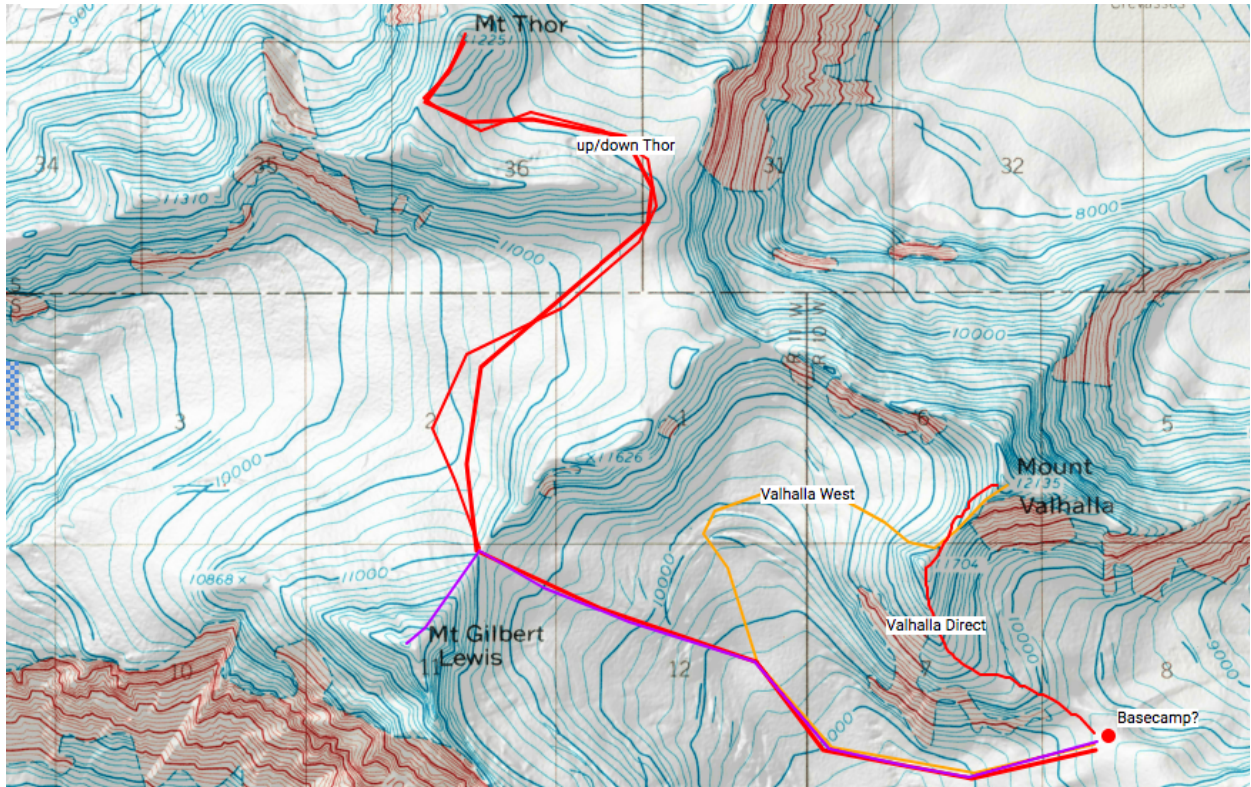
Day 9: Attempt Thor

Thor is the second-highest peak in the Chugach, and is the highest peak in the immediate area. It is not a technical summit, and is more of a long climb and slog, but it will have nuts views. It is not supposed to have good weather that often though, so we should not get too hopeful.

We will begin the climb the same way as to Gilbert-Lewis, skinning up the 2k ft/2 mile climb up the glacial valley between Valhalla and Gilbert-Lewis. Then we will slowly climb 1k feet north and northeast for 1.75 miles to the gradual pass between the Harvard and Nelchina Glaciers.

Then we'll skirt around the southeast ridge of Thor and do the last miles and 1k feet to the summit. A picture of the gentle summit ridge is below.

In the AAJ trip report linked above, Joe Stock and his partner hauled sleds up this route while on their traverse of the Chugach, so it shouldn't be that difficult of terrain. It is 4.5k feet of elevation gain total and 12 miles roundtrip (though most of it skiable on the 6 miles down). Main concerns will be avalanches and weather. We will need to make sure our weather window is solid for this attempt.





