

REPORT OF INVESTIGATION
Personnel Injury
Jim Hawecker, Fire Apparatus Engineer

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Type of Investigation: Personnel Injury
Jim Hawecker, Fire Apparatus Engineer
Morongo Fire 6/20/73
Riverside Ranger Unit

Investigation by: Russell F. Bockhop
State Forest Ranger I

Period of Investigation: July 24 - September 13, 1973

Date of Report: September 14, 1973

Synopsis

On June 20, 1973, at approximately 1350 hours, Jim Hawecker, Fire Apparatus Engineer, was severely burned while engaged in fire suppression activities on the Morongo Fire, Riverside Ranger Unit.

The Morongo Fire began at approximately 1800 hours, June 19, 1973, on the Morongo Indian Reservation, burning in a northwest direction in medium to heavy fuels. The fire weather, fuels and terrain contributed to a fast-moving erratic fire situation. In total, the fire consumed approximately 7,200 acres of grass and brush before control was established. The fire control efforts were further complicated by structural protection problem lying in the path of the fire. The Fire Boss, State Forest Ranger I Herb Nemeyer, who was himself nearly injured when he was trapped by the fire, can attest to the dangerous fire conditions.

On June 20, 1973, Engineer Hawecker, assigned to the West Riverside Station, was on duty with his crew of three (3) firefighters. During the morning hours, Hawecker and crew responded to a grass fire in the Corona area. Upon being released from the fire at approximately 1130 hours, he and his crew were dispatched to the Morongo Fire in Unit 6175. Upon arrival at the Morongo Fire, Hawecker was assigned to a pumper task force headed by Beaumont City Chief, Mike Diebner. Chief Diebner and his task force were assigned to structural protection responsibilities along Bluff Street on the west side of the fire.

Upon arrival in the area, Engineer Hawecker was contacted by Captain Bill Lord, Riverside Ranger Unit and commander of another task force already in position along Bluff Street. Captain Lord requested that Engineer Hawecker and his crew assist Engine 38 with mop-up operations on the east side of the road, downhill toward the creek bottom. Task Force Commander Diebner agreed to release Hawecker to Captain Lord's task force.

Engineer Hawecker was instructed to continue a one-inch cotton jacket hose lay downhill along the fireline, beginning at the end of a hard line already extended downhill from Engine 38 by Captain Phil Kerr assigned to Engine 38.

Hawecker and his crew proceeded as directed after discussion of an alternative method of dropping a 1-1/2" line to the bottom of the creek and firing out the south side of the hose lay. The idea was rejected by Captains Lord and Kerr.

Hawecker, two (2) firefighters from his crew and an unknown volunteer fireman worked along the fire edge approximately 200' - 300' to a point considered at the time to be the lowest part of the fire below the road. At this point there was a heavy canopy overhead with portions burned out and all ground fuels had been burned. Hawecker, his two (2) crew members and the volunteer fireman were approximately 25' - 50' into the canopied area below an open area which had already burned when Hawecker heard a crackling sound and a roar of fire below him. He could not see the fire below him.

Hawecker recognized the position he was in and ordered everyone out of the area uphill toward the trucks on the road. Hawecker pulled his hose back uphill toward the edge of the canopy, thinking the water might offer protection if needed.

The firefighters and the volunteer who were behind and uphill from Hawecker immediately started uphill, turning slightly to the left in a southwest direction, which allowed their escape route to be partly sidehill and partly uphill from their original location and inside the burn. Hawecker went straight uphill toward the trucks into the open area but was caught in convected and radiated heat approximately 2/3 of the way to the truck. The hill is estimated by this investigator to be 60-70% grade. Hawecker was unable to run standing up but ran on all fours to a point approximately 10 feet from his final uphill movement, where he was forced to crawl the remaining 10 feet, finally coming to rest face down trying to see over his shoulder what was behind him.

In the meantime, the firefighters and the volunteer fireman were able to stay out of the worst part of convected heat and did not sustain any injuries but did feel intense heat.

Hawecker was removed to a local hospital for emergency treatment and then transferred to Kaiser Hospital near Riverside. Hawecker was transported to the local hospital in a county-owned station wagon driven by Captain Lord. It is estimated that Hawecker was receiving emergency care at the local hospital within 20 - 30 minutes after the accident occurred.

Hawecker was moved to Kaiser Hospital at this request so that he might be closer to his family and because he had Kaiser health insurance which he felt he might need.

Hawecker returned to limited duty in the Perris dispatch office September 11, 1973.

The Investigation

On July 24, 1973, Russell F. Bockhop, State Forest Ranger 1, was assigned to investigate the circumstances surrounding the burn injury sustained by Fire Apparatus Engineer Jim Hawecker on the Morongo Fire which resulted in extensive hospitalization and medical treatment for Hawecker.

Contact was made with State Forest Ranger 1, Herb Nemeyer for the purpose of looking at the accident scene and gathering what information Ranger Nemeyer might have relative to the accident. Ranger Nemeyer was the Fire Boss during the first burning period of the Morongo Fire and is the District Ranger in charge of the area in which the fire occurred.

Mr. Nemeyer had been relieved and sent home to rest in the morning prior to the accident. He did state, however, that it was his opinion that no attack on the fire should have been made at the site of the accident due to the following reasons: 1) that the site of the accident was a spot fire which had crossed a large open creek bottom (See Exhibit 1) indicating that the fire weather was right for additional spotting problems, 2) that the steepness of hill lent itself to a potential accident since attack had to be made downhill (no attack could be made from the bottom due to poor access up the creek bottom), 3) that no material advantage would be gained by attacking the fire there in light of the open lines to the north and east and the apparent spotting conditions which existed, 4) that the primary function of the units along Bluff Street should have been structure protection, remaining mobile in case a structural protection problem developed.

