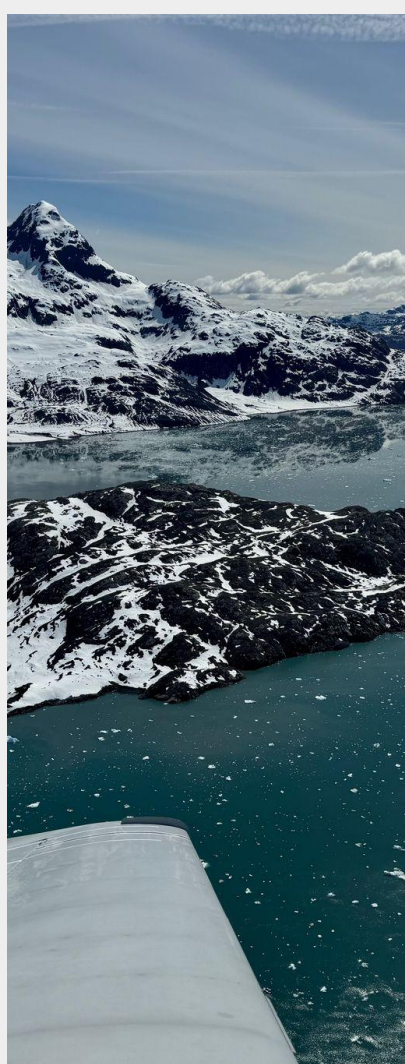




Flying the Scenic Route

*Flight Planning from
Orlando to Alaska and
Back Again*

Ryan Binns • Spring 2024

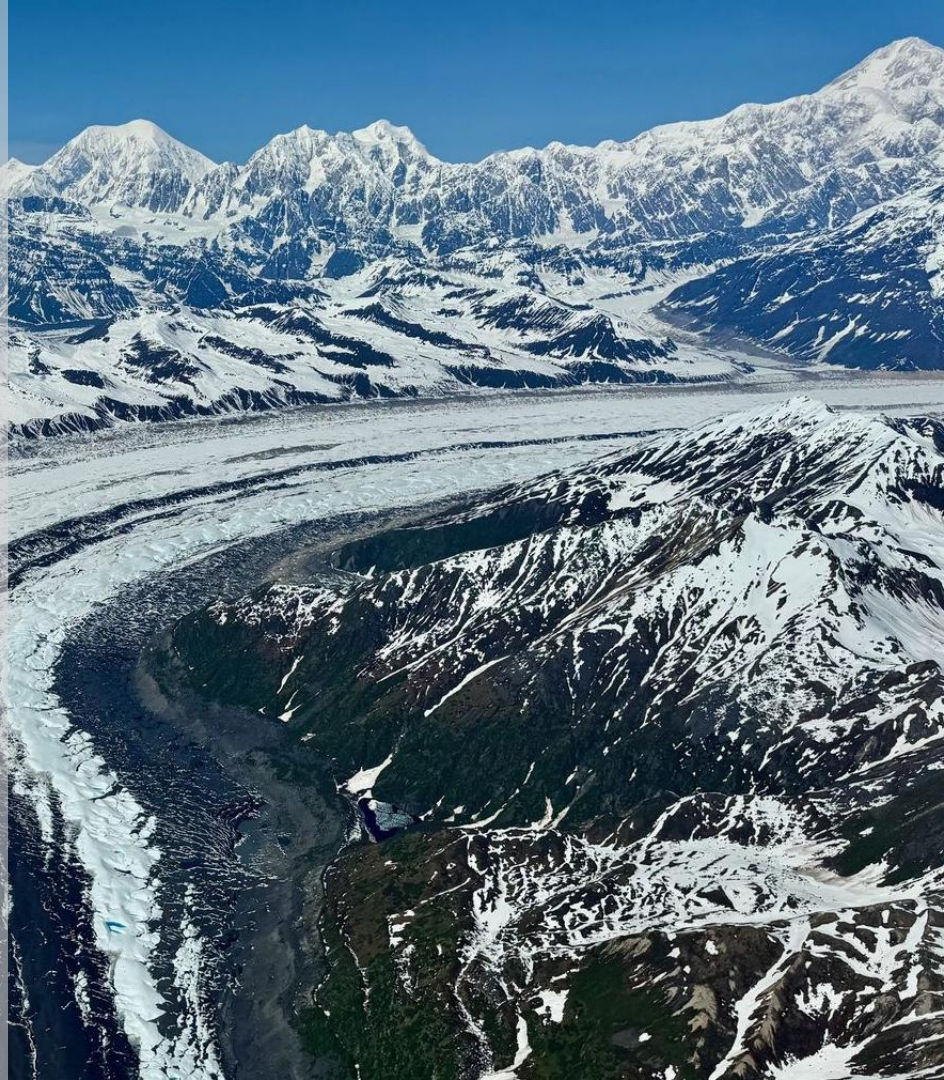


68.2 HOURS.

30 DAYS.

9,347 NM.

26 LEGS.





9 STATES.
5 PROVINCES.
696 GALLONS.
ONE CUTE
DOG.

We're Ryan and Katherine (and Magic)

- Married in 2019
- Live in Orlando, FL
- We're both Software Engineering Managers
- Bought our Mooney in January 2021
- We love to fly! Before this...
 - 46 States
 - 3 Canadian Provinces
 - All with our dog Magic (Cavalier King Charles Spaniel)





Prior Flying Experience

- Flying since 2006
- Independent CFI/CFII (2020)
 - ~1,400 hours (600 M20J)
- Instrument Current
- *Some* Canada experience 🍁
 - BC, Quebec, Toronto
- *Some* prior mountain/high DA experiences 🏔️
 - Crossed Rockies x2
 - Landed at Leadville (LXV)
 - etc.

Mooney N374SM

1984 M20J
G3X Touch PFD
GFC500 Autopilot
SXM Weather



Valdez, Alaska (PAVD)

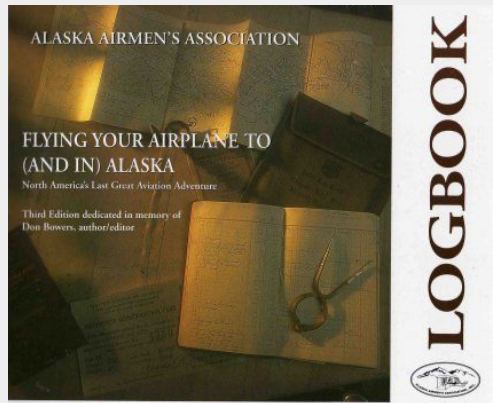


Our Trip Wish List

- See the beautiful Alaskan Coast
 - All the best sights, but dangerous!
 - Be as safe as possible: **wait for good weather**, avoid extended overwater
- See Denali up close
- See McCarthy/Kennecott area
 - This means one gravel strip!
- Go tent camping if possible 🏕️
- Leave Memorial Day weekend, be home by end of June
 - June is the *least* rainy month in Alaska 🌧️
 - Be flexible on schedule, plan for around a month away
 - Spend a week or 10 days in Alaska.
- Finish visiting all 49 reachable states and all the Canadian provinces we can
 - Visit Nebraska and North Dakota on the way north
- Return to the Lower 48 via the Seattle and San Francisco areas, to visit family and friends

Preparing for Adventure

- One does not simply fly to Alaska!
- Prepare your aircraft
 - Long shakedown flights!
 - Equip w/ 406MHz ELT, spare tubes, spark plugs, tools, tiedowns, survival gear, etc.
- Research, Research, Research!
 - Routes (fly2ak.com)
 - Typical Weather Patterns
 - Availability of fuel, services, hotels, etc.



Which Way to Alaska?

- **The Alcan Highway**
 - Pros: Most common route, usually good weather. **Can land on highway in emergency!**
 - Cons: Very remote in areas, no WX stations, no ATC
- **The Coast**
 - Pros: Fastest, shortest.
 - Cons: Usually IFR with icing, changes rapidly, **no emergency landing options at all!**
- **The Trench**
 - Pros: Shorter than Alcan
 - Cons: Very remote, no ATC, no WX stations, unpredictable weather, **350nm canyon with no divert options**



Image by Ted Waltman
fly2ak.com



How We Plan

- *Stay flexible*: Plan only for the next stop or two at most
 - Weather will largely dictate our route.
 - Book everything **on arrival**!
- Choose *good places* to stop
 - Access to pet-friendly Hotels or Tent Camping
 - Walkable, cool sights, etc.
 - Vegan food available (HappyCow)
 - **Access to 100LL!** 🛢️
 - Always check ForeFlight comments!
- Keep Average Legs < 3 hours (~450nm)
 - No 'Gatorade Bottles'
- No High Altitude Crossings
 - No Supplemental O2 for Magic!
- No Unnecessary Risks
 - Flying the Coast is out!
 - Stick to following roads, etc.
 - Avoid (mostly) unpaved runways.
 - All Day VFR once in Canada and Alaska.
 - **Wait for good weather!** ☀️

Camping/Survival Gear

- Emergency and Survival gear is **required** for flying to Alaska
 - This is a **serious** route with **serious** risks
 - Legally required
 - Alaska Statutes Title 2. Aeronautics § 02.35.110
 - 406MHz ELT is **mandatory** in Canada for N-registered aircraft
- Communications / SOS
 - Dual SIM cellphone, Garmin inReach Mini, Iridium GO! Satellite Phone, *Registered* 406MHz ELT
- Camping / Survival
 - Food, water, tent, sleeping bags, fire starting supplies, hatchet, **mosquito nets and repellent**, rope, etc.



4 Major XCs in One

- Crossing the Continent
Westbound to Banff
- The Alcan Highway and the
Canadian Rockies (x2)
- The Alaskan Coast and Interior
- Return via the Pacific Northwest
and American Southwest

