

**SUMMARY REPORT**

**BURN INJURIES**

**OF**

**ROBERT McALPINE, L.T. FIRE CAPTAIN**

**BRIAN MERRYWEATHER, FIREFIGHTER**

**JIM ELLIS, FIREFIGHTER**

**JULY 22, 1982**

**CALIFORNIA DEPARTMENT OF FORESTRY**

**AMADOR-EL DORADO RANGER UNIT**

**REGION IV**

On July 22, 1982, at approximately 1450, Limited Term Fire Captain Robert McAlpine, Firefighters Brian Merryweather, and Jim Ellis were burned while working on the Mt. Murphy near the community of Coloma. All three received minor burns with some second degree burns on their arms, leg, and face.

#### FIRE LINE CONDITIONS

Weather: Temperature 89 degrees  
Humidity 10%  
Winds 5 MPH Southwest

Fuel: Grass, light brush, some oak canopy 4-6 tons per acre. 1 hour fuel moisture 3.

Topography: Extremely steep 60 to 95%. Steepest portion just below accident site on southeast aspect.

#### SEQUENCE OF EVENTS

At approximately 1440 hours, Captain McAlpine was working a 1-1/2" hose lay with Firefighters Merryweather, Ellis and Hinzman. They were working from the top right flank of a fire which was approximately 75 acres in size at the time. The fire had made a rapid run to the top of a 1900' bluff, overlooking the American River Canyon, near Marshal State Park. McAlpine and his crew were working down into the fire from a flat grassy area which had been secured with hoselays and air drops.

McAlpine's plan was to progress the hoselay along the right flank of the fire and meet up with a hoselay extending up from the bottom. Approximately 100' into the hoselay, the slope increased dramatically from 60% to near 95%. The draw the crew found themselves in was in effect a chimney. A grassy mouth to the chimney approximately 115' wide narrowed down to a throat about 15' wide. The crew's visibility of the fire was restricted due to their location in the draw. A rock outcropping at the narrow throat at the bottom of the chimney also restricted their view. Smoke conditions were moderate to heavy. Air movement was still or very light.

The crew was halted by a steep dropoff at the throat of the draw. This was about 100' down the draw and 250' into the hoselay.

Moments after McAlpine's crew was halted due to the steep drop off, the fire made a rapid advance up the draw. The nozzleman attempted to protect himself and the crew with a fog pattern. The pattern was ineffective, due to an unseen break in the hose 20 to 30' in back of the crew. McAlpine directed his crew into the burn and onto the rock outcroppings. He had constantly reminded his crew to keep "one foot in the burn".

