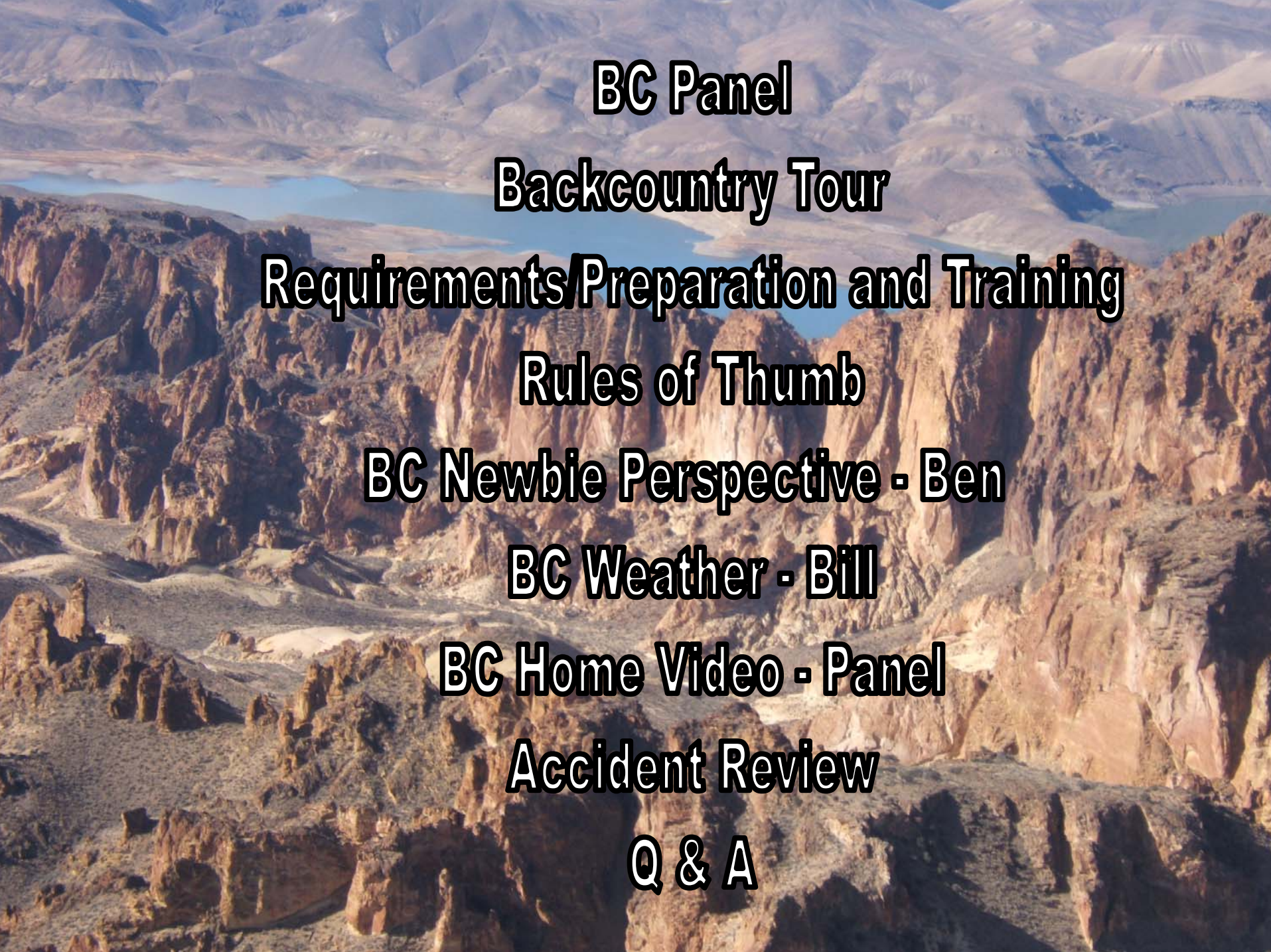
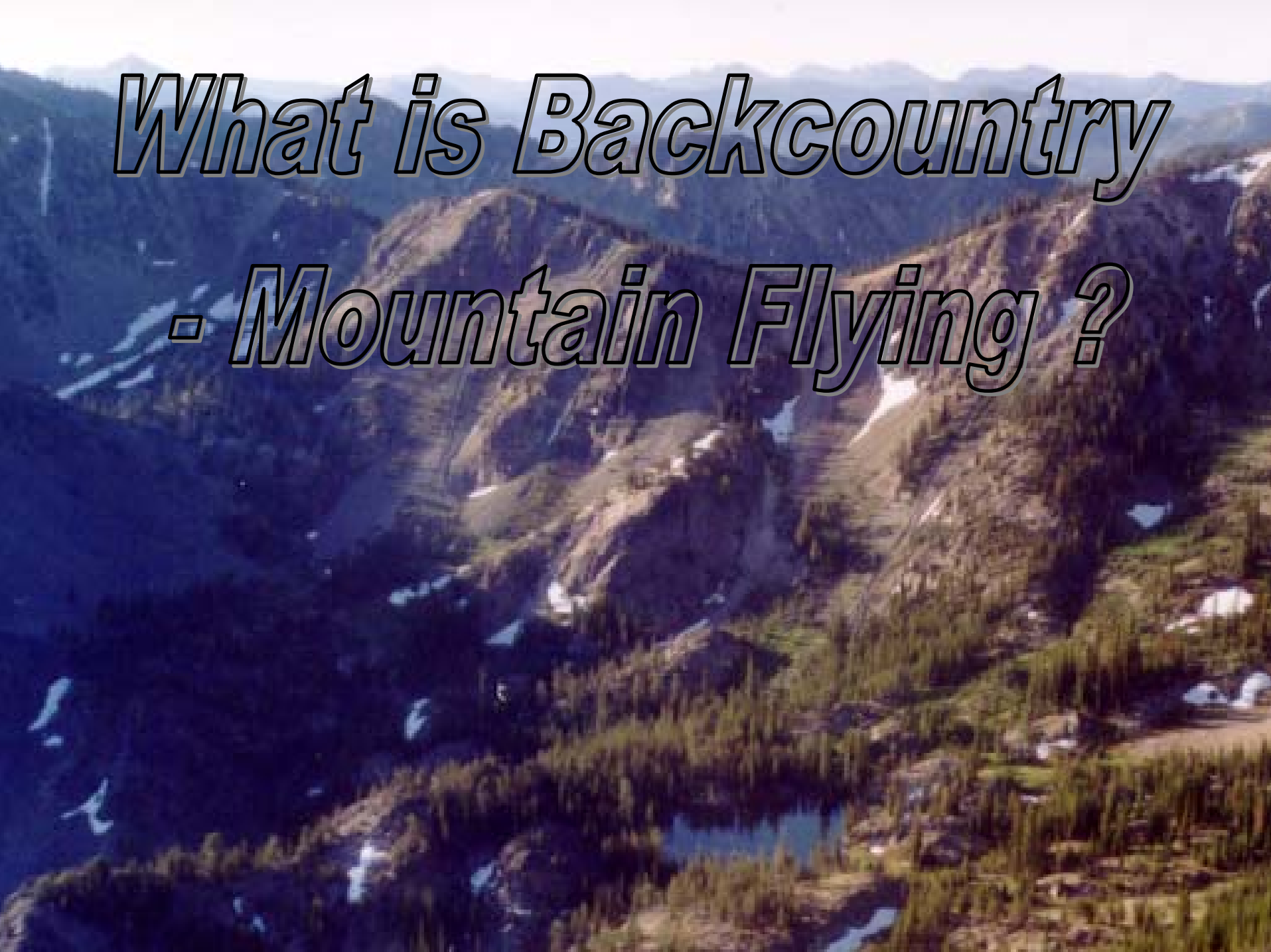
Flying The Idaho Back Country

JIM HUDSON

T-Craft Safety / Membership Director

May 23, 2012


BC Panel
Backcountry Tour
Requirements/Preparation and Training
Rules of Thumb
BC Newbie Perspective - Ben
BC Weather - Bill
BC Home Video - Panel
Accident Review
Q & A

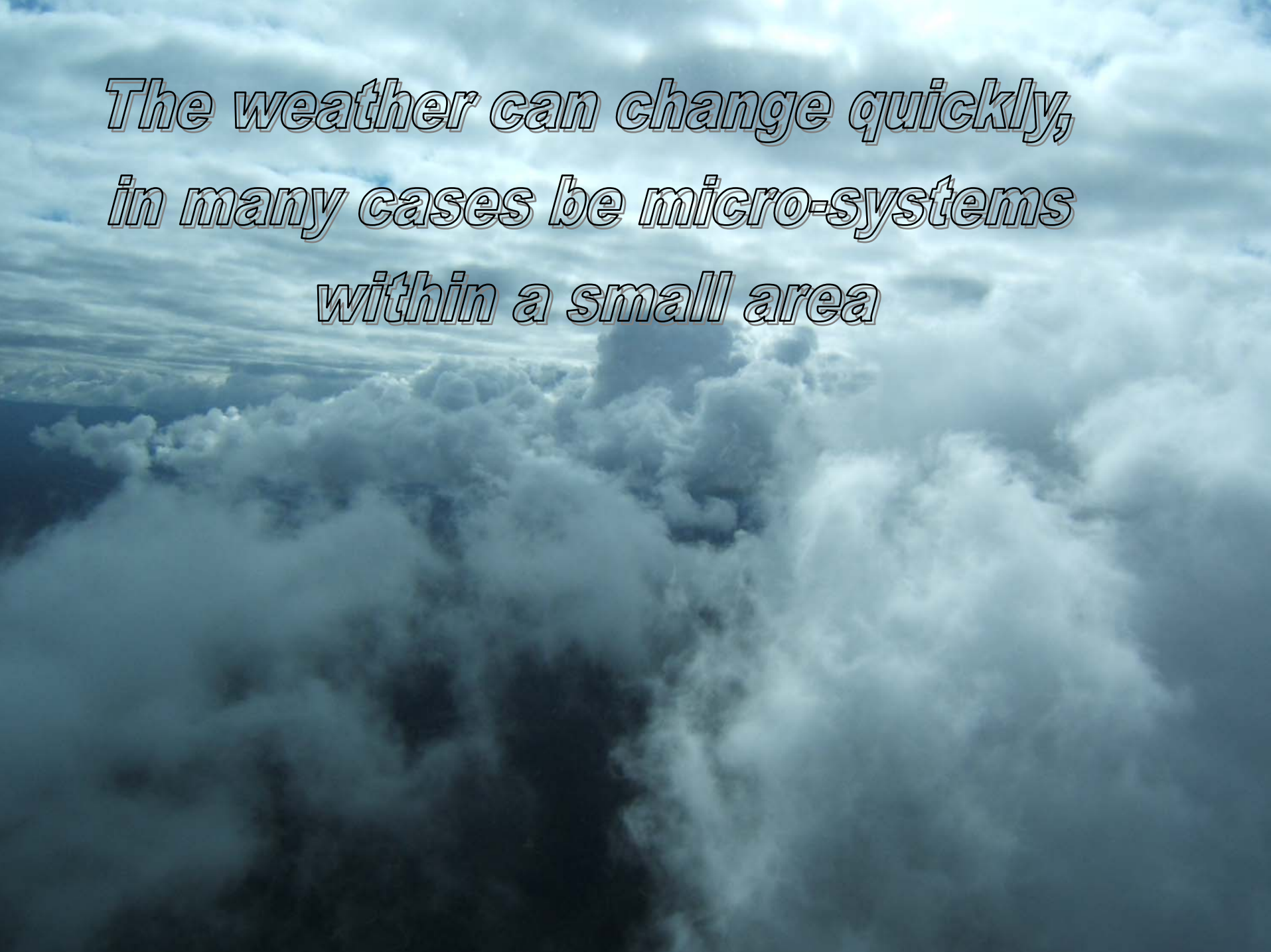

What is Backcountry
- Mountain Flying ?