Captain Bill Lord, Task Force leader and the man directing the operations at the scene of the accident, stated that he felt the attack was necessary to protect the structures on the west side of the road and hopefully would stop the forward expansion of the fire. Lord further stated that he thought that the fire had burned to the bottom in the creek bed and that there was no particular danger to the personnel on the hill. He expressed positively that a one-inch hose lay was adequate to do the job intended. Lord later stated that he had ordered Hawecker to lay a 1-1/2" line to the bottom and not to worry about water because he had a water tanker coming to supply water. At this point, Captain Lord left the scene and went after the tanker and approximately 2-3 minutes before the accident.

Lord stated that Ranger 11 Don Russell had ordered him to get a line to the bottom. Lord stated that there was no reference to the size of line put in.

Lord felt that contributing causes to the accident and its severity were the clothing worn by Hawecker and the escape route Hawecker chose. He stated there was no indication of trouble prior to the accident. He had not detected any signs of a potential blow-up and again stated that he felt the whole situation was safe. The fire had for the most part stopped and it was just a matter of mopping it up.

Lord left the scene approximately 2 - 3 minutes before the blow-up and returned immediately after being advised of it (See Exhibit 3). Lord ordered Hawecker loaded in his car for immediate transport to the local hospital.

Captain Lord told this investigator that while in the emergency room at the hospital, he observed the burns Hawecker had received and did not consider them too serious. He did ask Hawecker if he wanted to go to the Loma Linda Burn Center. Hawecker reportedly said, "No, I want to go to Kaiser Hospital." (Hawecker does not recall this.)

Captain Lord was asked who was in charge of the fire and who was his immediate line supervisor. He did not know for sure, but thought Ranger Russell was Fire Boss and Herb Nemeyer was Division Boss.

Firefighter Julio Fino, a member of Hawecker's crew, was interviewed and asked to make a map of the accident site and explain what he remembered (See Exhibit 4). Fino stated that Hawecker was told by Kerr or Lord (he wasn't sure of the names) to connect one-inch cotton hose to the end of the hard line. His assignment was to mop up along the fireline and to catch any spots outside the line.

Fino stated that he had been sent to the truck to get more hose and was on his way back down when the fire blew up. He dropped his hose pack and ran back up the hill. He did see Firefighter Case and Engineer Hawecker come out of the canopied area into the open and that Hawecker was pulling the hose behind him. Fino stated that there was no wind just prior to the blow-up, but it did get windy at the time of the blow-up.

Fino recalled working on burned areas outside what he considered the fireline. From his and other statements made, it would appear that the fireline was irregular with unburned fuels within the burn area.

Firefighter Gene Case was interviewed and also asked to draw a sketch and explain the situation as he saw it. (See Exhibit 5.) Case's story closely paralleled Fino's story. Case and the volunteer fireman were with Hawecker on the end of the hose lay and Fino was up the hill getting hose. Case also stated that while mopping up it appeared to him that they were in the green in heavy brush mixed with burned areas.

Case stated that he heard the fire below him prior to seeing it. He thought that they were into the canopied area approximately 50' at the time of the blow-up but could not see the fire below them because of the heavy brush.

Captain Phil Kerr was interviewed and asked to make a sketch of the situation as he saw it (Exhibit 6-7). Kerr relayed the following story.

Kerr was working along the fire edge with hard line off Engine 38. Lord contacted him and told him he would send some one-inch cotton hose down so that he could continue mop-up along the fire edge. Shortly after, a firefighter arrived at his location with some one-inch hose. Kerr attached one length and continued mop-up. Hawecker arrived which was followed by a discussion between Kerr and Hawecker about putting a scratch line to the bottom and firing out the line. Kerr didn't want to set any more fire, so he told Hawecker to continue the hose lay and he (Kerr) would go up and

Russell thought that the fire extended down to the creek bottom. Don Russell and Frank Gaddy, U. S. Forest Service Fire Control Officer, San Jacinto District, San Bernardino National Forest, discussed their plans on the ground and decided that they were in U. S. Forest Service protection area for fire control purposes. Russell later found out that Assistant Fire Control Officer Gene Kimble, U. S. Forest Service, San Bernardino National Forest office, and Dave Flake had decided to make the break in responsibilities at another location.

Russell felt at the time of the interview and in retrospect that the accident site was a bad place to be. Russell did feel that the 1-1/2" hose lay could have handled the total job if safe practices were observed. Russell did not feel at the time of the interview that he had complete knowledge of the situation at the bottom of the hill. He had just a general picture of the situation but felt the on-line supervisors should have been able to handle the situation.

On September 11, 1973, Jim Hawecker, Fire Apparatus Engineer, the accident victim, was interviewed after his return to work from extensive hospitalization. He was asked to draw a sketch and explain the situation (see Exhibit 8).

Jim arrived at the accident scene in a task force headed by Mike Diebner, Chief, Beaumont City. He was immediately contacted by Captain Lord and asked to shuttle his 1-inch hose down to Captain Kerr and the end of the already extended hard line from Engine 38. Hawecker advised Lord that he was assigned to Diebner's task force and would have to get clearance from Diebner. Lord and Diebner did confer and Hawecker was assigned to Lord.

Lord told Hawecker to extend the hard line with 1" cotton hose. Hawecker suggested to Lord that a 1-1/2" line be dropped to the creek bottom and fire the north line out. Lord told Hawecker he would discuss it with Kerr, but to go ahead with the 1" line in the meantime. Hawecker contacted Kerr on the line and told him that Lord wanted to see him up on the road. Kerr went up the hill to contact Lord. About ten minutes later, Lord or Kerr (Hawecker doesn't remember who) came halfway down the hill and told Hawecker to continue the 1" lay.