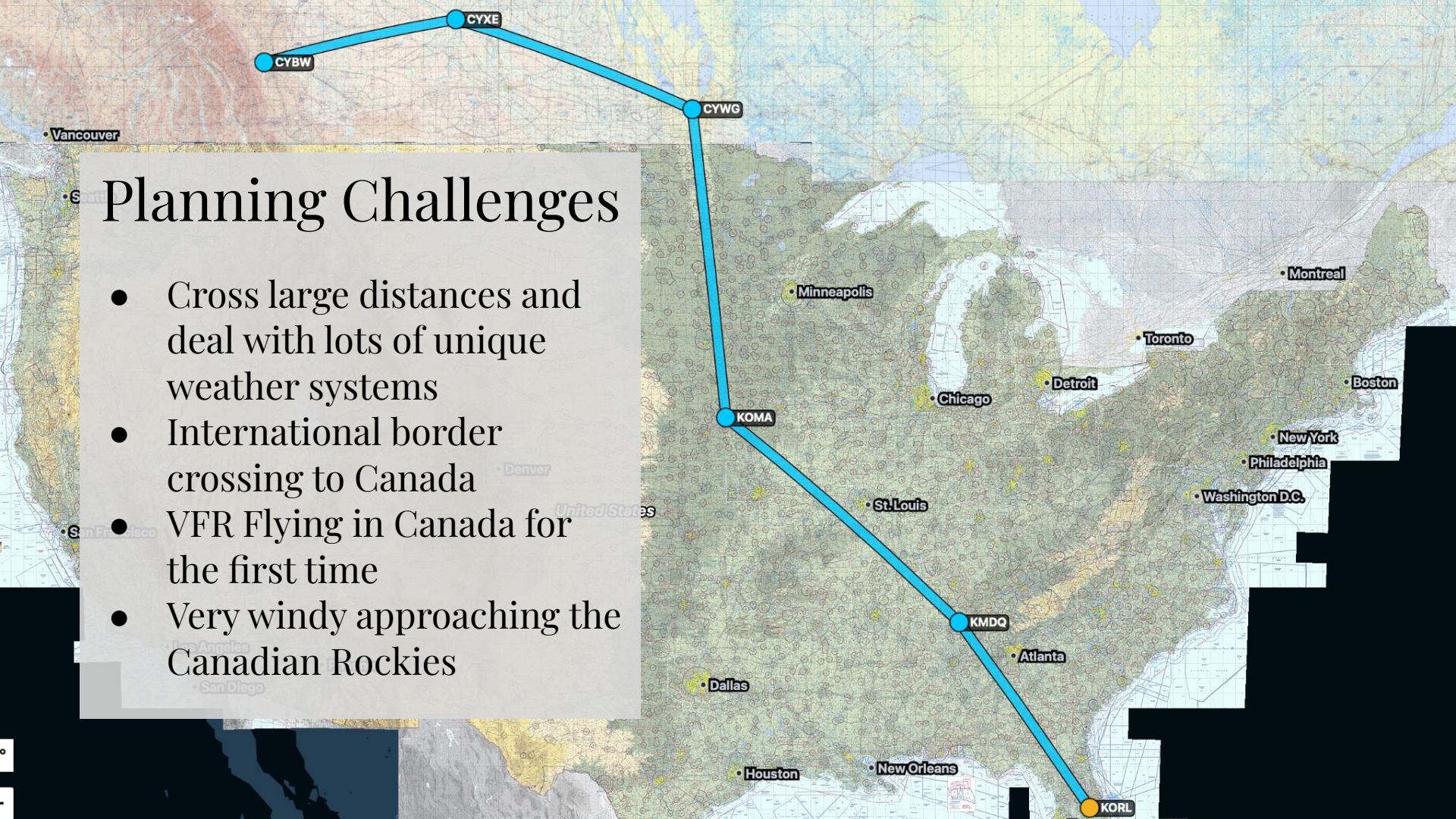


Crossing the Continent Westbound to Banff

Orlando, FL to Banff, AB
2,246 nm



Banff Natl. Park, Alberta

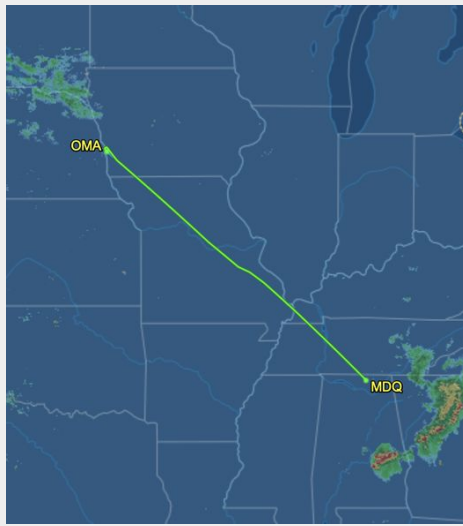
A map of North America showing a flight route. The route starts at CYBW (Vancouver), goes to CYXE (Edmonton), then to CYWG (Winnipeg), then to KOMA (Omaha), then to KMDQ (Midland), and finally to KORL (Orlando). The route is highlighted in blue. Various cities are labeled on the map, including Vancouver, Seattle, San Francisco, Los Angeles, San Diego, Denver, Minneapolis, Chicago, Detroit, Toronto, Montreal, Boston, New York, Philadelphia, Washington D.C., St. Louis, Dallas, Houston, New Orleans, and Atlanta. The United States and Canada are also labeled.

Planning Challenges

- Cross large distances and deal with lots of unique weather systems
- International border crossing to Canada
- VFR Flying in Canada for the first time
- Very windy approaching the Canadian Rockies

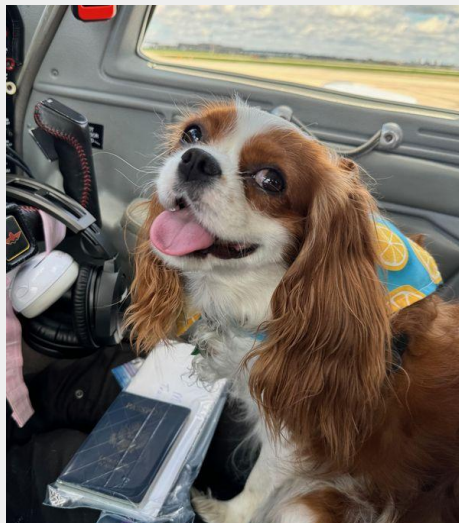
Huntsville, AL
KMDQ





Fargo, ND
KFAR





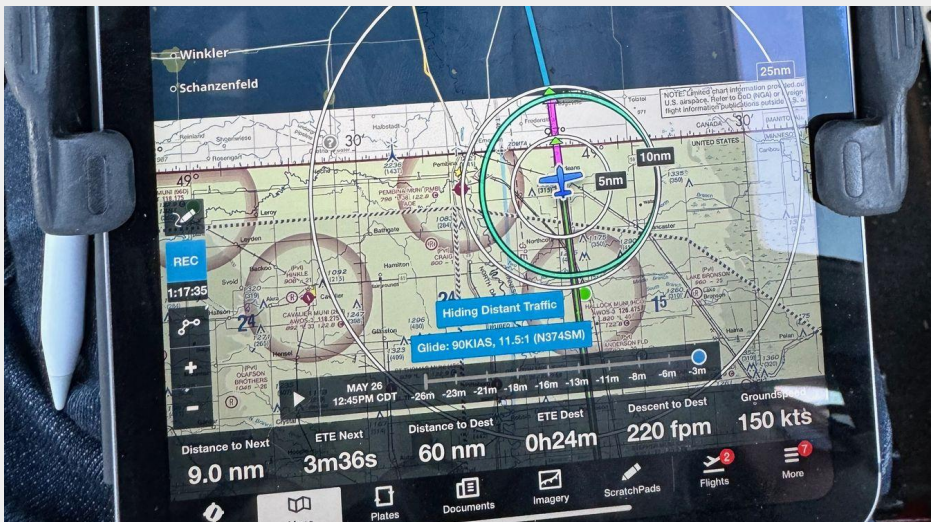
Flying into Canada

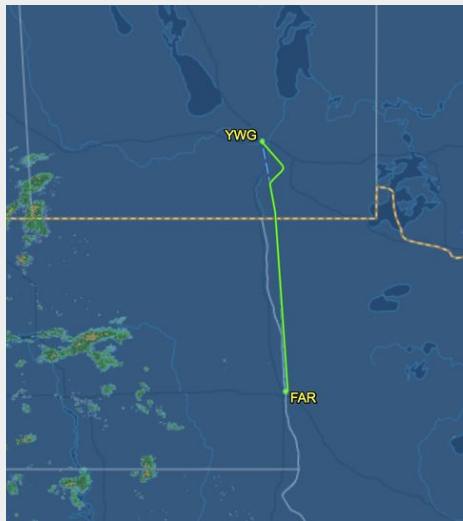
• Need:

- License / Medical (*No BasicMed*)
- Radio Operator / Radio Station License
- FAA Airworthiness / Registration (no temp)
- Passports / Vaccine cert for dog
- 406 ELT
- CBP Customs Decal

• An easy process:

- Call CBSA (1-888-226-7277)
 - >2 hours, <48 hours
 - They will ask for arrival FBO
- File Departure eAPIS with US CBP
 - >1 hour **before ETD**
- File VFR or IFR flight plan
 - Must be active and squawking!
- Fly to Canada and taxi to your FBO
 - **Arrival window of +/- 30 minutes**
- **Wait in aircraft**, Call CBSA to report
 - Probably won't meet a CBSA officer!





VFR in Canada

- VFR Flight Plans are *mandatory*
 - Can file online <https://plan.navcanada.ca/>
 - Activate via ATC (if avail.) or usually FSS
 - **Plans open automatically at ETD!**
- Pattern Entries are Regulatory
- Mandatory Frequencies
 - Mandatory to speak to FSS at some uncontrolled fields (some via RCO)
 - Required reporting points inbound and outbound
- “Switch to Enroute”
 - ATC services are *sparse* in Canada
 - >30nm from a major airport = 
 - Self-report enroute on “CTAF” of 126.7
- Class C = USA Class B (sort of)
 - Need permission to enter, you won’t get it
- No ADS-B WX or SXM Radar 
 - SXM *does* have METARs delayed 30m
 - Use Sat Phone for Inflight WX 

VFR CIRCUIT PROCEDURES AT UNCONTROLLED AERODROMES

Communications Requirements

Information can be exchanged with a flight service station (FSS), community aerodrome radio station (CARS), universal communications (UNICOM), or vehicle operators by directed transmissions, or with other aircraft by broadcast transmissions. See the Transport Canada Aeronautical Information Manual (TC AIM) RAC 4.5 for the current requirements.

It is essential that pilots be aware of other traffic and exchange information when approaching or departing an uncontrolled aerodrome, since some aircraft may be receiver only (ONLY) or no radio (NORDO).

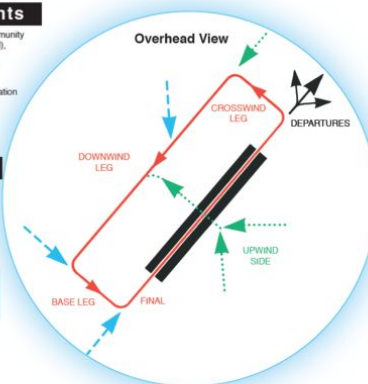
Standard Left-Hand Pattern

Before arriving at an uncontrolled aerodrome, plan your approach to the circuit.

If it is necessary to cross over the aerodrome prior to joining the circuit, or after departure, it is recommended that the crossover be made at least 500 ft above the circuit altitude.

Where designated, a mandatory frequency (MF) or aerodrome traffic frequency (ATF) area is normally a circle with a 5-NM radius, capped at 3 000 ft above aerodrome elevation (AAE). All radio-equipped aircraft must monitor a common designated frequency.

At aerodromes that have published instrument approaches, the MF area may be expanded to include the approach area. See the Canada Flight Supplement (CFS) for current information.



MF/ATF Communication Procedures (see TC AIM 4.5.7)

Note: If your aircraft is radio-equipped, it is recommended that the same calls be made at non-MF aerodromes.

Arrival (CAR 602.101)

- Report position, altitude, arrival procedure intentions and estimated time of landing (ETL) at least 5 min prior to entering the area.
- Maintain a listening watch on the designated frequency.
- Report when joining the circuit, giving position in the pattern.
- Report when on the downwind leg, if applicable.
- Report when established on final.
- Report when clear of the active runway after landing.

Operations on manoeuvring area (CAR 602.99)

- Report intentions and maintain listening watch prior to entering the manoeuvring area.

Departure (CAR 602.100)

- Report intentions before moving onto take-off surface.
- Ascertain by radio and by visual observation that no conflict is likely during takeoff.
- Report departure from aerodrome traffic circuit.
- Monitor the designated frequency until well clear of the MF/ATF area.

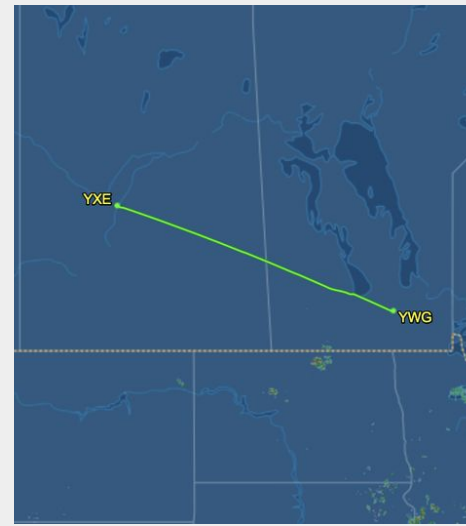
Circuits (CAR 602.102)

- Report when entering the downwind leg.
- Report, with intentions, when established on final.
- Report when clear of the active runway after the final landing.

DEPARTURES

Climb to circuit altitude before making any turns.

