

Incident Summary Page for the 100 Fires Project

Incident Name: Cart Creek Fire	Incident Date & Time: 07/16/1976 @ 14:55
Incident Location: Flaming Gorge Ranger District, Ashley National Forest, Utah	Incident Size 1,500 acres final size Approximately 50 acres at time of entrapment
Types of resources involved: US Forest Service employees Youth Conversation Corps program leaders & enrollees	# of Fatalities/injuries: 3 fatalities
Reasons this fire was selected for the 100 Fires list:	
<ul style="list-style-type: none"> ➤ Fire made a notable impact within the wildland fire service ➤ 3 or more firefighter fatalities by entrapment 	
Conditions leading up to the event:	
<p>The morning forecast called for partly cloudy with scattered afternoon showers and thunderstorms. Winds were forecast to be "light and variable with gustiness in late afternoon near showers and thunderstorms.</p> <p>The fire area is about 6000 feet in elevation; bounded by Cart Creek Canyon, the Spruce Creek drainage, and by a 10-20 foot high broken rocky bluff. The two creeks converge to form a rough triangle area of about 100 acres below the rocky bluff; only the southwest half of this was burned or burning at the time of the accident.</p> <p>Fuels over the entire fire area were grass and sage with scattered junipers, Ponderosa pines and clumps of bitterbrush with curl-leaf mahogany.</p>	
Brief description of the event:	
<p>The Cart Creek Fire began about noon Saturday, July 16 from a lightning strike south of the confluence of Cart Creek and Spruce Creek. The District Fire Management Officer (FMO) Dennis Hatch saw the smoke at 12:10 and estimated it to be ½ acre in size.</p> <p>The Dutch John Assistant Helitack Foreman, Dave Dumas, and one other firefighter landed near the fire, at H-1, about 12:35. They were instructed by the Helitack Foremen, Don Black, to wait until additional help arrived before beginning initial attack. The fire was about 1½ acres at this time. District FMO Hatch and another Firefighter, were dropped at H-1 with the next load. Hatch assumed command as the Fire Boss and recognized available personnel could not control the fire and ordered retardant and 20 firefighters. The fire was spreading slowly uphill against the wind and was moving more rapidly with the wind downhill and west toward Cart Creek Canyon. Fire Boss Hatch and two firefighters (Squad #1) walked up the slope near the origin and began building an unanchored line uphill to the south.</p> <p>Many Flaming Gorge District personnel were attending a rodeo at Manila, about 30 miles away. The District Office contacted the rodeo site, and a call was made over the loudspeaker system for all district personnel to report to the gate. They were informed of the fire and the need for firefighters and instructed to report to the Cedar Springs Lagoon for transport to the fire site.</p> <p>Two more firefighters arrived at H-1 and joined the Fire Boss/Squad #1 around 13:00. They continued direct line on the east flank heading uphill. About this time fire progression necessitated the establishment of H-2 further to the east. At around 1340 Squad Leader Barry Sheakley and one firefighter were placed, in the green, on the ridge above Squad #1 to keep the fire from crossing the ridge. Squad Leader Sheakley established voice contact with the Fire Boss. Sheakley/Squad #2 began a second unanchored fireline across the ridge. At about 13:50 three more firefighters arrived at H-2.</p> <p>At about 14:00 a retardant drop of 2500 gallons hit the heavy fuel along the ridge line and on hot spots along the edge of Cart Creek Canyon, west of the Fire Boss/Squad #1 position. During these airdrops firefighters were reassigned between both squads, leaving five firefighters in each of these two squads.</p> <p>After the retardant drops, more personnel were placed at H-2. This was Squad Leader Martin/Squad #3. YCC Camp Director Dave Noel who was at H-2 and had radio contact with Fire Boss/Squad #1 directed this squad to proceed from H-2 up the slope to a point one ridge east of the initial attack point.</p> <p>Since the initial attack by Fire Boss/Squad #1 the fire had burned east and outflanked their original unanchored line. Martin/Squad #3 would begin a third section of unanchored line to secure this location cutting line uphill tying into the Fire Boss/Squad #1 original line. During this time fire spread necessitated the establishment of H-3 approximately 65 yards east of the fires edge.</p> <p>The next load of firefighters was placed at H-3. This was Ray Purdy/Squad #4 who were directed by Noel to anchor off the Martin/Squad #3 line and construct direct line downhill around the heel of the fire. Purdy/Squad #4 walked over to H-2 to get tools.</p>	

