MAR - 1 2005

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FORM APPROVED FOR USE THROUGH 7/31/96 BY OMB NO.3147-0001.

NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT
This form To Be Used For Reporting Civil Aircraft Accidents Involving Commercial and General Aviation Aircraft

Location

Nearest City/Place, State, Zip Code	Date of Accident	Local Time (24 HOUR CLOCK)	Zone	Elevation At Accident Site
PROVO, UTAH	02-03-2005	0800	MT	10,100 Feet MSL _____ Feet MSL

If The Accident Occurred On Approach, Takeoff or Within 3 Miles of An Airport, Complete The Following Information

Proximity To Airport

1.☐ On Approach 2.☐ Within 1/4 Mile 3.☐ Within 1/2 Mile 4.☐ Within 3/4 Mile 5.☐ Within 1 Mile 6.☐ Within 2 Miles 7.☐ Within 3 Miles 8.☒ Beyond 3 Miles

Airport Name	Airport Ident	Runway/Landing Surface Conditions:
		1.☐ Direction: 2.☐ Length: 3.☐ Width: 4.☐ Surface: 5.☐ Condition:

Phase Of Operation:

1.☐ Standing 2.☐ Taxi 3.☐ Takeoff 4.☐ Climb 5.☐ Cruise 6.☐ Descent 7.☐ Approach 8.☒ Landing 9.☒ Hover/Maneuver 10.☐ Altitude Of In-Flight Occurrence 10,100 Feet MSL

Aircraft Information

Registration Mark	Aircraft Manufacturer	Aircraft Type/Model	Serial Number	Cert Max Gross WT
N9118F	MD	369 HS	7203-75	3200

Type Of Aircraft

1.☐ Airplane 2.☒ Helicopter 3.☐ Glider 4.☐ Balloon 5.☐ Blimp/Dirigible 6.☐ Ultralight 7.☐ Gyroplane 8.☐ Specify_____

Type Of Airworthiness Certificate

1.☒ Normal 2.☐ Utility 3.☐ Acrobatic 4.☐ Transport 5.☐ Restricted 6.☐ Limited 7.☐ Experimental 8.☐ Specify_____

Amateur Built

1.☐ Yes 2.☒ No

Landing Gear

1.☐ Tricycle—Fixed 2.☐ Tricycle—Retractable 3.☐ Tailwheel—Fixed 4.☐ Tailwheel—Retractable 5.☐ Tailwheel—Retractable Mains 6.☐ Amphibian 7.☒ Skid 8.☐ Limited 9.☐ Specify_____

No. Of Seats

Flight/Cabin Crew 1 Pax 4

Stall Warning System Installed	IFR Equipped	Engine Type
1.☐ Yes 2.☒ No	1.☐ Yes 2.☒ No	1.☐ Reciprocating—Carburetor 2.☐ Reciprocating—Fuel Injected 3.☐ Turbo Prop 4.☐ Turbo Jet 5.☐ Turbo Fan 6.☐ Turbo Shaft

Engine Manufacturer	Engine Model/Series	Engine Rated Power	Type Of Fire Extinguishing System Used
ROLLS ROYCE	250-C20 (B)	1._____ Horsepower 2._____ Lbs Thrust	(1) None 2.Specify_____

Engine(s)	Date of Mfg.	Mfg. Serial No.	Total Time	Time Since Inspection	Time Since Overhaul
Engine No. 1		CAE 820630	Hours	Hours	Hours
Engine No. 2			Hours	Hours	Hours
Engine No. 3			Hours	Hours	Hours
Engine No. 4			Hours	Hours	Hours

Type Of Maintenance Program

1.☒ Annual 2.☐ Manufacturer's Inspection Program 3.☐ Other Approved Inspection Program(AAIP) 4.☐ Continuous Airworthiness 5.☐ Specify_____

Type Of Last Inspection

1.☒ Annual 2.☐ 100 Hours 3.☐ AAIP 4.☐ Continuous Airworthiness

Date Last Inspection Performed _____(M/D/Y)