Saskatoon, SK CYXE

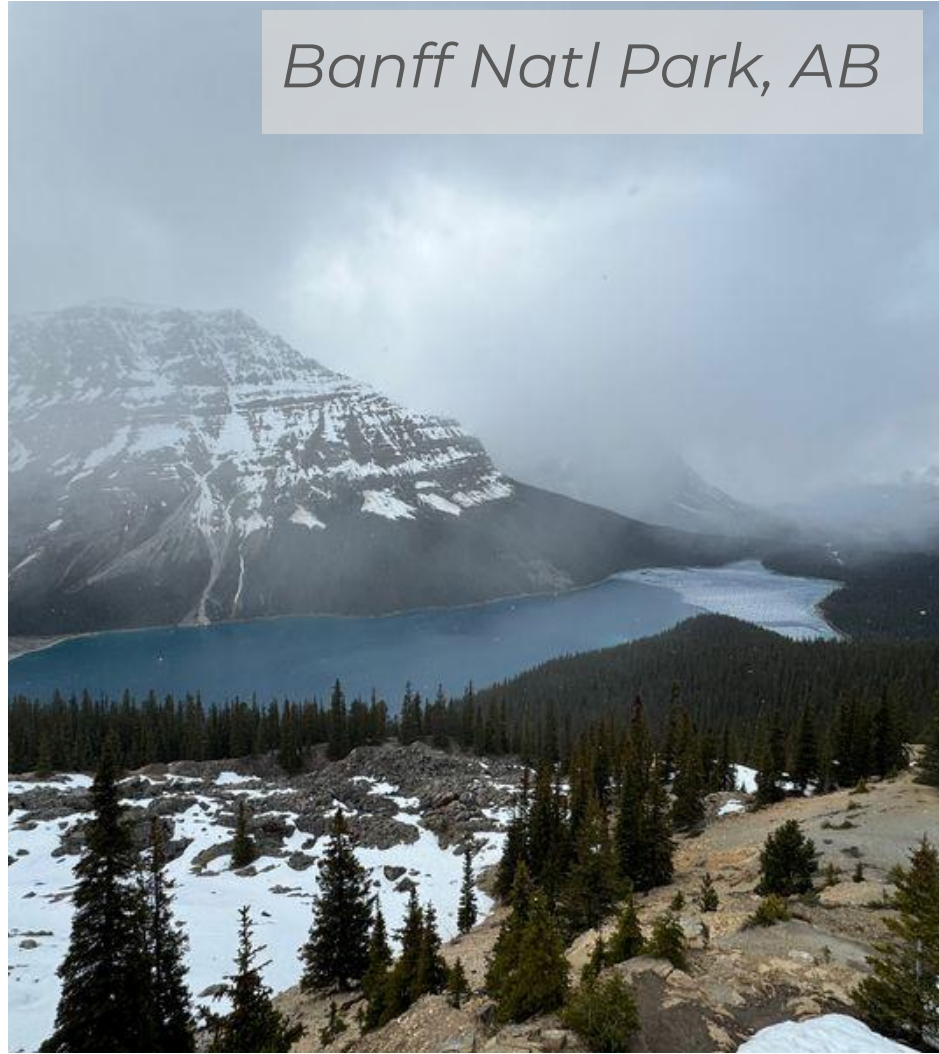




Calgary/Banff, AB
CYBW



Banff Natl Park, AB



The Alcan Highway and the Canadian Rockies (Part 1)

Banff, AB to Juneau, AK

1,060 nm

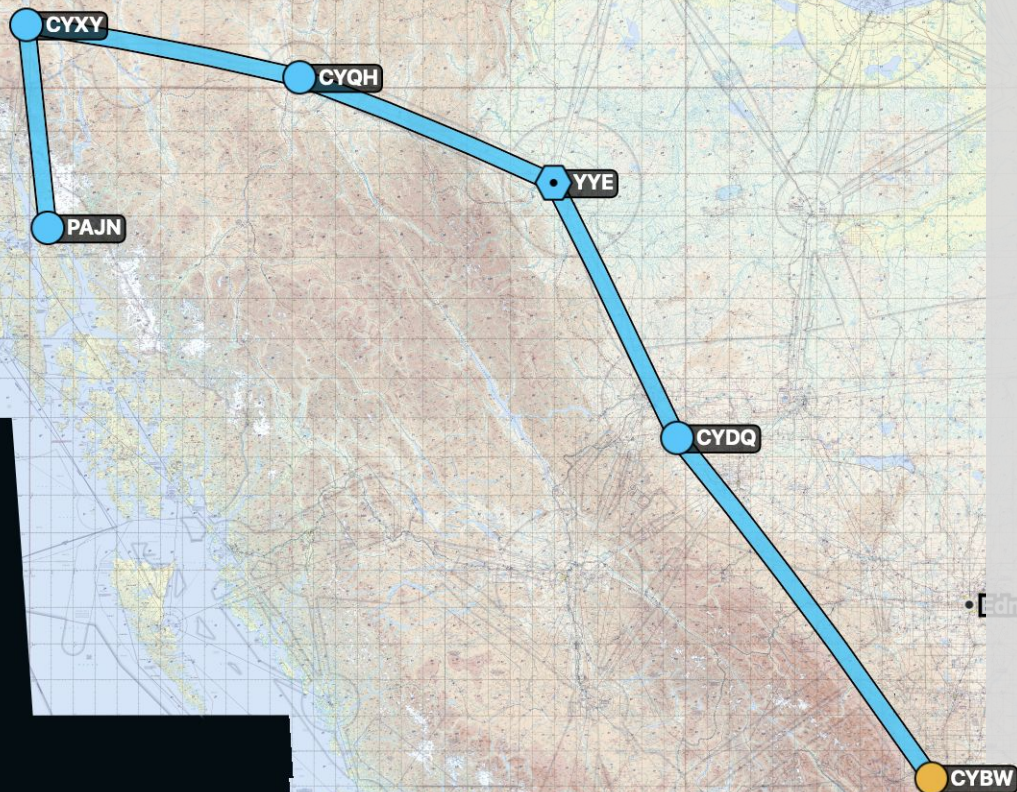


Dawson Creek, British Columbia

Planning Challenges

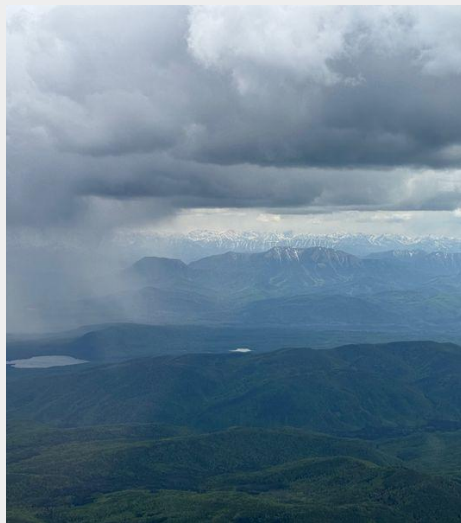
Canada

- Cross large distances over unpopulated areas
- Mountain weather can change quickly
- **No divert airports!**
- Uncertain 100LL availability 🛢️ ?
- International border crossing to Alaska
- Virtually no ATC or ground services available
- **You are on your own!**



Flying On Your Own

- No Weather Reporting
 - There is a ~800nm gap in NEXRAD, only a handful of METARs with hundreds of miles between
 - No WX Cameras over much of the route
 - **Rely on forecasts weather models** (Windy) and occasionally PIREPs
 - Mountains make weather highly localized and unpredictable!
- No ATC / FSS / Services / MX
 - Out of ATC VHF range for 90% of the Alcan crossing
 - Can relay with other pilots on 126.7
 - Call ahead to confirm 100LL availability! 📞
- Diversion may be 250nm the other way!
 - Can be past the “point of no return”
- Have a plan for the worst! (IIMC)
 - Easy to become trapped!
 - Land on the road in a dire emergency
 - Study topography, program safe route into GPS
 - **ForeFlight Hazard Advisor!**
 - **Always know minimum safe altitude!**



ForeFlight Hazard Advisor

Garmin G3X Terrain

Whitehorse,
Yukon Territory



CYXY

189nm

Watson Lake,
Yukon Territory



CYQH

192nm

Fort Nelson,
British Columbia



Closed

411nm

211nm



MILE
0
ZERO
Dawson Creek,
British Columbia

The Trench

Prince Rupert

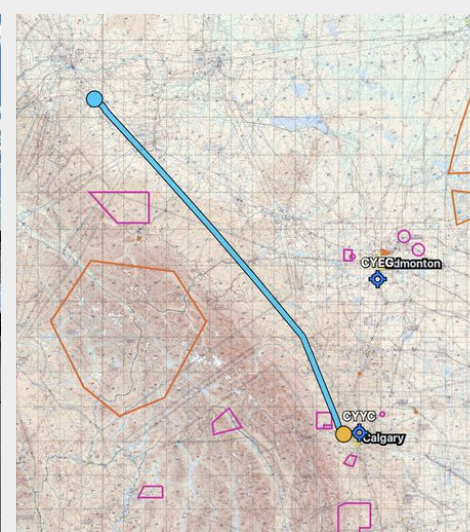
The Alcan Highway

Dawson Creek, BC
to Whitehorse, YT

WX Forecast

4,500ft Hazards

Dawson Creek, BC
CYDQ



Liard River Valley

Skook
Land

Fort Halkett

Liard River

Liard River

Liard River

*The Alcan
Highway*

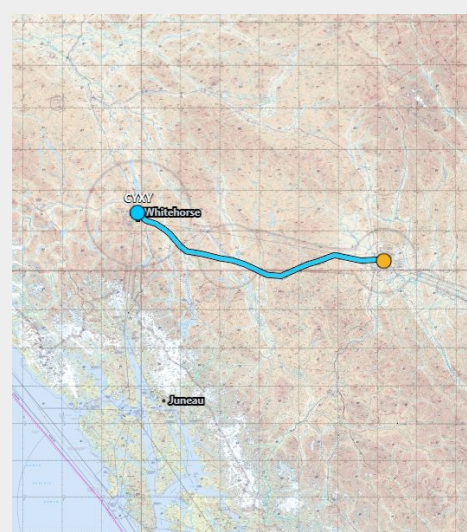
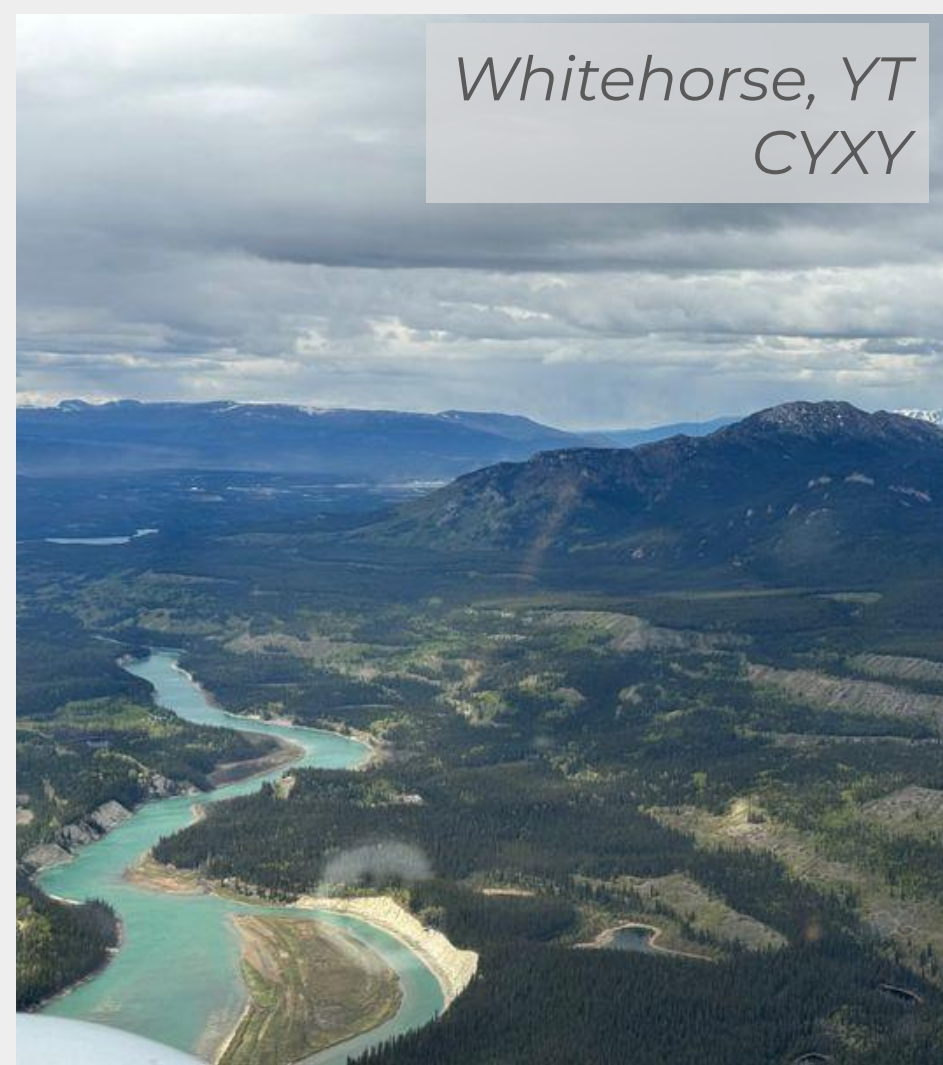
via Muncho Lake Pass

