

SEQUENCE OF EVENTS

During the course of structure protection operations, Butte County Engine 71, staffed with a CDF fire captain and a firefighter 1, responded to a structure on Stagecoach Lane in order to protect the structure and the resident therein. E-71 was backed in at the structure, two 200 foot 1½" hose lines were deployed and charged, and contact was made with the occupant. As the fire approached, the wind pushed a sheet of flames towards the structure near ground level. Wind shifts brought fire to the structure from multiple directions. Heavy fuels to the sides and rear of the house, including manzanita and live oak, contributed to direct flame impingement of the house. The garage ignited and rapidly become heavily involved, sending fire into the attic of the house. The captain determined that it was necessary to take the occupant in the engine and evacuate the area. The captain instructed the firefighter to disconnect the hose lines and take the engine out of pump, while he (the captain) went into the structure and got the occupant. When the captain contacted the occupant, she refused to leave the structure without her three dogs. After failing in his efforts to convince the occupant to leave without the dogs, the captain assisted her in looking for and retrieving the dogs. Upon leaving the structure, the captain and the occupant encountered heavy wind driven flames, heat and smoke conditions.

They retreated back into the structure, which was now on fire both in the attic and the interior. Fire conditions quickly worsened inside the structure and the captain attempted to persuade the occupant to follow him back to the engine. Heat and smoke conditions forced both of them to floor level, and rollover conditions were occurring, blocking exit by the doors. They retreated to a back bedroom, with a window above the bed as the only viable exit. The occupant was lying against a bed, and appeared to have been affected by fire gases. She was unable to assist with her own rescue, and it was impossible for the captain to force or drag her across the bed and through the window. The captain continued his rescue efforts until being burned and it became apparent that rescue of the occupant would be impossible. For him to remain inside the structure any longer would result in his own death. He then exited through the window, jumping head first through the flames.

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After the captain exited, the structure rapidly progressed to full involvement and eventually burned completely to the ground. The captain made it back into the cab of the engine, where the firefighter had found refuge. The engine was moved into the burned over pasture area as a safety zone, and the crew remained there until help arrived.

The firefighter was not injured. The captain sustained burns to his hands, face, and back.

INJURIES

The captain sustained burns to his hands, face, and back, totaling approximately 5% first degree and second degree burns. Full wildland personal protective equipment was in use, including gloves. In addition, the captain was wearing a medical style facemask over his mouth and nose.

The facemask sustained damage on its exterior surfaces, and was in good condition on its interior, indicating that use of the mask may have reduced potentially serious injuries to the captain's airway.

Burn injuries to the captain's back include a legible "C" and "F" which appear to have resulted from the "CDF" lettering on his uniform T-shirt. (The "D" was covered by web gear.) A second "F" from the word "FIRE" was also legibly burned in his back.

DAMAGE

Visual inspection of the engine revealed minor damage, including to a fabric hose bed cover, and tread damage to one tire along an exterior tread edge consistent with contact with the hot ground.

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SAFETY ISSUES FOR REVIEW

1. The position of the engine and deployment of lines was consistent with standard I-zone operations.
2. The use of a facemask, while not approved or issued safety gear, appears to have significantly reduced the injuries to the captain, especially to his airway.
3. It appears the type of ink used in the printing of the blue CDF uniform T-shirt may have contributed to the burn injuries on the captain's back, resulting in burns in the legible shape of the lettering of the T-shirt.

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CDF GREEN SHEETS

Investigation Summaries of Serious CDF Injuries, Illnesses, Accidents and Near-miss Incidents



**CONCOW FIRE
CA-BTU-10476
BUTTE RANGER UNIT
COAST-CASCADE REGION
SEPTEMBER 20, 2000
RESCUE BURN INCIDENT**

A Board of Review has not approved this Summary Report. It is intended as an aid in accident prevention, to let interested parties know what happened, and to be used as a safety training tool. To that end it is published and distributed within a short time frame. Information contained within may be subject to revision as further investigation is conducted, and other reports and documents are received.

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SUMMARY

On Wednesday, September 20, 2000 at approximately 0225 hours, A CDF/Butte County Fire engine was participating in structure protection operations on a wildland fire and was involved in a burnover incident resulting in injuries to a CDF Fire Captain. A civilian died when she was trapped in her home that burned. The captain was burned as he attempted to rescue the civilian.

CONDITIONS

The structure was a single story wood frame, wood sided dwelling with an aluminum roof. A detached garage was connected to the house by a roof, creating a breezeway of about 5 feet. The garage was used for storage and provided a heavy fuel load and excellent fuel bed on the fire-side of the structure. The structure sat on top of a knoll, with gentle slopes on the fire-side with pasture and star thistle. The fire was driven down a hillside of heavy fuel (grey pine, manzanita, probably over 90 tons per acre) until it crossed Stagecoach Lane. At this point the fire was driven by the now heated winds across the field of star thistle and into the structure.