Time Since Last Inspection _____Hours

Airframe Total Time _____Hours

Emergency Locator Transmitter (ELT)	ELT Manufacturer	Model/Series	Serial Number	Battery Date (M/D/Y)
	Switch 1.☐ On 2.☐ Off 3.☒ Armed	Operated 1.☐ Yes 2.☒ No		Aided In Accident Location 1.☐ Yes 2.☒ No

Registered Aircraft Owner	Address
ELITE PORTFOLIO	WRANGEL AK 99929

Operator Of Aircraft	Address
1.☐ Same As Registered Owner 2. Name 3. DBS: PARK CITY HELICOPTERS	1.☐ Same As Registered Owner 2. 5 SLC UT 84107

NTSB Form 6120.1/2 (11/87) This Form replaces NTSB Forms6120.1 (rev. 10/77) and 6120.2 (Rev.10/77)

Owner / Operator Information (cont.)

Operator (Certificate Number)	Operator Designator (4 Letter Designator)

Purpose Of Flight And Type Of Operation

Regulation Flight Conductor Under
1.☐ FAR91 (only) 4.☐ FAR 121 7.☐ FAR 133
2.☐ FAR91D 5.☐ FAR 125 8.☒ FAR 135
3.☐ FAR 103 6.☐ FAR 129 9.☐ FAR 137

Purpose of Flight
1.☐ Personal 6.☐ Aerial Observation
2.☒ Business 7.☐ Other Work Use
3.☐ Educational 8.☐ Public Use
4.☐ Executive/Corporate 9.☐ Ferry
5.☐ Aerial Application 10.☐ Positioning

Operator Authority
FAR121
1.☐ Domestic
2.☐ Flag
3.☐ Supplemental

FAR 135
4.☒ On Demand
5.☐ Commuter

FAR 133
6.☐ Rotorcraft External Load

FAR125
7.☐ Large Aircraft

FAR 129
8.☐ Foreign

FAR 121, 125, 127, 129, 135 Revenue Operations
1.☐ Scheduled
2.☒ Non Scheduled
3.☐ Domestic
4.☐ International
5.☐ Passenger
6.☐ Cargo
7. Specify_____

Pilot Information

Pilot Name	Pilot Certificate No.	Address	Nationality
CLAUS NAUER		SANDY UT 84070	US

Certificate (s)
1.☐ Student 3.☑ Commercial 5.☑ Flight Instructor 7.☐ Military 9.☐ None
2.☑ Private 4.☐ Airline Transport 6.☐ Flight Engineer 8.☐ Foreign 10.Specify_____

Rating (s)
1.☐ None 6.☑ Helicopter
2.☑ Single Engine Land 7.☐ Glider
3.☐ Single Engine Sea 8.☐ Free Balloon
4.☑ Multiengine Land 9.☐ Airship
5.☐ Multiengine Sea 10.☐ Gyroplane

Instrument Rating (s)
1.☐ None
2.☑ Airplane
3.☑ Helicopter

Instructor Rating (s)
1.☐ None 6.☐ Instrument Airplane
2.☑ Airplane S.E. 7.☐ Instrument Helicopter
3.☐ Airplane M.E. 8.☐ Ground Instructor
4.☐ Helicopter 9.☐ Specify_____
5.☐ Glider

Type Ratings/Student Endorsements

Date Of Biennial Flight Review or Equivalent (M/D/Y)
12/7/2004

BFR Aircraft
1. Make MD 500
2. Model 369 HS

Medical Certificate
1.☐ None 3.☑ Class 2
2.☐ Class 1 4.☐ Class 3

Date Of Last Medical (M/D/Y)

Limitations NONE

Waivers NONE

Date Of Birth (M/D/Y)

Degree Of Injury
1.☑ None
2.☐ Minor
3.☐ Serious
4.☐ Fatal

Seat Occupied
1.☑ Left 4.☐ Front
2.☐ Right 5.☐ Rear
3.☐ Center

Person At Controls At Time Of Accident
1.☑ Pilot In Control 4.☐ Non-Pilot
2.☐ Second Pilot 5.☐ No One
3.☐ Both Pilots