*The Liard
River*





Whitehorse, YT CYXY





Canada to Alaska

- Need:
 - Same as USA to Canada plus...
 - Health certificate for our dog (Alaska only)
- A not-as-easy process:
 - Only 5 Realistic Airports of Entry from Alcan
 - Juneau, Northway (PPR, very ltd. hours, **no fuel**), Skagway (PPR, very ltd. hours), Fairbanks (far), Anchorage (**very far**)
 - File Arrival eAPIS with US CBP
 - >1 hour **before ETD**
 - **Call US CBP Port of Entry and get landing permission!**
 - **Land +30/-0 minutes from ETA**
 - File VFR or IFR flight plan
 - DO NOT need to talk to ATC if VFR
 - **Squawk 1200!** (when N of 54th parallel)
 - **See FDC NOTAM 3/2768**
 - Fly to USA and taxi to CBP Box
 - **Wait in aircraft**, will be met by US CBP officer
 - Expect inspection of documents!



White Pass to Skagway, AK

White Pass

Crossing White Pass

Carmacks
14°

Faro
12°

White Horse
12°

Teslin
13°

Watson
13°

Fraser
5°

Nakina
9°

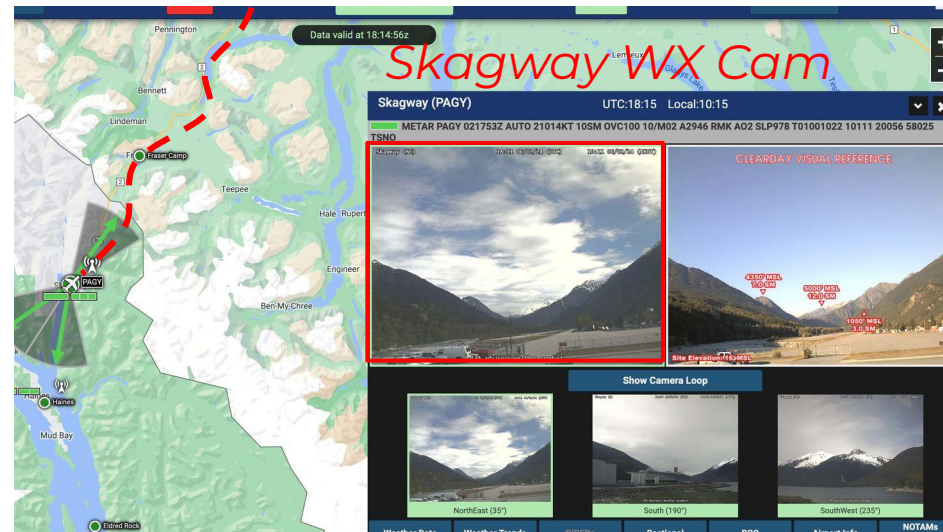
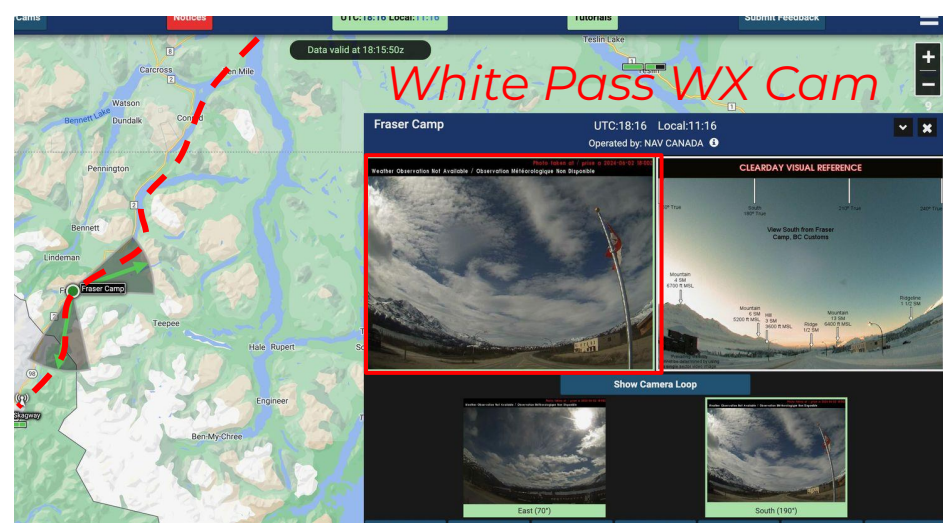
McDame
13°

Juneau
9°

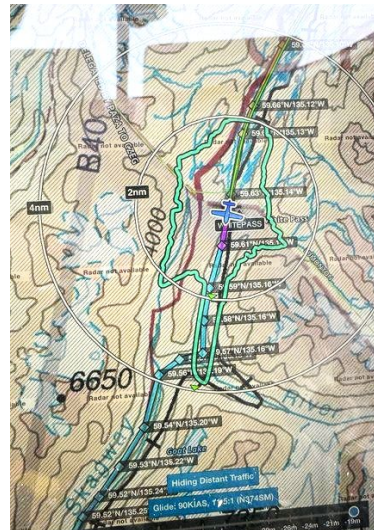
Telegraph Creek
12°

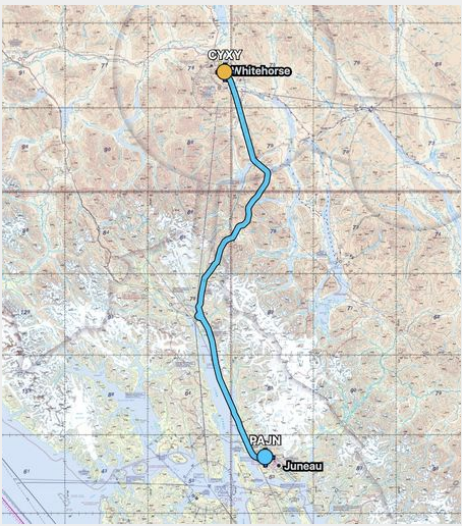
Sitka
10°

Petersburg
10°



Crossing White Pass





The Alaskan Coast and Interior

Juneau, AK to
Tok Junction, AK
906 nm



McCarthy/Kennecott, Alaska

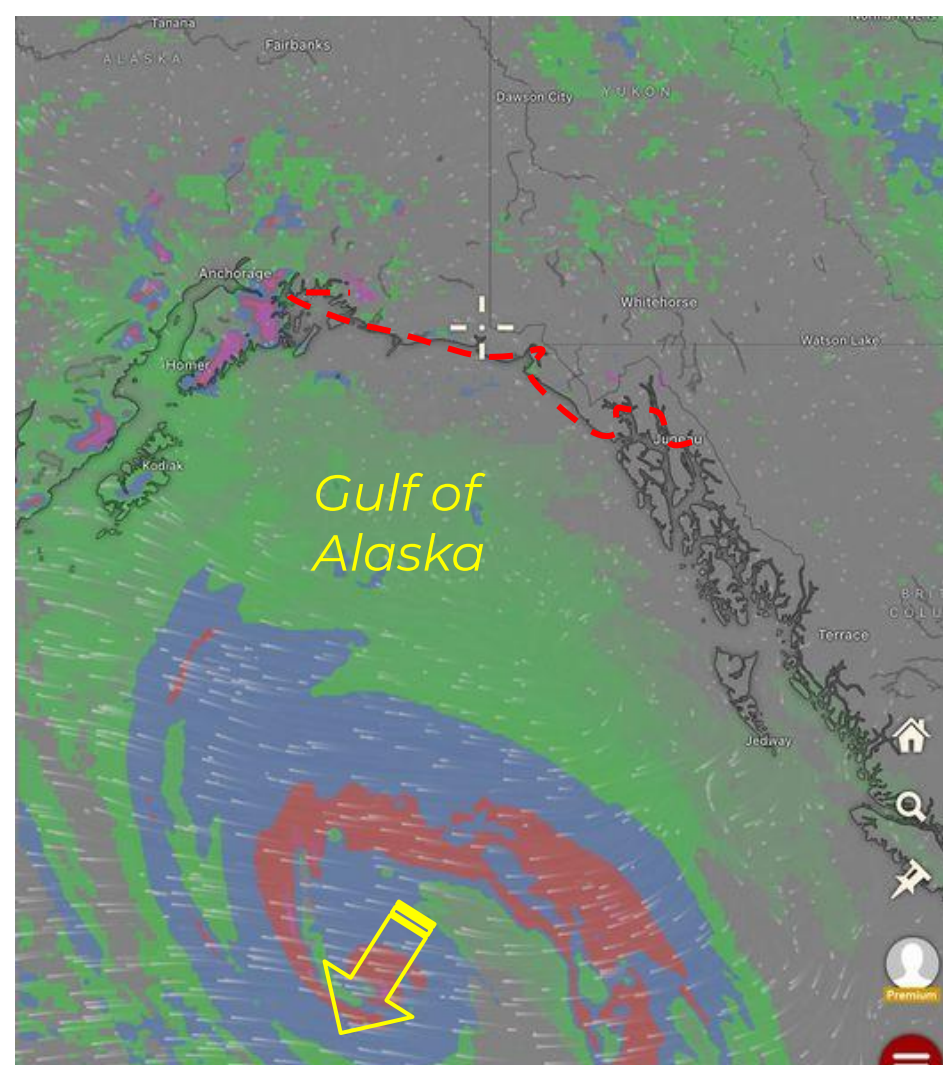
Planning Challenges

- Cross large distances over unpopulated areas
- Coastal and Mountain weather can change quickly
 - Very limited TAF/METARs
- Sparse/Uncertain 100LL availability 🛢️❓
- Over icy water for brief periods 🧊
- No ATC or ground services available *in some areas*
 - But plentiful FSS!



