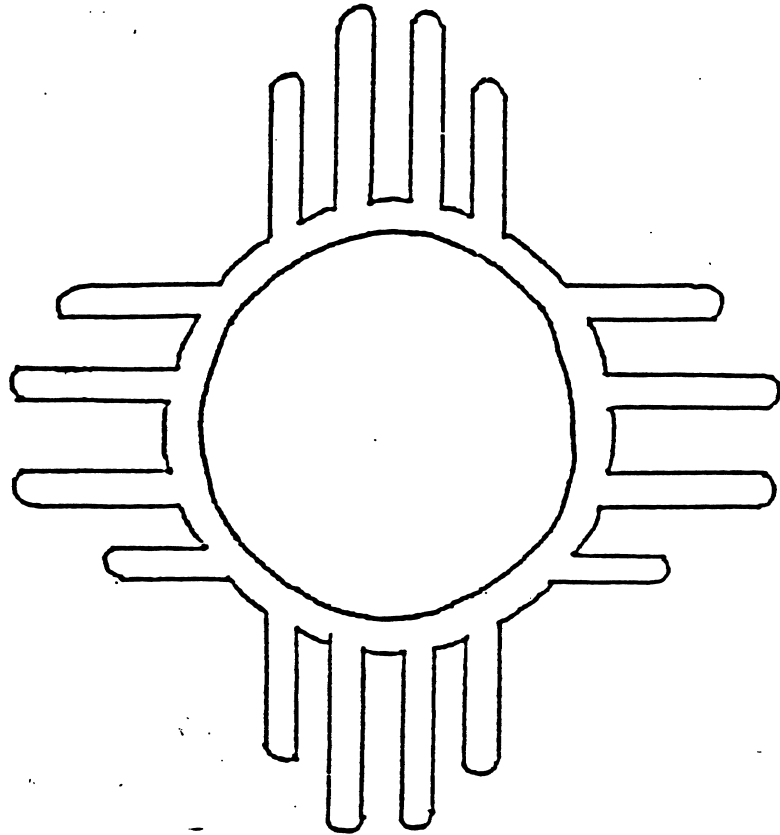


MULTIPLE
FATALITY ACCIDENT
ANDERSON CREEK FIRE



BOISE NATIONAL FOREST
INTERMOUNTAIN REGION

AUGUST 24, 1986

Accident: Multiple Fatality
Vehicle Accident
Jemez Pueblo Firefighting Crew

Location: Region 4, Boise National Forest, Anderson Creek Fire

Date: August 24, 1986

ALLEN J. SCHACHT
Chief Investigator


(Signature)

LTC WILLIAM G. MARTIN
Idaho ARNG


(Signature)

Team Members:

Jerry Monesmith
Tom Pettigrew
Hank Walters
John Destito
Jim Stevens

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ACCIDENT BRIEF - AUGUST 25, 1986

Four firefighters were killed and 17 others were injured early Sunday when an Idaho National Guard truck overturned on the way to the Anderson Creek Fire Camp from the Anderson Creek Fire, Boise National Forest, Region 4.

The 5-ton dump truck rolled down an 80-foot embankment along Danskin Creek Road, 35 miles northwest of Boise, about 5:30 a.m. Aboard were two guardsmen drivers, a crew of Indian firefighters from the Jemez Pueblo, N.M., and a BLM crew liaison officer. Four of the crewmembers were killed and 17 others hospitalized. Nine of these have subsequently been released. Killed in the accident were: Anthony Pecos, Andrew Waquie, Benjamin Waquie, and Allen Baca.

A joint Forest Service and Idaho National Guard investigation is underway. Chief Investigator for the Forest Service is Allen Schacht, Associate Deputy Chief, S&PF. Team members include Jerry Monesmith, WO F&AM; Jim Stevens, WO P&CR; Tom Pettigrew, Region 3 Engineering; and Hank Walters, Region 4 Safety and Health Manager.

The investigation is continuing.

ALLEN SCHACHT
Chief Investigator

NARRATIVE

Initial notification of a serious vehicle accident with fatalities was made by the Anderson Fire Camp to the Boise Area Fire Command at 6:30 a.m. on Sunday, August 24. The initial report indicated a National Guard 5-ton dump truck transporting the Jemez Pueblo #4 crew from Region 3 (Albuquerque, N.M.) off the fireline rolled over resulting in two fatalities and other serious injuries. The Fire Command immediately dispatched personnel to Anderson Camp and advised the Idaho Army National Guard (IDARNG), Region 4 Regional Office, and Region 3 Regional Office.

Personnel of the Regional Office in Ogden were notified of the accident about 6:30 a.m. John Destito, Personnel Management, received the call and passed the information to Clair Beasley, Deputy Regional Forester, Administration. Beasley designated a Regional Investigation Team made up of Ed Browning, Director of Minerals Management, Team Leader; Ray Kinyon, Director of Administrative Services; and John Destito, Group Leader, Staffing and Recruitment Group, Personnel Management.

After notifying the Washington Office, the team departed Ogden at approximately 9:00 a.m. via contract aircraft, arriving Boise at approximately 10:30 a.m. The Regional Team joined up with Duane Butler, Acting Deputy Forest Supervisor, and Chuck Hardy, Administrative Officer, and proceeded to Anderson Fire Camp where they were briefed on the accident by H.B. "Doc" Smith, Incident Commander. They then proceeded to the accident site where contact was made with LT Ron May, IDARNG, Liaison Officer, and SGT M.K. Miller, Accident Reconstructionist, Idaho State Patrol. While at the site, the Regional Team began taking statements and interviewing witnesses. The Regional Investigation Team returned to Boise at approximately 10:00 p.m.