Summit of Thor in April

Day 10: Rest/weather

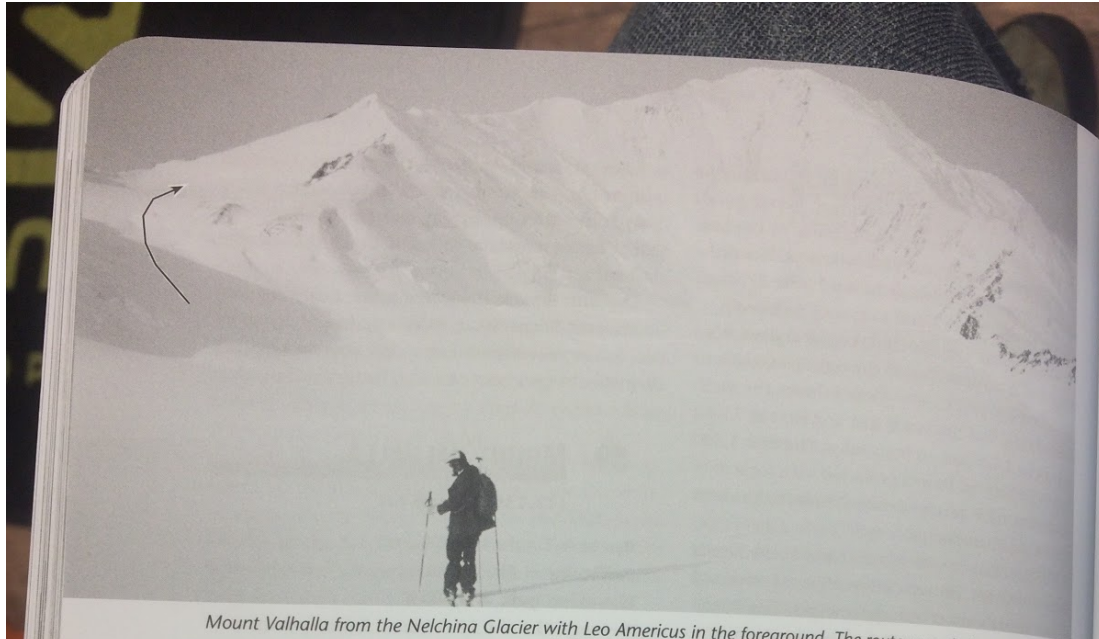
Day 11: Attempt Valhalla Peak.

Valhalla is the central peak to our area, and could be considered the most aesthetic. There are a few different options, depending on conditions.

The easiest is the basic route up the east ridge, described in *Alaska: A Climbing Guide* (guidebook photo below). It is a 4th class, 5k elevation gain slog over 3 miles, that we would want to approach by descending from one of our lower camps. The largest challenge on this would be the avalanche hazard on some steep slopes, some exposure when the ridge narrows, and some cornices. On a day with good avalanche conditions and clear weather this should be doable with an early start and a steady pace. It looks like most of this could be done with skis with an occasional bootpack. If we did this route, we might attempt it earlier in the trip, from our original basecamp, so we have a shorter approach/deproach.

We could also attempt the summit from the southwest. This is much shorter, at only 3k feet of elevation gain, though more technical. An AAJ (<http://publications.americanalpineclub.org/articles/12195809202/North-America-United-States-Alaska-Chugach-Mountains>) from 1958 has a trip report which says “Mount Valhalla (12,000 feet), the most spectacular peak in the central Chugach Mountains, was climbed July 1 from a high camp among the crevasses of the glacier basin between Mount Elusive and Mount Fafnir. It was the most difficult peak attempted. The only feasible route led over the south summit and then along the great knife-edged ridge to the main summit. The slope on the eastern side of the ridge is so steep that snow never clings very long to the 3000-foot face. This route is safe only under ideal snow conditions.” We could approach the south summit from our high camp by

either booting straight up the south ridge, or by circling in clockwise along the less steep glacier. For the knife-edge ridge to the summit we would be booting roped up, using a running belay with pickets and skis as protection. To descend, we would either downclimb/ski our ascent, or we could ski the south ridge, or we could ski the east-facing chute coming down from between the south and main summits (this is visible in a picture below). We could assess these alternative descents on our ascent.