Juneau, AK





Glacier Bay Tour

Buckwell Peak

Mt Fairweather

Situk

Yakutat

Glacier Bay National Park and Preserve

Glacier Bay Park & Wilderness
- Water

Dude Creek State Critical Habitat Area

Gustavus

Pleasant Island

Excursion Inlet

St James Bay State Marine Park

Layers

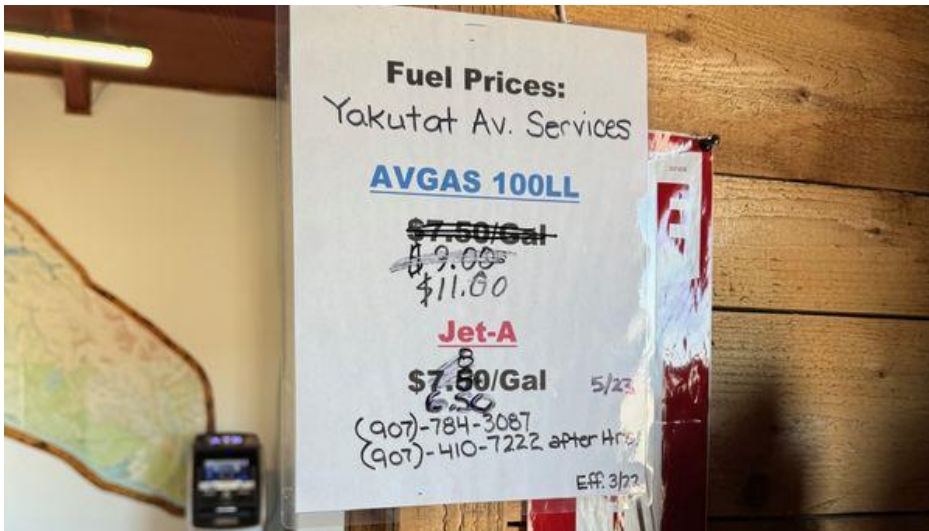


2D



Glacier Bay







Columbia Glacier Flyby

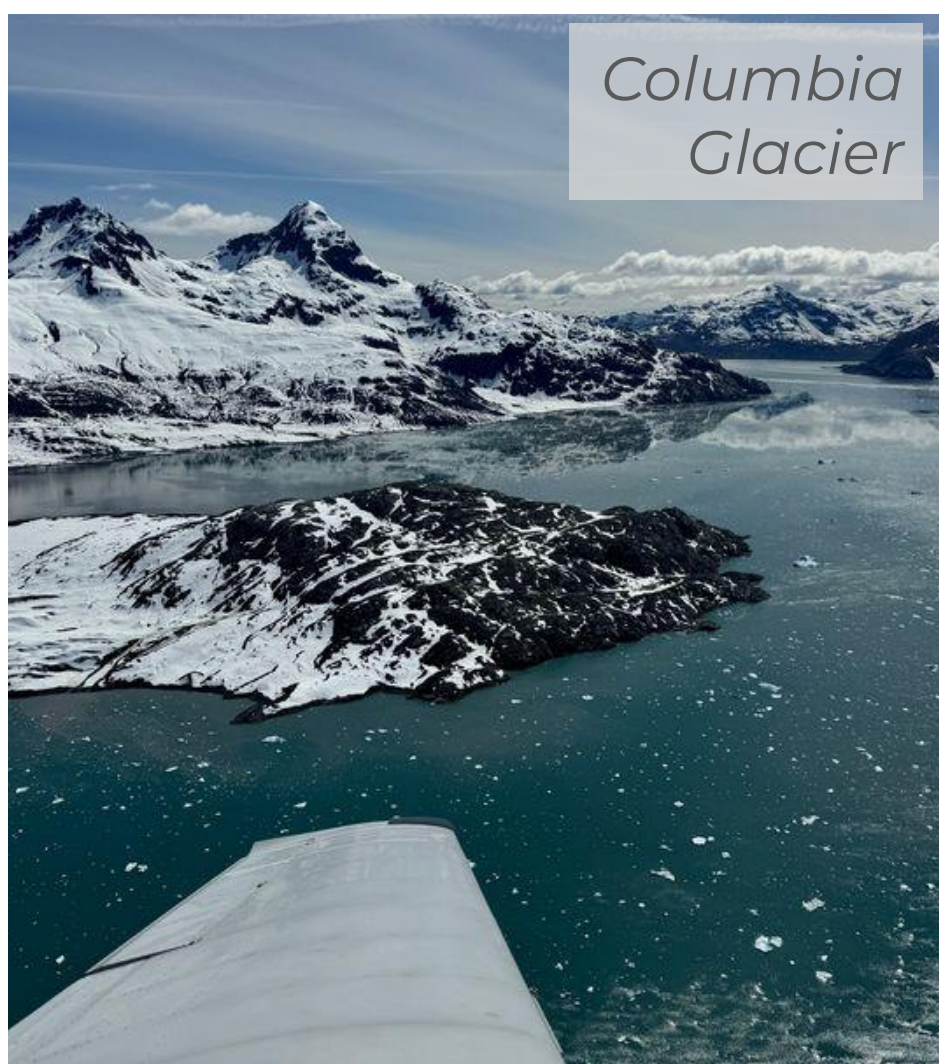
Glacier
Extent 2024

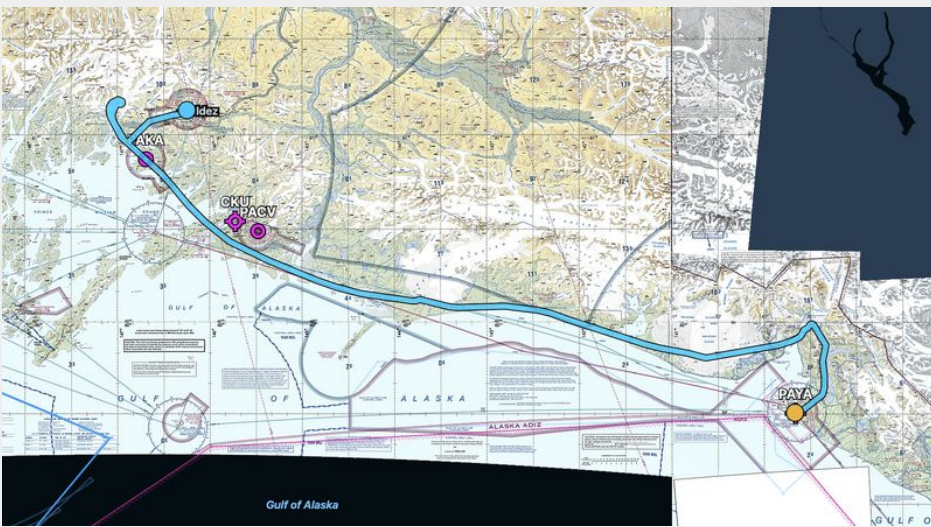
The Face of
Columbia Glacier

Columbia Glacier

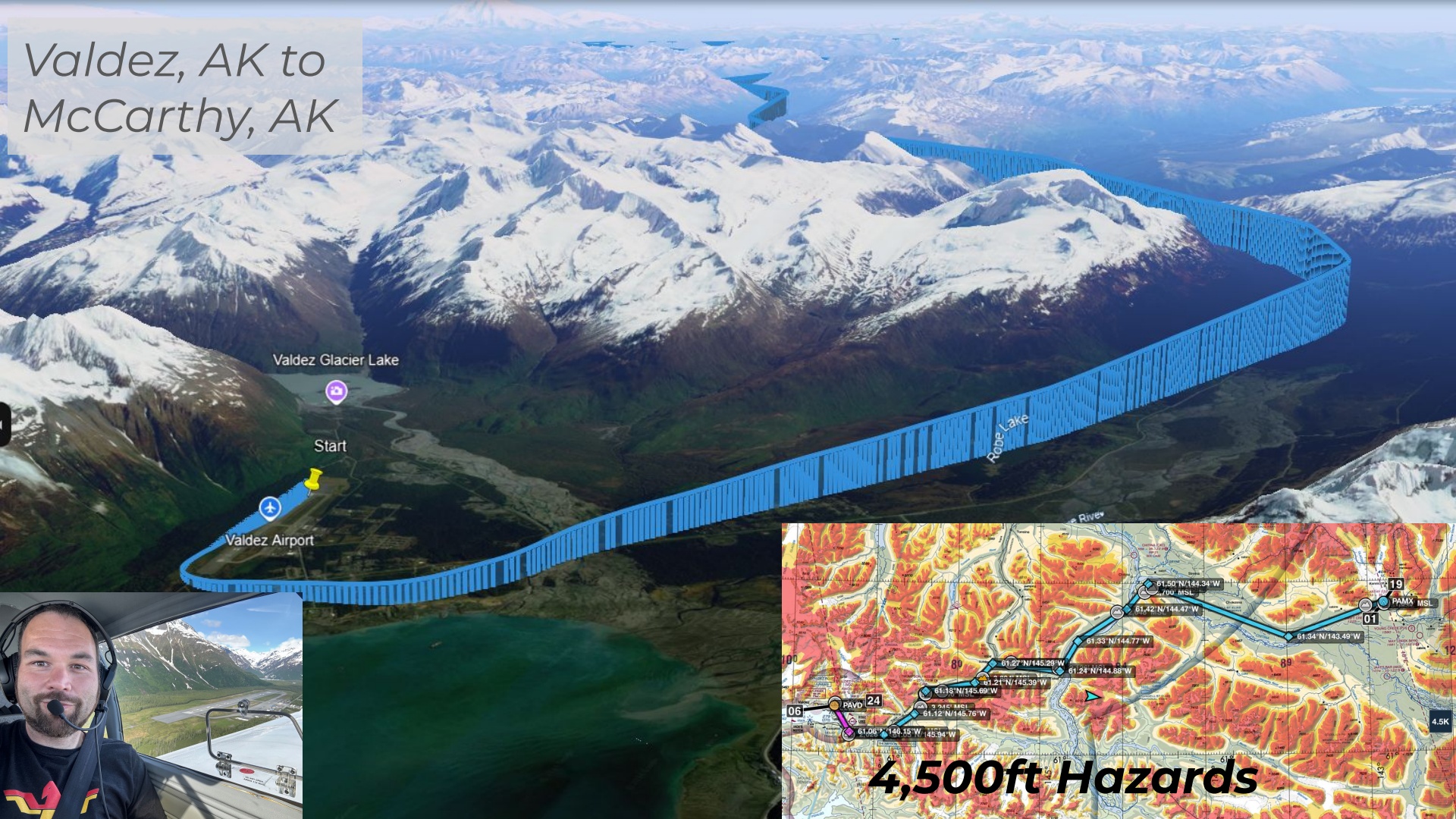


*Columbia
Glacier*





Valdez, AK to McCarthy, AK



4,500ft Hazards

Valdez, AK to McCarthy, AK

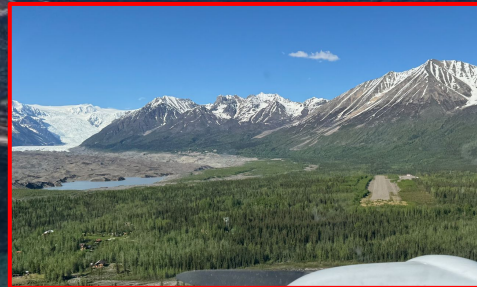
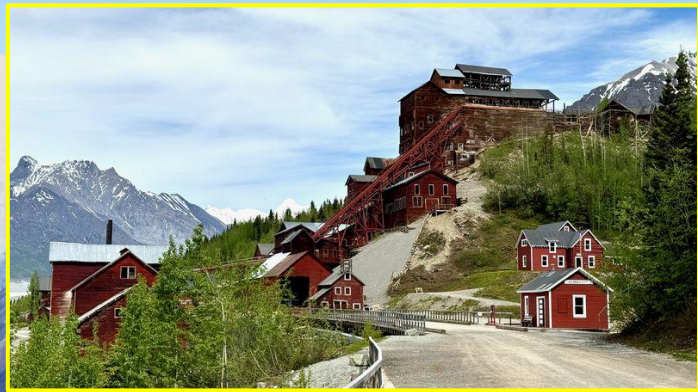
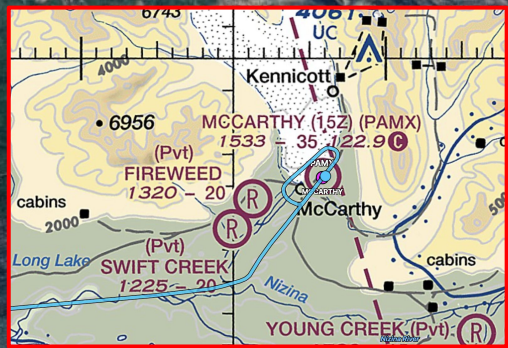
Root
Glacier →

Kennecott →
Glacier

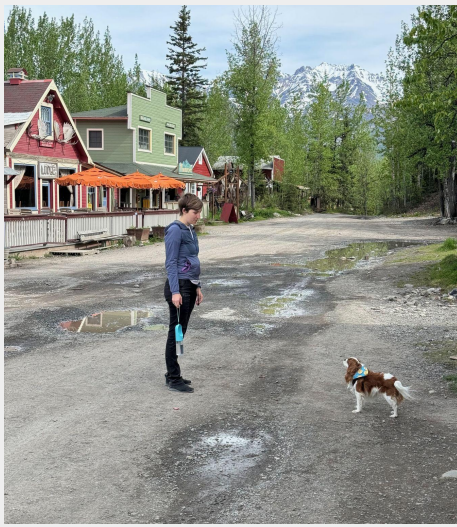
Kennecott Mines National
Historic Landmark