Seat Belt Available
1.☑ Yes
2.☐ No

Seat Belt Used
1.☑ Yes
2.☐ No

Shoulder Harness Available
1.☑ Yes
2.☐ No

Shoulder Harness Used
1.☑ Yes
2.☐ No

Source Of Pilot Flight Time Information
1.☑ Pilot Logbook 4.☐ Company
2.☐ Operators Estimate 5.☐ Specify_____
3.☐ FAA Records

Flight Time	All A/C	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument Actual	Instrument Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time	4680	11.7	1011	38	532	65	253	363.1	Ø	Ø
Pilot In Command (PIC)	3723	11.7	902	38	542	60	218	2785	Ø	Ø
Instructor	578	Ø	518	Ø	26	Ø	82	Ø	Ø	Ø
This Make & Model					Ø	Ø	Ø			
Last 90 Days	91	3.4	Ø	Ø	2.4	Ø	Ø	91	Ø	Ø
Last 30 Days	25	1.0	Ø	Ø	1.4	Ø	Ø	25	Ø	Ø
Last 24 Hours	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø

Second Pilot Information

Second Pilot Responsibilities At The Time Of Accident
1.☐ Co-Pilot 2.☐ Dual Student 3.☐ Safety Pilot 4.☐ Check Pilot 5.☑ None (Pilot-Rated Passenger)

Pilot Name	Pilot Certificate No.	Address	Nationality

Certificate (s)
1.☐ Student 3.☐ Commercial 5.☐ Flight Instructor 7.☐ Military 9.None_____
2.☐ Private 4.☐ Airline Transport 6.☐ Flight Engineer 8.☐ Foreign 10.Specify_____

Second Pilot Information (cont.)

Rating (s)
1.☐ None 6.☐ Helicopter
2.☐ Single Engine Land 7.☐ Glider
3.☐ Single Engine Sea 8.☐ Free Balloon
4.☐ Multiengine Land 9.☐ Airship
5.☐ Multiengine Sea 10.☐ Gyroplane

Instrument Rating (s)
1.☐ None
2.☐ Airplane
3.☐ Helicopter

Instructor Rating (s)
1.☐ None 6.☐ Instrument Airplane
2.☐ Airplane S.E. 7.☐ Instrument Helicopter
3.☐ Airplane M.E. 8.☐ Ground Instructor
4.☐ Helicopter 9.☐ Specify
5.☐ Glider

Type Ratings/Student Endorsements

Date Of Biennial Flight Review or Equivalent (M/D/Y)

BFR Aircraft
1. Make
2. Model

Medical Certificate
1.☐ None 3.☐ Class 2
2.☐ Class 1 4.☐ Class 3

Date Of Last Medical (M/D/Y)

Limitations

Waivers

Date Of Birth (M/D/Y)

Degree Of Injury
1.☐ None 3.☐ Serious
2.☐ Minor 4.☐ Fatal

Seat Occupied
1.☐ Left 3.☐ Center 5.☐ Rear
2.☐ Right 4.☐ Front

Seat Belt Available
1.☐ Yes
2.☐ No

Seat Belt Used
1.☐ Yes
2.☐ No

Shoulder Harness Available
1.☐ Yes
2.☐ No

Shoulder Harness Used
1.☐ Yes
2.☐ No

1.☐ Pilot Logbook 4.☐ Company
2.☐ Operators Estimate 5.☐ Specify
3.☐ FAA Records

Flight Time	All A/C	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument Actual	Instrument Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time										
Pilot In Command (PIC)										
Instructor										
This Make & Model										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Other Personnel

Name	Seat	Address (City & State)	Crew	Non-Revenue	Revenue	Non-Occupant	FAA	Fatal Serious Minor None
1.								
2.								
3.								
4.								
5.								
6.								