Mount Valhalla from the Nelchina Glacier with Leo Americus in the foreground. The route ascends the ridge line.
(Photo: John Bauman)

Nielsen, Arthur Maki, David Bohn, Martin Mushkin, and Don Mukski.

Fly-in approach: The flight in can come from any of the flight services operating in the Chugach Mountains. The closest strip is at Eureka Lodge on the Glenn Highway, or Mike Meekins's strip at Sheep Mountain. A landing can be made on the Nelchina Glacier at the pilot's discretion. It is also possible to land at the toe of the glacier in a Super Cub. Flying from the north side of the range is advantageous because weather observations can be made first-hand.

Walk-in approach: Follow the walk-in directions for Mount Thor (Route 58) to the toe of the Nelchina Glacier. It is necessary to cross the Nelchina River to reach the moraines at the toe of the glacier; the river can be difficult to cross in the summer. The route onto the Nelchina Glacier is straightforward by keeping low on the west side.

From here travel up the Nelchina is really dependent upon snow cover. This glacier is heavily crevassed all the way to the upper fork, which makes

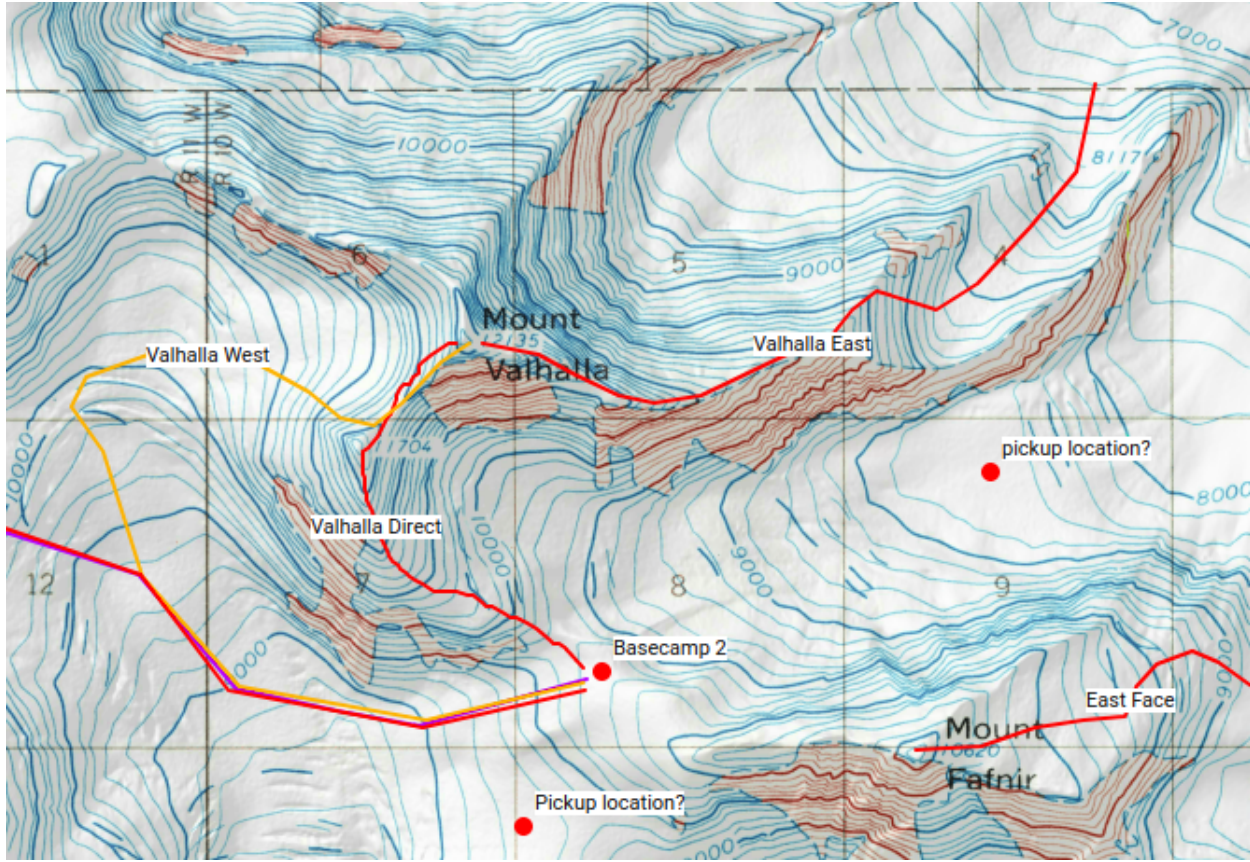
late-season travel pretty interesting on the "dry ice." The west fork of the Nelchina Glacier will bring you right to the base of the spectacular Mount Valhalla.