Hawecker worked along the fire edge as directed and was approximately 25 feet into the canopy covered area when he heard a crackling noise and the roar of fire below him. Hawecker thinks that he had extended his line approximately 200 feet at the time he heard the fire. He stated that he could not see what was burning, but recognized the potential danger. He ordered everyone out up the hill. Hawecker does not know why he went straight up the hill rather than follow his crew in a side hill fashion. He guessed it was because he felt he would be safe if he reached the truck.

Hawecker stated he didn't feel there was any safety problems when he began his assignment. If he had he would not have gone down in the first place. He also stated that since Kerr had been down there that it was probably okay.

Hawecker was asked about his clothing. He stated they were stay-press material (Exhibit 9, 10, 11).

The shirt had been burned and what did not burn was stiff. The pants did not burn, but got sooty and slightly stiffened. The leather belt and his leather key chain showed signs of heat. He feels his back was not severely burned because it was loose and he had a T shirt on under it (see Exhibit 10). His legs and arms suffered extensive burns as did the left side of his face.

Hawecker did not feel there was any danger in what he was asked to do nor did he recognize the potential of reburn in the canopy. In retrospect he feels that the best way to have prevented the accident was to stay out of the area. He could not say whether his burns would have been less if he had lain down on the ground sooner, rather than try to outrun the fire uphill.

He did feel at the time that it was all over for him and that he hoped it wouldn't take long.

Hawecker would like to see a standard policy where burn victims are taken immediately to burn centers after receiving emergency first aid. Victims could be returned to local hospitals if the conditions warranted. Hawecker did not recall being asked if he wanted to go to a burn center.

Jack Sherman, State Forest Ranger I, and Hawecker's supervisor, was interviewed to learn something about Hawecker's experience, training and abilities.

Sherman stated he felt Hawecker was adequately trained and had reasonable experience to copewith the situation. Hawecker should have known not to go straight uphill as he did. Hawecker's experience includes volunteer at Glen Avon Station, Riverside Ranger Unit; Firefighter 1-1/2 seasons, Riverside Ranger Unit; Fireman, Orange Ranger Unit; two years as relief Engineer, Corona District, Riverside Ranger Unit. Hawecker had received all required training. Sherman stated that Hawecker had done a reasonably good job, lacked initiative to make an aggressive initial attack, but did well under supervision.

Opinions and Conclusions

1. There was a breakdown in the fireline organizational structure with no definite chain of command. Each party involved seemed to grab a piece of the action. No one involved in the accident, outside of Ranger Russell, knew who was in charge of the overall fire management. Most of those involved accepted Captain Lord as the man in charge. Lord accepted responsibility and received some instructions, but for the most part was in a free-lance position. It has not been determined who was in fact responsible for the overall fire control efforts along Bluff Street.

2. The attack plan initiated was obviously incorrect in light of the following conditons:

- a. steep terrain
- b. Heavy unburned fuels on the bottom side
- c. Afternoon weather conditons
- d. Extreme fire weather conditons during the period of the entire fire

- e. Known spotting conditions
- f. The action at that point would be of little value in light of conditions on the rest of the fire.
- g. Lack of knowledge about local burning conditions.

3. Inexperience in detecting potential danger signals played a significant role in the resultant accident. Although those in direct command had considerable time in the fire service, their most recent experience was in structural fire control. In the course of their normal duties they would not normally become involved in wildland fire control efforts. Those involved had arrived at the fire just shortly before the accident, and due to the emergency nature of their assignment (structural protection) were probably unaware of the entire fire control picture.

4. The 1" hose lay used was significant in itself, but probably did not significantly alter the end result. It is possible that had the 1-1/2" lay been further along in its initiation, it may have been of significant help in protecting the victim while he made his escape. No attempt was made to provide a water curtain to the escaping parties. It is not known however, whether time was available to set up for protection. The indications are that time may not have been available.

5. The clothing worn by Hawecker was probably significant, resulting in more serious burns. It is interesting that in spite of the severe burning of the shirt, those areas of the body covered by Hawecker's T shirt sustained somewhat reduced burns, principally on the back. It appears that those portions of the body insulated from the outer clothing by under garments can withstand a greater amount of heat before burns occur. Even as we shift to Nomex clothing, we should pursue this aspect of protecting bodies from burns.

Respectfully submitted,

Russell F. Bockhop

Russell F. Bockhop

INCIDENT REPORT
INVOLVING JIM HAWECKER
BEING BURNED ON
MORONGO FIRE

6/20/73 1350 hours

Location: Bluff Road, Banning

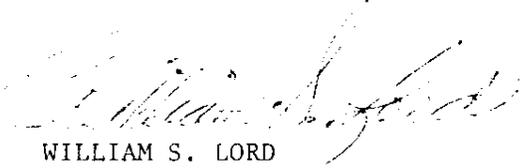
Pumper Boss: William S. Lord

Equipment: County Engines 33, 34, 38, 39 and 40; CDF Unit 6175

At approximately 1245, my task force was dispatched to the north end of Bluff Road. The fire had jumped Banning Canyon and spot fires were burning below Bluff Road. Unit 33 with Captain Fronek and two U. S. Forest Service tankers and one rent tanker started a hose line down the south end of the spot fire, off Bluff Road to the bottom of the canyon. Units 34, 38, 39, 40 and CDF Unit 175 started working additional spot fires around the houses.

Unit 38 with Captain Kerr used hard line from Bluff Road to the green oaks (marked X on map). Engineer Hawecker added cotton hose to XO on map. Captain Kerr and I thought we should put in 1-1/2 inch line down through the oaks to the bottom of the canyon. At that time I had Unit 6175 back down Bluff Road so that the hose line would be more in the burn and a straight shot to the bottom of the canyon with a large amount of burned area above and below.