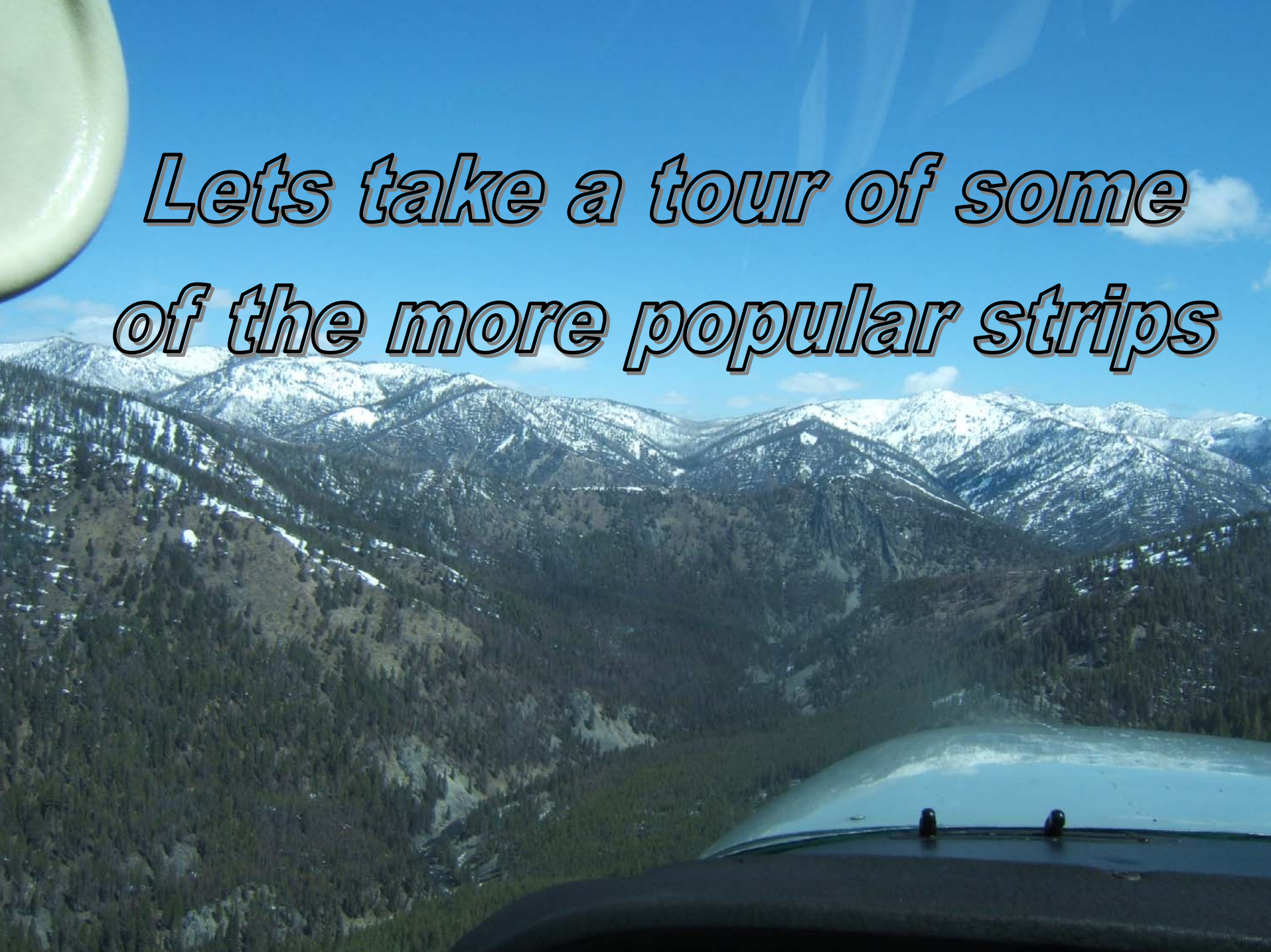

Flying over or in beautiful
but rugged mountainous terrain,

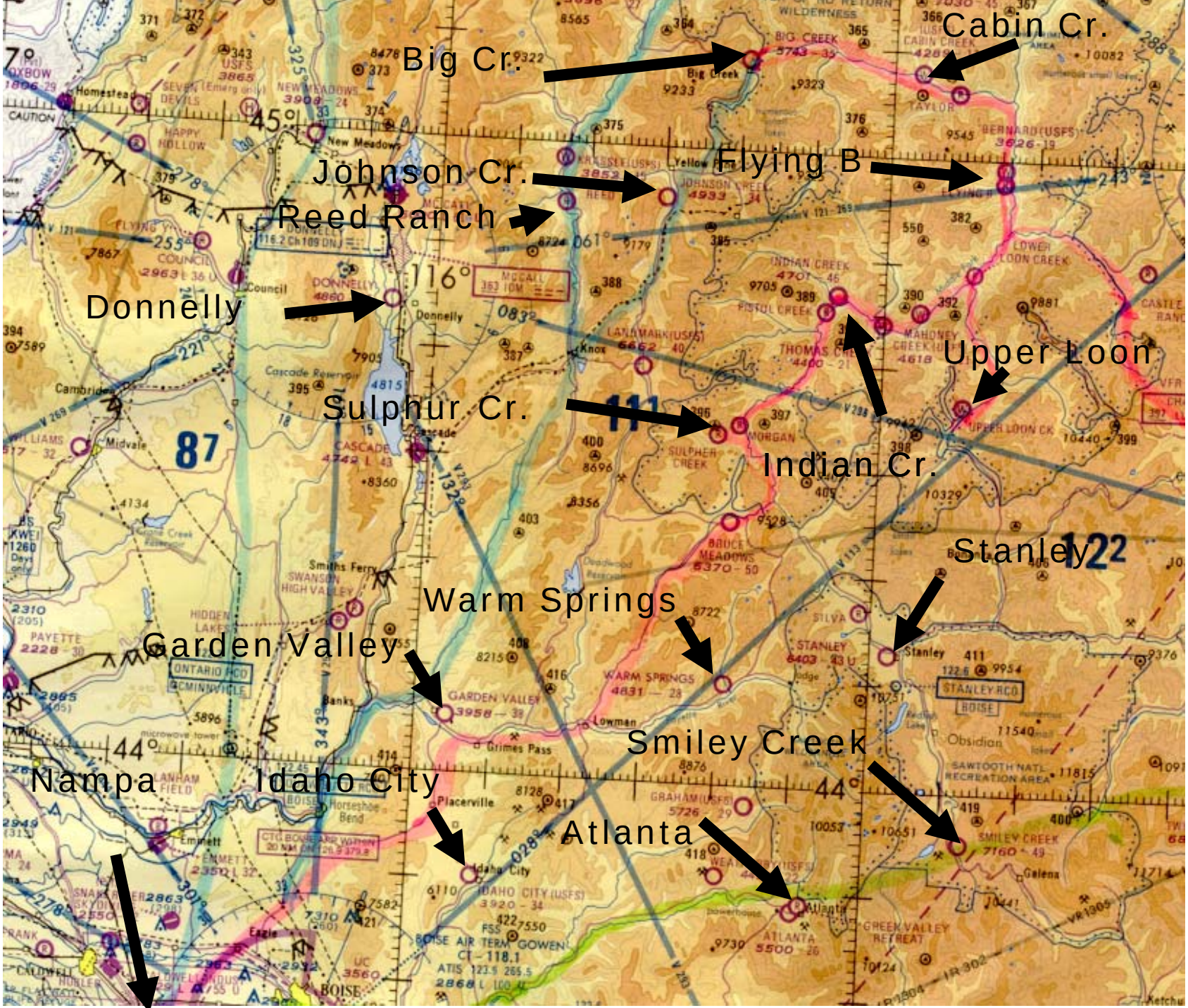

or in deep canyons.

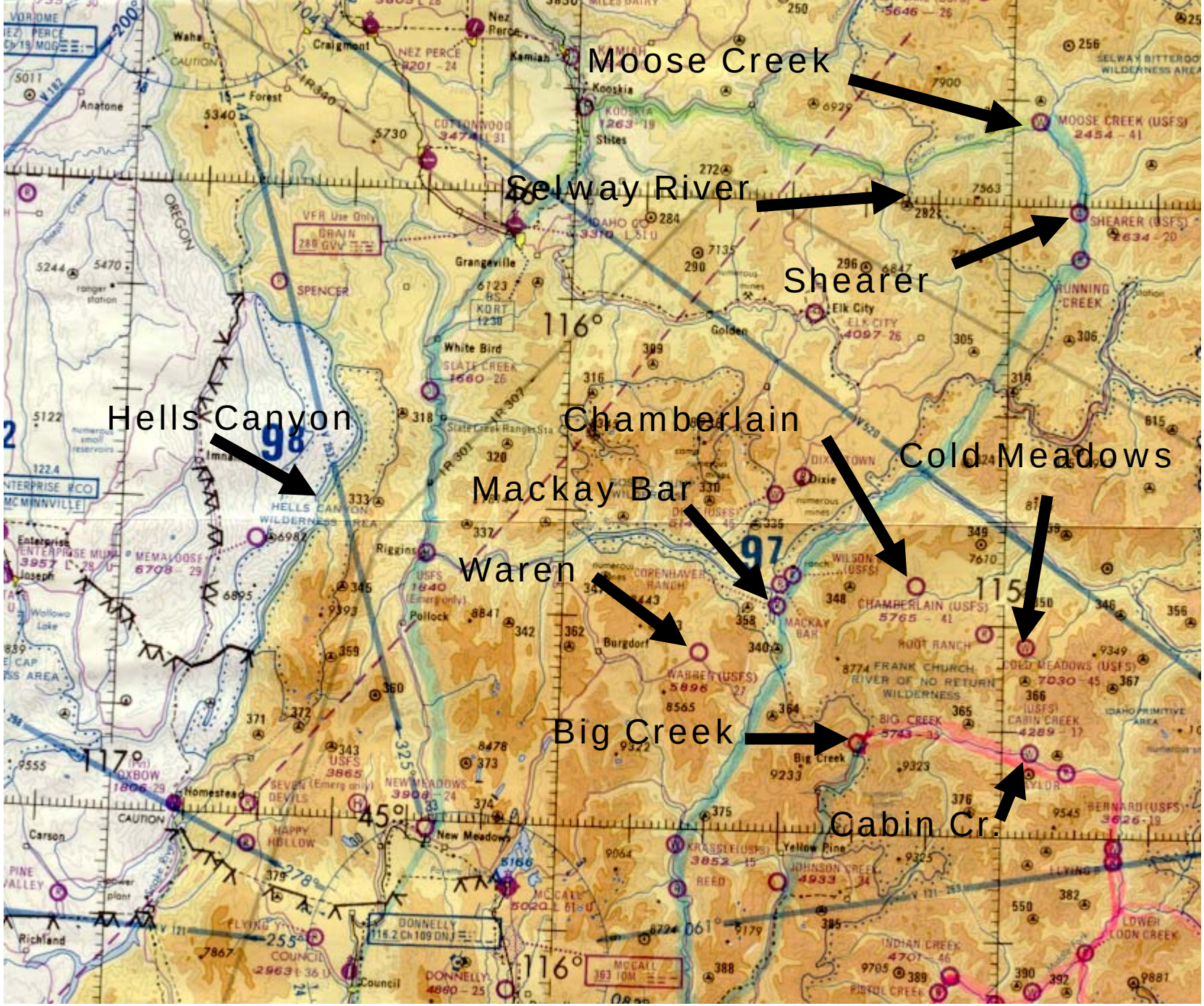

Mountain flying is very unforgiving to
poor planning and training.
There is a very narrow margin for error.


Landing strips are typically
narrow, short, and at high elevation


The weather can change quickly,
in many cases be micro-systems
within a small area


Lets take a tour of some
of the more popular strips


Cabin Cr.
Big Cr.
Flying B
Johnson Cr.
Reed Ranch
Donnelly
Upper Loon
Sulphur Cr.
Indian Cr.
Stanley
Warm Springs
Garden Valley
Smiley Creek
Nampa
Idaho City
Atlanta


Moose Creek
Selway River
Shearer
Hells Canyon
Chamberlain
Cold Meadows
Mackay Bar
Waren
Big Creek
Cabin Cr.