Incident Summary Page for the 100 Fires Project

At 14:50:

- Purdy/Squad #4 was walking upslope roughly parallel 250 yards from the fire edge; they proceeded with a firefighter scouting slightly in the front.
- Noel and Gene Campbell were following Purdy about 15 or 20 yards behind the squads last member.
- Martin/Squad #3 noted they had to drop back twice because of increasing heat in what appeared to be relatively uniform fuels.
- Sheakley/Squad #2 was just preparing to drop over the edge and tie to the Fire Boss/Squad #1 line which was about 50 yards below the top. On the ridgetop the Fire Boss had noted increasing fire intensity as it moved into the heavier fuels and sent a message up to Sheakley/Squad #2 to be alert. The message was not understood, and Sheakley walked out where he could talk directly with the Fire Boss. The Fire Boss and Sheakley felt they would be successful in cutting off the head of the fire.
- A single firefighter was dropped off at H-3. With the helicopter low on fuel it left for the Helibase with the pilot and Helicopter Foreman Black onboard. Within less than a minute of the helicopter taking off the fire intensified abruptly along the full length of the line. Helicopter Foreman Black recognized the change in fire behavior and alerted people to the change.

When the fire intensified Squad Leader Sheakley who was separated from his firefighters by the rocky bluff, but could communicate verbally, instructed his squad to drop back off their line. The firefighters moved in an orderly fashion a short way down the ridge to the east. Realizing this was more than a simple increase in intensity, he instructed his squad to come down the bluff. The firefighters ran about 100 yards to a point where they could come down through the rocks. Squad Leader Sheakley was below them and in voice contact at all times. As the firefighters came down through the rocks Dwight Hodgkinson stepped aside and told another firefighter to go ahead of him. He then came down the rocky slope immediately behind her. Word was passed to drop their tools and run. Each crew member dropped their tool in an orderly fashion and ran toward the burned area. Hodgkinson was the last person in line but did not come to the burned area with the other crew members. Immediately they called to him but got no response.

The helicopter observed Hodgkinson running a few yards behind the other firefighters when a juniper suddenly flared. The helicopter pilot stated Hodgkinson stopped, paused momentarily, turned around and began to run back to the point where he had descended from the ridge. Helicopter Foreman Black saw him only after he had started running back toward the ridge. The helicopter dropped low over him and tried get him to follow other crew members to the burned area. They believed time was adequate for him to reach safety. As he struggled up the slope Hodgkinson apparently became disoriented and was stumbling and falling among the rocks when obscured by smoke. The fire rolled over his location.

The helicopter pilot, recognizing he could no longer help Hodgkinson, swung to the low end of the fire to support the squads below.

- The Fire Boss/Squad #1 had moved back down their line into the burn and safety where they tied in with Sheakley/Squad #2.
- Further down the hill Martin/Squad #3 moved back on their line to safety in the burned area.
- Purdy/Squad #4 was just reaching the starting point of the Martin/Squad #3 line where the fire had gone out. When Squad Leader Purdy looked behind him all he could see was a wall of fire; he yelled for his squad to move into the burn. Other members of his squad yelled for all members of the squad to run forward into the burned area. All members of Purdy/Squad #4 made it into the burned area and safety.

Campbell and Noel were last seen about 15 to 20 yards behind the last Purdy/Squad #4 FF. None of the squad members who looked back after the fire erupted saw Campbell and Noel, only a wall of flame variously described as 10 to 30 feet high. Campbell and Noel were apparently cut off from the Purdy/Squad #4 escape route and turned south up a low stony ridge and attempted to outrun the fire. From the best estimate of their position, they ran up the low ridge about 50 yards then turned northeast toward the helispot and continued running. No one witnessed the exact point from which they began their run, however; canteen, radio, and tools established their line of retreat.

Fire behavior factors that were present during the event:

Light flashy fuels.
Drainages which came in and out of alignment with the shifting winds.