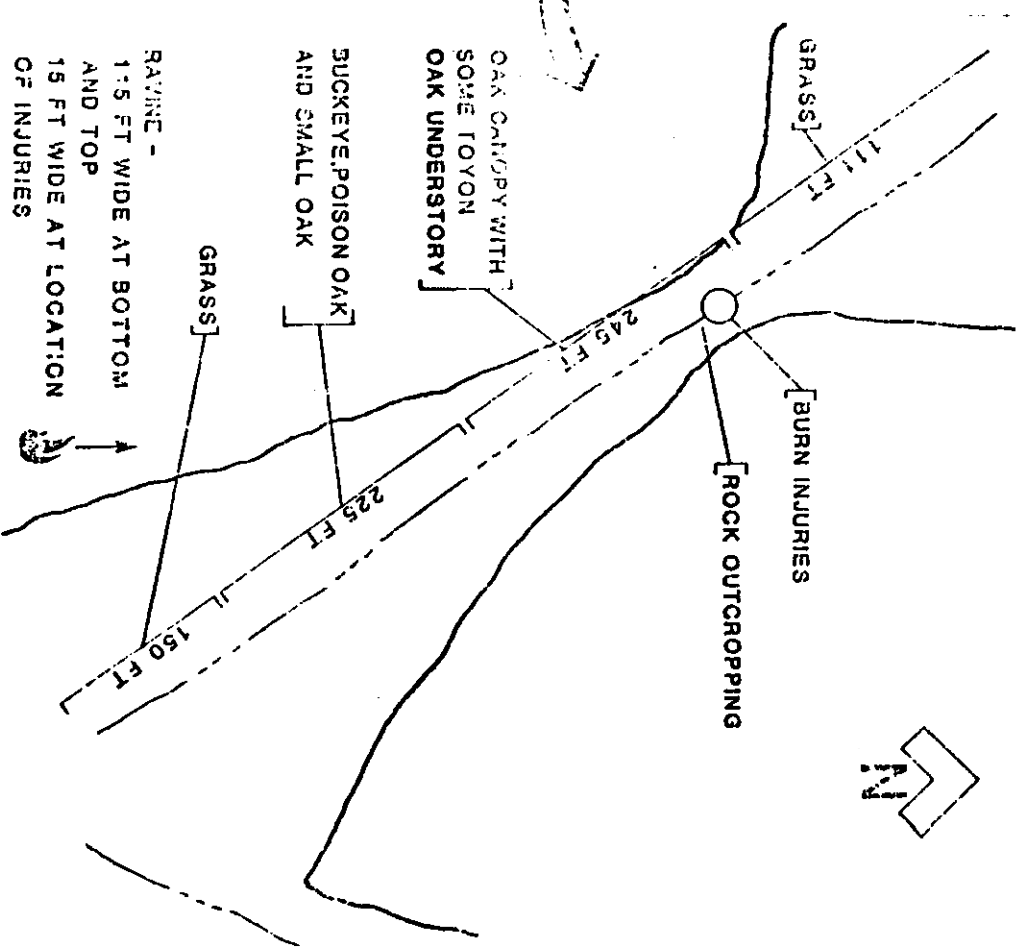
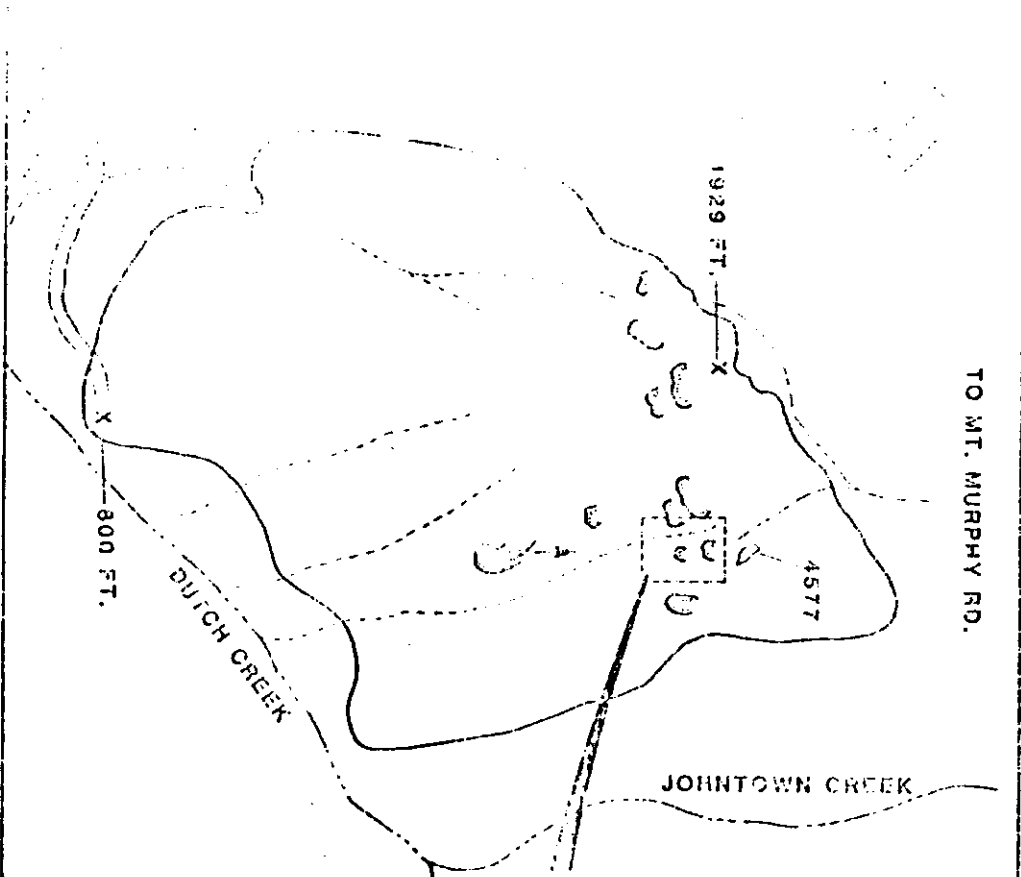
Total time of the blow-up was 15 to 20 seconds. When the air cleared, McAlpine evacuated his crew to the engine and notified the I.C. McAlpine and Firefighters Ellis and Merryweather were evacuated to the hospital by helicopter. They suffered moderate first and second degree burns.

# M. MURPHY FIRE

NOV. 1992 93 ACRES - 70 ACRES OPEN GRASS

NOV. 1992 23 ACRES OAK CANOPY

NOV. 15-1992 WITH GRASS AND LIGHT BRUSH



## CONCLUSIONS

Based on statements by the victims and witnesses, several conditions and actions contributed to the injuries. Although a near miss, it could have easily been tragic.

### 1. DOWNHILL ATTACK

McAlpine's decision to make a downhill attack was discussed prior to the action. They were aware of the dangers involved. They also felt that if they did not catch the fire at that location there was imminent danger to a nearby subdivision.

### 2. ENTERING A CHIMNEY

The hose crew did not realize how precarious their position was until it was too late. This was primarily due to obscured vision blamed on smoke.

### 3. NOT KNOWING WHERE THE FIRE WAS

The crews did not know what the fire was doing below them. They were actually fighting fire on a slight overhang. By the time the fire advanced on their position, it was too late to avert the danger.

### 4. LOOKOUTS

Although present, communications were bad and the vantage point wasn't all that much better than McAlpine's crew.

### 5. BROKEN HOSE

Investigation of the burned hose uncovered the break. The break was not due to flame impingement. There was no fire damage near the break.

### 6. BLOW UP CONDITIONS

Conditions were such that the grass and light brush surrounding McAlpine's crew was preheating. As soon as the flames advanced to their position, the area ignited and burned over within 10-15 seconds. Area consumed was approximately 2 acres on the blow up.