McCarthy
Airport 15Z

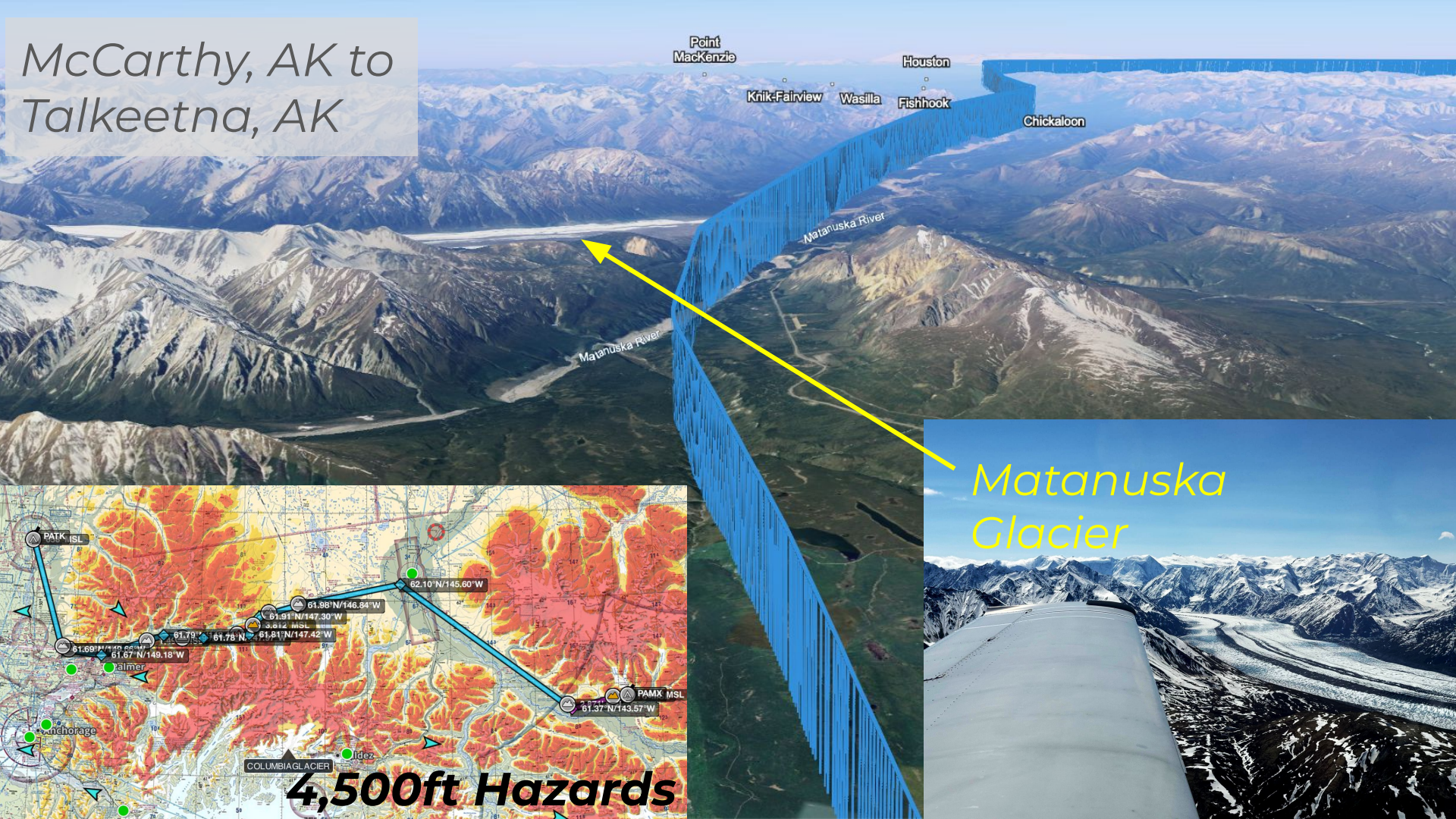
Inspection
Pass →



McCarthy, AK
PAMX



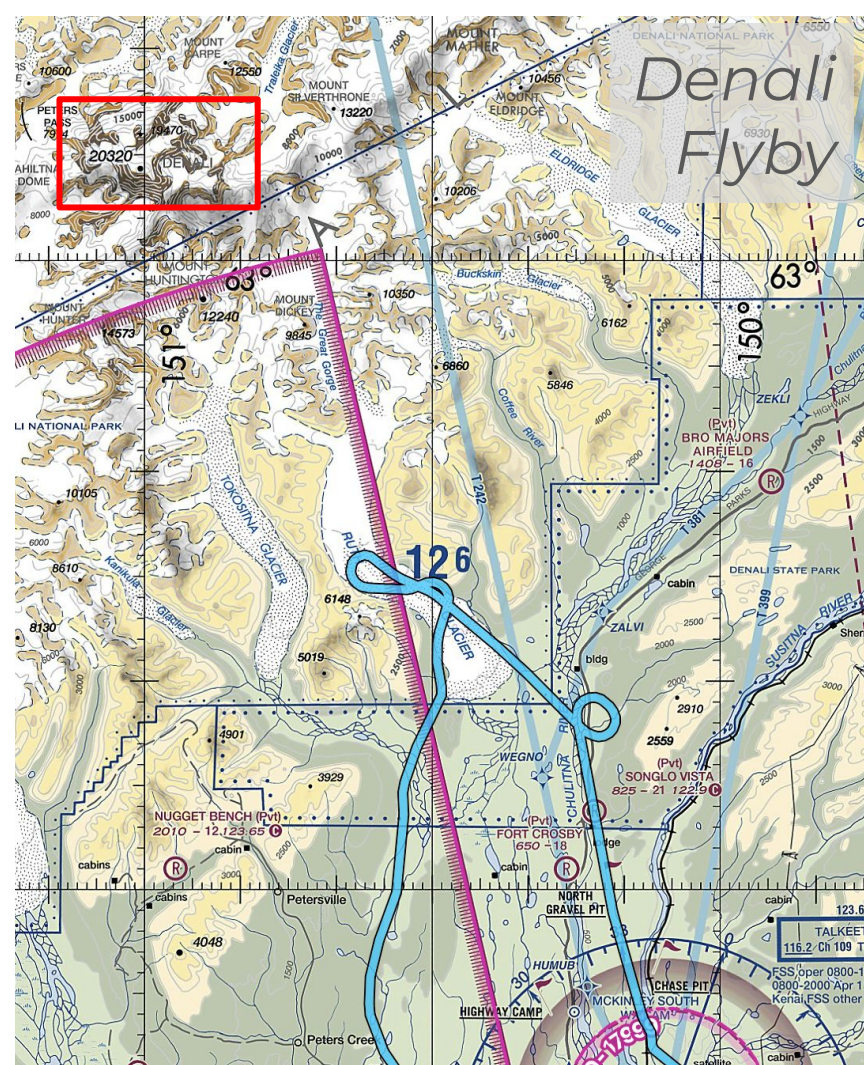
McCarthy, AK to Talkeetna, AK



4,500ft Hazards

Matanuska
Glacier

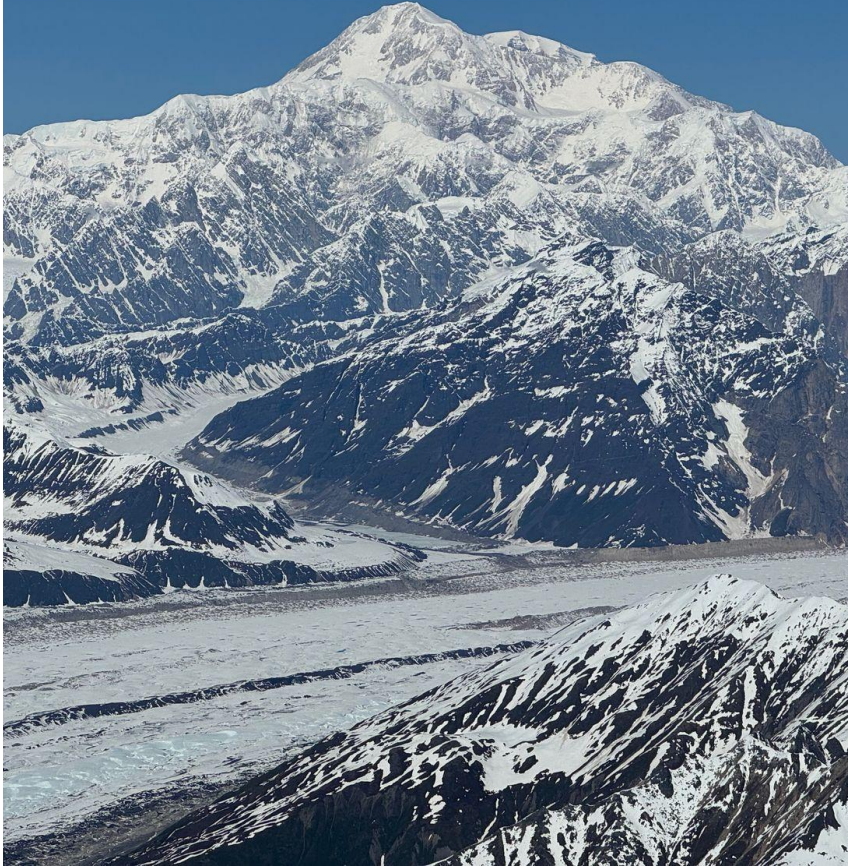


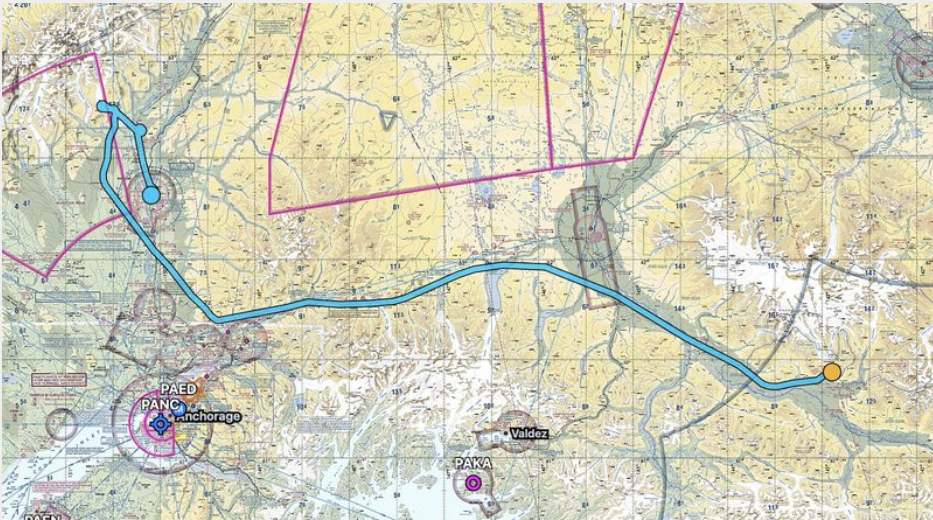


Denali, AK

20,310 ft MSL →

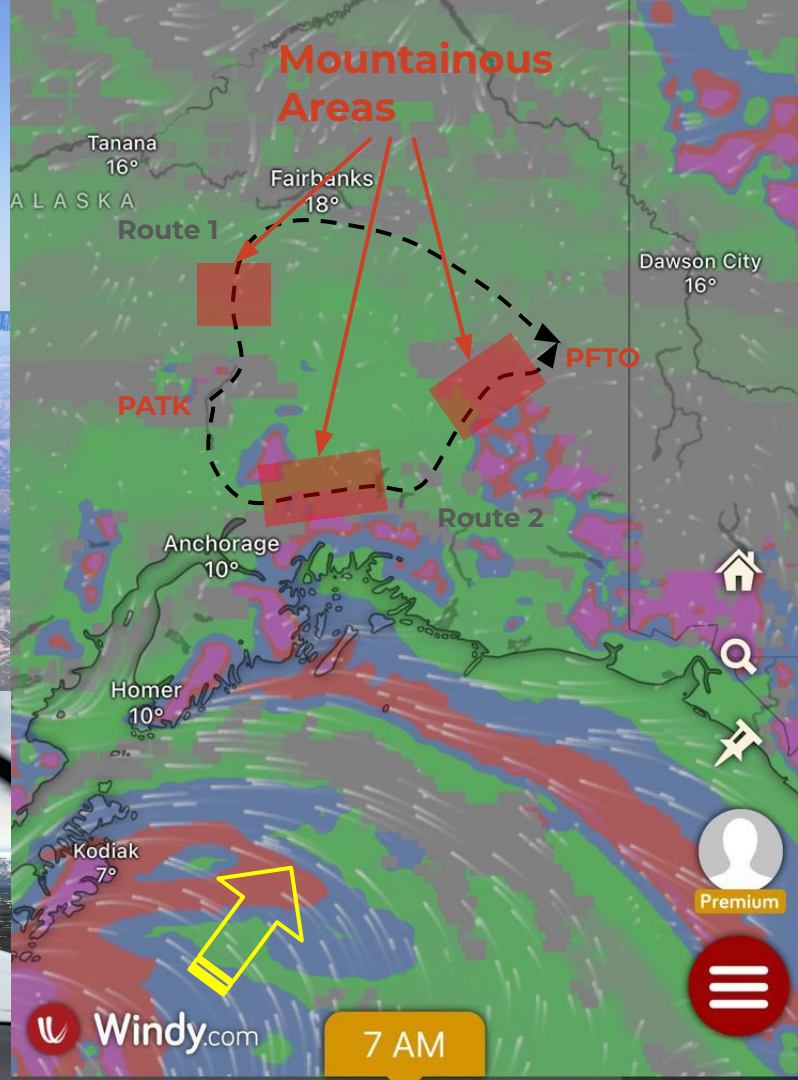
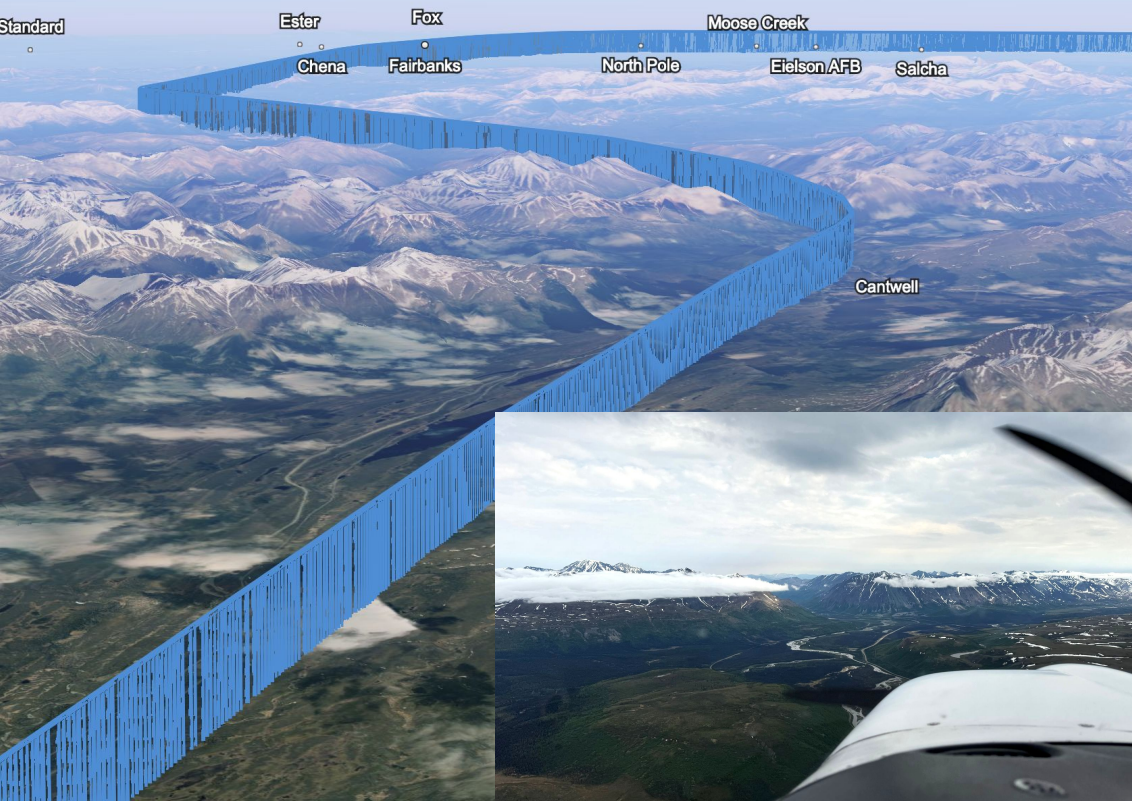
