



**American Avalanche Association
Forest Service National Avalanche Center
Avalanche Incident Report: Long Form**



Please send to: CAIC; 325 Broadway WS1; Boulder CO 80305; caic@qwest.net; Fax (303) 499-9618
and to the nearest Avalanche Center.

Occurrence Date: 080407 **Time:** 1300

Report Author(s)

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Location:

State: Alaska County: n/a Forest: n/a
Peak, Mtn Pass, or Drainage: Thompson Pass, Richardson Highway Mile Post 30
Site Name: Vertigo, Little Matterhorn
Lat/Lon or UTM: N61.08.99, W145.39.85

Summary	Caught	Partially Buried Not Critical	Partially Buried Critical	Completely Buried	Injured	Killed	Vehicles Damaged	Structures Damaged
Number	1					1		

Weather Fill in the weather chart of the five days prior to the accident. Use 24 hr trends for wind speed and direction.						
Weather station location(s): DOT Camp @ Pass			Lat/Lon or UTM: N61.08.472, W145.44.834		Elevation: 2507 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	
Date	080402	080403	080404	080405	080406	080407
Tmax	37.6 (F)	35.8	35.9	33.8	28.8	28.1
Tmin	29.4 (F)	29.4	27.3	24.7	19.1	7.6
HN24	16 (cm)	8	5	5	5	0
HN24W	22 (mm)	12	8	6	5	0
Wind Speed	30 (mph)	20	20	10	15	10
Wind Dir	SE	SE	SE	SE	N	NE

Avalanche Conditions		Attach most recent advisory (Section VII).
Closest Avalanche Center: Valdez <input type="checkbox"/> accident outside of forecast area Avalanche warning in effect? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Avalanche Danger Rating <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Considerable <input type="checkbox"/> High <input type="checkbox"/> Extreme	Recent Avalanche Activity Upper elevation: numerous solar triggered HST, numerous heli-skier triggered HST, few cornice drops, few large avalanches on N asp running in depth hoar. Mid elevation: persistent weak layer under 080307 HST N asp. Lower elevation: no significant activity since 080219.

Snowpack Describe the state of the snowpack. Include season history, snow profiles, and prominent features as necessary.
profile and snowpack archive at: <http://www.alaskasnow.org/>
wx archive at: <http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KAKTHOMP1>

Section I: Group Information

Fill in the following tables. Some of the fields can be checked or left blank. Attach additional pages and reports from other agencies as necessary (Section VII).

Subject	Name	Age	Gender	Address	Phone
1	Jesse Tol	31	M	Alpine Woods, Valdez, Alaska, 99686	
2	John Tol (father)	54	M	Alpine Woods, Valdez, Alaska, 99686	907-835-9299
3					
4					
5					

Skill Level	Activity	Years at Activity	Activity Skill Level	Accessed Local Avalanche Advisory?	Avalanche Education Level
1	snowboard	10+	Expert	No	None
2	ski	20+	Expert	No	None
3			—		
4			—		
5			—		

Rescue Equipment Carried	Transceiver Make and Model	Shovel	Probe Pole	Releasable Bindings	Other	Snowmobile: Rescue Equipment Carried on Person
1	Pieps DSP	X	X			
2	Pieps 457 Optifinder	X	X			
3						
4						
5						

Injuries or Cause of Death	Unknown	None	First-Aid Needed	Doctor Care Needed	Hospital Stay Needed	Asphyxiation	Head Injury	Chest Injury	Spinal Injury	Hypothermia	Skeletal Fracture	Other	Fatal
1	<input type="checkbox"/>	<input type="checkbox"/>				X							<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>											<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>											<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>											<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>											<input type="checkbox"/>

Comments

Section II: Avalanche Path and Event Information

Fill in the following tables. Some of the fields can be checked or left blank. Attach additional pages, fracture line profiles, and reports as necessary (Section VII).

Avalanche Characteristics		
Type: Soft Slab	Trigger: victim	Size: R 3 \ D 2
Aspect: 260	Elevation: 5100 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	
Sliding surface (check one): <input type="checkbox"/> In new <input checked="" type="checkbox"/> New/old <input type="checkbox"/> In old <input type="checkbox"/> Ground		

Dimensions <input checked="" type="checkbox"/> m / <input checked="" type="checkbox"/> ft	Average	Maximum
Height of Crown Face	0.4	1.0
Width of Fracture	100	
Vertical Fall	120	140

Snow	Hardness	Grain Type	Grain Size (mm)
Slab	4F	PP, DF	1.5
Weak Layer	F+	SH, NSF	2.0
Bed Surface	P/1F-	sun crust	1.0
Thickness of weak layer: 5 <input checked="" type="checkbox"/> mm / <input type="checkbox"/> cm / <input type="checkbox"/> in			

Start Zone	Ground Cover:	Location of Crown Face:	Snow Moisture
Elevation: 5100 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	<input type="checkbox"/> Smooth	<input type="checkbox"/> Ridge	<input checked="" type="checkbox"/> Dry
Average Slope Angle: 40°	<input type="checkbox"/> Rocky	<input type="checkbox"/> Cornice	<input type="checkbox"/> Moist
Maximum Slope Angle: 45°	<input checked="" type="checkbox"/> Glacier	<input type="checkbox"/> Mid-Slope	<input type="checkbox"/> Wet
Aspect: 260	<input type="checkbox"/> Dense Forest	<input checked="" type="checkbox"/> Convex Roll	
	<input type="checkbox"/> Open Forest	<input type="checkbox"/> Rocks	
	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	
Vegetation: n/a			