Flight Itinerary Information

Last Departure Point
1. Airport ID BTF
2. City/Place WOODS CROSS
3. State UTAH

Time Of Departure
1. Time 0700
2. Time Zone MT

Destination
1. Airport ID FIELD SITE
2. City/Place
3. State

Flight Plan Filed
1.☐ None 4.☐ VFR/IFR
2.☐ VFR 5.☒ Company (VFR)
3.☐ IFR 6.☐ Military (VFR)

If Weather Was Involved, State If Weather Briefing Was Obtained or If Weather Reports Were Checked And How It Was Accomplished

NO

Fuel On Board At Last Takeoff
Gallons
220 or
Pounds

Fuel Type
1.☐ 80/87 4.☐ 115/145 7.Specify
2.☐ 100 Low Lead 5.☑ Jet A
3.☐ 100/130 6.☐ Automotive

Other Services, If Any, Prior to Departure

Weather Information At The Accident Site

Source Of Weather Information (Pilot/Operator, Weather Observation)
NWS

Light Condition
1.☐ Dawn 3.☐ Dusk 5.☐ Dark Night
2.☑ Daylight 4.☐ Bright Night

Visibility
10+ Miles

Temp (°F)
30

Weather Information At The Accident Site (cont.)

Dew Point (°F)	Altimeter Setting "Hg	Sky/Lowest Cloud Condition
		1.☑ Clear 2.☐ Scattered _____ Feet AGL 3.☐ Broken _____ Feet AGL 4.☐ Overcast _____ Feet AGL 5.☐ Partial Obscuration 6.☐ Obscured

Wind Information	Restriction To Visibility	Type Precipitation	Intensity Of Precipitation
1.Direction EASTERLY 2. Velocity 12 Kts 3. Gusts 18 Kts	NONE	NONE	1.☐ Light 3.☐ Heavy 2.☐ Moderate 4.Specify _____

Turbulence (Multiple Entry)
1.☐ None 2.☑ Light 3.☐ Moderate 4.☐ Severe 5.☐ Extreme 6.☐ Clean Air 7.☐ In Clouds

Damage To Aircraft And Other Property

Degree Of Aircraft Damage	Fire
1.☐ None 2.☑ Minor 3.☐ Substantial 4.☐ Destroyed	1.☐ Yes 3.☐ In-Flight 2.☑ No 4.☐ On Ground

Description Of Damage To Aircraft And Other Property
T/R Drive shaft in 3 pieces, some structual damage on inside of tail boom + transition area. (Aircraft not yet recovered).

Mechanical Malfunction Failure

1.☐ No
2.☑ Yes List The Name Of The Part, Manufacturer, Part No., Serial No. And Describe The Failure

Failed at a hover

T/R Drive shaft
PN 369A 5518-601
SN 6084-P034

Total Time	
On Part 55 Hours	At Overhaul 0 Hours

Collision Accident
If Collision Accident Occurred, Complete The Information For Other Aircraft

Registration Mark	Aircraft Manufacturer	Aircraft Type/Model	Degree Of Aircraft Damage
			1.☐ Destroyed 3.☐ Minor 2.☐ Substantial 4.☐ None

Registered Aircraft Owner	Address

Pilot Name	Address	Pilot Certificate No.

Evacuation Of Aircraft

Assistance Received
1.☐ Outside Person (s) 3.☐ Slide 5.☐ Ladder
2.☐ Auxiliary Lighting 4.☐ Rope 6.☐ Specify _____

Method Of Exit (State Approximate Number Of Persons Using Each Of The Following
1. Main Door ✓ 2. Auxiliary Door _____ 3. Emergency Exit _____

Recommendation (How Could This Accident Have Been Prevented)
Operator/Owner Safety Recommendation (Optional Entry)

Additional Flight Crew Members

For Each Additional Flight Crew Member, Exclusive Of Cabin Attendants Complete The Following Information

Name	FAA Certificate No.	Address ______	Title

Certificate(s)

1.☐ Student 3.☐ Commercial 5.☐ Flight Instructor 7.☐ Foreign
2.☐ Private 4.☐ Airline Transport 6.☐ Flight Engineer 8.Specify ______

Ratings/Endorsements	Total Flight Time	Flight Time This Accident

Name	FAA Certificate No.	Address ______	Title

Certificate(s)

1.☐ Student 3.☐ Commercial 5.☐ Flight Instructor 7.☐ Foreign
2.☐ Private 4.☐ Airline Transport 6.☐ Flight Engineer 8.Specify ______

