

Incident Summary Page for the 100 Fires Project

Incident Name: Spanish Ranch Fire	Incident Date & Time: 08/15/1979 @ 16:20
Incident Location: Highway 166 and Chimineas Ranch Road, San Luis Obispo County, California	Incident size: 940 acres final size Approximately 450 acres at the time of the entrapment
Types of resources involved: California Department of Forestry engine and bulldozer Santa Barbara County bulldozer	# of Fatalities/injuries: 4 fatalities / 1 injury
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 Spanish Ranch Fire was reported on August 15, 1979 to the California Department of Forestry (CDF...now known as Cal-Fire) San Luis Obispo Emergency Communication Center. The fire was started by a flail mower working along State Highway 166, west of New Cuyama. At 14:02 hours a mutual aid initial attack response was initiated from three different agencies; CDF, Santa Barbara County Fire, and the Los Padres National Forest. Initial size-up of the fire reported a moderate rate of spread, with fire size estimates ranging from 10 to 15 acres by ground resources to 75 to 100 acres by the Airco 53 (Air Attack). Winds were light and ground units reported them to be out of the northeast, while Airco 53 reported a northwesterly wind direction.</p> <p>Weather readings from a station 20 miles north of the fire at the time recorded temperature of 86 degrees Fahrenheit, relative humidity of 26%, and a 10-hour fuel moisture of 5%. The fuels on the lower slopes of the fire consisted of light flashy grass fuels with a sparse over story of Blue oak and on the upper slopes fuels consisted of yucca, light brush, and scattered juniper.</p>	
Brief description of the event:	
<p>The first units on scene at 14:23 were Los Padres National Forest Engine 315 and Santa Barbara County Engine 41. Both engines went direct on the flanks, anchoring off Highway 166. CDF Engine 5379 arrived on scene shortly after, led by Engineer John Schroeder, and assumed command of the fire. He assigned incoming units to support direct attack actions already taking place. At about this time, Airco 53 requested a second alarm to the fire of bulldozers, handcrews, and air tankers. At 14:40 ground resources reported a wind shift from the west at 5 to 8 mph.</p> <p>About 45 minutes after initial attack action began, CDF Battalion 5312 Lew Killion and CDF Dozer Operator Rich Corning arrived. Lew Killion assumed command as the Fire Boss. With a transition of command from the first-in CDF engine to CDF Battalion Chief Killion, the strategy for controlling the fire changed from a direct attack to an indirect attack on the east flank and north end of the fire, while staying with direct attack on the west flank and the south end anchored by Highway 166. Air tankers were used to support the efforts on the west flank and keep the fire knocked down across the north end while the indirect dozer line was being constructed. By 15:00 the fire had burned an estimated 300 acres, but calm winds and the retardant drops soon combined to slow the fire spread considerably. At 15:30 a dozer line was started by Corning's CDF dozer on the east flank that went direct on the fire edge for about 400 yards, and then turned northwest as indirect line along a ridge (Sycamore Ridge) leading to Hill 2465.</p> <p>CDF Engine 5373, another unit which was part of the initial response order, had mechanical difficulties with their engine and had a delayed response time. They departed their Nipomo station at 15:10, arrived on the incident at approximately 15:50 with Engine Captain Ed Marty and three firefighters. They were assigned to follow the indirect dozer line on foot and support the dozer working toward Hill 2465. After the Engine 5373 crew had moved about 700 yards up the dozer line, Lookout James McPharlin began following them up Sycamore Ridge to find a vantage point to observe the fire and report back to the Fire Boss. A Santa Barbara County dozer, with operator John Feazelle, arrived on the east flank at 16:10 and was assigned to follow the CDF dozer widening the east flank dozer line, starting at the bottom and proceed up Sycamore Ridge.</p> <p>Within minutes, the fire intensity increased significantly and the Santa Barbara County dozer assignment was changed to proceed at once to the CDF dozer position up the ridge and assist. The fire had reached the bottom of steep ravines to the south of Hill 2465, burned through retardant lines, and raced toward the crest of Hill 2465. At this time, westerly winds of 25 to 30 mph surfaced, interacted with the complex topography, and drove the fire in northerly and easterly directions. Seeing the fire would beat the CDF dozer to the top of Hill 2465, the Lookout advised the dozer to start back down the ridge. At approximately 16:15, the entire northern flank erupted into a high intensity fire driving toward the ridge where the two dozers, the Lookout, and the crew of Engine 5373 were on the indirect dozer line. CDF Dozer Operator Corning had time to construct a "safety island" four blades wide and lower the fire curtains and wrap himself in a fire blanket. The Lookout escaped by running downhill. Captain 5373 informed the Fire Boss he and his crew would not be able to make it to the CDF dozer above them and would have to start firing from their position to create a "safety island." Spot fires across the dozer line erupted and combined with the oncoming main fire from the south, overwhelmed the crew of Engine 5373 and the Santa Barbara County dozer. Dozer Operator Feazelle used his dozer as a heat shield and received minor burn</p>	