Track		Snow Moisture
<input checked="" type="checkbox"/> Open Slope	Average Slope Angle: 40°	<input checked="" type="checkbox"/> Dry
<input type="checkbox"/> Confined	Aspect: 260	<input type="checkbox"/> Moist
<input type="checkbox"/> Gully		<input type="checkbox"/> Wet

Runout	Ground Cover:	Snow Moisture	Debris Type	α_c : 30°
Elevation: 4800 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	<input type="checkbox"/> Smooth	<input checked="" type="checkbox"/> Dry	<input type="checkbox"/> Fine	α_c : °
Average Slope Angle: 35°	<input type="checkbox"/> Rocky	<input type="checkbox"/> Moist	<input checked="" type="checkbox"/> Blocks	Debris Density: 300 kg m ⁻³
Aspect: 260	<input checked="" type="checkbox"/> Glacier	<input type="checkbox"/> Wet	<input type="checkbox"/> Hard	Terrain Trap? <input checked="" type="checkbox"/> no <input type="checkbox"/> yes
	<input type="checkbox"/> Dense Forest		<input checked="" type="checkbox"/> Soft	Terrain Trap Type:
	<input type="checkbox"/> Open Forest		<input type="checkbox"/> Rocks	
	<input type="checkbox"/> Unknown		<input type="checkbox"/> Trees	
Vegetation:				

Comments
bed surface: thin sun crust

Section III: Accident Description

Fill in the following sections with available information. Attach additional pages, witness accounts, and other reports as necessary.

Events Leading Up to the Avalanche Include objectives of the party, departure point, route taken, familiarity with area, encounters with other groups, location of the party at time of avalanche, etc.

Location of group in relation to start zone during avalanche: high middle low below all unknown

Slope angle at approximate trigger site: 42°

Father (John) and son (Jesse) accessed glaciated terrain lined with steep ramps by snowmachine. John planned to film Jesse's decent from a safe location. Jesse booted up the ramp carrying his snowboard in his hands. Approximately 1:08 pm the slope released on Jesse, he was 3/4 the way to the top.

Avalanche Danger Evaluation

Number of snowpit observations:	Stability Tests Performed: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> unknown	Test Results:
Signs of Instability Observed:		
<input checked="" type="checkbox"/> none	<input type="checkbox"/> unknown	
<input type="checkbox"/> some cracking	<input type="checkbox"/> shooting cracks	
<input type="checkbox"/> whumphing	<input type="checkbox"/> hollow sounds	
<input type="checkbox"/> recent avalanche activity		

Comments

Witness	Name	Address	Phone
1	John Tol (father)		
2	Andrew Blessing & Steve Charest		802.233.9844

Accident Diagram On a separate page (Section VII) or photograph, draw a diagram of the accident scene. Include avalanche boundaries, prominent rocks and/or trees, the location of all party members before the avalanche, and the location of people, machines, and equipment after the avalanche.

Section IV: Rescue

Fill in the following sections with available information. Attach additional pages, witness accounts, and other reports as necessary.

Rescue Chronology						
First Report	Response					
Reporting Party:	Agency	Time Dispatched	Time on Scene	Method of Travel	Number of Rescuers	Equipment
Report Method:	Valdez Fire Department	1:37 pm	2:36 pm	road	5	ambulance
Time Reported:						

Recovery									
Subject	Caught	Partially Buried— Not Critical	Partially Buried— Critical	Completely Buried	Depth to Face <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	Time Recovered	Length of Burial	Body Position	Head Position
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.5		15	___	___
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				___	___
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				___	___
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				___	___
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				___	___

Recovery Method		For a transceiver recovery, include make and model of transceiver used by searcher. If an object on the surface was used as a clue, list object.								
Subject	Self Rescue	Companion	Organized	Voice	Object	Transceiver	Spot Probe	Probe Line	Rescue Dog	Digging
1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	snowboard visible	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rescue Description List pertinent events that occurred during the rescue. Include additional pages of dispatch notes, statements, and agency reports as needed (Section VII).

RECOVERY BODY POSITION: vertical, head down.

Jesse was buried head down, his feet just visible beneath the surface. Jesse's snowboard was sticking out of the snow near Jesse's feet. John responded with beacon search, then switched to visual search after seeing the snowboard which revealed Jesse's feet. John began to dig after a failed attempt to pull Jesse free. There was no movement of Jesse's legs initially, then 20-30 seconds of movement, then nothing else.

At 1:22 pm a party of three ski tourers arrived to assist (see their attachment). John was digging with a shovel blade but no handle. They extracted Jesse from the snow almost immediately after their arrival. There were no vital signs and CPR was initiated. At 2:00 pm a helicopter from H20 Heli-Guides arrived to assist. A snowboard was placed under Jesse and CPR was continued. At approximately 2:30 pm a helicopter from Valdez Heli-Camps extracted Jesse and CPR was stopped. At 2:36 pm Jesse was loaded onto an ambulance and transported to Valdez Hospital.

Section V: Damage

Fill in the following sections with available information. Attach additional pages, witness accounts, and other reports as necessary.

Vehicles in Avalanche Describe and/or estimate the cost of damage to each vehicle caught in the avalanche.			
Type	Partially Buried	Completely Buried	Damage
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

Structures Damaged Describe and/or estimate the cost of damage to each structure affected the avalanche.			
Type	Construction Type	Damage	Destroyed
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Total Loss Estimate the cost of damage caused by the avalanche: \$

Rescue Cost Estimate the cost of rescue: \$

Economic Effects List economic effects not included in the above tables (road closed, ski area closed, mine closed, change in policy, etc)

Section VI: Additional Comments and Recommendations

Section VII: Blank pages for Additional Information

This page is not protected, so diagrams, digital photos, or other information can be pasted in.