Ratings/Endorsements	Total Flight Time	Flight Time This Accident

Name	FAA Certificate No.	Address ______	Title

Certificate(s)

1.☐ Student 3.☐ Commercial 5.☐ Flight Instructor 7.☐ Foreign
2.☐ Private 4.☐ Airline Transport 6.☐ Flight Engineer 8.Specify ______

Ratings/Endorsements	Total Flight Time	Flight Time This Accident

Narrative History Of Flight

Describe What Occurred In Chronological Order, The Circumstances Leading To The Accident And The Nature Of The Accident. Describe The Terrain and Include a Sketch Of Wreckage Distribution If Pertinent. Attach Extra Sheets If Needed. State Point Of Departure, Time Of Departure, Intended Destination And Services Obtained.

SEE ATTACHED NARRATIVE + MAP

I Hereby Certify That The Above Information Is Complete And Accurate To The Best Of My Knowledge

Date Of This Report	Signature Of Pilot/Operator
2-17-05	[redacted]

Signature Of Person Filing Report Other Than Pilot/Operator

1. Signature _____
2. Type Or Print Name _____
3. Title _____

For NTSB Use Only

NTSB Accident No.	Reviewed By NTSB Office Located At	Name Of Investigator	Date Report Received
DEN 05 LA 056	DENVER, COLORADO	ARNOLD W. SCOTT.	RECEIVED MAR 07 2005

NTSB - DEN

Narrative

On 02/03/2005 at 07:30 I was chartered to fly Park City Helicopter's MD 369HS Tail No N9118F from a parking lot at the west end of Provo Canyon to several LZs nearby. My passengers were two UDOT personnel in charge of avalanche control within the canyon. We loaded several explosives, two sets of skis, a light antenna pole about 3/4" by 3' and two passengers on the aircraft. Our first mission was to dispense the pentolyte charges for avalanche control. This mission went without incident.

The next mission was to land at the summit (approximately 11,400') and to try to drop off the two people and the antenna pole. The summit was too narrow for me to safely land there, so I chose an LZ approximately 1,300' lower that we had used previously in the summer. The size of the LZ is larger that a football field.

I over flew the area doing a reconnaissance and determined that the wind was coming down canyon from the east. I circled as I descended and set up a final approach from the southwest and continued on short final to turn toward the east. There were absolutely no obstacles in my path on either approach or final. The LZ was covered in snow but had a very thin crust on it so loose snow was not an issue. As I was applying power just before touching down, I felt an unusual vibration in both the pedals and the airframe. At this point we were about 4' off the ground. My initial reaction was to pick the helicopter back up to a high hover (approximately 8' - 10').

I repositioned the helicopter about 20' away from the first intended landing area. While I was doing this, the vibrations and noise got worse. I was about to land the helicopter when I heard a kind of clanking sound and the aircraft began to spin to the right. I immediately realized I had no tail rotor authority. I rolled the throttle to flight idle and descended straight down into the snow in an auto rotation. As you can imagine all this happened within about 2-3 seconds. We rotated about 200 degrees.

The snow was so deep, that the aircraft settled into it about 1', slightly tail low. All three of us were on intercom, and I verified that none of us were hurt. Since we were upright and very stable I left the aircraft in flight idle for 2 min before doing a shut down. During this period I did hear more clanking in the tailboom area. I then shut down the engine, waited for the rotors to come to a stop. We exited the aircraft, and I immediately notified the Director of Operations.