Ruth Glacier →



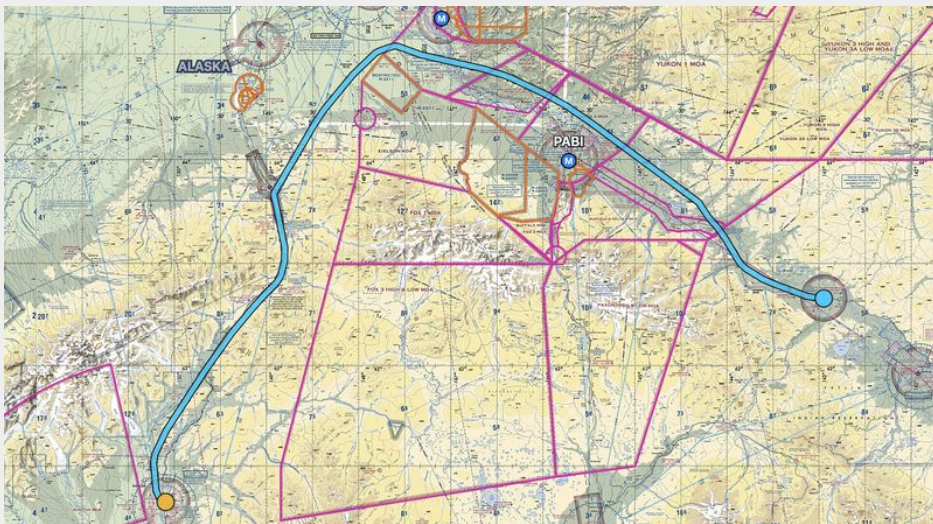


Talkeetna, AK
PATK

Escape from Alaska



Tok Junction, AK PFTO



The Alcan Highway and the Canadian Rockies (Part 2)

Tok Junction, AK to
Vancouver, BC

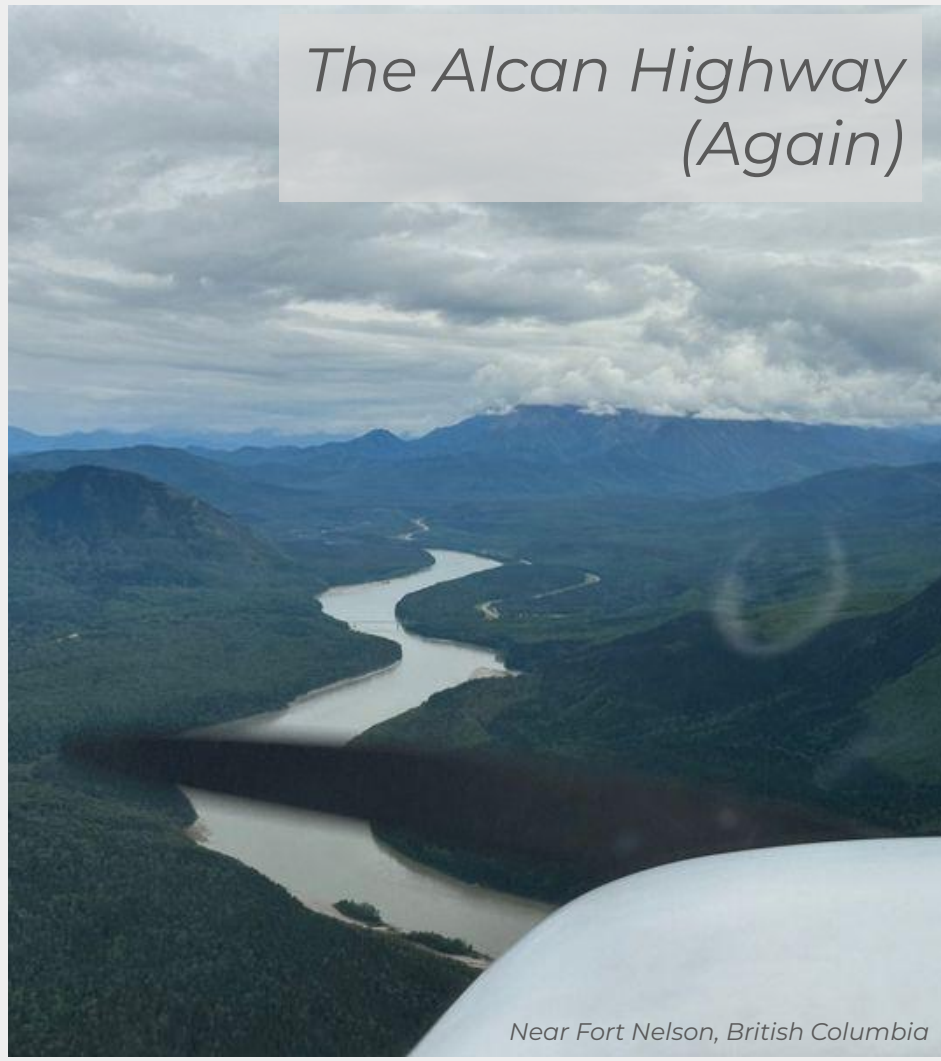
1,257 nm



Near Whitehorse, Yukon Territories

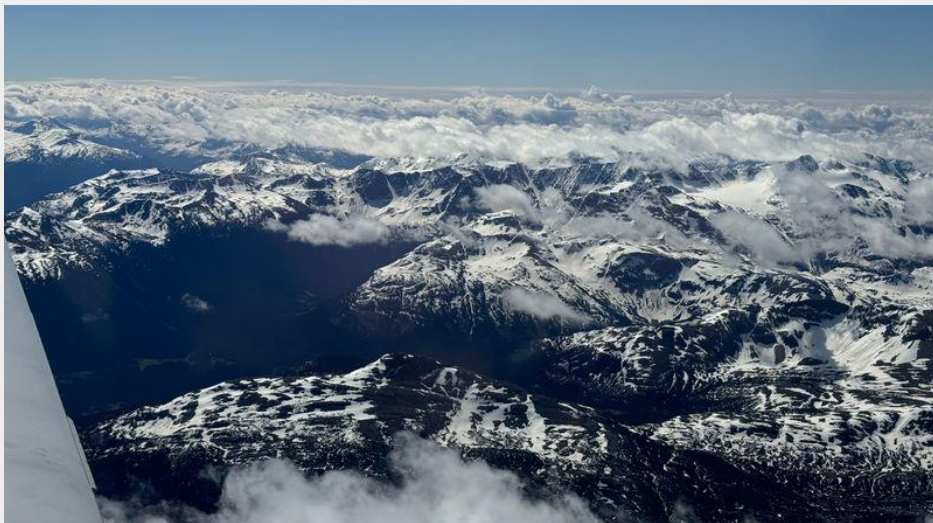
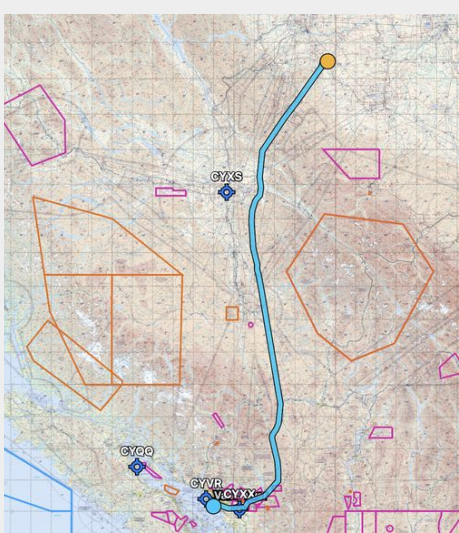


