



**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: 18 APR 2009 **Time:** 1245

Report Author(s)

Name: Sean D Wisner and Pete Carter

Affiliation:

Alaska Avalanche Information Center

Address: PO BOX 2988
Valdez, AK 99686

Phone: (907) 831-0040

Fax: (907) 835-5387

Email: alaskasnow.org@gmail.com

Location:

State: Alaska

County: USA

Forest: N/A

Peak, Mtn Pass, or Drainage: Nicks Gulley, Thompson Pass

Site Name: NICKS

Lat/Lon or UTM: N61.10.21 W145.39.16

Summary	Caught	Partially Buried Not Critical	Partially Buried Critical	Completely Buried	Injured	Killed	Vehicles Damaged	Structures Damaged
Number	1	0		1		1	1 snowmachine	0

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): Thompson Pass DOT	Lat/Lon or UTM: N61.08.29 W145.44.56			Elevation: 2465 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft		
Date	090413	090414	090415	090416	090417	090418
Tmax	31	28	27	31	33	33
Tmin	15	22	22	26	26	24
HN24	5"	4"	0	0	0	0
HN24W	0.5"	0.4"	0	0	0	0
Wind Speed	Lt	Lt-Mod	Lt	Mod	Lt-Mod	Lt
Wind Dir	N	SE	N	N	SE	Var

Avalanche Conditions	Attach most recent advisory (Section VII).	
Closest Avalanche Center: 5 miles <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 checked="" type="checkbox"/> High <input type="checkbox"/> Extreme	Recent Avalanche Activity Natural and human triggered avalanches occurring frequently on all aspects and elevations the day of and the day prior to the incident. Advisory: "Considerable before noon. High after noon."

Snowpack Describe the state of the snowpack. Include season history, snow profiles, and prominent features as necessary.

On 090418 the average HS was 2-3m between 2000'-3000' elevation. Size D3 remote trigger on 081201 on adjacent slope on early season facets with crown 1-2m. Pronounced faceting in December and January followed with 090116-090119 'Pineapple Express' depositing 130cm HST (230mm HNW in Valdez, mostly rain, which did not percolate to ground). 090120 MFcr became faceted and buried with windslab during February extreme northerly outflow winds. Windslabs were pencil to knife hard averaging 1m, but much thicker (~3m) where wind loaded.

The slope that failed was crossloaded during February and March northerly outflow wind events. The crown averaged 1m thick but thickened to more than 2.5m in center of the loaded gully terrain feature which failed. See attached photographs. On the day prior to the accident, a similar crossloaded feature on part of the adjacent slope (the same one with the 081201 size D3) was remotely triggered by a snowmachine competition producing a D2.5.

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	Williams, Jordan	27	M	Valdez, Alaska	
2					
3					
4					
5					

Skill Level	Activity	Years at Activity	Activity Skill Level	Accessed Local Avalanche Advisory?	Avalanche Education Level
1	Snowmobile	20	Advanced	NO	None
2			—		
3			—		
4			—		
5			—		

Rescue Equipment Carried	Transceiver Make and Model	Shovel	Probe Pole	Releasable Bindings	Other	Snowmobile: Rescue Equipment Carried on Person
1	None	None	None	N/A		None
2						
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		X			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
 CPR was performed upon extrication, unsuccessfully. Cause of death was later identified as being due to significant basal skull fracture and spinal injury.

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: Slab	Trigger: Human	Size: R 2 \ D 2
Aspect: West	Elevation: 3000 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	
Sliding surface (check one): <input type="checkbox"/> In new <input type="checkbox"/> New/old <input checked="" type="checkbox"/> In old <input type="checkbox"/> Ground		

Dimensions <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	Average	Maximum
Height of Crown Face	3 ft	7 ft
Width of Fracture	500 ft	
Vertical Fall	700 ft	

Snow	Hardness	Grain Type	Grain Size (mm)
Slab	P	RG	0.5
Weak Layer	1F	Facets	0.5
Bed Surface	MFcr	WG	1.0
Thickness of weak layer: 3 <input checked="" type="checkbox"/> mm / <input type="checkbox"/> cm / <input type="checkbox"/> in			

Start Zone	Ground Cover:	Location of Crown Face:	Snow Moisture
Elevation: 3000 <input type="checkbox"/> m / <input checked="" type="checkbox"/> ft	<input checked="" type="checkbox"/> Smooth	<input type="checkbox"/> Ridge	<input type="checkbox"/> Dry
Average Slope Angle: 40°	<input checked="" type="checkbox"/> Rocky	<input type="checkbox"/> Cornice	<input checked="" type="checkbox"/> Moist
Maximum Slope Angle: 45°	<input type="checkbox"/> Glacier	<input checked="" type="checkbox"/> Mid-Slope	<input type="checkbox"/> Wet
Aspect: SW	<input type="checkbox"/> Dense Forest	<input type="checkbox"/> Convex Roll	
	<input type="checkbox"/> Open Forest	<input type="checkbox"/> Rocks	
	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	
Vegetation:			