John Chambers, Forest Service Washington Office, Fire and Aviation Management, received initial notification from Region 4 at approximately 10:30 a.m. Chambers immediately notified Jim Stevens, Safety and Health Manager, and recommended Jerry Monesmith as a team member on the Chief's Office Investigation Team. Jim Stevens advised Bill Rice, Deputy Chief, Administration, of the accident that three fatalities were now confirmed and recommended a Chief's Office investigation. Rice concurred and identified Al Schacht, Associate Deputy Chief, State and Private Forestry, as Chief Investigator, and instructed Stevens to work with Schacht to assemble a team and proceed with the investigation. Frank Quintana, Region 3 Safety and Health Manager, contacted Jim Stevens and expressed the desire of Sotero Muniz, Regional Forester, Region 3, to have a representative on the team. Team members approved by Chief Investigator Schacht were Jerry Monesmith, Washington Office, Fire and Aviation Management, Fire Safety and Training; Tom Pettigrew, Region 3, Transportation System Design Group Leader; Hank Walters, Region 4, Safety and Health Manager; and Jim Stevens, Washington Office, Personnel Management and Civil Rights, Safety and Health Manager. Stevens advised Region 4 of the Investigation Team membership and made arrangements for travel to Boise. The Chief's Office Team arrived in Boise at 10:30 p.m. on Sunday, where they were advised that a fourth crewmember had died.

Monday morning a team briefing and transition meeting was held at the Boise National Forest Supervisor's Office. Jack Lavin, Boise National Forest, Forest Supervisor, and Ed Browning, Region 4 Investigation Team Leader, reviewed the circumstances of the accident and the actions taken to date by medical aid personnel, National Guard personnel, and Forest Service investigators. A video tape showing reconstruction analysis of the accident site by SGT Miller of the Idaho State Patrol was shown. LTC Bill Martin of the Idaho Army National Guard was present at this briefing. LTC Martin and Al Schacht agreed to conduct a joint Forest Service and Idaho National Guard investigation. The Forest Service will issue the report. The Boise National Forest Public Affairs Specialist Dale Dufour was asked to handle all media contacts and to ensure that all information on the accident was cleared by Chief Investigator Schacht prior to release. Administrative Officer Chuck Hardy was appointed as Team Liaison, and Chief Investigator Schacht requested all members of the Region 4 Team to remain until released.

An accident brief was prepared and sent to the Chief's Office, Regions, Stations, and Areas. The team and Hardy then departed for the accident site, stopping first at Anderson Fire Camp to interview members of the Anderson Fire Management Team. Lt May and other National Guard personnel were interviewed at the accident site. The team members viewed the accident scene, after which Chief Investigator Schacht released the vehicle for recovery by the Idaho National Guard.

On Tuesday morning, some members of the team returned to Anderson Fire Camp to conduct additional interviews. Other team members conducted interviews with the hospitalized crewmembers and the drivers of the accident vehicle. Participating in the driver interview were Boise County Sheriff Craig Landers; Chief Deputy, Richard Comstock; LTC Martin, IDARNG; Bill Van Hole, Department of Justice; and Hank Walters, Forest Service Investigation Team.

Chief Investigator Schacht developed and presented to the local media a short statement on how the investigation was proceeding. Tuesday evening, Ed Browning and Ray Kinyon were released. John Destito was asked to remain through the duration of the investigation and was added to the Chief's Office Investigation Team. Report preparing assignments were made as follows: Hank Walters, Sequence of Events; Tom Pettigrew, Site Investigation; Jerry Monesmith, Organizational Factors; Jim Stevens, Statements/Interviews and Records. Destito assisted each in completing their assignments.

Wednesday, Chief Investigator Schacht and LTC Martin prepared and delivered a media release updating the status of the investigation. The team held an exit briefing with the Forest Supervisor Jack Lavin, and the Anderson Creek Fire Incident Commander H.B. "Doc" Smith on Thursday. The team held an exit briefing with Regional Forester Tixier in Ogden on Friday morning.

The team reconvened in Boise September 2 through September 4 to complete the report.

Jemez Crew Members Killed in the Accident

Andrew Waquie
Benjamin Waquie
Allen Baca
Anthony Pecos

Injured Jemez Crew Members

Hilarso Armijo	- Left eye, head, left leg, and right ankle
Timothy Armijo	- Injured shoulder, back, and knee
Vincent Chavez	- Multiple injuries
David Chinana	- Injured right arm
Victor Chinana	- Injured back
Ivan Gachupin	- Right shoulder
Michael Gachupin	- Abdominal pain
Dennis Magdalena	- Multiple Injuries
Frank Magdalena	- Back pain
Lawrence Seonia	- Injured leg and neck
Jose Toledo	- Injured hip, chest, and skin lacerations
Roberta Toledo	- Injured neck, shoulder, and back
Nathaniel Tosa	- Chest and abdominal pain
Allen Toya	- Chest and shoulder pain

Bureau of Land Management Crew Liaison

Daniel Armstrong - Injured leg and chest

Idaho National Guard

Steve McCord	- Multiple injuries
Tom Herron	- Multiple injuries

Additional Contacts

Sgt M.K. Miller, Idaho State Patrol
Craig Landers, Sheriff, Boise County Idaho
Richard P. Comstock, Chief Deputy, Boise County Idaho
Bill Van Hole, Department of Justice, Boise
John Russell, Area Command, Incident Commander
Sotero Muniz, Regional Forester, Region 3

FINDINGS

A. SITE

1. Road narrowed from a average width of 16 feet to 10 feet 3 inches wide at the accident site.
2. Forest Service standard for this class of traffic (commercial vehicle) and speed is 12 feet with appropriate widening on curves.
3. Road curves at the accident site.
4. No road edge berm where vehicle left roadway and the masking effect of a bush, lessened identification of the road edge.
5. Bush on shoulder of fill slope at beginning of curve, and the berm along previous and following road section, gives the illusion that the road surface was wider than it was.
6. Driver's view of the road edge was limited by darkness and/or the vehicle configuration.
7. Narrowing of road section at the accident site was not marked.
8. There was evidence of no vehicle braking at the site.
9. Vehicle speed was not a factor of this accident.
10. Accident vehicle was not "hugging" uphill slope as it approached the accident site.
11. Weather was not a factor.