T-Craft BC Policy
Classification of Air Strips
Fly Idaho Relative Hazard Index RHI

Level I Airports* RHI 1-9	Level II Airports* RHI 10-19	Level III Airports* RHI 20-28
3 Priest Lake (67S)	10 Slate Creek (1S7)	20 Weatherby (52U)
4 Smith's Prairie (2U0)	10 Memaloose (25U)	20 Graham (U45)
4 Murphy Hot Springs (3U0)	10 Landmark (0U0)	20 Cold Meadows (U81)
5 Cavanaugh Bay (66S)	11 Twin Bridges (U61)	21 Deadwood**
5 Magic Reservoir (U93)	12 Chamberlain (U79)	22 Bernard (U54)
6 Elk River**	12 Magee (S77)	22 Krassel (24K)
6 Midway (U37)	12 Pine (1U9)	22 Upper Loon Creek (U72)
6 Bear Trap (1U0)	13 Elk City (S90)	23 Rogersburg**
6 Fairfield (U86)	13 Flying B**	24 Moose Creek (1U1)
7 Laidlaw Corrals (U99)	13 Greene Valley Ranch**	24 Thomas Creek (2U8)
7 Grasmere (U91)	14 Big Creek (U60)	26 Dixie Town**
7 Cox's Well (U48)	14 Johnson Creek (3U2)	26 Fish Lake (S92)
7 Big Southern Butte (U46)	15 Lord Flat**	27 Dug Bar**
7 Stanley (2U7)	15 Sulphur Creek**	27 Pittsburg**
7 Garden Valley (U88)	15 Indian Creek (S81)	27 Wilson Bar**
7 Idaho City (U98)	17 Warren (3U1)	28 Shearer (2U5)
7 Smiley Creek (U87)	18 Orogrande**	28 Big Bar**
7 Antelope Valley (U92)	18 Cayuse Creek**	28 Mahoney Creek (0U3)
8 Hollow Top (0U7)	18 Mackay Bar**	28 Cabin Creek (I08)
8 Copper Basin (OU2)	19 Dixie USFS (ID05)	
9 Warm Springs (0U1)	19 Atlanta (55H)	
9 Henry's Lake (U53)		
9 Bruce Meadows (U63)		


Garden Valley
Level 1


Jeff Cook
N4464R


Jim Schiers
FLY IDAHO!

Warm Springs

Smiley Creek

Level 1

galen@flyidaho.com

Paul Chase


Redfish Lake - Mt Heybern

Stanley


Short Final Stanley

Jared Martens

Sulphur Creek

Level 2


Mark Pfeifer


"Don"


Indian Creek
Level 2
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galen@flyidaho.com


Charles Merrell Dan Johnson


Flying B Ranch
Level 2

Big Creek

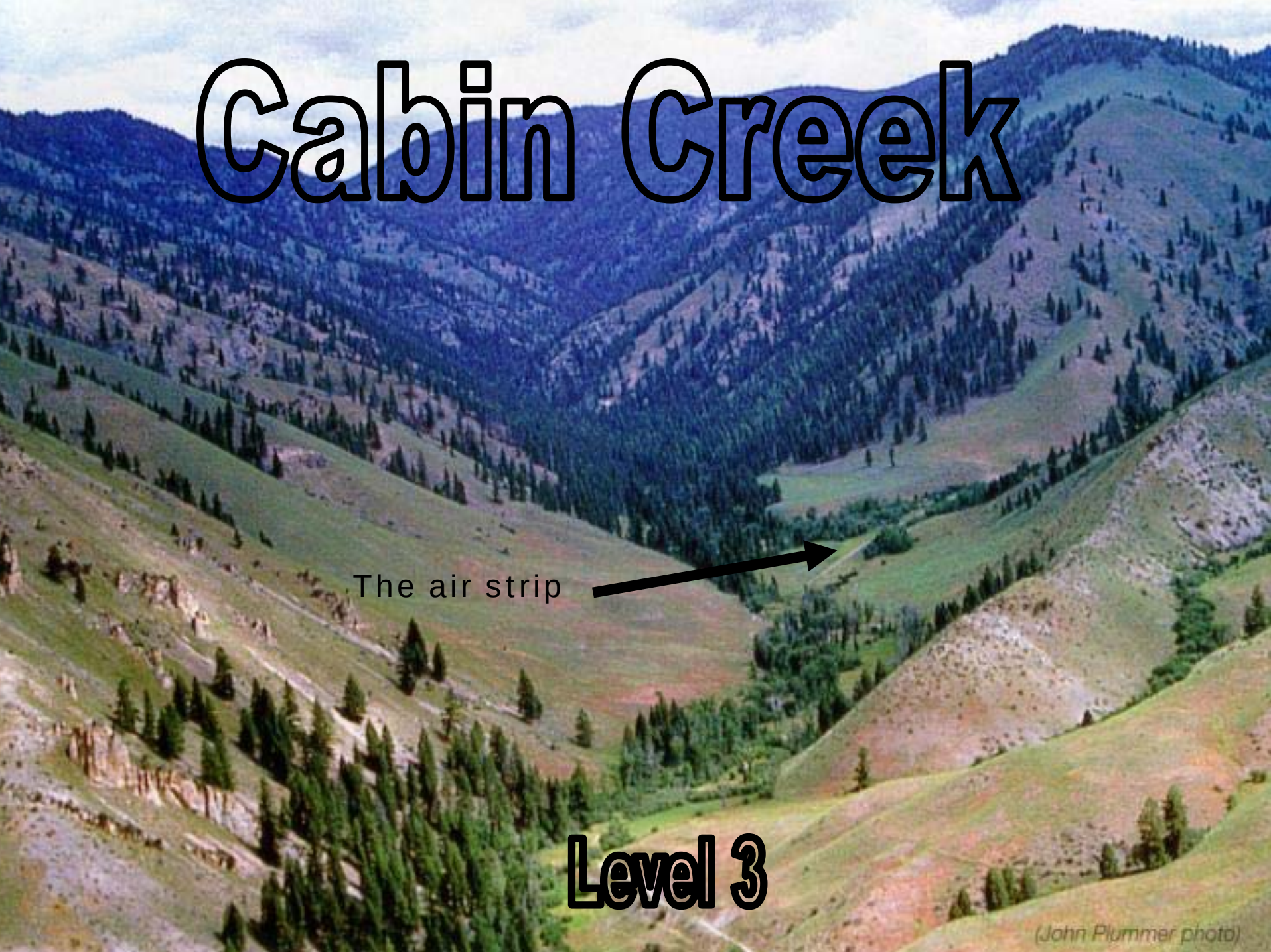
Level 2


Big Creek Lodge 2008 Fire
BIG CREEK LODGE
LICENSED PACKER
FOOD & LODGING
TRAIL RIDING
PASTURE
HUNTING & FISHING


Johnson Creek
Level 2

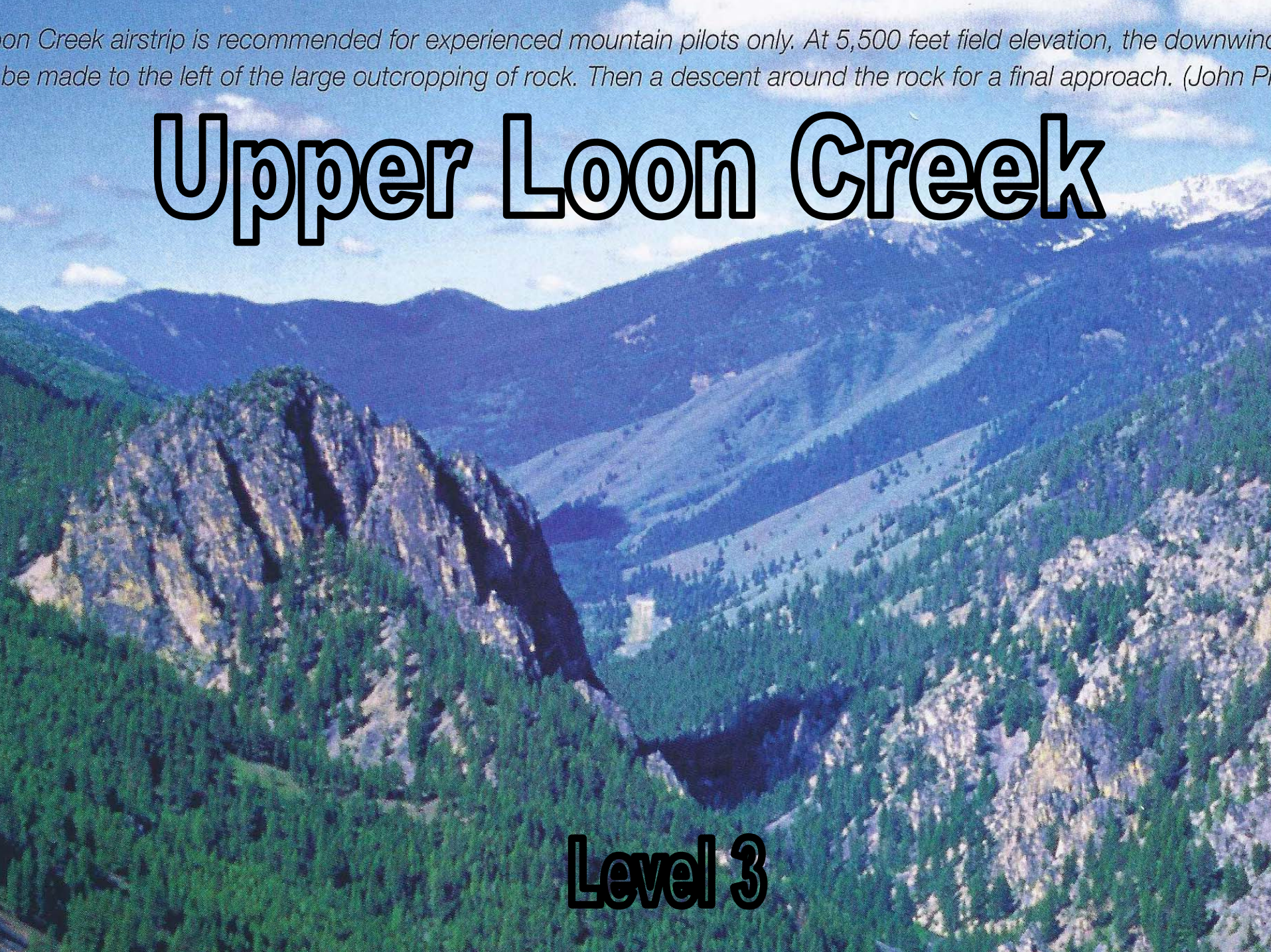
Chamberlin Basin


Chamberlin
Steve Fickes


Cabin Creek
The air strip
Level 3
(John Plummer photo)