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injuries. Three of the four Engine 5373 crew died on the fireline, Captain Ed Marty, Firefighter Ron Lorant, and Firefighter Steve Manley. Firefighter Scott Cox ran down the dozer line about 500 yards, receiving second and third degree burn injuries over 60 percent of his body. He succumbed to his injuries approximately 202 days later at the Sherman Oaks Burn Center.

Fire behavior factors that were present during the event:

Live fuel moistures were at critical levels, sage was 54% and white sage at 66%.

Slopes in the accident area were approximately 60% with chimneys off the main ridge.

Some ground units observed cumulus clouds over the fire area. Wind speed and direction differed depending on the side of the fire where they were being reported. The fatalities occurred when unexpected, upper-level strong westerly winds surfaced and interacted with the terrain and fuels to produce extremely rapid rates of spread (possible area ignition).

It should be noted that four of the largest fires in San Luis Obispo County's history have occurred in mid-August.

Operational lessons available for learning from this incident:

The Common Denominators of Fire Behavior on Tragedy Fires were all present on the Spanish Ranch Fire:

- Deceptively quiet area of a fire
- Light fuels
- Unexpected wind shift
- Fire responding to topographic features
- Critical Burn Period between 13:00-18:00

Escape routes and safety zones were inadequate. The *Fatalities and Serious Injury Report, Spanish Ranch Fire* used the term "safety island" to describe the last resort attempts by the dozer operator and engine crew to eliminate fuels around them in order reduce the heat impact at their location.

At the time of the accident, fire shelters were not required personal protective equipment for the California Department of Forestry.

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

One of the earliest fires where the phenomena of "Area Ignition" has been cited.

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.

**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.nwccg.gov/publications/training-courses/rt-130/case-studies/cs224>

<https://wlfalwaysremember.net/1979/08/15/spanish-ranch/>

https://lessonslearned-prod-media-bucket.s3.us-gov-west-1.amazonaws.com/s3fs-public/irdoc/Spanish_Ranch_Fire.pdf

<https://www.ksby.com/news/local-news/remembering-the-deadliest-wildfire-in-san-luis-obispo-countys-history>

Book:

- *Area Ignition: The True Story of the Spanish Ranch Fire* ~ by Joseph N. Valencia

Video:

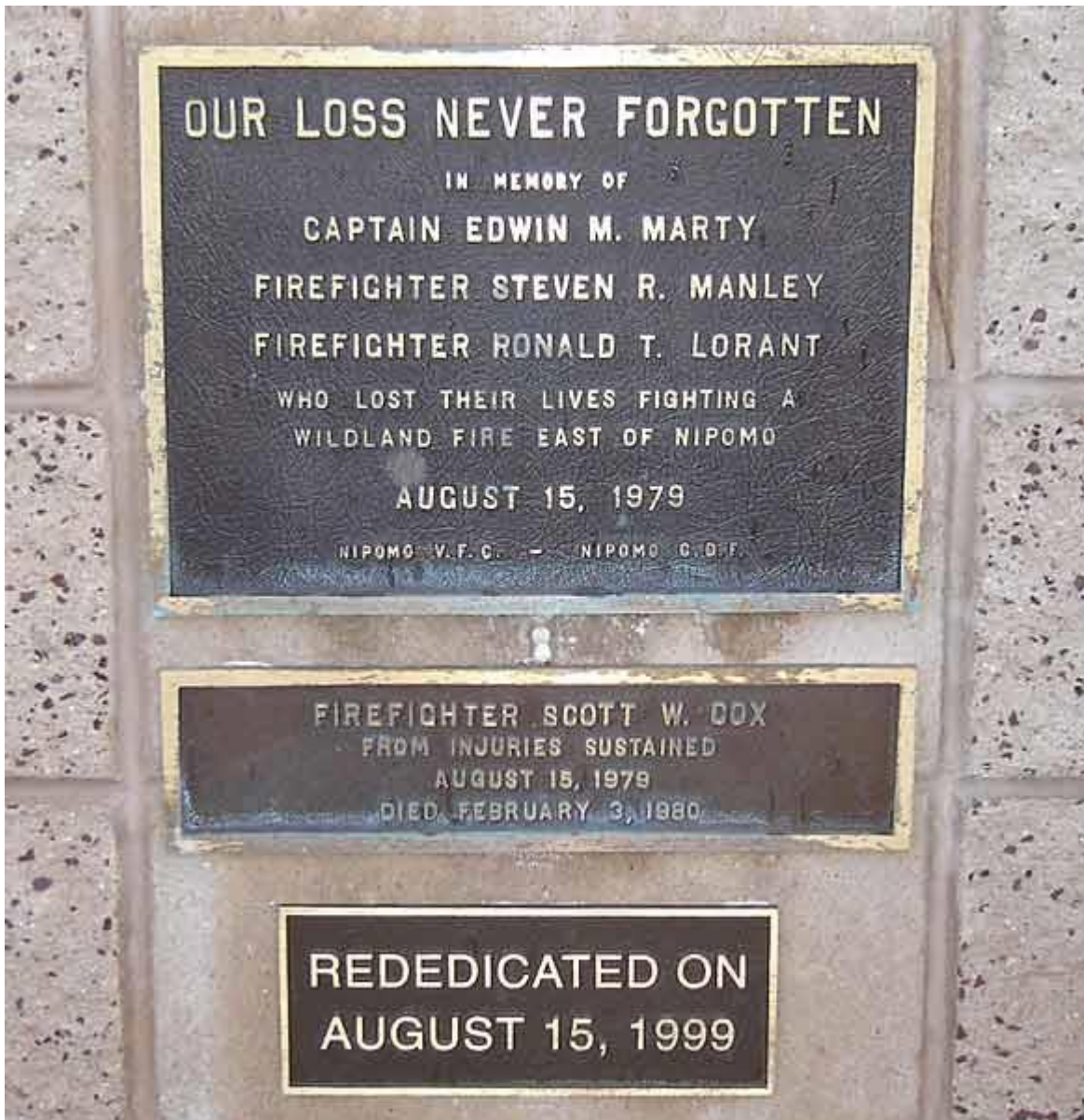
- <https://www.youtube.com/watch?v=wxyiJEyVmEo>