REFERENCES

Site Diagram

FSH 7709.56

Site Diagram

Site Narrative, Photos, and Site Diagram

Photos and Site Diagram

Driver's Statements and Sheriff's Report

Statement of Boise NF Fleet Equipment Mgr

Photos, Site Diagram, Idaho State Patrol Report

Site Diagram
TM 9-2320-260-10

Site Diagram

Sheriff's Report

B. RECORDS

1. Driver was not impaired by drugs/alcohol. No other medical problems were identified. Driver was not smoking or drinking coffee at the time of the accident.

REFERENCES

Sheriff's Report
Driver's Physical
Driver's Statement

2. No contributing mechanical problems with the accident vehicle.

Fleet Equipment Mgr
Statement, Vehicle
Maintenance Records,
Idaho State Patrol
Report

3. The vehicle was not equipped with rollover protection or seatbelts in cab or crew area.

Site Observation

4. Driver had driven the road approximately 9 times, at least once at night.

Statements from
IDARNG personnel
and Driver

5. Driver was 35 years old, qualified in the vehicle, and experienced driving this vehicle in other fire situations over mountain roads.

IDARNG Records,
Statements from NG
Personnel

6. Approximately 400 similar vehicles had negotiated this road section during the Anderson Creek Fire operation previous to this accident.

Shift Plans

C. ORGANIZATIONAL FACTORS

REFERENCES

1. No evidence that safety and road condition assessments were initiated by the Anderson Creek Fire Planning, Logistics, or Safety Functions.

Statements from Day
Ground Unit Support
Leader, Planning
Section Chief,
Logistics Section
Chief, Situation
Unit Leader

2. An evaluation of road hazards was made by Idaho National Guard personnel and an unidentified Forest Service person prior to the accident, but hazards identified at the accident site were not mitigated.

Statements from
IDARNG personnel

3. Shift plans do not indicate any maintenance on accident section of road, however, interview with grader operator indicates the road had been lightly bladed once, five days prior to the accident.

Shift Plans and
Motor Grader
Operator

4. Command Staff Liaison Officer position in Incident Command System structure was not filled by the Anderson Creek Fire Incident Commander. Idaho National Guard did fill their liaison position with the Fire Management Team.

Shift Plans and
IDARNG Firefighting
Plan

5. IDARNG Firefighting Plan does not define roles of the Command Staff Liaison Officer, Ground Support Unit Leader, and Equipment Manager. Also, the Plan does not reflect Forest Service limitations or driver shift lengths.

IDARNG Firefighting Plan

6. Vehicle drivers, including McCord and co-driver Herron, exceeded standard driver shift lengths.

Timesheets

7. Original Ground Support Unit Leader was replaced and was replaced by a person who was not red-card qualified for this position.

Statement from Logistics Section Chief

8. A Deputy Logistics Section Chief was assigned to give special attention to overseeing Ground Support Unit functions.

Statement from Logistics Section Chief

9. The area of responsibility with respect to the traffic plan and its implementation were not clear between the Plans and Logistics Sections.

Statements from Logistics Section Chief and Plans Section Chief

10. Safety Function did not adequately assess, monitor, or report hazardous and unsafe situations on this road.

Command Staff Safety Officer

11. Use of Spike Camps was considered by the Incident Commander and District Ranger, and considered not feasible.

Discussion with Incident Commander

D. OTHER

REFERENCES

1. Co-driver Herron was asleep at the time of the accident.

Statement from Co-driver

2. Idaho National Guard had provided safety instructions to drivers. Additional safety instructions were issued to drivers following a previous vehicle incident at a different location.

Statements from IDARNG personnel

3. Prior to the accident, Danskin Road was changed to one-way traffic.

Statements from Logistics Section Chief and Planning Section Chief

4. Personnel at the scene recognized and accommodated spiritual needs of Jemez firefighters.

Discussions with personnel at site

5. The National Guard driver was cited by the Boise County Sheriff for "inattention".

Sheriff's Report

CAUSE(S) OR PROBABLE CAUSE(S)

The event after which the accident became inevitable was the left side wheels of the vehicle leaving the roadway, and the vehicle rolling down an embankment. The Investigation Team was unable to identify any single conclusive cause for this accident. However, several contributing factors were identified:

1. Condition of roadway allowing minimal margin for error.
2. Driver visibility and perception of road alignment.
3. Long shifts and their possible cumulative effect on drivers.

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g. Tim Armijo	
h. Frank Magdalena, Jr.	
i. Additional Interviews	

D. RECORDS

1. Idaho Army National Guard Firefighting Plan (excerpts)
2. Vehicle Inspection Records
 - a. DA Form 2404 - Inspection Worksheet, August 12, 1986.
 - b. Organizational Maintenance Shop #6, Equipment Condition Checklist, August 12, 1986.
 - c. DA Form 2404 - Inspection Worksheet, August 23, 1986.
 - d. Maximum Road Speed Table (excerpt from TM 9-2320-260-10).
 - e. DA Form 461-5, Vehicle Classification Inspection.
3. Personnel Records
 - a. SF 46, Government Motor Vehicle Operator Identification Card, Steven B. McCord.
 - b. DA Form 348, Equipment Operator's Qualification Record, Steven B. McCord.
 - c. Report of Medical Exam, Steven B. McCord.
 - d. Driver Timesheets.
4. Motor Pool Dispatch Logs
 - a. August 23, 1986.
 - b. August 24, 1986.

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1. Boise County Sheriff's Report.
2. Idaho State Patrol Site Reconstruction Report.