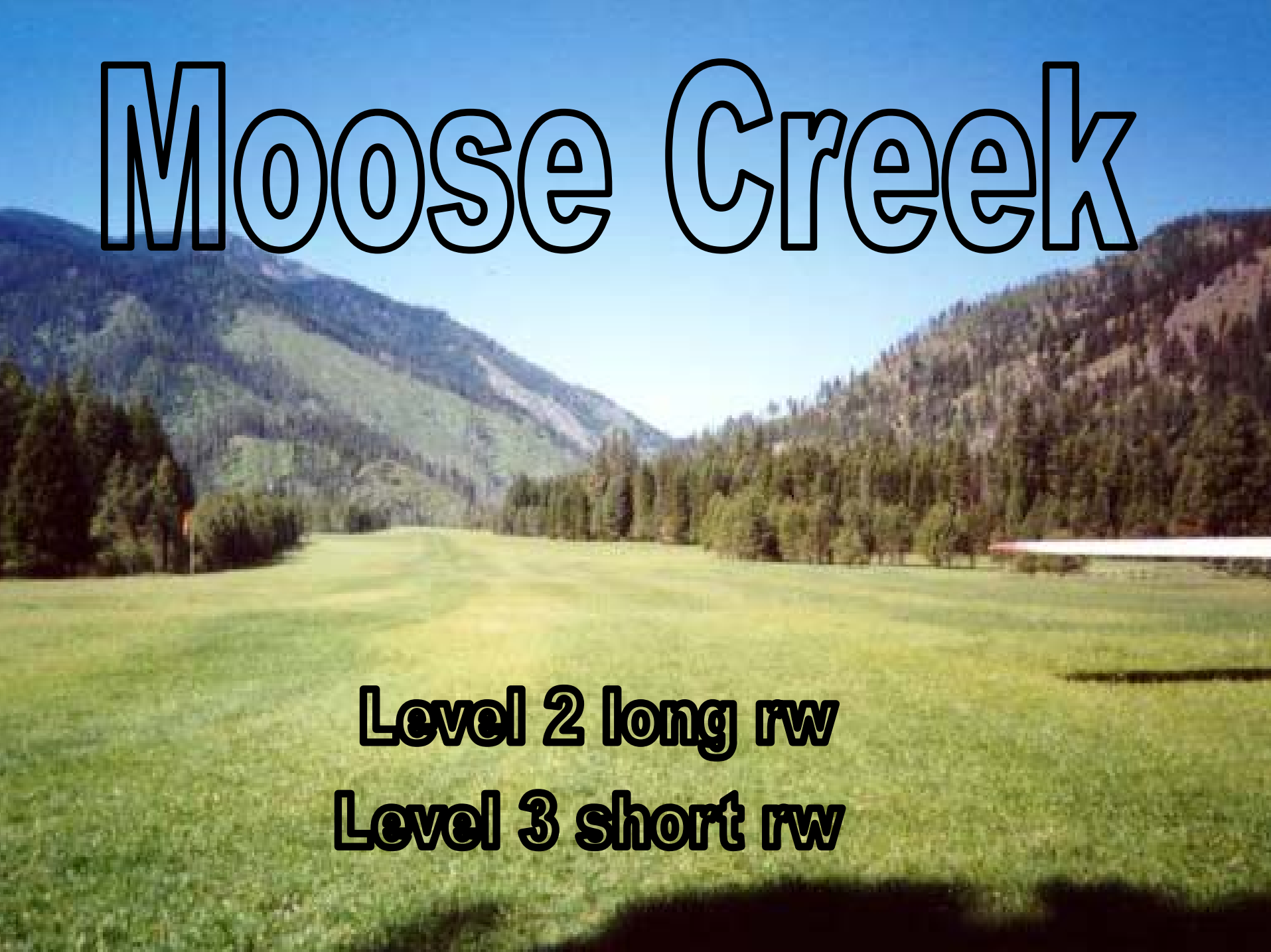
on Creek airstrip is recommended for experienced mountain pilots only. At 5,500 feet field elevation, the downwind
be made to the left of the large outcropping of rock. Then a descent around the rock for a final approach. (John P

Upper Loon Creek



Level 3

Bill McGlynn


Moose Creek
Level 2 long rw
Level 3 short rw


Allison Ranch
Level 3 +

Getting Started

Pilot Requirements

Generally accepted requirements: FAA / AOPA/ Mtn. Flying Clinics. At least 150 – 250 hrs of PIC with 50-100 hrs in M&M, 10 Hrs M&M within 90 days.

T-Craft BC Policy Brief

To start, each level requires minimum of 5 hrs of instruction within 60 days in Make & Model.

Level 1 150 Hrs total, 50 PIC make and model

Level 2 250 Hrs total 75 PIC make and model

Level 3 325 Hrs total 125 PIC make and model

Also an annual refresher ground class and min of 1 hr mtn flying practice in M&M within 30 days prior to heading into the BC.

THE BASICS

- KNOW YOURSELF
- KNOW THE AIRCRAFT
- KNOW THE ENVIRONMENT

JUDGEMENT – KNOWLEDGE – SKILL

Get instruction from approved backcountry CFIs or take one of the BC clinics.

KNOW THYSELF

Currency – Tune up skills prior to flying the Backcountry

GOOD JUDGEMENT COMES FROM EXPERIENCE – EXPERIENCE USUALLY COMES BAD JUDGEMENT (YOUR'S OR PREFERABLY SOME ELSES)

YOUR ATTITUDE!! – Knowledge and Skill don't make up for BAD Judgment – be honest with yourself.

This is risky flying; the techniques may be entirely different than what you learned in basic flight training.

NEVER BECOME COMPLACENT – OR OVER CONFIDENT

Part Time Pilots - Full Time Mountains.

SET AND ADHERE TO PERSONAL LIMITS

KNOW YOUR AIRPLANE & YOUR SKILLS

The three most important things:

Slow Flight, Slow Flight **SLOW FLIGHT!!**

(helps you become one with your aircraft)

Know your aircraft performance and your ability to perform

- Takeoff, climb, cruise, and landing performance
- Airspeed settings in different weight/bal configurations
- Fuel consumption and range
- Weight and balance limits
- And : **Effects of Density altitude**

KNOW THE ENVIRONMENT

Study and learn as much as possible in the following areas. An experienced BC pilot can help.

Learn the geography and major landmarks
(peaks and drainage's) of the area in which
you are flying. Google Map/ Earth can help.

Plan your route through drainages, meadows – DON'T go GPS direct.

Be familiar with local mountain & Canyon weather

General Circulation Patterns, thermal & turbulence,

Local Canyon Windflow Patterns

Know specific details of airstrips you are using

Approach and departure routes, Unique Hazards,

Lighting conditions.

IAA web page www.idahoaviation.com – Idaho Airstrip Network. www.shortfield.com Airport Explorer. Both have airport directory's with google maps/satellite and topo views, descriptions and in some cases pilot reports, photos, and video's

KNOW THE ENVIRONMENT

Study and learn as much as possible in the following areas. An experienced BC pilot can help.

Learn the geography and major landmarks

EXAMPLE – INDIAN CREEK

Sectional Chart – Overview

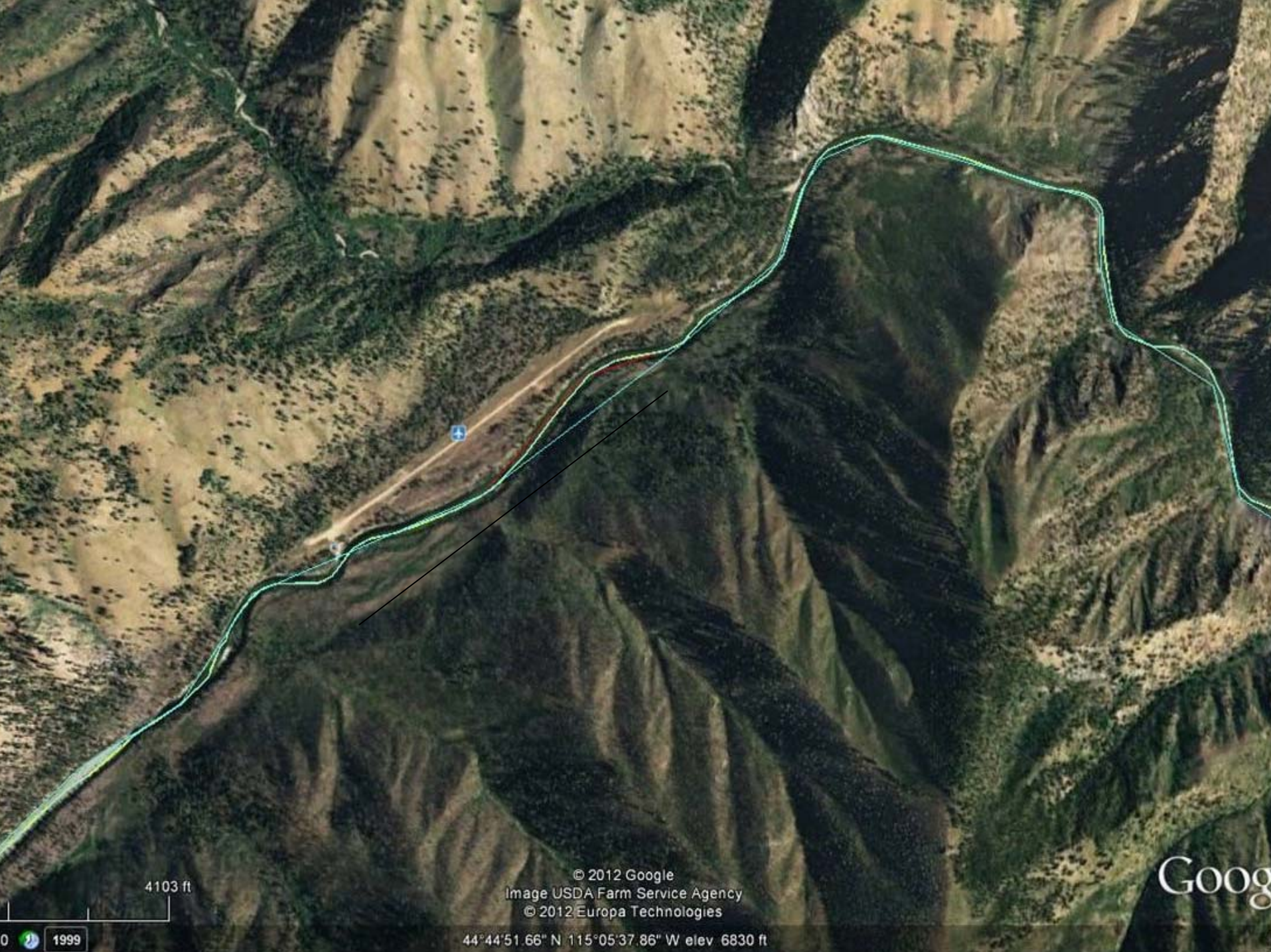
Idaho State Aeronautics Chart

Shortfield.com – Topo/Goggle Maps / photo's/ video's / comments

Idaho Aviation Association

Fly Idaho Book

Indian Creek
101
INDIAN CREEK USFS (S81)
4701 - 46 122.9
MAHONEY CREEK USFS
THOMAS CREEK (2U8)
4415 - 21 122.9
14,500 MSL
SALMON
RIVER
MORGAN (Pvt)


4103 ft
© 2012 Google
Image USDA Farm Service Agency
© 2012 Europa Technologies
1999
44°44'51.66" N 115°05'37.86" W elev 6830 ft