WEATHER

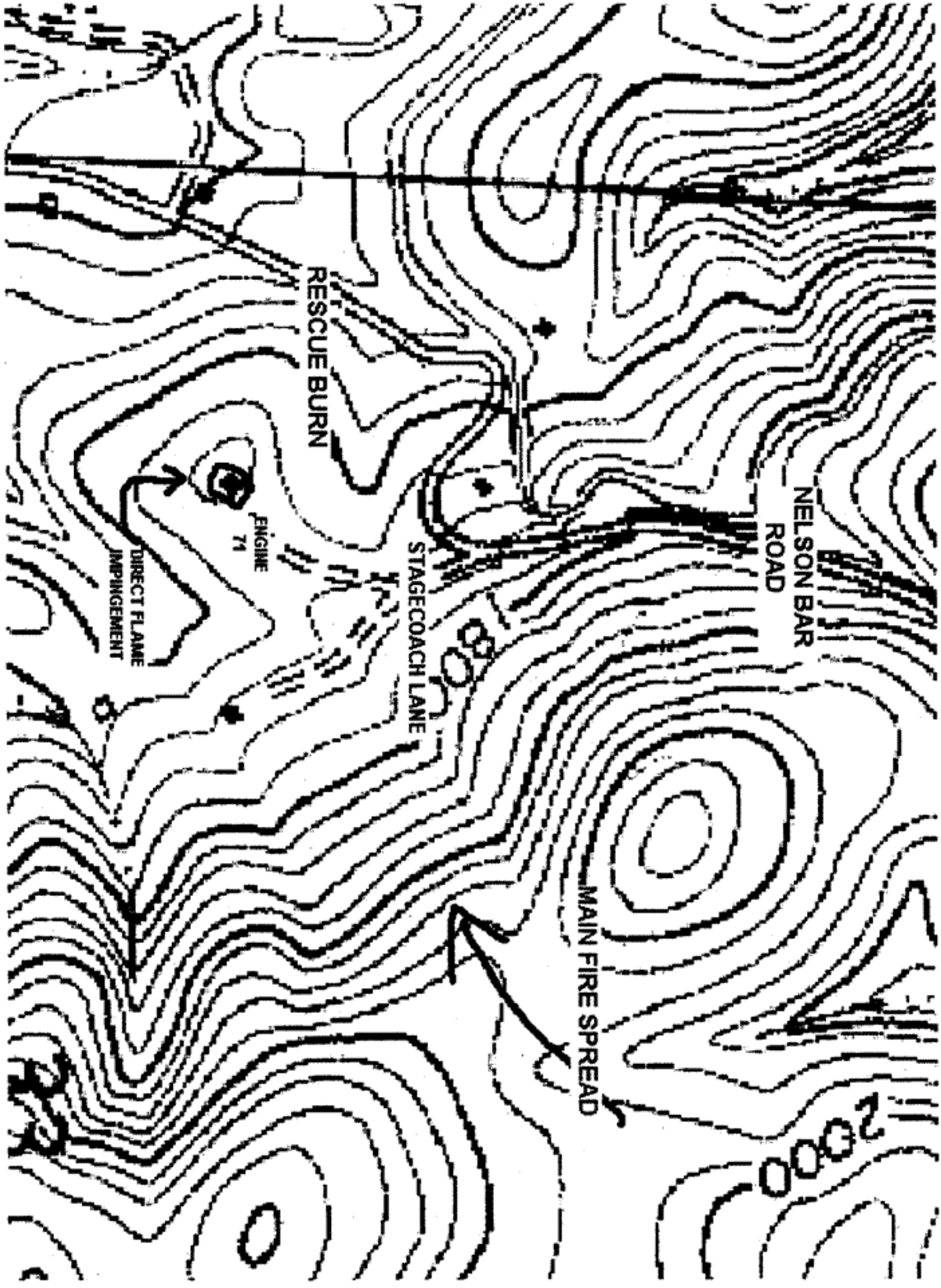
The temperature was about 84 degrees and relative humidity about 27%. The wind speed was unknown but estimated by ground forces as strong gusts to 20 mph or greater. Flames and smoke were blowing the fire horizontally along ground level. Winds shifted from the east and south.

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RESCUE BURN

FIRE ENGINE 71

DIRECT FLAME IMPINGEMENT

STAGECOACH LANE

NELSON BAR ROAD

MAIN FIRE SPREAD

2000