A. SEQUENCE OF EVENTS

SEQUENCE OF EVENTS

Sunday, August 24, 1986

(All times approximate)

- 0230 Convoy of five, 5-ton National Guard trucks leave Anderson Fire Camp enroute to Drop Point 15 to pick up 4 crews.
- 0400 Convoy arrives at Drop Point 15.
- 0430 Convoy starts down Danskin Road from Drop Point 15.
- 0520 Accident occurred.
- 0530 Drop Point Coordinator left junction of Danskin Road and Garden Valley-Lowman Road to look for missing truck.
- 0535 Drop Point Coordinator met Jemez Crew member running down Danskin Road and he advised Drop Point Coordinator of the accident.
- 0540 Drop Point Coordinator arrived at the accident scene.
- 0545 Anderson Base Camp Communications receives message from Drop Point Coordinator that truck was off Danskin Road.
- 0550 Medical Unit Leader is advised by Safety Officer that a National Guard truck has run off the Danskin Road.
- 0600 Medical Unit Leader and 5 Emergency Medical Technicians enroute from Anderson Camp to Danskin Road.
- 0625 Medical Unit Leader and Emergency Medical Technicians arrive at accident site.
- 0630 Life Flight Helicopter #1 left Saint Alphonsus Regional Hospital for accident scene.
- 0635 Crouch Rescue Unit arrives at scene with equipment to lift truck.
- 0640 Life Flight Helicopter #2 left Saint Alphonsus Regional Hospital for accident scene.
- 0700 Mast helicopters dispatched to accident scene.
- 0711 Life Flight Helicopter #1 arrived on the accident scene.
- 0715 Lowman ambulance arrived at scene.
- 0730 Chief Deputy Dick Comstock arrived at accident scene.
- 0750 Mast helicopter arrived at scene.

0811 Life Flight Helicopter #2 arrived on the accident scene.

0830 Life Flight Helicopter #1 departed accident scene for Saint Alphonsus Regional Hospital.

0850 Life Flight Helicopter #1 arrived at Saint Alphonsus Regional Hospital.

0906 Life Flight Helicopter #2 departed from scene for Saint Alphonsus Regional Hospital.

0908 Request made that no autopsies be performed on the bodies.

0926 Life Flight Helicopter #2 arrived at Saint Alphonsus Regional Hospital.

0935 SGT Miller, Idaho Highway Patrol, arrived on site to assist in the investigation.

0950 Stan Palmer, Major Dillon, and Bob Morgan arrived on accident scene from Area Command.

1000 Mast Helicopter on way to Saint Lukes Hospital with 5 patients.

1030 Mast Helicopter arrived at Saint Lukes Hospital with 5 patients.

1125 Last two patients and remaining Life Flight personnel left by Mast Helicopter.

1130 All EMT's left accident scene and returned to Anderson Camp.

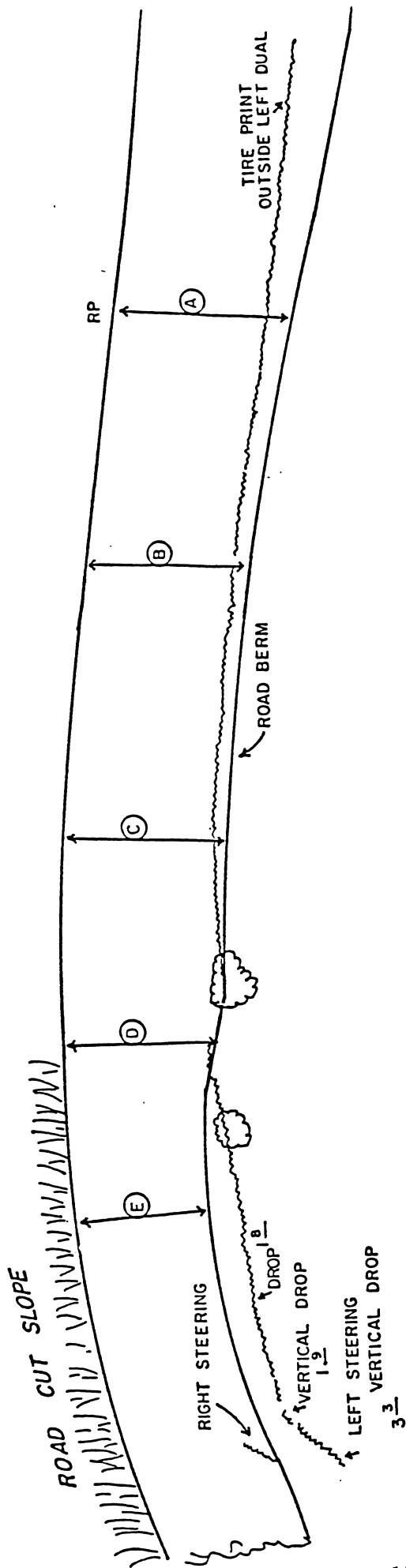
1300 Shaman on site performing rites.

1330 Regional Investigation Team arrived at accident scene.

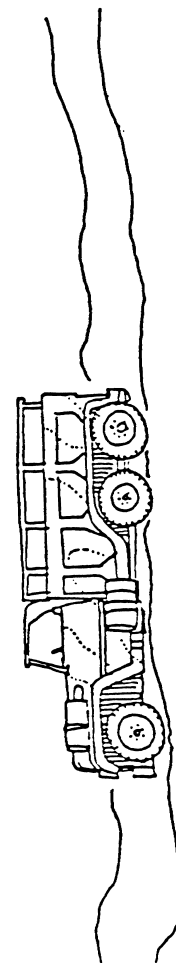
1400 Bodies removed from site. Taken to Saint Alphonsus Hospital.

1500 Site open to media for review.

B. SITE INVESTIGATION



15

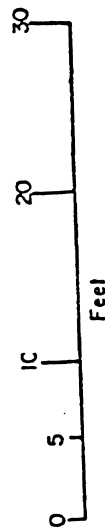


U.S.F.S. - National Guard
 Danskin Creek
 5 A.M. 24 Aug. 1986
 Boise County Idaho

- (A) Width of Rd. at RP 16 ft. and 93 ft. 10 in. from end of vehicle track South.
- (B) 20 ft. S of RP Width is 13 ft.
- (C) 40 ft S of RP Width is 12 1/2 ft
- (D) 56 ft. S of RP Width is 11 ft. 4 in.
- (E) 70 ft S of RP Width is 10 ft. 3 in.