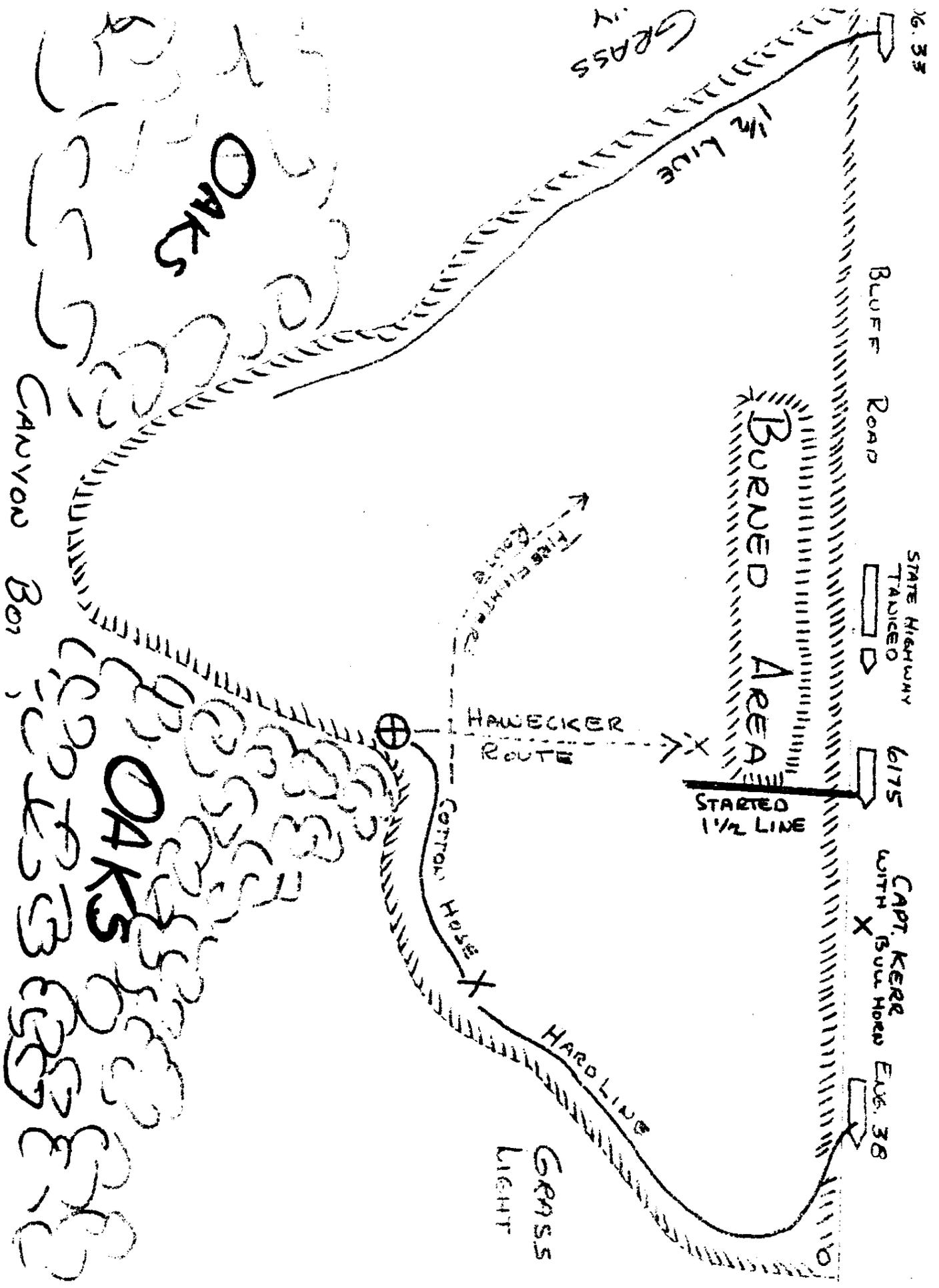
After getting the hose line started, I went to find the Highways tanker that had been parked to the south end of Bluff Road. At this time is when the fire blew up and Engineer Hawecker was burned. Captain Kerr radioed me to return to the scene and at that time I took Hawecker to the San Gorgonio Pass Hospital.