Route description: Mount Valhalla is a snow climb with fourth-class travel. The ridge begins as a broad slope that narrows down at about 8,117 feet. From here the ridge is a bit more defined, and the climbing is straightforward on the ridge top. The greatest hazard on this route occurs when moving across steeper slopes with some avalanche potential. Take care to avoid spots that are corniced. At about the 9,800-foot elevation the two ridges converge and continue for 2,335 vertical feet to the summit. The ridge is exposed, but the climbing is fantastic. Within 600 feet of the summit the ridge broadens a bit then steepens just before the summit.

Descent: To descend, reverse the route of ascent. It is also possible to continue down the Northern East Ridge to complete a traverse. The slopes on this ridge are avalanche-prone, however, plus there is a lot to be said for descending the known route, especially in the event of bad weather.



Two different pics of Looking West from summit of Fafnir at Valhalla (FG Right) and Gilbert-Lewis (BG Left). Notice the glacier on the left up to Gilbert-Lewis looks manageable.



Day 12/June 4: Fly out, drive back to Girdwood

On the fly in we will look with the pilot for good pickup locations. Two possibilities are marked on the map, both of which are longer than the 1000 feet required by a supercub, and are relatively flat and near our second basecamp. The day earlier we will communicate with the pilot to pick the exact pickup location, and will move the basecamp there in the morning for an afternoon pickup. Once we are all back at Sheep Mountain Lodge, we may stay the night at the hangar, or drive back to Girdwood that day.

Appendix B- Equipment

Type	Item	Quantity
GROUP		
Shelter	megamid (cooktent)	1
	3 person Hilleberg	1
Cooking	Whisperlite stove	1
	whisperlite fuel (5 gallons white gas)	2
	Whisperlite repair kit	1
	jetboil stove	1
	jetboil fuel (4 canisters isobutane)	4
	BIC Lighters	5
	large aluminum pots X2	2
	frypan	1
	pot grip	
	hand sanitizer	2
Safety	Ropes, 30m 8mm dynamic glacier line	2
	glacier wands	20
	SPOT personal locator beacon	1
	DeLorme InReach	1
	SAT phone (provided by air service)	1
	Extra sleeping bag	1
Avy Evaluation	Snow saw	
	Snow crystal card	
	10X magnifying loupe	
	Analog thermometer	
	Slope meter	
	AIARE blue field book	
misc	sunblock	1
	gallon ziplock bags X10	10

tech	mountaineering harness		1
	non-lockers		5
	lockers		4
	single length slings/2ft cord (hip prussik/general)		3
	double length slings/10ft cord (foot prussik/general)		2
	quad length sling/20ft cord (anchor material)		1
	mountaineering iceaxe (for steeper summits/more)		1
	whippet (for mellower terrain)		1
	mountaineering crampons		
	pickets	3 total	
	ice screws 15-19cm	4 total	
misc	headlamp (w/ extra batterieis)		1
	nalgenes		2
	glacier glasses		
	bowl/tupperware/mug + utensil		
clothes	hardshell jacket		1
	puffy jacket		1
	midlayer top		2
	base top		1
	hardshell pants		1
	down pants		1
	fleece pants		1
	base bottoms		1
	wool socks		3
	gloves (2 pair)		2
	warm hat		1
	baseball cap		1
	buff		1

	down booties	1	
	goggles	1	
	sunglasses	1	
first aid kit	see attached		

First Aid Kit:

General Supplies

Nitrile Gloves: 5 pairs
12 cc irrigation syringe: 1
Trauma shears: 1
Tweezers: 1
SOAP notes: 5
Safety Pins: 6
WFR Book: 1 Ziplock bag: 4
Emergency Blanket: 2

Drugs/Meds

Ibuprofen: 60 pills
Pepto Bismol: 30 pills
Acetaminophen: 30 pills
Tincture of Benzoin: 5 ampules
Iodine towelettes: 10
Triple antibiotic ointment: 1 tube

Wound Care/Bandaging

Antiseptic towelettes: 25 3"
conforming gauze roll: 4 3 x 3"
sterile gauze pads: 5 2 x 3"
non-adherent dressings: 3 3 x 4"
sterile gauze pads: 5
Trauma Pads: 4
Transparent Dressing: 4
Closure strips ("steri-strips"): 3 sets of 4+ strips
Ace Elastic bandage: 3
Triangular bandage: 5
2nd Skin 2 x 3 pad: 6
Band-aids: 10
Butterfly bandages: 5
Sterile Cotton Tipped Applicator: 10
1" tape roll: 1
1.5" Athletic tape roll: 2
Moleskin 2 x 3: 6

Appendix C- Food

Breakfast (18)	Amount (lbs)	Cost (\$/lb)	total \$
Oatmeal	3	2.49	7.47
Power pancake r	2	6.49	12.98
walnuts	1	6.89	6.89
raisins	1	4.99	4.99
almonds	2	9.99	19.98
mixed dried fruit	2	7.75	15.5
granola	3	5.99	17.97
Lunch (18)			0
Tortillas	5	3.29	16.45
Peanut Butter	4	2.48	9.92
Jelly	2	3.55	7.1
Pitas	5	3.39	16.95
Cheddar Cheese	4	6.99	27.96
Tofu Jerky	2	5.49	10.98
Dried hummus	2	3.29	6.58
Snacks (18)			
Sour patch kids	2	5.99	11.98
Clif bars	12	3.99	47.88
trail mix	16	6.49	103.84
snickers	2	1.99	3.98
electrolyte drink	1	5.7	5.7
chocolate chips	4	4.39	17.56
hot cocoa	1	2.2	2.2
tea	1	6	6
apple chips	3	6	18
dinner (18)			0
Pasta	7	3	21
couscous	4	5	20
instant brown rice	4	3.5	14
mac and cheese	4	4.2	16.8
quinoa	4	9	36

veggies	4	16.99	67.96
alfredo	0.5	16	8
olive oil	1.5	4	6
Total Weight	109		
Pounds per pers	36.33333333		
Total Cost	588.62		

Appendix D- Budget

Budget

Transportation

In the space below, write the total Transportation cost for your expedition in US dollars.

DEN to ANC round trip (for Merritt and Grace):

<https://www.google.com/flights/#search:f=DEN;t=ANC;d=2018-05-22;r=2018-06-08>

\$470 per person

DEN to ANC one way (for Crews)

\$235

Gas Girdwood to/from Anchorage for airport pickup/supply runs:

$(40\text{miles} * 2) / 19 \text{ MPG} * \$3 \text{ per gallon} = \$15$

Gas Girdwood to/from Sheep Mtn Lodge:

$(144\text{miles} * 2) / 19 \text{ MPG} * \$3 \text{ per gallon} = \$50$

Drop Off and Pickup with Meekin's Air Taxi:

\$700 per person = \$2100 total (this is the quoted max, if we have extra money we will return it)

Total: 3340

Food and Fuel

In the space below, write the total cost of Food and Fuel for your expedition in US dollars.

We are bringing food and fuel for 18 days in case weather traps us on the glacier

Food: \$588.62

Fuel:\$50

Total: \$638.62

Maps and Books

In the space below, write the total cost of Maps and Books for your expedition in US dollars.

0

Communication Device Rental

In the space below, write the total cost of renting a Communication Device for your expedition in US dollars.

0

Permits/Fees

In the space below, write the total cost of Permits/Fees for your expedition in US dollars.
\$0, there are no permits

Gear Rentals

In the space below, write the total cost of any Gear Rentals for your expedition in US dollars.
0

Total Funding Request

\$3978.62

~\$1326 per person