Brush width above Rd. berm Foliage

Tree



9 00 AM
 MK Miller
 27, Aug. 1986

SITE DIAGRAM

2. ACCIDENT SITE NARRATIVE

The accident site is located on the Boise National Forest (BNF) about one mile north of the intersection of the Garden Valley - Lowman Highway and the Danskin Road - Forest Development Road (FDR) 613 and approximately 120 yards south of the intersection of the Danskin Road and left fork of Danskin Creek Road Anderson Road, FDR 649. Danskin Road is generally characterized as a single lane, with turnouts, local road with a native earth (decomposed granite) surface. The BNF Travel Map indicates that the road is seasonally closed from December 1 to May 1 and traverses an area closure which is closed to all vehicle entry, except on designated routes. The BNF Transportation System Inventory indicates that the road has been designated by management as traffic service level C with an objective road maintenance level of 2.

The road at the accident site narrows from approximately 16 feet with a berm to 10 feet 3 inches without a berm. The road (when viewed from the direction of travel for the accident vehicle) curves gently to the left. From the intersection with FDR 649, the road is generally straight with a gentle uphill grade of 4 percent. The grade through the accident site is nearly level. The narrowing in the gentle left curve created a "kink" in the road. There also is a bush approximately 4 feet in diameter and height located at the point that the berm ends as one approaches the accident site. A second bush, a few feet further south and just below the edge of the road on the fill slope (slough slope) gave a visual clue that the berm and the road edge continued as it probably had before the sloughing occurred. The masking effect of the first bush and the false reassurance that the second bush offered when combined with the darkness and the headlights shining straight ahead as the road curved gently left and the residual dust from the previous vehicle, may have obscured the significant narrowing at the accident site.

3. ACCIDENT RECONSTRUCTION

The accident was reconstructed by investigators trained in accident reconstruction. SGT Marvin Miller of the Idaho State Police arrived at the accident site about 9:30 a.m. on August 24, 1986, about four and one-half hours after the accident. Robert Morgan, BNF Fleet Specialist, arrived about 30 minutes later. They, along with efforts by the Idaho Army National Guard (IDARNG), reconstructed the accident as follows:

The accident vehicle had left Anderson Camp at approximately 2:30 a.m. on August 24 as part of the 5 vehicle convoy made up of 4 IDARNG 5-ton dump trucks used for transporting crews to and from the fire. The fifth vehicle was a pickup truck used for hauling tools and contained the Drop Point Coordinator Jerry Hagen, driven by Mike Haddon, driver, and Todd Larson, co-driver. The pickup truck lead the convoy. The convoy drove up the Anderson Creek Road to Drop Point 11 (DP-11) where one of the four 5-ton trucks picked up a crew and returned to Anderson Camp via FDR 649 to FDR 613 (past the accident site) and back to Garden Valley - Lowman Highway. The rest of the convoy proceeded past DP-14 to DP-15 where crews were loaded into each truck. The convoy proceeded down from DP-15 on FDR 613 to the south towards the Garden Valley - Lowman Highway. The accident vehicle, designated by the Idaho Army National Guard as

truck number C-11, was the last vehicle in the convoy both on the way up to DP-15 and on the way down. From Anderson Camp to DP-15, the accident vehicle was driven by Thomas Herron. As had been the common practice after reaching the assigned DP, the driver and co-driver switched places and Steven McCord became the driver for the return trip and Herron became the co-driver.

As the vehicle approached the accident site, as shown on the site diagram, the left tire tracks, at a very flat angle of incidence, approached the left edge of the road. The left front tire left the roadway at approximately the first bush. Then, the tire gradually dropped as the vehicle continued to travel more or less parallel to the edge of the road. After traveling in this relationship for about 37 more feet, the left front tire had dropped vertically approximately 3 feet, 3 inches. At about that same time, the two left rear duals left the road through the first bush. The truck then rolled approximately one and three-fourth times, striking a large ponderosa pine on the opposite side of the Danskin Creek, then rotating back about 1/4 turn and coming to rest with its right side lying in the creek. The truck rolled about 80 feet down a 70 percent slope from the road. A number of the 19 crew members were thrown from the vehicle.

The injured were removed for medical aid. One body was found under the rear duals. Two other bodies were found about one-half way up the slope lying together and had probably been moved to that location by rescue personnel. The fourth body was located at the top of the slope along the road.