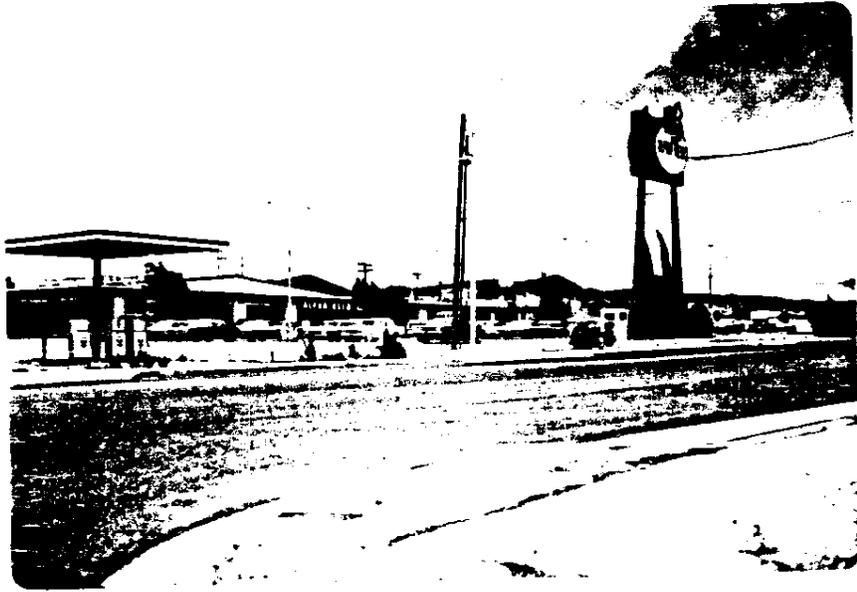


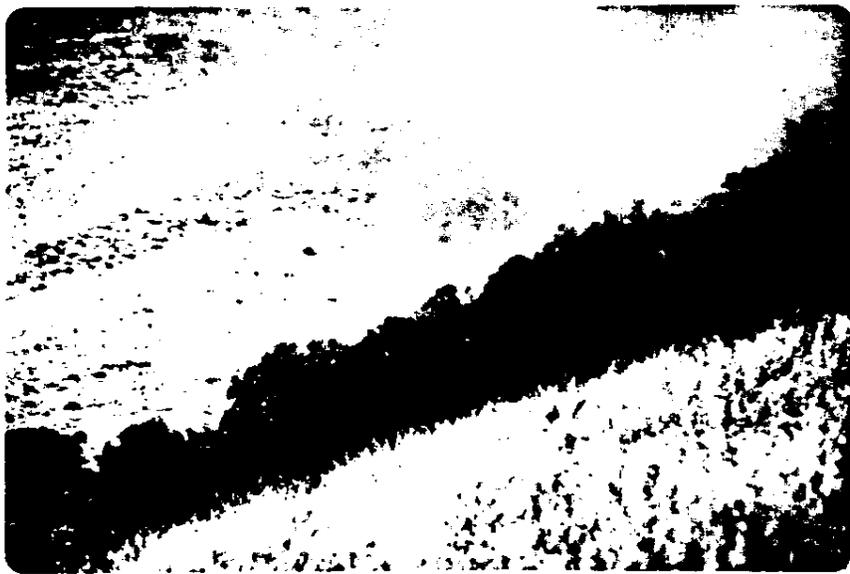
WILLIAM S. LORD

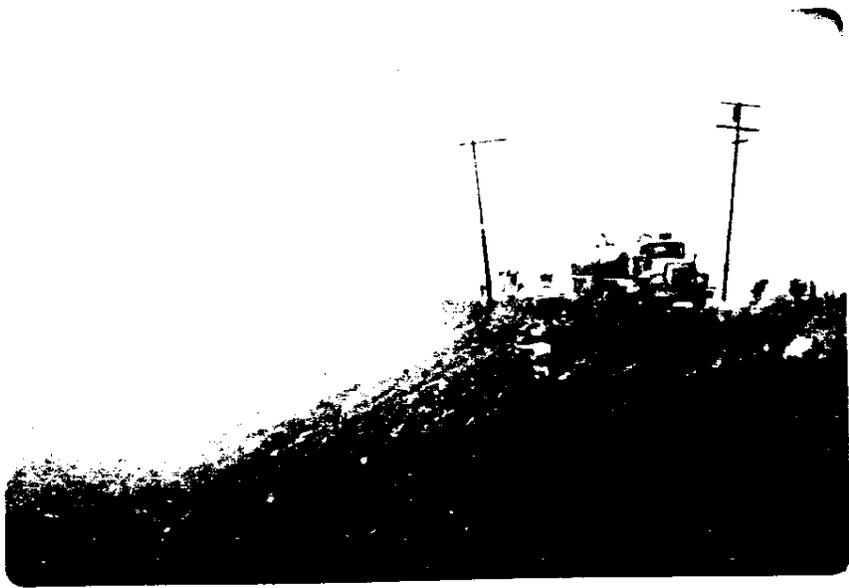
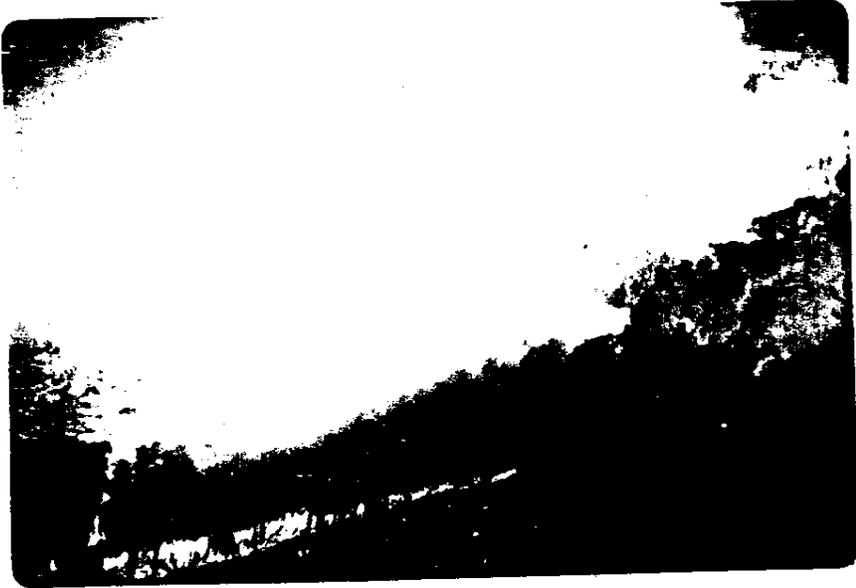
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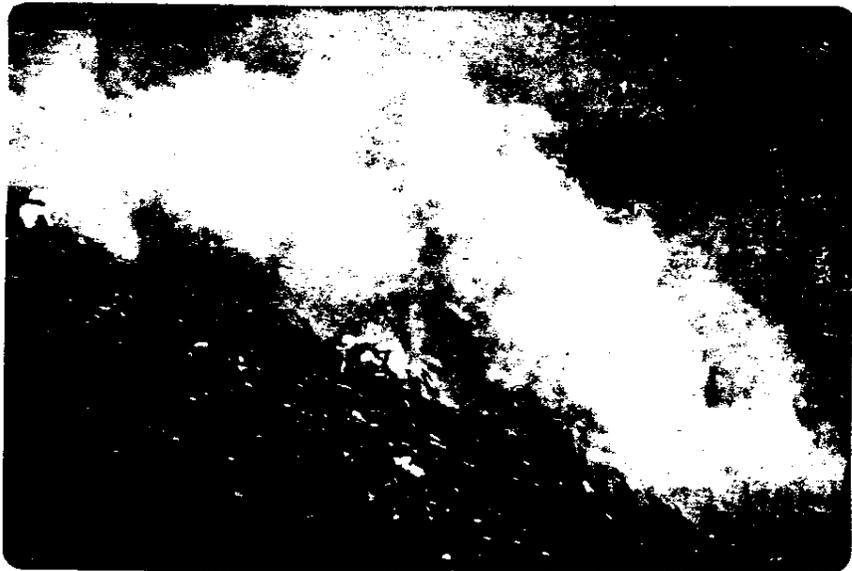
6/25/73