Operational lessons available for learning from this incident:

Establishing "Anchor Points" is essential for any fireline operation.

- They hold the fire in place and protect the crew from being overrun from behind.
- They provide a continuous safety zone at the back of the crew when direct line is being constructed.

Incident Summary Page for the 100 Fires Project

- They provide a location into which fire can be stopped when conducting firing operations.
- When fuels and fire behavior limit the availability of natural anchor points, having two modules anchor off the starting point of each other's lines when "going direct" and tied to the black is an acceptable practice.

Fireline leaders should maintain themselves in positions to see the entire situation as it is developing, both on the fire and in the area around the fire. Firefighters with their heads down constructing fireline need to be led by experienced personnel with their heads up.

The investigation team found that no personnel on the fire were equipped with fire shelters, however, the team noted that the fire moved too rapidly for fire shelters to have any positive effect on the outcome.

Notable impact or historical significance for the wildland fire service from this incident:

While this fire was not the specific reason for the adoption of national standards regarding training, physical fitness, Red Card qualifications, nomex use and fire shelter use; it is one in a string of multi-fatality fires* that occurred across the country in the late 1970s that drove home the need for such standards. Some of these incidents also pushed the agencies away from using untrained non-fire employees on wildland fires.

**1976 Battlement Creek Fire in Colorado; 1977 Cart Creek Fire in Utah; 1977 Bass River Fire in New Jersey; 1977 Honda Canyon Fire in California; and 1979 Spanish Ranch Fire in California.*

Links to more information on this incident:

<https://www.nwcg.gov/wfldp/toolbox/staff-ride/library/cart-creek-fire>
<https://lessons.wildfire.gov/incident/cart-creek-fire-1977>
<https://wlfalwaysremember.net/1977/07/16/ut-cart-creek/>
<https://www.nwcg.gov/wfldp/toolbox/staff-ride/library>

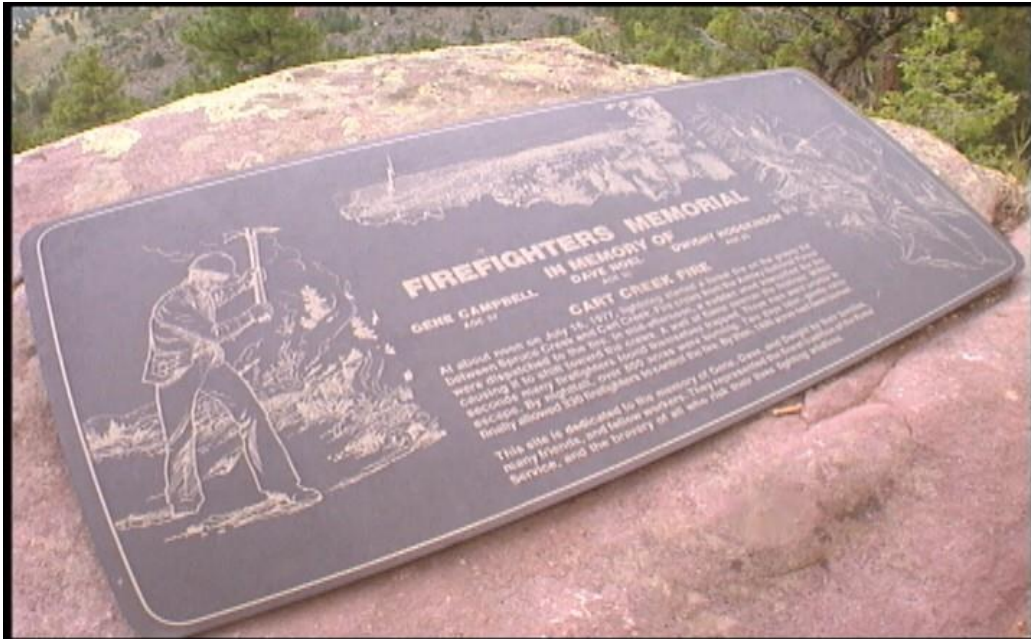
Video:

- <https://www.youtube.com/watch?v=akpWbXrv3dE>

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Incident Summary Page for the 100 Fires Project



Dwight Hodgkinson



Gene Campbell



Dave Noel