The Alcan Highway (Again)



Near Fort Nelson, British Columbia

Vancouver, BC
CZBB



Return via the Pacific Northwest and American Southwest

Vancouver, BC to Orlando, FL
2,840 nm

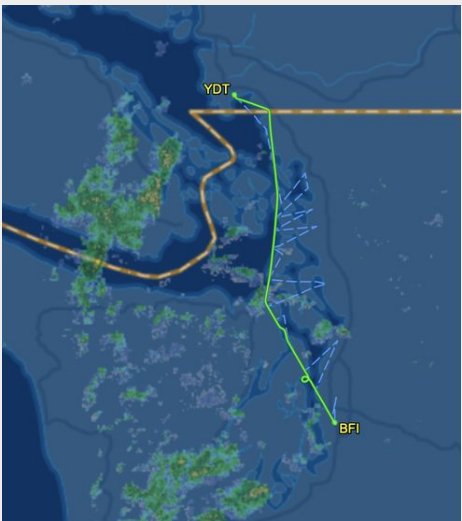


San Francisco, California

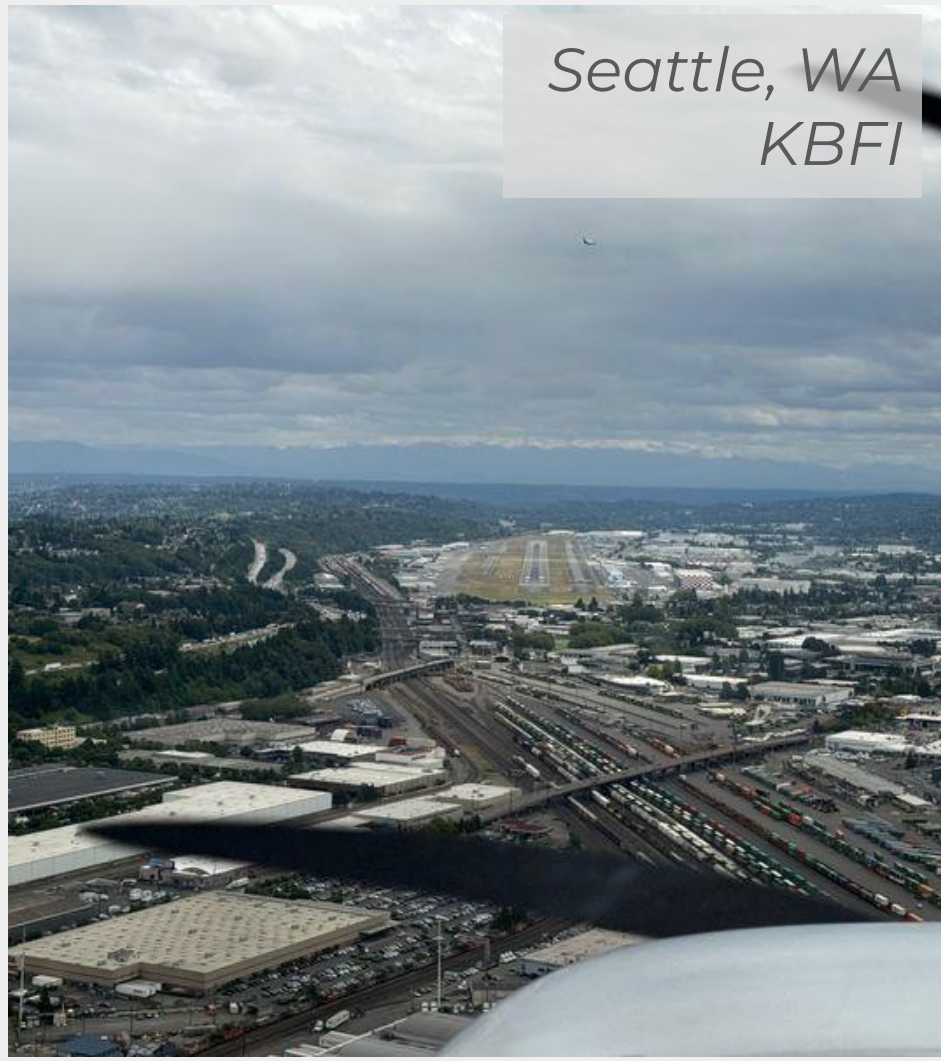
Planning Challenges

- Cross large distances and deal with lots of unique weather systems
- International border crossing back to USA
- Possible Icing + IFR in PNW area ☁️❄️
- High Density Altitude in the SW 🌞🌵, crossing the Sierras

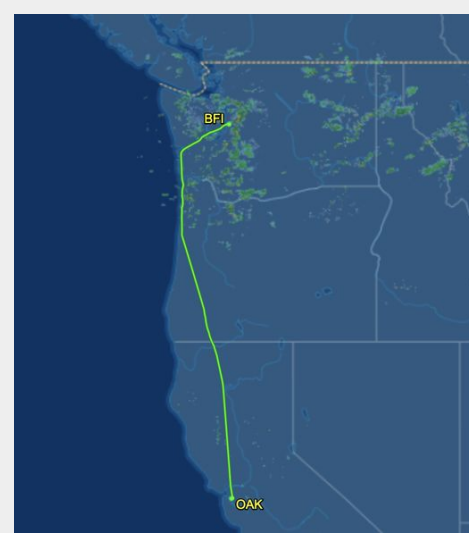




Seattle, WA
KBFI



Oakland/SF, CA
KOAK





Page, AZ
KPGA



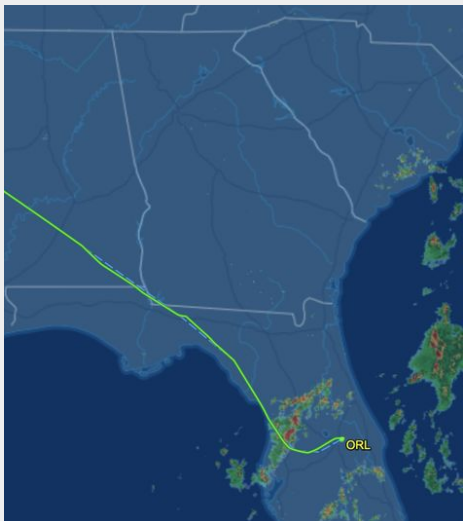
Antelope Canyon, AZ





Little Rock, AR KLIT





To be continued...



Rapid City, South Dakota



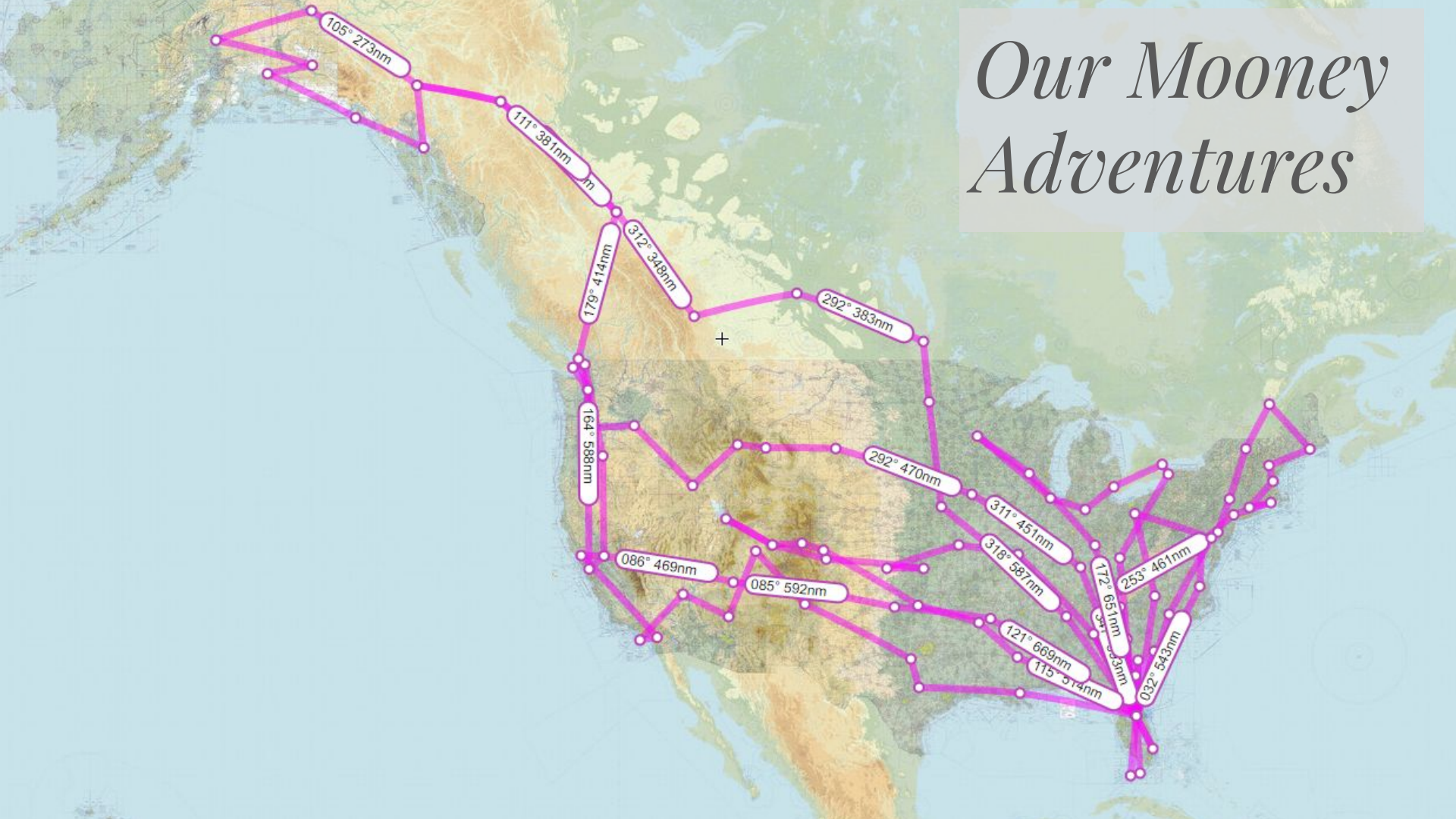


Trip Stats

- **Total Distance:** 9,347 nm
- **Direct Distance:** 8,309 nm
- **States Visited:** 9 US States and 5 Canadian Provinces
- **Hours Logged:** 68.2
- **Total Days:** 30
- **Flying Days:** 19
- **Legs:** 26 (20 VFR, 6 IFR)
- **Longest Leg:** Little Rock, AR (KLIT) to Orlando, FL (KORL)
 - 4.7 hrs - 669nm (direct) - 706nm (actual)
- **Longest Day:** Page, AZ (KPGA) to Elk City, OK (KELK) to Little Rock, AR (KLIT)
 - 6.6 hrs - 985 nm
- **Shortest Leg:** Oakland, CA (KOAK) to Rancho Murieta, CA (KRIU)
 - 0.8 hrs - 70nm (direct) - 81nm (actual)
- **Approaches Flown:** 1 ILS (KBFI)
- **Unpaved Runways:** 1 (McCarthy, AK - PAMX)
- **Fuel Purchased:** 696 gal - \$5,218.48
 - \$7.50/gal avg, highest **\$12.18/gal at PAJN**
- **FBO Services / Overnights / Fees:** \$475.96
- **Oil Quarts Added:** 4 (plus 1 entire DIY oil change at KRIU)



Our Mooney Adventures





Helpful Resources

- Ted Waltman's wonderful fly2ak.com
- WX Models Windy.com
- FAA WX Cameras
<https://weathercams.faa.gov>
- NAVCANADA Flight Plans
<https://plan.navcanada.ca/>
- Fire and Smoke Forecast
<https://firesmoke.ca/forecasts/current/>
- FAA Alaska Chart Supplement

Questions?

Contact Me:
binnsflightservices.com



Denali, Alaska