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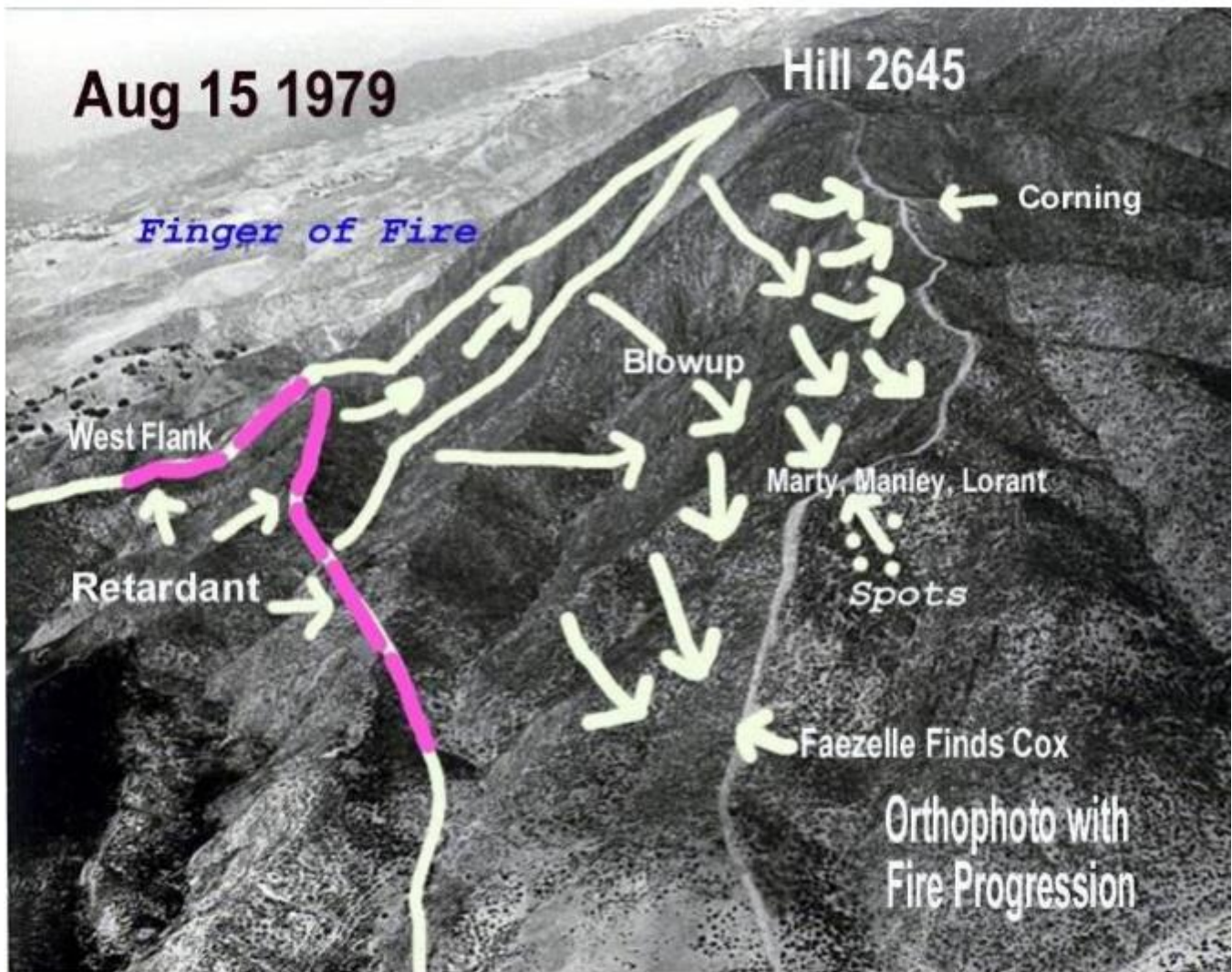
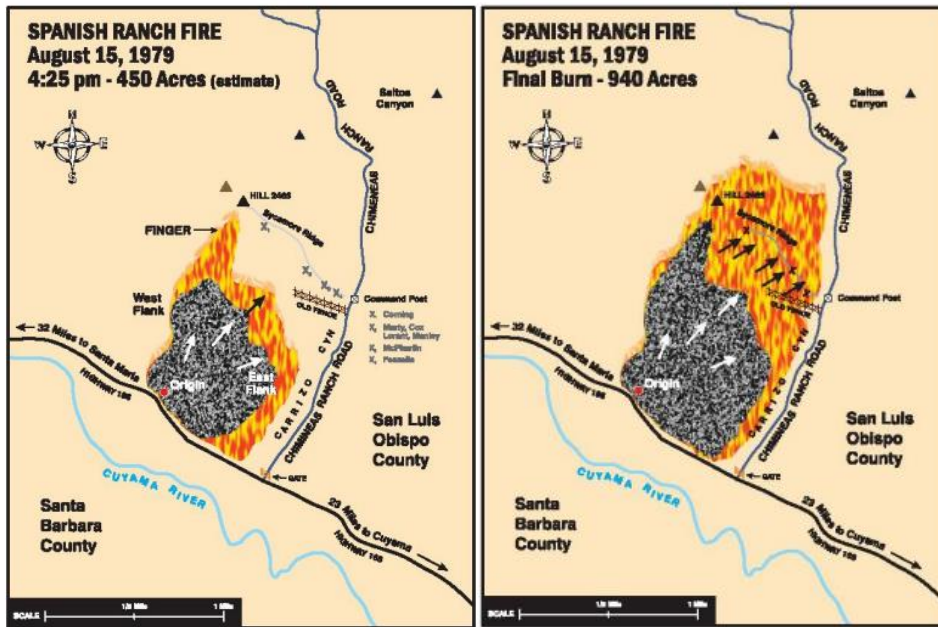
Arroyo Grande Interagency Hotshot Crew - Phil Hernandez
Tom Plymale, developer of the Spanish Ranch Staff Ride
Dan Buckley, former Superintendent Arrowhead Hotshot Crew and
crewmember on CDF Engine 5361 at the Spanish Ranch Fire

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