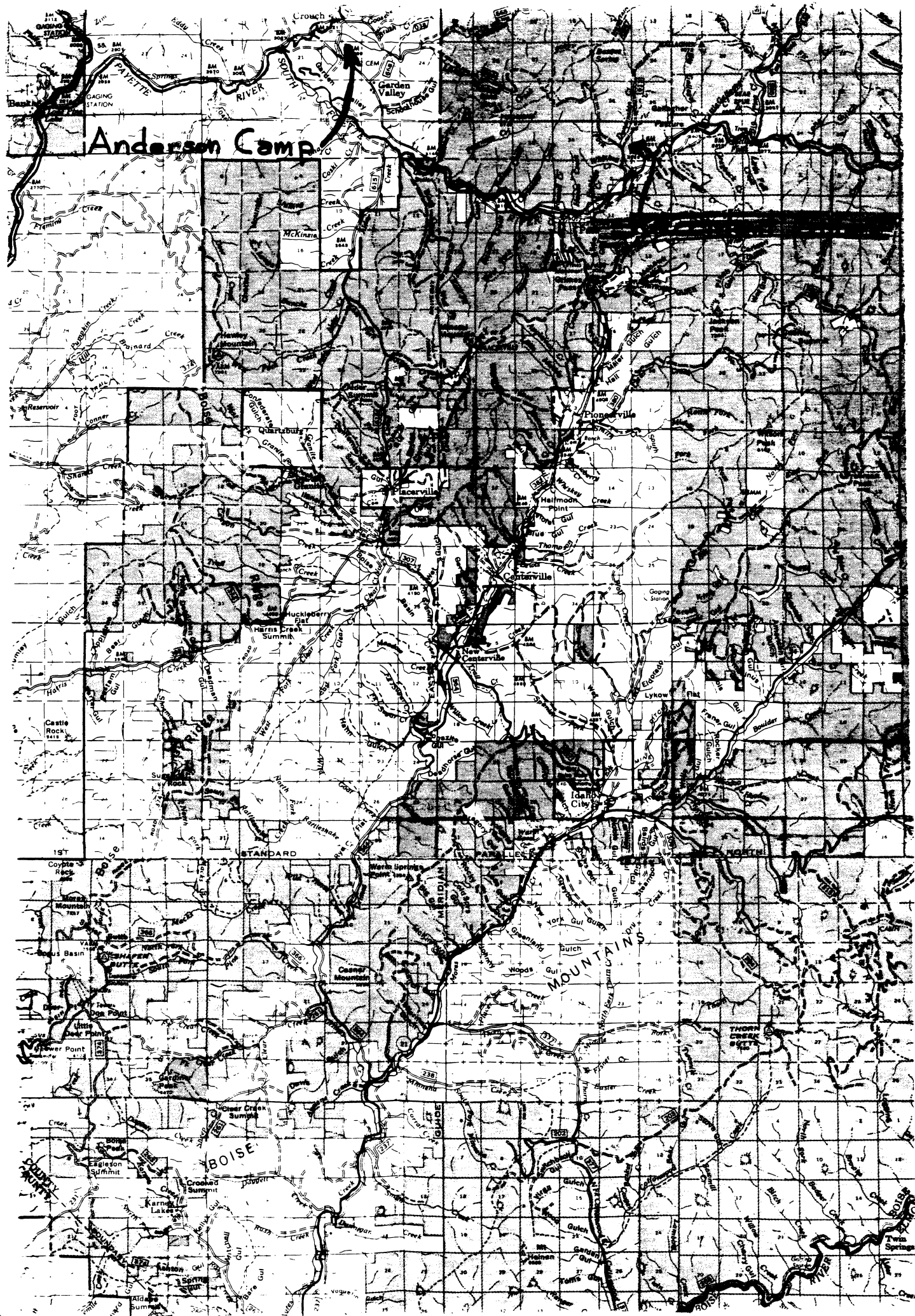
Miller and Morgan inspected the truck and did not detect any mechanical problems that would have contributed to the accident.