INDIAN CREEK USFS S81

LOCATION

LAT 44°45.67′ LONG 115°06.44′

LAYOUT

ELEVATION 4701

CTAF 122.9

LOCATION
ADJACENT SE OF RANGER STN

VOR	FREQ	RAD	NM
LKT	113.5	231°	50.0

COMMUNICATIONS CTAF 122.9

NAV AIDS NO

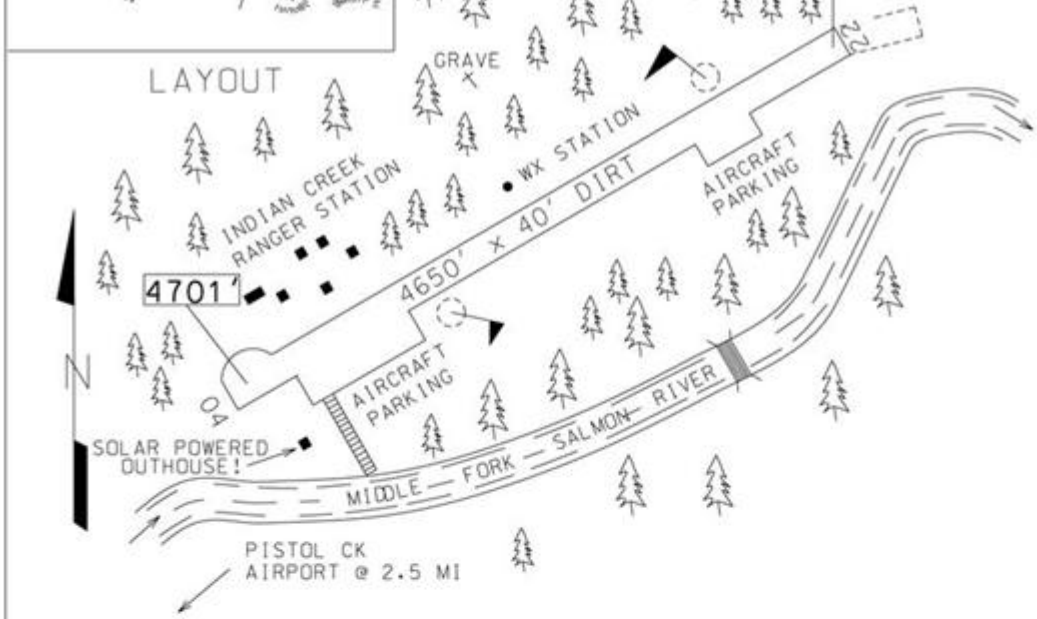
LIGHTS NO

FUEL NO

SERVICES
TIEDOWNS

MANAGER 208-879-4101

FBO(S) NO



ELEVATION 4701

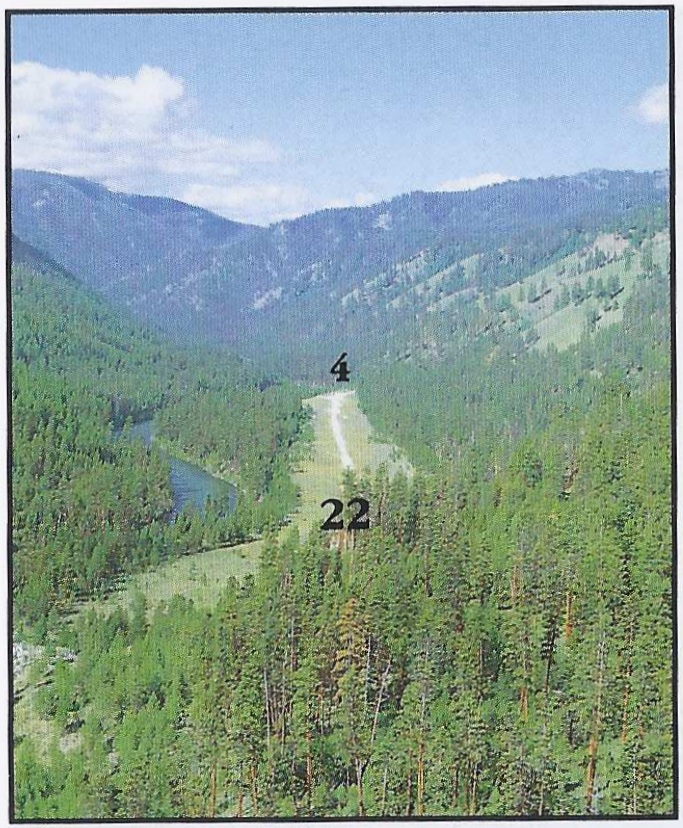
CTAF 122.9

LOCATION ADJACENT SE OF RANGER STN	FUEL NO
VOR FREQ RAD NM LKT 113.5 231° 50.0	SERVICES TIEDOWNS
COMMUNICATIONS CTAF 122.9	
NAV AIDS NO	MANAGER 208-879-4101
LIGHTS NO	FBO(s) NO
ATTENDED NO	

REMARKS NORMALLY LAND RUNWAY 22. TAKEOFF RUNWAY 04. CHECK AIRCRAFT PERFORMANCE FOR HIGH DENSITY ALTITUDE. STEEP ENCLOSING TERRAIN. NO WINTER MAINTENANCE.

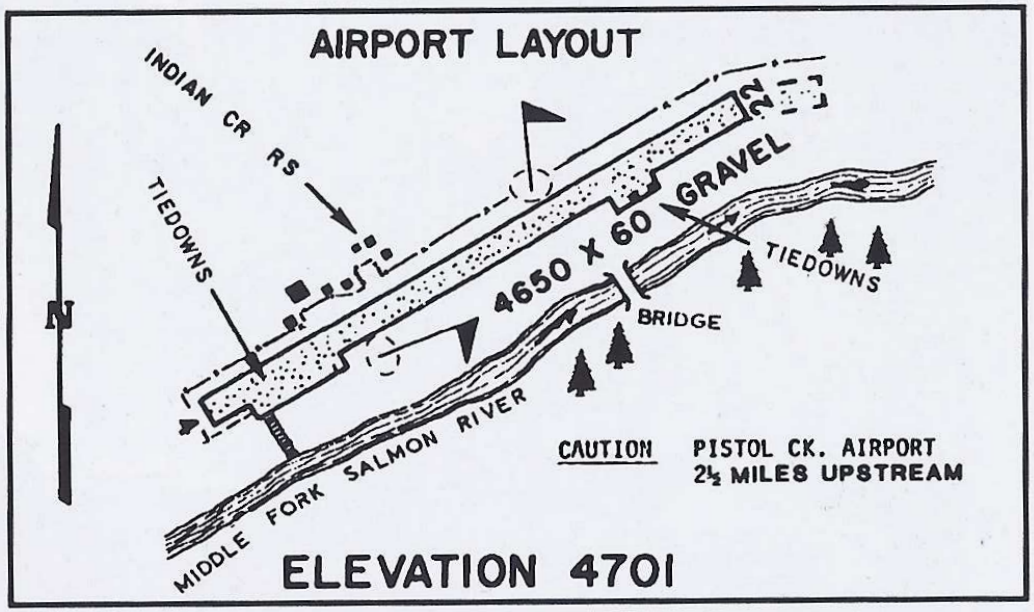
11/09

INDIAN CREEK USFS S81



INDIAN CREEK (W) S81

CTAF: 122.9 Lat: N44-45.68 Class: USFS REC W
FSS: 122.1T 116.2R Long: W115-06.44 Chart: Great Falls



AIRPORT CAUTION • The IAFD cautions: "Other traffic confined to same canyon area. Special consideration should be given to density altitude, turbulence, and mountain flying proficiency. Pistol Creek airport located 2.5 miles upstream. • USFS recommends **remain in main canyon when departing up or downstream.** • Do not attempt to climb out side canyons. • Close flight plan prior to landing. • No winter maintenance." • Info:(208)879-4106 USFS Middle Fork District, Challis, Idaho.


Idaho Aviation Association.com
4
22
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S81 - INDIAN CREEK USFS

[PUBLIC]

Navigation

Sectional: GREAT FALLS
Elevation: 4701'
Latitude: 44.7613
Longitude: -115.1073
Nearby City: 00 miles NE of INDIAN CREEK
State: ID

Communication

CTAF: 122.900
Control Tower: No
ATIS:
UNICOM:
Ground: n/a

Runway(s)

Airstrip Search

Go

Full Search

Latest Updates

Videos PIREPs Desc.

No ID 067 - CHICKEN STRIP, CA
69U - MACKAY BAR, ID
L05 - KERN VALLEY, CA
ID67 - LOWER LOON CREEK, ID
ID67 - LOWER LOON CREEK, ID
79U - FLYING B RANCH LANDING STRIP, ID
2U8 - THOMAS CREEK, ID
8Q1 - J-B, CA
8Q1 - J-B, CA
ID76 - WILSON BAR USFS, ID

Google earth

feet 700

meters 200


Preparation and Training
PILOTS Lounge

PREPARATION - SKILLS

KNOWLEDGE

- REVIEW – KNOW POH; PERFORMANCE CHARTS, RECCOMENDED SHORT/SOFT FIELD PROCEDURES, Vx, Vy, Va, Best Glide.
- DO DA, PERFORMANCE CALCULATIONS FOR AIR STRIP YOU WILL BE USING FOR PRACTICE.
- AIR STRIP RESEARCH – AFD / CHARTS / TOPO MAPS / WEB / ASK
- FLIGHT PLANNING – FUEL/WEIGHT TRADE OFF'S/ROUTE
- REVIEW WEATHER, SOURCES OF INFORMATION, WEB CAM'S

SKILL PRACTICE – TUNE UP

- SLOW FLIGHT, LEVEL, TURNS, CLIMBS, DECENTS IN SLOW FLIGHT
- SHORT/SOFT TAKE-OFF (COMPARE ACTUAL TO POH T/O & R.O.C)
- SHORT FIELD LANDINGS (HIT TARGET WITHIN 100' - <u>CONSISTANTLY)</u>
- CANYON 180 TURN (MODIFIED CHANDELL)
- EMERG PROCEDURE – BEST GLIDE
- DETIRMINE AIRSPEED CONFIG, STALL SPEEDS – NEXT SLIDES

KNOW YOUR AIR SPEEDS

At 8000 - 10,000 DA, determine Power (MP/RPM) setting with respective flap settings at Mountain flying air speeds:

Test altitude:_____ / DA_____ Weight_____

	Flaps	Airspeed	Power
Cruse	____	____	____
Slow Cruse Va	____	____	____
Canyon Speed:	____	____	____
Landing - Downwind	____	____	____
Landing - Final	____	____	____
Takeoff Vx	____	____	____
Takeoff Vy	____	____	____

KNOW YOUR AIR SPEEDS - MCA / STALL

At 8000 - 10,000 DA, determine Power (MP/RPM) setting at MCA and stall with flap configurations and typical weight.

Test altitude:_____ / DA_____ Weight_____

Flaps	Vso	MCA	Power MP/RPM
0	____	____	__/____
20	____	____	__/____
40	____	____	__/____

Basic Information									
Aircraft Ident: N7593S		Aircraft Type:	C-182Q	Departure Date:	12/18/2007	Departure Time:	9:00	Arrival Time	12:00

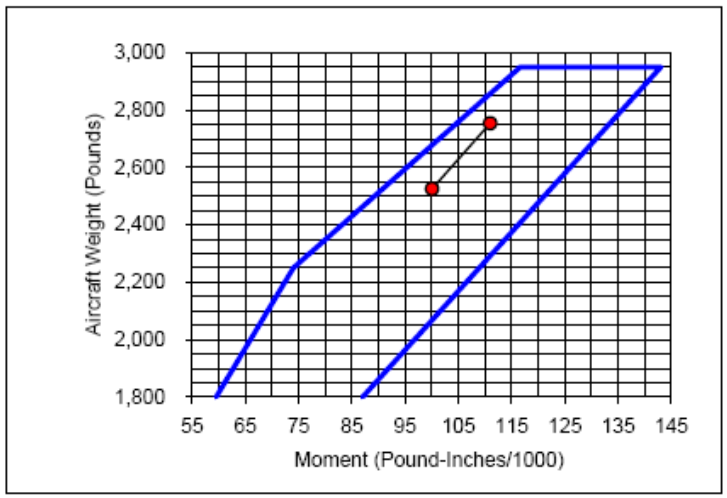
Fuel - 75 Gallons MAX Useable	65.0	
Planned Trip Time	3.0	Hrs.
Payload (Pax & Baggage)	550.0	
* Range @ 74% PWR =12.7 GPH	5.0	Hrs.
Fuel Reserve Time	2.0	Hrs.

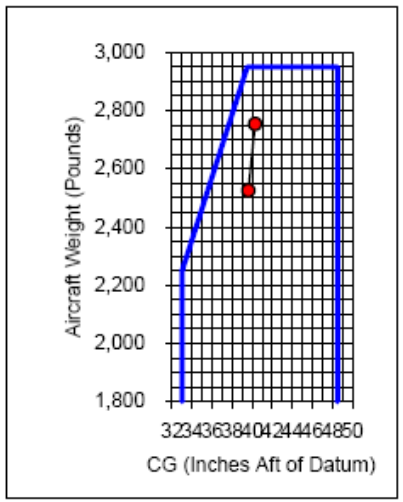
Enter data in highlighted blocks			
Max Gross Weight	2950		
Take-Off Weight	2754	93%	of Gross
Over/Under weight	**196**		

* Range based on POH Fuel Burn @ 74% power, 8,000' Std Conditions - may be more or less depending on leaning, DA, other factors.