PHIL KERR FL
INVOLVED IN INCIDENT

SEE PAGE II REF. ENG 34
TASK FORCE WAS MAKING RUNNING ATTACK
NORTH ON BLUFF STREET.

WIND & FIRE LAID DOWN AT POINT
WHERE E34 IS LOCATED ON PAGE II.

WE HAD BEEN USING HARD LINE ON RUNNING
ATTACK AND WHEN FIRE LAID DOWN I WENT
OVER THE EDGE AND EXTINGUISHED FIRE
TO POINT X WHERE COTTON 1" LINE WAS
CONNECTED. WE WENT ANOTHER 50' OR SO THEN,
J. HOWECKER TOOK OVER PUTTING IN FURTHER INCH
LINE. I RETURNED TO ROAD APPROXIMATELY AT
POINT OF ENG 34 & DISCUSSED WITH LORD PUTTING
IN A 1 1/2" HOSE LAY FROM UNIT 175 TO OAKS
WHERE INCH LINE ENDED. I INSTRUCTED F. F. AT
175 TO START 1 1/2 HOSE LAY, THEN WENT NORTH
ON BLUFF PAST ENG 34 LOOKING FOR ADDITIONAL
MANPOWER FOR 1 1/2 LAY AT THIS TIME I
SAW BUILD UP IN OAKS AND SPOT FIRE JUST
NORTH OF WHERE OAKS WERE IN THE GRASS.
I RAN TO ENG 34 GRABBED A BULLHORN
AND YELLED FOR CREW TO ABANDON HOSE &
GET OUT. FIRE BLEW UP AS MEN WERE RUNNING
UP HILL. I WENT OVER BANK AT POINT WHERE
75 WAS & MET HOWECKER 50 TO 75'
DOWN SLOPE. CALLED FOR HELP, AND ME & 2 OTHERS
PULLED HIM UP.

Road



1250
1250

*

Light GRASS

Hard Line

END OF

1.1.108
104

Brown
grass
green

MAZE
RHITA

you have
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road
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Brown

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D
D

To - Dave Flate - Don Russell

From - Dick Pilkington

Subject - Training - Safety
Recommendations
Morango Fire

After being Safety Officer on the day shift
on June 20 and 21 I would like to bring
up the following points:

1. Too many State pickups and sedans were parked where they could roll and they were not chocked. (This biggest safety violation ^{on fire})
2. Some "key" overhead seen on going fire line without goggles and helmets
3. A group of tankers were trapped in Miras Canyon.
4. A group of tankers bottle necked at the end of Bluff St and one tanker singed (Refer FAE Cline).
5. State FAE Hawecker burned see detailed report.
6. No sleeping safety violations seen.

7. Definitely need to do something with the steps of the fire bosses Trailer.

8. On large fires two safety men on the day shift would be helpful at least at shift change so that more safety checking could be done.

9. FF Dale Burfield from Anza CDF passed out due to heat exhaustion. Maybe we need reminder on drinking too much cold stuff on fire lines and also a comment on the use of salt.

10. Maybe large stickers could be made that identify safety violators to others. "Failed to use chalk block" - "Parked in sleeping area" that could put on windshields. They make them that are harder than hell to get off.

End Report

HAPP
DMS

Subject to
Review by Lord
and Hawecker

A. Men involved in incident

Bill Lord - Tanker Boss

*Jim Hawecker - Engineer	West Riverside
Leonard Kimbey - Firefighter	West Riverside
Julio Fino - Firefighter	West Riverside
Eugene Case - Firefighter	West Riverside