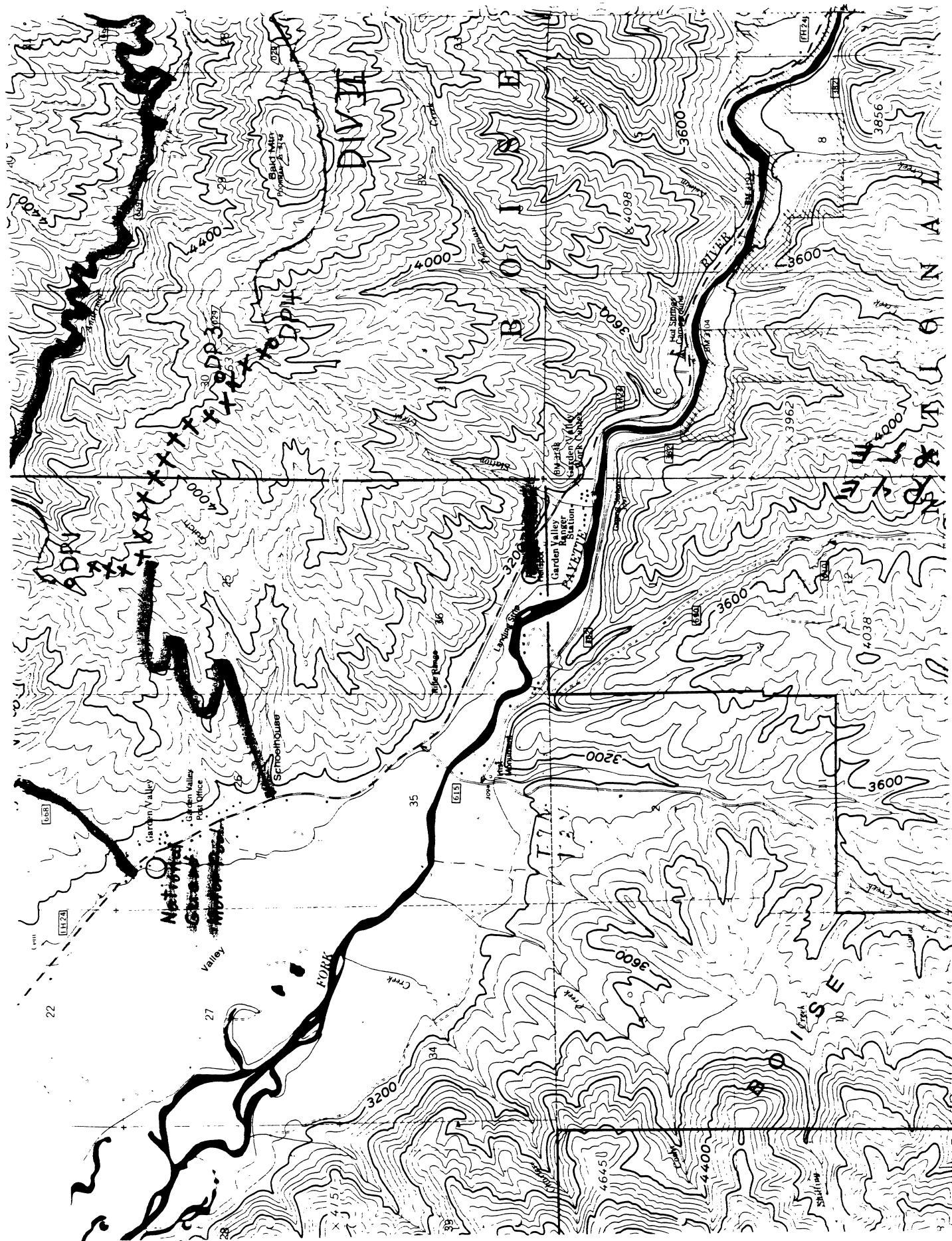
4. DESCRIPTION OF PROPERTY DAMAGE

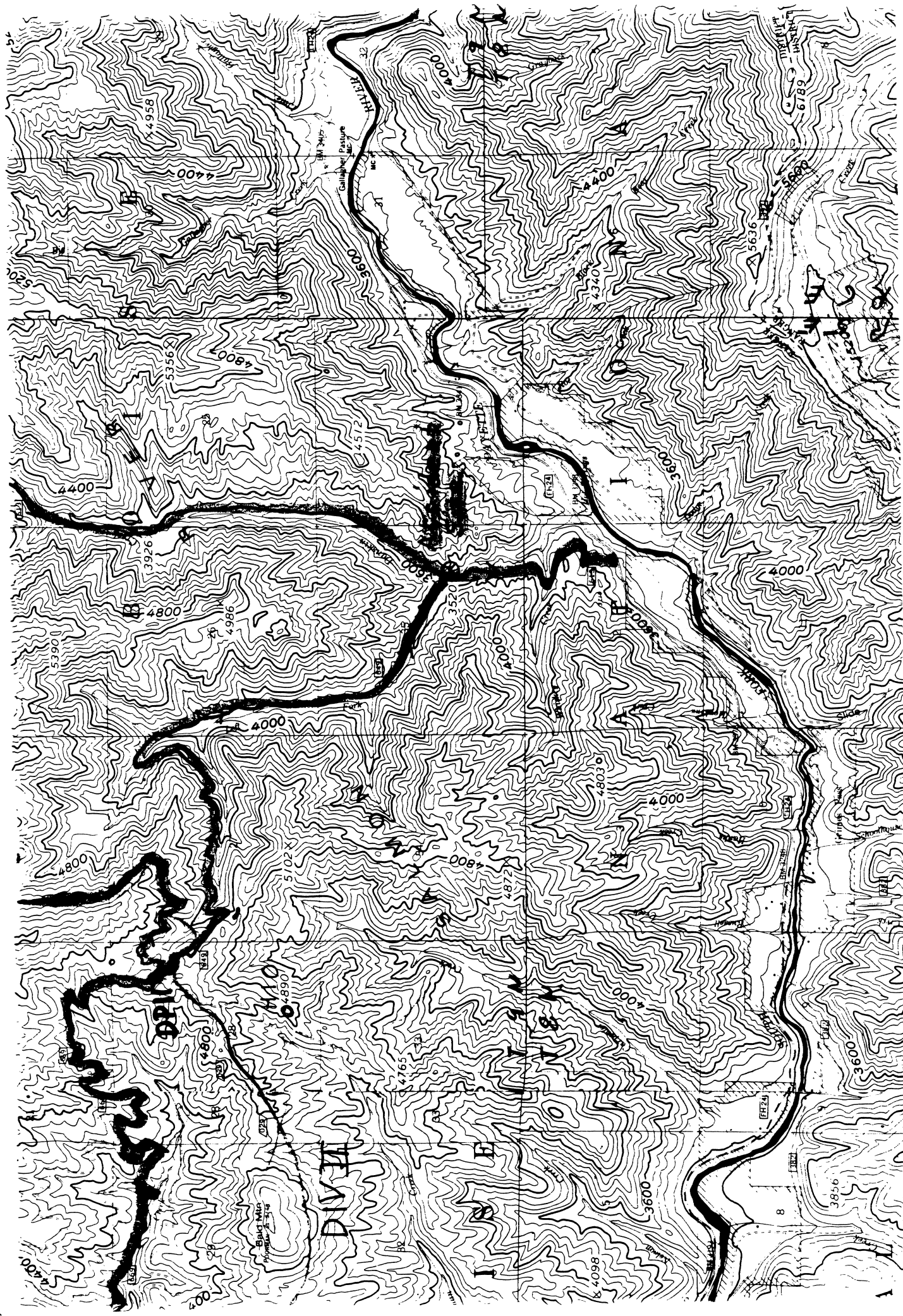
The cost of repair for truck #C-11 is estimated to be \$7200.

5. TEST RESULTS

See statement by Robert Morgan concerning condition of accident vehicle following recovery, dated August 16, 1986.









Direction of travel up 4 percent grade
proceeding southerly. Orange tape marks
left duel tracks.



Left real duel tracks at the point vehicle
left the road surface.



Trench produced by the travel of the left tires off the road surface.



Point at which the forward momentum of the vehicle stopped and began to roll to the left.



Point at which the vehicle came to rest.



Vehicle in creek bottom.



Trench produced by the travel of the left tires off the road surface, looking north.



View of vehicle looking north.