Weight and Balance at Departure					
Loads		Weight (Pounds)		Arm (Inches)	Moment /1000
Empty Aircraft:		1823.3		36.78	67.07
Front Passengers:		220.0	250.0	37.0	17.4
Rear Passengers:				74.0	
Area 1 Baggage 120# Max:		50.0		97.0	4.9
Area 2 Baggage 80# Max:		30.0		115.0	3.5
Departing Fuel :	63.5	381.0		47.8	18.2
Grnd Ops (Gal):	1.5				
Totals:		2754.3		40.3	111.0
CG = Total Moment / Total Weight:					40.3

Weight and Balance at Arrival				
Loads		Weight (Pounds)	Arm (Inches)	Mome /100
Empty Aircraft:		1823.3	36.78	67.0
Front Passengers:		470.0	37.0	17
Rear Passengers:			74.0	
Baggage (Area 1):		50.0	97.0	4
Baggage (Area 2):		30.0	115.0	3
Arrival Fuel (Gal)	25.4	152.4	47.8	7
Totals:		2525.7	39.6	100
CG = Total Moment / Total Weight:				39





	At Gross Wt	At Take Off Wt	At Land Wt.
Va	111	107	103
V BG	70	68	65
V S0	45	43	42
VS1	48	46	44
Landing @ 1.3 Vso	59	57	54

		At Take Off Weight				
	Sea @ GW	Sea	2,500	5,000	7,500	10,0
Vx	57	55	56	57	58	
Vy	78	75	74	73	71	
		At Landing Weight				
Vx	57	53	54	55	56	
Vy	78	72	71	70	68	

No self-checkout at back-country strips.

- Prior experience or ride along minimum.
- More difficult strips require demonstrated proficiency with check-pilot.
- McCall Air maintains record of specific strips pilots are approved for.

Stable, power on, full flap approaches.

- Physical landmarks provide glide-path checks. (e.g. Cabin Creek, U. Loon)
- Stable approach allows early recognition of and correction for departures from norm.
- 15” MP (turbo 206) 12” MP C182 allows a smoother, more rapid power response to deal with unexpected downdrafts.

Landings

- All landings are spot landings, but if it is not necessary to hit the end of the strip, then don't try – it makes passengers nervous and reduces your margin of safety. (Also adds to taxi time.)
- Shoot for white 1/3 markers. (e.g. Big Creek, Indian Creek)

Temper takeoff calculations with local knowledge and conservative judgment.

- Takeoff into wind may produce rapid initial climb out, but leave you climbing into downdrafts.
- Downwind will degrade takeoff and climb out performance, but may allow you to climb into updrafts as you cross canyon.

RULES OF THUMB

- Do not fly in the Mountains with winds aloft in excess of 30 Knots - less with less experience.
- Plan to arrive / depart by 10 AM or late evening when winds are calm and temperature is cooler.
- Always have an out
  - Be able to turn to lowering terrain.
  - Be able to turn 180 in Canyons.
- 50% Runway Rule - if not at 70% rotate IAS at 50% of runway length - ABORT.
- Approach ridges at 45^0 angle before crossing.
- In Canyons - always keep river under your arm pit.
- Life is Good – so is Lift – Look for it
- Land Up River – Take Off Down River
- **WIND AND HEAT ARE NOT YOUR FRIENDS**

Ben Brandt - New BC Piolt Perspective


B C Weather
Bill McGlynn


B C Home Video

Accidents / Fatalities

NTSB Data (as of 5/18/2012)

YEAR	Total State / BC	FATAL STATE / BC
2000	34 / 8	13 / 1
2001	24 / 3	7 / 4
2002	48 / 13	17/ 6
2003	52 / 15	21/ 11
2004	41/ 6	8/ 2
2005	38/ 7	12/ 4
2006	31/ 6 4 killed in forest service Helicopter, Yellowpine.	6 / 0 (2 killed in one plane VFR in IFR conditions out of Couer d'lane
2007	41/10 (Nampa had 4) 5 Helicopter	4(6) / 1(1) accidents (fatalities)
2008	34 / 8	3 (5) 3 in McCall C172's/ 0 BC (2 very serious)
2009	38 /10	6 (7) / 2 (3)
2010	38 / 12	5 (8) / 2 (3)
2011	34 / 9	5 (12) / 2 (5) 2 Stanley, 3 Simpson/Soda Sp.
2012	10 / 2 (both Stibnite Mine Ag op on snow)	1 / 0

BC Accident Summary - 2011

- Simpson (Grace/Soda Spr). 7/18/2011 **3 FATALITIES** At 1746 mountain daylight time, a Mooney M20C, N6855N, impacted terrain while on approach to Simpson Airport (ID62). According to witnesses traveling south on highway 34, the airplane flew overhead, made a slight right bank, and then banked to the left back toward the runway. The witnesses reported that they were able to hear the engine as it passed overhead; there were no unusual sounds coming from the engine. They also stated that the landing gear was in the UP position. From their perspective, the witnesses indicated that the airplane was in a 45-degree bank as it turned back toward the runway. The airplane rotated so that the top of the fuselage was visible to the witnesses, and then it dropped behind sagebrush. The witnesses saw a cloud of smoke; they called 911, and responded to the site to render aid until emergency medical services (EMS) arrived. The witnesses further reported that the weather was clear with no wind.

- Cavanaugh Bay 8/23/2011 Cessna 150 Serious Injury. At 1138 Pacific daylight time, crashed 150 yards east of the southern running dirt landing strip at Cavanaugh Bay, Idaho Witnesses reported to that they observed the airplane while it was approaching the dirt landing strip. One witness stated that he saw the airplane's left wing dip down, then the airplane pitched up into a high angle of attack, and descended vertically; he then lost sight of it behind some trees. Visual meteorological conditions prevailed and no flight plan had been filed. The flight originated from Chatteroy, Washington, around 0900
- Mile Hi 8/25/2011 PA-18 Super Cub Pvt Pilot 6170 PIC/ 2170 M&M 10:30 Mtn Time the left landing gear collapsed during landing on a remote grass/turf airstrip. After the landing gear collapsed, the airplane veered to the left and impacted a tree. The pilot stated that there were no mechanical malfunctions or anomalies with the airplane during the flight. The reason for the landing gear collapse was not determined.

- Hungry Ridge Ranch Airport (Grangeville) 8/28/2011 0620 PDT Cessna 170A Serious Injury Private Pilot 570 TT/570 M&M The pilot stated that he took off from the remote grass airstrip, which had 80-foot-tall pine trees along both sides. Shortly after takeoff the pilot heard a bang and the airplane veered right. The pilot tried to correct the flight path; however, the airplane descended and impacted pine trees about 300 feet east of the departure end of the airstrip. The pilot was able to extract himself from the cockpit before the airplane was consumed by a post accident fire. A federal Aviation Administration inspector and the county sheriff inspected the control cables of the airplane and found them all to be connected and continuous between the flight control surfaces and the cockpit controls.

- Atlanta 8/29/2011 Cessna 172F . Pvt Pilot 180 hr PIC/140 M&M. According to the pilot, on short final approach to runway 34 in his 145-horsepower Cessna 172F, he realized that his approach path was too high, so he attempted to go around. After full engine power was applied, he recognized that he had insufficient distance from the approaching trees and terrain to perform a go-around. Therefore, he aborted the maneuver and forced the airplane onto the ground in a clearing beyond the departure end of the runway. The airplane impacted the ground hard, breaking wing and fuselage structure. The pilot reported that he was unfamiliar with the airport, and he had not read the published remarks for the airport in its Airport Facility Directory. The remarks state, in pertinent part, that the airport is recommended for use by “mountain proficient pilots using high performance aircraft.” It also states “no go-around due to rising terrain and trees.” Nine thousand foot mountains are located within 5 miles from northwest through southeast of the 5,500-foot mean sea level airport.

BC Accident Summary - 2011

- Stanley, 9/12/2011 Cessna 182H **2 FATALITIES** about 2300 mountain daylight time, a Cessna 182H, , impacted the terrain about four miles west of Stanley, Idaho. Th flight departed Salmon, Idaho, about 40 minutes prior to the accident, was being operated in night visual meteorological conditions. According to witnesses in the area, the airplane sounded as if it was circling the area at a fairly low altitude, when the engine began to sound as if the pilot had applied full power. Soon thereafter, witnesses heard the sound of an impact. They further stated that it had been raining lightly around the area most of the evening, and that a low level mist was present in the area at the time of the impact.

- Ashton 11/20/2011 American Champ The student pilot reported that he approached the privately-owned, rough grass airstrip and observed that it was covered with snow. After evaluating the snow's depth as being only a few inches, the pilot landed. During the landing roll, the airplane decelerated quickly and nosed over, bending the vertical stabilizer, wings, and lift struts. After exiting the airplane, the pilot realized that the snow was between 6- and 8-inches deep. The student pilot's certified flight instructor reported that he had not endorsed the student's flight record logbook in over 90 days, and he had not authorized the student to fly to the accident airport. The student was not current in the airplane.

- Hailey 11/29/2011 Piper PA 32RT Serious injuries About 1900 mountain standard time, the aircraft impacted the terrain about one mile east of Friedman Memorial Airport, Hailey, Idaho. The pilot received minor injuries, his passenger received serious injuries, and the airplane, which was owned and operated by the pilot, sustained substantial damage. The flight had just departed Hailey for Nampa, Idaho, was being operated in night visual meteorological conditions. According to the pilot, during the initial climb over the valley that extends south from Hailey, he was focused on trying to get the autopilot system set up in a manner that would allow it to be used to direct the airplane to Nampa. During the time that the pilot was focused on the autopilot, the airplane began turning to the left without him being aware of it. As the airplane continued to turn, it approached the steeply rising terrain to the east of the airport. The passenger, who was looking outside, noticed the oncoming terrain and made the pilot aware of the situation. When the pilot saw the terrain, he quickly reached the conclusion that he was not going to be able to avoid it, so he maneuvered the airplane into a controlled crash.

- Warm Springs 12/10/2011 Cessna 182 The pilot reported that he determined that the snow-covered runway was suitable for landing, based, in part, upon overflying it and seeing snowmobile tracks, which indicated to him that the surface was firm enough. After touching down on the main landing gear, the pilot held the nosewheel off the ground with full-aft elevator pressure, but, when the nosewheel settled, the airplane pitched down violently. It traveled for about 80 feet in the nose-down attitude before it abruptly nosed over, sustaining substantial damage to the right wing and rudder. The pilot indicated that there were no mechanical issues with the airplane that would have precluded its normal operation.