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

Runout	Ground Cover:	Snow Moisture	Debris Type	α_i : °
Elevation: 2200 <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: 30°	<input checked="" type="checkbox"/> Rocky	<input checked="" type="checkbox"/> Moist	<input type="checkbox"/> Blocks	Debris Density: 350 kg m ⁻³
Aspect: W	<input type="checkbox"/> Glacier	<input type="checkbox"/> Wet	<input checked="" type="checkbox"/> Hard	Terrain Trap? <input type="checkbox"/> no <input checked="" type="checkbox"/> yes
	<input type="checkbox"/> Dense Forest		<input type="checkbox"/> Soft	Terrain Trap Type:
	<input type="checkbox"/> Open Forest		<input type="checkbox"/> Rocks	Gulley
	<input type="checkbox"/> Unknown		<input type="checkbox"/> Trees	
Vegetation:				

Comments
SW asp, 3000' elevation, 40 degree start zone, size D2.5, hard slab over facets. 500' crown averaged 3', crown max depth 7', ran 700' into terrain trap. Victim, buried 12 feet, no transceiver. Triggered slope from bottom.

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: <input type="checkbox"/> high <input type="checkbox"/> middle <input checked="" type="checkbox"/> low <input checked="" type="checkbox"/> below <input type="checkbox"/> all <input type="checkbox"/> unknown	
Slope angle at approximate trigger site: 40°	
Snowmachiner was riding in terrain trap below slab, highmarked into slab and triggered from below.	

Avalanche Danger Evaluation		
Number of snowpit observations: numerous over season	Stability Tests Performed: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> unknown	Test Results: Numerous skier triggered on 090404 SH over the previous ten days. Generally moderate to hard stability test results on 090120 MFcr over the weeks prior to the accident: ECT and PCT results less noteworthy as March progressed. The deep buried facets on west aspects below 1000m elevation and within 10km range of accident site were widely discussed by at least one heli-ski operation (observations posted on http://alaskasnow.org/) and suspected to fail with spring thaw.
Signs of Instability Observed:		
<input type="checkbox"/> none <input type="checkbox"/> some cracking <input type="checkbox"/> whumphing <input checked="" type="checkbox"/> recent avalanche activity	<input type="checkbox"/> unknown <input checked="" type="checkbox"/> shooting cracks <input type="checkbox"/> hollow sounds	

Comments
Public forecats on http://alaskasnow.org/ rated at Considerable trending to high with PM warming. Recent avalanche activity, both natural and human triggered, observed on adjacent slopes in area.

Witness	Name	Address	Phone
1	Jeff Saxe	Valdez, Alaska	(907) 255-2633
2	Tony Beck	Valdez, Alaska	deleated

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.
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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: Jeff Saxe	Agency	Time Dispatched	Time on Scene	Method of Travel	Number of Rescuers	Equipment
Report Method: Radio	Valdez Search and Rescue	1245	1247	Snowmobile	10	Transceivers, probes, shovels, backboard, litter, first aid, etc.
Time Reported: 1245	Valdez Fire Department	1247	1255	Snowmobile	5	Transceivers, probes, shovels, backboard, litter, first aid, etc.
	Alaska Backcountry Adventures	1255	1300	Helicopter	2	Helicopter

Recovery									
Subject	Caught	Partially Buried— Not Critical	Partially Buried— Critical	Completely Buried	Depth to Face <input checked="" type="checkbox"/> m / <input type="checkbox"/> ft	Time Recovered	Length of Burial	Body Position	Head Position
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.0	20 min	20 min	Prone/Face Down	Downhill
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	<input checked="" type="checkbox"/>	<input checked="" 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).
	<p>The Valdez Search and Rescue team was standing by, as the accident occurred adjacent to snowmachine "hill climb" event. Rescuers were immediately dispatched to scene and began rescue efforts. ICS was established and spotters were staged on nearby ridge to watch for avalanche activity. The rescuers needed to access the terrain trap to recover the victim under rising hazard from subsequent abvalanches.</p> <p>Fire Department personnel were dispatched to the scene within 5 minutes of the burial. Helicopter was placed on stand-by immediately. Spotters at the snowmachine race, who witnessed the incident, were able to direct rescuers to last scene point to begin spot probing. Probe line was established. Victim was located with spot probing at last seen point.</p> <p>After extricating patient from debris, CPR was initiated, patient was loaded on backboard and transported to hospital in helicopter. Airway was open and CPR was initiated within 20 minutes of burial. Patient was pronounced dead on arrival by Valdez Hospital personnel.</p>

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
Snowmobile	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Minimal
	<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.



Photo taken on 04/18/09 immediately following avalanche by spotters on ridgeline who were searching debris with telephoto camera lens.



Photo taken on 04/18/09 immediately following avalanche by spotters on ridgeline who were searching debris with telephoto camera lens. Person visible in photo was the victim's nephew who was looking for the victim prior to rescuers arriving on scene. Note hard slab debris and large blocks.