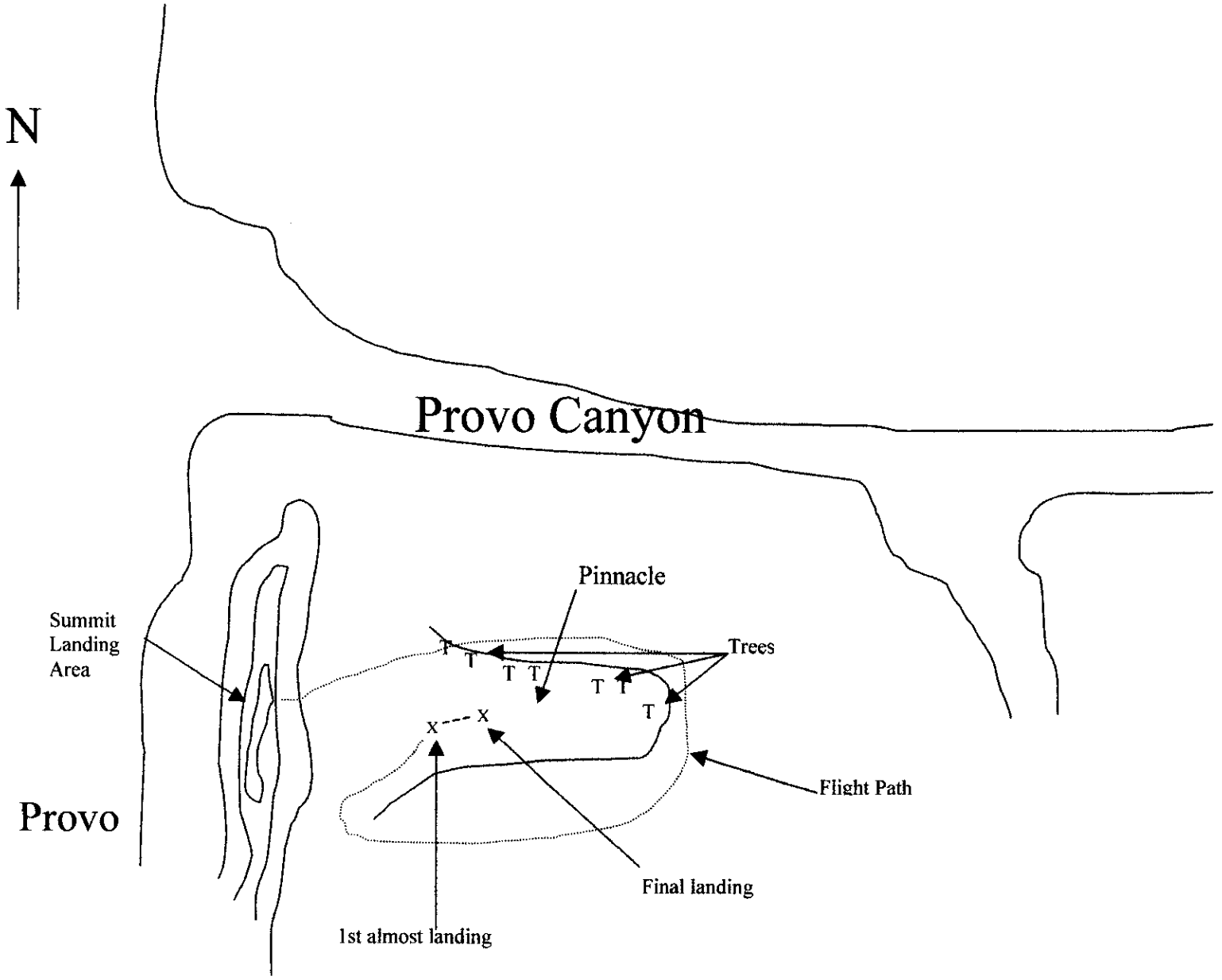
My two passengers got out and went on with their mission while I arranged alternate transportation.

During my post incident inspection, I noticed on the right side of the helicopter, a small triangular tear in the skin. It was in line with the drive shaft and immediately above the end of the exhaust pipe. There appeared to be no other structural damage. The tailrotor could be spun freely. There was no damage to the blades or any other part of the tail rotor assembly. There was no indication of damage to the gearbox or to its attachment points. Both the upper and lower vertical fins showed no damage. The imprint of the fuselage in the snow indicated that the aircraft descended perfectly vertical, with no drift.

With help from Matt Higginbotham, the rescue pilot, we dug beneath the forward part of the skids with snow shovels, to make the helicopter perfectly level for extraction. At this time we took the pictures that are attached.

[redacted]

Claus Hauer


N
Provo Canyon
Pinnacle
Summit
Landing
Area
Trees
T T T T T T T
X X
Provo
Flight Path
Final landing
1st almost landing