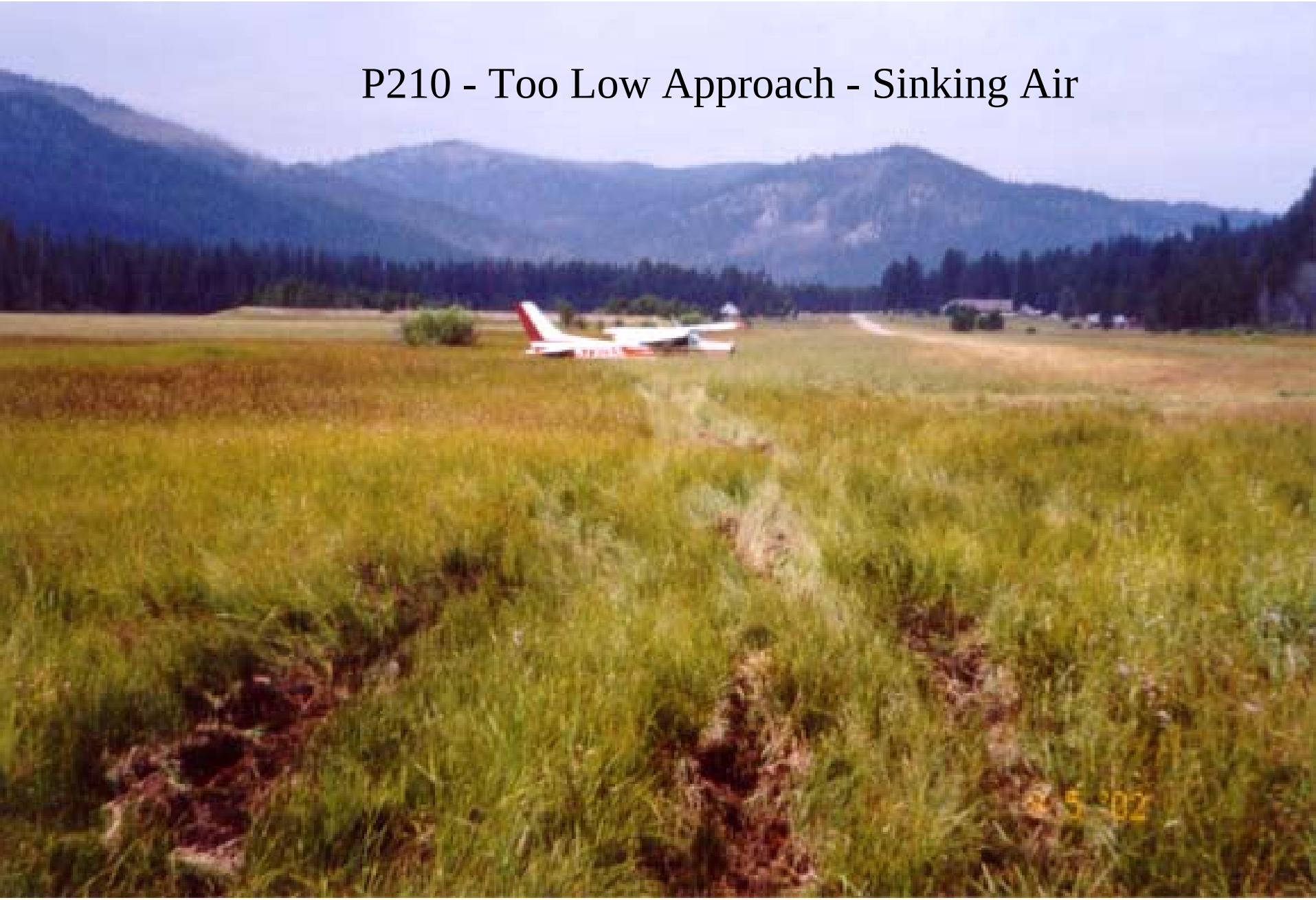
Dangers of Mountain Flying


N5720A


Slightly off track
- New Meadows
N737MY


C182 - Overloaded -tailwind - take off stall
8 5 '02

P210 - Too Low Approach - Sinking Air

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Star-News Photo by Ben Salmon

SUMMARY

- Mountain/ Canyon flying is fun and exciting.
- Mountain / Canyon is different type of flying.
- Mountain / Canyon takes lots of work and effort.
- Get instruction from experienced backcountry pilots or take one of the clinics.
- Stay Current - Complacency Kills. Overconfidence Kills. Stupidity Kills
- Know your limits – Set you own personal limits
- Land Upstream – Take off Downstream
- Always have a Out
- Be Safe - Have Fun.

RESOURCES

- Lori MacNichol,McCall Mountain Flying, LLC: 208-634-1344 www.mountaincanyonflying.com
- River of No Return - Mountain Flying Clinic, Challis: 208-879-5900
- Idaho Aviation Association: www.idahoaviation.com
- Dick Williams – Mountain Flying Video (in club library)
- Galen Hanselman, Fly Idaho Guide Book 1-800-574-9702
- Sparky Imeson, Mountain Flying Bible and Flight Operations, 1-480-855-7444 or www.mountainflying.com
- Idaho Division of Aeronautics: Frank Lester - Safety/Education Coordinator, 334-8780, http://www2.state.id.us/itd/aero/aerohome.htm
- www.shortfield.com – Great website with airstrip views, pilot reports
- Back Country Gear – www.cubgerastore.com
- Back Country Forum – www.backcountrypilot.org


Questions ?
'02 2 14

BC Accident Summary - 2010

- Big Creek 6/21/2010 C180 10,000 Hr / 1200 ATP/Flt Inst. PLANO, TX while **taxiing a tail wheel airplane down a slope the airplane began to slide sideways** and the empennage turned downslope. Despite the pilot's control inputs, the empennage reached approximately a 90-degree angle to the desired direction and the airplane tipped to the left. During the accident sequence, damage was incurred to the left wing and left horizontal stabilizer. The pilot reported no mechanical failures or malfunctions with the airframe or engine prior to the accident. The pilot stated **the accident could have been prevented by obtaining more knowledge concerning the airstrip**.
- Smiley Creek 6/26/2010 8 P.M Glastar – 510 Hr Tot / 69 M&M AZTEC, NM The pilot reported that he had been landing and departing from the grass strip numerous times earlier in the day. For the accident flight, he was attempting to perform a **midfield takeoff**. During the departure roll, the airplane **momentarily became airborne** and then settled back into the wet grass and slowed. He opted to immediately abort the takeoff by retarding the throttle control and applying brakes. The airplane then slid off the end of the grass strip and collided with a ditch, incurring damage to the right wing and tail.
- Johnson Creek 7/12/2010 8:30 AM Piper PA-32RT-300 2650 Tot / 2450 M&M SANTA CRUZ, CAThe pilot requested that the airport manager delay turning on the sprinklers until he departed the airport; however, the sprinklers were turned on prior to departure. The pilot stated that he remained on the right half of the runway to keep clear of the sprinklers during the takeoff roll. As the airplane approached midfield during the takeoff roll, the **pilot determined that the airplane was not "moving fast enough"** to continue the take off. The pilot stated that he **aborted the takeoff** by pulling back on the throttle and applying the brakes. He added that during the aborted takeoff, the airplane began skidding on the wet grass and he shut the engine off. Subsequently, the **airplane exited the departure end of the runway and struck a sign and a boulder**, which resulted in substantial damage to the right and left wings. The pilot reported no mechanical malfunctions or failures with the airplane prior to the accident. According to the Northwest U.S. Airport/Facility Directory, runway 35, a grass runway, is 3,400 feet long and 150 feet wide. At the reported weight of the airplane, in the weather conditions of the airport at the time of the accident, the airplane had a calculated takeoff ground roll of about 2,000 feet, with a landing ground roll of 880 feet. These numbers are calculated for a dry, paved, level runway, with two notches of flaps used for the takeoff. The airplane took off on a wet, grass, down-slope airstrip, with only one notch of flaps. The Performance Section of the Pilot Operating Handbook for this airplane states that the "effects of conditions not considered on the charts must be evaluated by the pilot, such as the effect of soft or grass runway surface on takeoff or landing performance
- Pitsburg Landing 7/20/2010 9:20 AM Piper Cub Crafter PA-18-150 535 ToT / 140 M&M Anatone, WA The airplane touched down **about 200 feet from the approach end of the 900-foot-long** landing strip and bounced. The pilot maneuvered the airplane back down on the ruwnay, but then **decided to perform a go-around**. He applied full engine power but **collided with a fence** during the initial climb

BC Accident Summary - 2010

- Bernard 8/14/2010 4:45 PM Cessna T182T 612 TT 505 M&M SANTA ROSA, CA The pilot of the turbocharged airplane was executing a takeoff from a 1,900-foot-long grass/turf back country airstrip. The surface of the airstrip was rough, with occasional holes and soft spots, and areas of vegetation. The density altitude calculated by the pilot was 5,495 feet. Although he had determined that the airplane should be able to successfully complete the takeoff, during the latter part of the takeoff roll the **pilot became uncomfortable with the airplane's rate of acceleration**, and he therefore elected to **abort the takeoff**. After making the decision to abort the takeoff, the pilot was **unable to stop** the airplane before it **went off the end of the runway, rolled down a bank, and nosed over onto its back**, whereupon it sustained substantial damage to both its wings and its fuselage

- Wilson Bar 11/2/2010 2:00 PM C U206 2800 TT / 1700 M&M Boise, ID. The pilot, who was flying the second airplane in a flight of two, was maneuvering in the traffic pattern at a remote back-country airstrip. The approach to the airstrip required the pilots to make a precise base leg to final turn between two steep rock cliffs. During the accident pilot's turn to final approach, **he inadvertently made too wide of a turn, resulting in the airplane's nose and right main landing gear colliding with the cliff and becoming separated** from the airframe. After the pilot in the other airplane confirmed the extent of the damage, the pilot flying the accident airplane maneuvered to a town where emergency personnel could be available on the ground. Due to the damage, the pilot decided to land in the grass/turf area alongside the main runway. During the landing roll, the nose gear strut dug into the soft terrain and the airplane nosed over onto its back.

BC Accident Summary - 2007

- Lava Hot Springs-On 10:30 September 14, 2007, A light sport Skykits Savannah ADV airplane, came to rest inverted after landing.
- Big Creek – 11:00 August 4, 2007 Piper PA-34-200T Landed on wrong runway 01, landed hot – ran off the end of the runway – no injuries
- Elk River – 08:05 August 3,2007 Grumman American AA5A The pilot landed long on the unimproved runway, porpoised, and veered into a building.
- Johnson Cr. – 19:00 July 23, 2007 Beech V35B The airplane landed long pilot intentionally ground looped the aircraft to avoid overrunning the runway end.
- Leadore – 12:30 July 15, 2007 C182 The pilot reported that the airplane was about 20 feet above ground level during the initial takeoff climb when a "heavy wind started. resulted in a loss of control and collision with terrain during the takeoff initial climb.
- Stanley – 17:00 July 15,2007 Britten-Norman / BN-2A-20 Pilot placed a fuel order, but did not verify that the twin-engine airplane was refueled before departing with 8 passengers for a cross country flight. This flight reached its destination without incident, and the pilot then departed as the sole occupant of the airplane. Shortly after takeoff, at an altitude of about 400 feet agl, the left engine "started to sputter." Ran out of fuel
- Johnson Cr. 08:30 June 14, 2007 Cessna 172 **impacted mountainous terrain** while maneuvering near Yellow Pine, Idaho. The flight departed Johnson Creek Airport and the intended destination was Big Creek. The private pilot received **fatal injuries**, and the passenger received serious injuries
- Shearer 16:30 May 30, 2007 C185 The left main landing gear separated above the left wheel axle, through the upper two bolt holes during the landing roll. Post accident metallurgical examination showed that the fracture occurred due to fatigue cracks Injuries: 1 Serious, 1 Minor, 1 Uninjured Part 135 Operator
- Fairfield 11:30 May 17, 2007 C170 he pilot set the airplane up for landing with two notches of flaps, and while turning from base to final, the airspeed got low and the airplane stalled. the aircraft impacted a field adjacent to the airport 2 uninjured
- Cottonwood – 700' Grass Strip 12:00 April 22, 2007 C206 The airplane overran the landing strip, encountered deep sand and nosed over. As the airplane approached the destination, the pilot performed three passes over the airstrip and noted that the windsock indicated light winds (about 5 knots). In light of the airstrip having a slope, the pilot opted to land in an upslope direction with a tailwind.

BC Accident Summary - 2008

- Wilson Bar 10:30 5/3/2008 C172. During the takeoff ground roll, maneuvered right in order to miss some rocks. In the initial climb, the outboard portion of the right wing then collided with brush-like vegetation. The pilot then flew the airplane to an airport where maintenance personnel examined. The Federal Aviation Administration inspector reported structural damage to the right wing. .

- Atlanta – 5/4/2008 Grumman AA-DA The runway had softened due to snow and water runoff and the pilot said he experienced slight sinking conditions, but it was not muddy or sloppy. The pilot elected to depart to the south in order to takeoff on a downhill slope. The pilot performed a soft field takeoff by pulling the yoke back to reduce friction from the nose wheel. About 40 miles per hour (mph), the airplane hit several ruts and slowed down. He initiated rotation at 60 mph, but could not gain sufficient altitude prior to hitting a tree at the departure end of the runway, causing substantial damage.

- Graham – 6/15/2008 C180 The plot landed on the last half of the 2,900-foot-long grass runway and was unable to bring the airplane to a stop before it ran off the end of the runway and into trees. Prior to going to the airport, the pilot had spoken with local area pilots who indicated that he should not use the first half of the runway because it was muddy and soft. Dennis and Steve F. witnessed this. Alaska pilot overconfident – DA surprise.
- Johnson Cr. – 9:30AM 6/26/2008 C182 , Lebon, OR. The airplane was high and fast on the approach to the runway. When the pilot flared for landing, the airplane floated and he tried to force it on the ground. The airplane began to porpoise, contacting the ground twice before settling onto the runway for the third and final time. The pilot thought that the nose wheel was damaged when the airplane contacted the runway the second time, so he decided not to go around. The airplane sustained structural damage to the firewall. .