Don Eisenacker - Volunteer Fireman Station 31

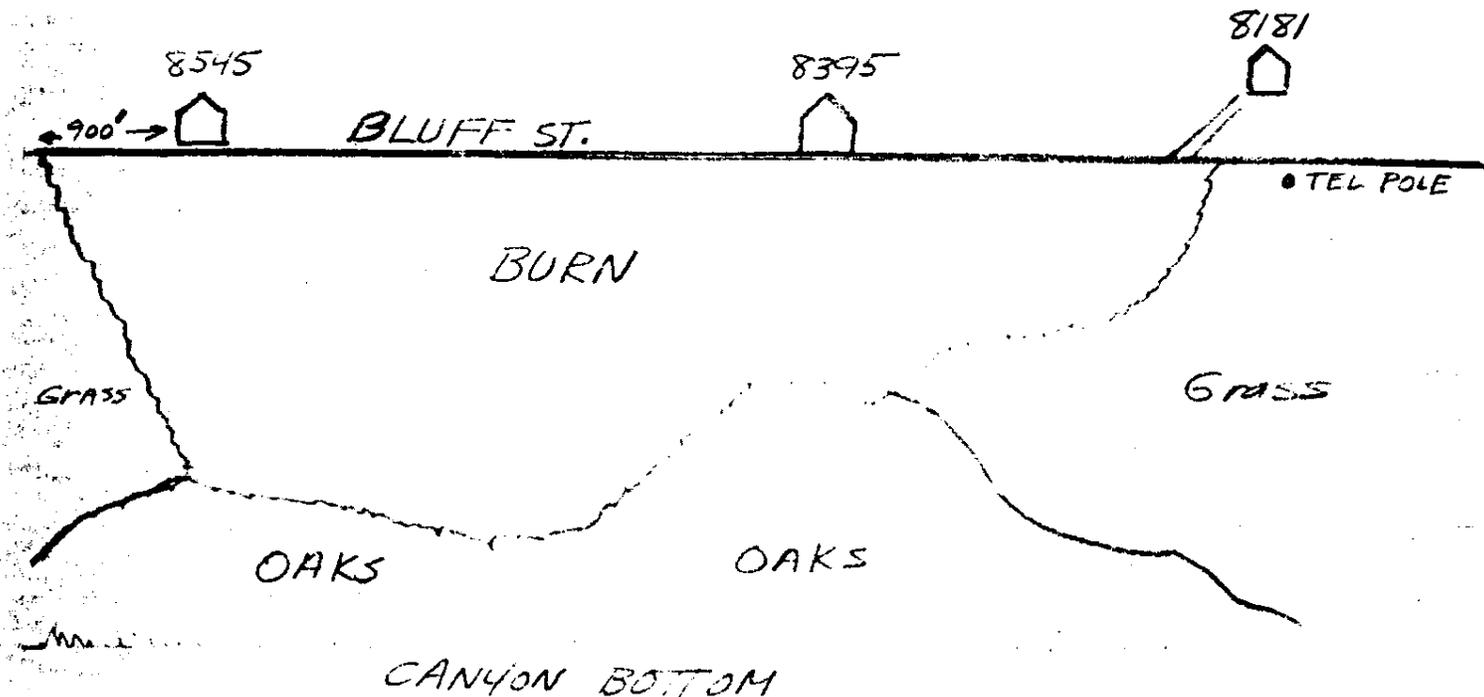
B. Men with knowledge of incident

Ron Miller, Fire Captain, Riverside County

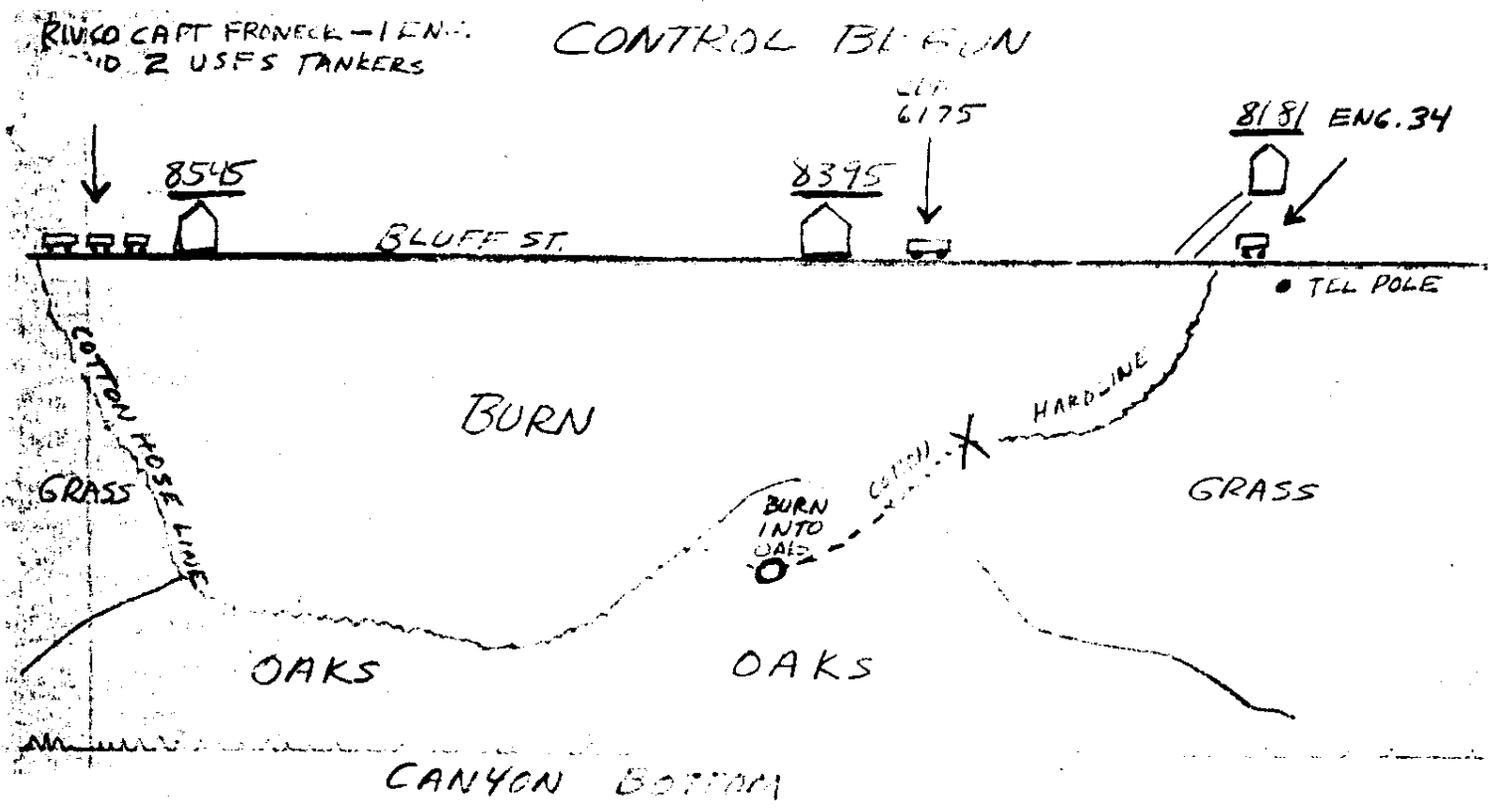
C. Report by R. Pilkington 6/20/73

*Employee burned

ORIGINAL PROBLEM
6-20-73 1350 HOURS



The fire started on the west side of Banning Canyon and burned in basically the pattern shown above. At this time, action was taken to control the north and south spread of the fire on the side of the bluff. In addition to the main fire, dozens of spot fires were being set on the Banning bench.

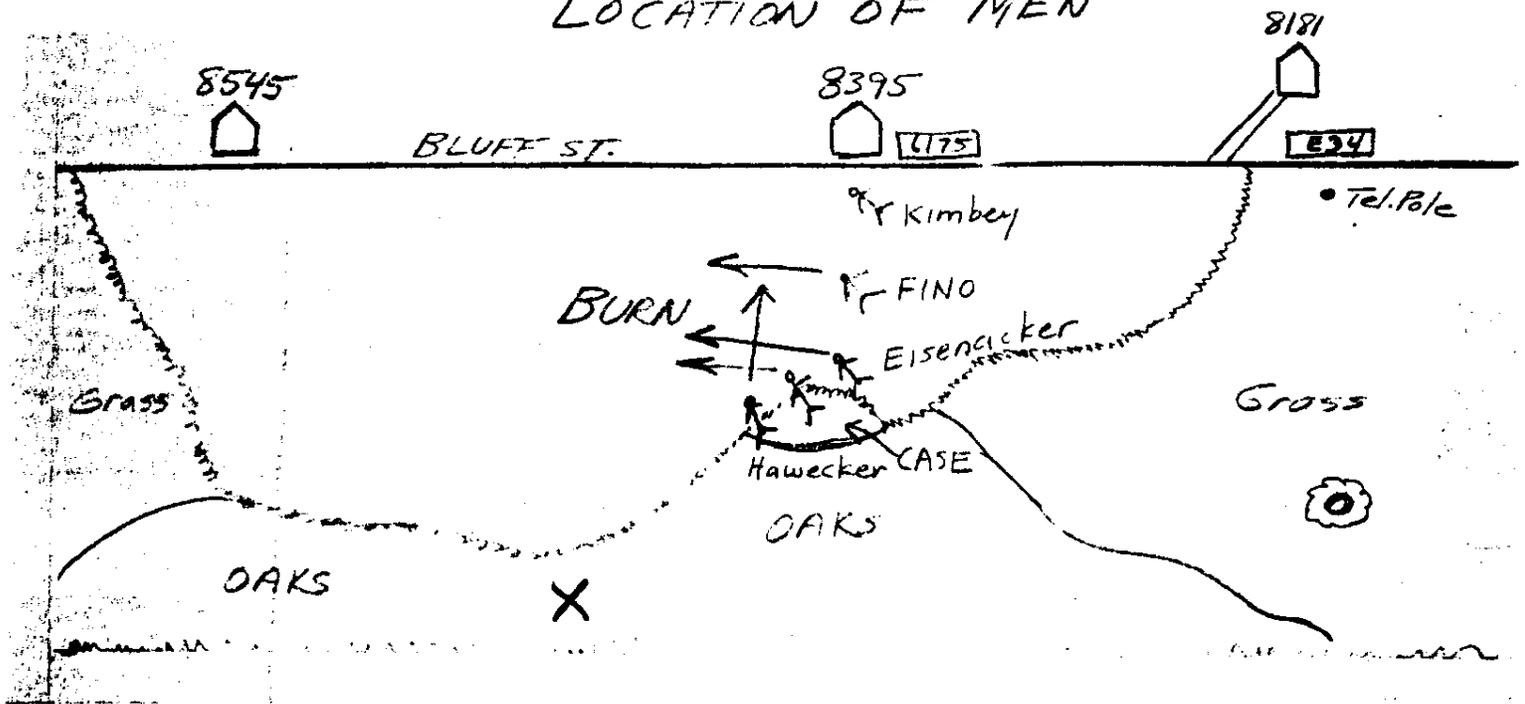


South End - 1 Riverside County engine and 2 U.S.F.S. tankers laid a hoseline over the side and later fired out a section to tie the fire into the bottom of the canyon on the South side.

North End - With the wind calm, 200 ft. of 1" hardline was used to control the fire to point X. Then 200' of 1 inch cotton was added to the hardline but not fully extended to point O.

At this time FF Kimbey was starting a 1-1/2" hoseline straight down the side from 6175.

TIME APPROX 1402
FIRST INDICATION
OF PROBLEM AND
LOCATION OF MEN



Events:

1. Crew heard crackling sound at X.
2. Spot fire started at O. (Later burned into main fire.)
3. Wind came up strong.
4. Crew began moving out.

Location of men and routes taken out:

1. Firefighters Fino and Case and Volunteer Eisenacker went in a southerly direction (sidehill).
2. Engineer Hawecker went westerly uphill and was burned approximately 50 ft. below Bluff Street.