- Elk River –10:30 AM 6/29/2008 Aeronca 7DC Chattaroy, WA Attempting to take off from a gravel runway that was lined on both sides with tall grass. During the takeoff roll, the airplane drifted to the left into the grass, and the pilot corrected his course back toward the runway. The airplane then drifted into the grass on the right side, hit a wire fence and a dirt berm, and nosed over

- Big Creek – 11:15 AM 7/7/2008 Money M20E San Diego Injuries: 2 Serious. While landing on a 3,550-foot long runway, the pilot added power to abort the landing and go-around. The airplane failed to gain sufficient altitude and impacted a parked vehicle about 75 feet beyond the departure end of the runway. Witnesses adjacent to the accident site reported observing the airplane land about three quarters down the runway prior to the pilot aborting the landing. The density altitude was calculated to be 7,383 feet MSL.

- Big Creek. 2:30 PM 7/26/2008 Cessna 182 The airplane encountered a downdraft while on short final, which resulted in a sudden drop from about 15 feet, and subsequent hard landing. The landing bent the nose gear forward and damaged the firewall. The pilot made a field repair to hold the nose wheel in place by lashing the nose wheel strut back using rope and a come-along attached to the main landing gear. The pilot then proceeded to fly the airplane to an airport about 30 minutes away, where a mechanic assessed the damage and advised the pilot not to continue the flight. The pilot decided to continue the flight to his home base home base, Minden-Tahoe Airport, Nevada approximately 454 miles to the southwest. The elevation of the accident airport is 5,720 feet mean sea level (msl). The outside air temperature at the time of the accident was 80 degrees Fahrenheit. The calculated density altitude was 8,238 feet msl at the accident airport.

- Warm Springs 10:30 AM 8/16/2008 C140 Nampa ID, Low time pilot 180Tot/ 32 hr M&M. After touching down on the grass/turf airstrip in a tailwheel equipped airplane, the pilot failed to maintain directional control. it ground looped, resulting in the collapse of one of the main landing gear legs. In addition to the collapse of the landing gear leg, the accident sequence resulted in the bending of internal structure of the right wing.

BC Accident Summary - 2009

- Cox Well 5/1/2009 Rans S-7 the engine lost power about 250 feet above ground level (agl). The owner took control, turned back to the left, and tried to land on the end of the runway. He leveled off slightly about 20 feet agl, and then flared for landing. The airplane landed hard on the north side of the runway and the right wheel broke off. The landing gear dug into the turf, the airplane spun 180 degrees, and the right main landing gear collapsed. The airframe around the tailwheel and rudder sustained substantial damage.. He said that he probably let the fuel level get too low on this flight. During the climbout with the nose up, he surmised that the header tank fuel pick-up unported, resulting in the loss of power.

- Atlanta 6/3/2009 C182. Boise, ID **FATALITY** The single engine airplane **impacted a vertical rock cliff face in mountainous** terrain about 500 feet below a mountain ridge line.. The GPS data track originated in the vicinity of the departure airport, and proceeded at 8,350 feet mean sea level (msl) northeast for 57 miles, and abruptly ends in the vicinity of the accident site. During the last 2 minutes of the flight, the track increased in altitude from 8,350 feet to 8,891 feet msl. The height of the mountain ridge line directly ahead of the airplanes' flight path was between 9,100 feet and 9,580 feet msl. The end of the GPS track did not exhibit any deviations that could be interpreted as an evasive maneuver. The cloud coverage in the vicinity of the accident location was between scattered and broken, with bases between 8,000 and 9,000 feet msl, cloud tops were about 15,000 feet msl, with visibility greater than 3 miles in cloud-free areas.

- Dixie – 7:15 AM 6/18/2009 Piper PA-18-150 Ventura, CAThe pilot was making a landing on a dirt landing area that also doubled as the main road in the center of the remote mountain town. **He intentionally landed a little long** in order to miss the substantial puddle of water near the approach end of the landing area. He began applying brakes while the airplane was going about 20 miles per hour, but **his brake application was of sufficient force to result in the airplane nosing over** onto its back.

- Johnson Cr. 9:45 AM 6/22/2009 C172 INDEPENDENCE, OR The pilot, who had flown into a backcountry airstrip with **minimal fuel** in order to reduce the airplane's takeoff weight, departed that airstrip for a destination that was reporting overcast clouds.. When the other pilots started their engines, the accident pilot realized that he had not yet dipped his fuel tanks to measure fuel quantity, so as not to get separated from the pilots he was going to follow en route, he elected to not sump the tanks. As he approached the destination airport, one fuel gauge read empty, and the other read one-quarter, but its needle had stopped moving/bouncing,." **Soon thereafter the engine lost all power**, he ultimately had to make a forced landing in what appeared to be an open field. During the landing roll, the airplane impacted some cement barrier blocks and collided with a steel fence gate. Post accident inspection found no usable fuel remaining in the airplane's fuel system.

- Wilson Bar 9:15 AM 6/25/2009 Maule M-5-235C Curtice, OH After surveying the landing area, the pilot stated that, as he neared the approach end of the runway, he was approximately **20 feet above ground level when the airplane dropped straight down**. The pilot indicated that his airspeed was slow and that he most likely encountered a downdraft. This resulted in the airplane landing hard on the runway surface, and the airplane **porpoised prior to impacting rising terrain and trees**

- Sulphur Creek 8:30 AM 7/10/2009 Flight Design CTS MCMINNVILLE, OR After touching down on the remote rough gravel airstrip, the pilot applied what he described as "hard braking" with the non-differential handbrake, while **attempting to maintain directional control** with the nose wheel steering. As the pilot continued the landing roll, the airplane began to skid/slip off to the left side of the convex shaped runway crown, and it eventually **exited the runway and impacted a large rock pile**. After hitting the rock pile, the airplane nosed over onto its back, resulting in damage to the wings, and the rudder separating from its hinges.

BC Accident Summary - 2009

- Simonds 10:10 AM 7/14/2009 Cessna U206 **1 Serious Injury** A SPOT saved the instructors life. During a biennial flight review, at the suggestion of the evaluating instructor pilot, the Pilot-In-Command elected to land at a remote back-country airstrip where he had not made prior plans to land. After landing at the 800- to 900-foot-long strip, the pilot took off in the high-density-altitude environment without having first completed an aircraft performance calculation or checking his airplane's outside air temperature gauge. Although the pilot reported that there did not seem to be any issues with the engine producing full power, **soon after liftoff the airplane struck a number of pine trees** and descended into the terrain. A postaccident inspection of the airplane did not find any evidence of powerplant anomalies, but did reveal that the **elevator trim was set at a five degrees tap up (airplane nose down) position, and that the flaps were extended 25 degrees even though the cockpit indicator indicated that they were at 20 degrees**.
- St. Charles – Mtn Flying 8/7/2009 Piper PA-22-150 **2 FATAL**The private pilot was on a visual flight rules personal cross-country flight during day visual meteorological conditions near mountainous terrain. Witnesses along the route of flight reported observing the airplane overfly their position at a low altitude on a course towards the accident site. There were no known witnesses to the accident sequence. The accident site was in an open area surrounded by rising terrain in three of the four quadrants. Examination of the wreckage revealed that impact damage signatures on the wings were consistent with right wing low impact with terrain. The fuselage, wings, and most of the empennage were consumed by a post-impact fire. No evidence of any pre impact mechanical anomalies was discovered with the engine or airframe. Using reported weather conditions near the accident site and the accident site elevation, the density altitude was calculated to be about 10,706 feet mean sea level. Toxicology testing on the pilot was positive for an unspecified amount of Famotidine within the blood and urine. Famotidine is an acid-reducing medication, used to treat heartburn or ulcer disease and is available through prescription or over the counter. Famotidine is commonly known by the trade name Pepcid.
- Pitsburg Landing 9/24/2009 12:00 PM C182 Flt Inst 4718 ToT / 37 M&M: Hope, ID. When they arrived at the third airstrip, three airplanes made successful landings, but the accident pilot, who was in an airplane with slightly different performance characteristics than the other three, **was unable to stop before running off the end of the runway** and impacting a ditch. After the accident, the pilot, who had not been into the subject airstrip before, stated that he should have made a better decision, and not assumed that because the other three pilots made it successfully that he could too.
- Pistol Cr. 10/8/2009 C180 ATP 25,000 / 1,000 M&M Boise, ID. The pilot was landing at a remote dirt/grass airstrip where the winds were gusting and variable in direction. Although the touchdown was normal, as he made rudder and brake inputs to maintain directional control, the right main gear leg separated from its mounting structure, and the right wing sustained substantial damage when it contacted the terrain. An inspection of the gear leg attachment hardware determined that the nut on the gear leg attachment bolt had been stripped from the bolt, thus allowing the bolt to come out of the attachment structure. During the pilot's initial contact with the NTSB Investigator-In-Charge, the pilot stated that the airplane's right brake had failed during the landing roll, but in a follow-up interview the pilot stated that he believes that the brake was working fine until the moment the gear leg separated from its mount.

BC Accident Summary - 2010

- Dixie – 2/26/2010 C185 ATP 29,000 Hrs, MYL After arriving at the airport, the Cessna 185 pilot overflew the runway and requested that a friend on the ground check the condition of the snow-covered runway, which was reported as being in excellent condition, smooth and well-compacted. The Cessna 185 pilot landed and taxied to the end of the runway where he turned his airplane around and shut it down. The experimental FK1, which was equipped with skis instead of wheels, landed and was not slowing at the rate the pilot expected. The pilot said that, because of a lack of rudder effectiveness, the experimental **Kitfox veered uncontrollably to the left and struck the other airplane head on**. The Cessna 185 sustained structural damage to the firewall.
- Dixie – 2/26/2010 Kit Fox ATP 6,000 Hr. Alaska.
- Smiley Cr. 4/10/2010 C150 High Time Pilot 4900 Tot / 250 M&M. Boise, ID. The pilot reported that he intended to fly his airplane on a cross-country flight over high mountainous terrain. After takeoff, the pilot climbed to 9,500 feet mean sea level (msl) in order to fly over mountains. He subsequently descended to 8,500 feet msl, and then he attempted to climb back to 9,500 feet to clear additional mountains. This second climbing effort diminished his fuel reserve, so the pilot opted to divert to a 7,160-foot msl uncontrolled airport short of his destination. While flying over the airport to evaluate its runway's condition, the pilot noted that the runway was covered with snow. The pilot opined that because of the airplane's low fuel state, it was prudent for him to land. The pilot made a soft-field landing on the runway. During rollout, the airplane's wheels penetrated the snow-covered surface, the airplane nosed over, and both wings and the empennage broke
- Sulphur Creek 6/13/2010 C172 Low time 332 Tot / 56 M&M Garden Valley, ID The pilot reported that after an uneventful landing, **the airplane drifted approximately 20 feet to the left of the runway** centerline during the landing roll on the gravel and turf runway. The pilot corrected back to the runway centerline just as the **airplane's nose landing gear dropped into a large unnoticed hole**. The airplane came to an immediate stop and sustained substantial damage to the firewall. The C172 was air lifted out by Helecoptor.
- May 6/19/2010 RV-9A **FATALITY** 5700 HR TT / 170 M&M Onterio, OR On June 19, 2010, at 1103 mountain daylight time, an experimental Oliver RV-9A, N559B, **impacted the terrain** about one-quarter mile south of May Airport, May, Idaho. The pilot, who was the sole occupant, received fatal injuries, and the airplane, which was owned and operated by the pilot, sustained substantial damage. The 14 Code of Federal Regulations Part 91 personal flight, which departed Challis, Idaho, about 15 minutes prior to the accident, was being operated in visual meteorological conditions. **Antihistamine may have lead to drowsiness** and spatial disorientation.