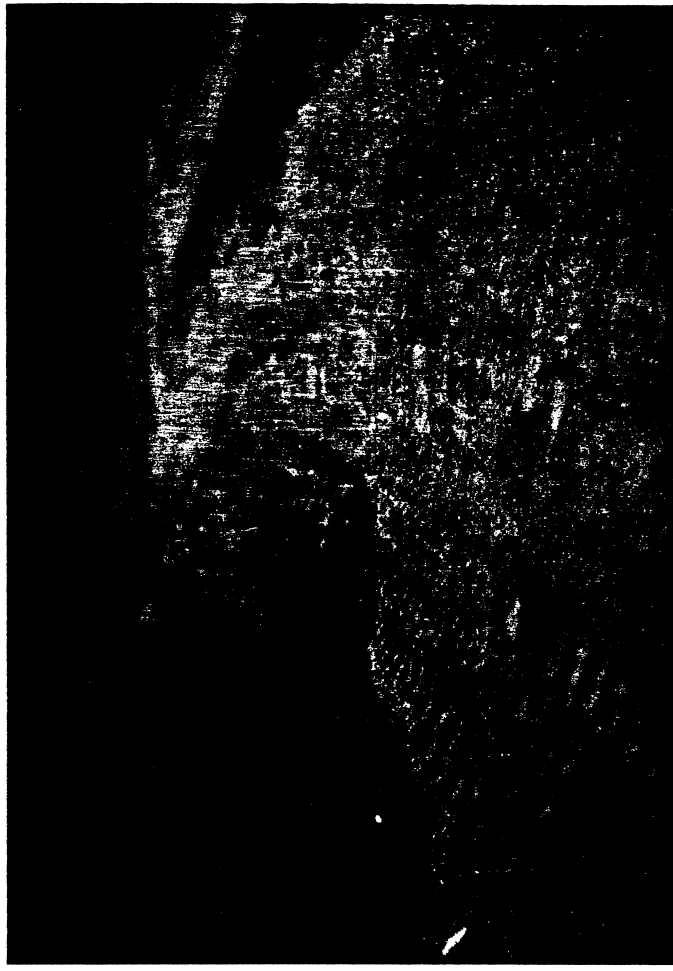
Looking from point of accident site
back toward route of travel up 4 per-
cent grade into left hand turn.



Point at which vehicle left the road and rolled.
Vehicle in bottom of drainage.



Route of travel in which the vehicle
would have proceeded southerly



Next narrow section of road in the direction of
travel south of the accident scene, showing tire
passage off the road surface.

E. ORGANIZATIONAL FACTORS

E. Organizational Factors

1. MANAGEMENT TEAMS

IDAHO NATIONAL GUARD (Principle organization involved in or related to the accident)

- a. Lt. Ron May
Sandpoint, Idaho
National Guard (NG) Liaison
Responsible for liaison between all Idaho National Guard involvement and the fire overhead team.
- b. Lt. Bernie Kelly
Idaho Falls, Idaho
National Guard Task Force Commander
Responsible for supervision and management of Guard personnel.
- c. Sgt. William Casper
Rexburg, Idaho
National Guard Sgt. of 2nd Platoon
Responsible for supervision of 2nd Platoon personnel.
- d. Steven B. McCord - Company C(-)
St. Anthony, Idaho
Driver
Driving 5-ton dump, C-11 (accident vehicle), 4th vehicle in convoy.
- e. Thomas Herron - Company C(-)
St. Anthony, Idaho
Driver
Co-driver of 5-ton dump, C-11 (accident vehicle), 4th vehicle in convoy.
- f. Michael A. Haddon, PVT E-2, Company C(-)
St. Anthony, ID
Driver
Driver of pickup C-60 leading the convoy.
- g. Todd Larson, Pvt., Company C(-)
St. Anthony, ID
Driver
Co-driver of pickup leading the convoy.
- h. Gary B. Hunter, SGT, DET 1, Company C
Rexburg, ID
Driver
Driver of 5-ton dump, C-22, second vehicle in convoy.

- i. Travis D. Madsen, PVT E-2, DET 1, Company C
Rexburg, ID
Driver
Co-driver of 5-ton dump, C-22, second vehicle in convoy.
- j. Robbie L. Duncan, SP 4, DET 1, Company C
Rexburg, ID
Driver
Driver of 5-ton dump, D-25, third vehicle in convoy.
- k. Lawrell D. Cook, SP 4, DET 1, Company C
Rexburg, ID
Driver
Co-driver of 5-ton dump, C-25, third vehicle in convoy.

FIRE OVERHEAD TEAM (Principle organization involved in or related to the accident)

- a. H.B. "Doc" Smith
Kaibab National Forest, Region 3
Incident Commander
Responsible for the overall management of the Anderson Creek Fire and Class I Overhead Team.
- b. Not filled
Liaison Officer (Command Staff)
Serves as the point of contact for assisting and cooperating agency representatives.
- c. Don Van Driel
Tonto National Forest, Region 3
Logistics Chief - Member of General Staff
Responsible for providing facilities, services, and materials in support of the incident.
- d. Gary Foreman
Phoenix District, Bureau of Land Management
Deputy Logistics Chief
Assigned to assist Logistics Section Chief with special emphasis on overseeing ground support functions.
- e. Ben Ross
Coconino National Forest, Region 3
Ground Support Unit Leader, Logistics Section (initial position)
Responsible for transportation of personnel supplies and equipment; service, maintenance, and repair of vehicles; implementing traffic plan, and maintaining incident roads.

Equipment Manager, Logistics Section (position at the time of the accident). Responsible for providing service, repair, and fuel for all equipment; provides transportation and support vehicle services.

- f. Clint Dotson
Bankhead - National Forests in Alabama
Ground Support Unit Leader (Day Shift), Logistics Section
Responsible for transportation of personnel, supplies and equipment; service, maintenance and repair of vehicles; implementing traffic plan; and maintaining incident roads.
- g. Jerry Hagen
Challis, National Forest, Region 4
Drop Point Coordinator, passenger in the C-60 lead vehicle in the convoy. Responsible for coordinating the drop off and pick up of crews and equipment at certain points on the incident.
- h. Jerry Deiter
Sierra Vista RD, Coronado National Forest, Region 3
Safety Officer - Member of the Command Staff
Responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety.
- i. John E. Roberts
Coronado, National Forest, R-3
Planning Section Chief (Member of General Staff)
Responsible for the collection, evaluation, dissemination and use of information about the development of the incident.
Provides incident traffic plan.
- j. Jerry Elson
Gila, National Forest, R-3
Situation Unit Leader, Planning Section
Responsible for the collection and organization of incident status and situation information. Prepares traffic plan, external and internal to the incident.

2. DIRECTION

a. FIRELINE HANDBOOK 410-1:

- 21.5-1. Drivers' shifts should not exceed 12 hours.
- 21.5-5. Driver will be skilled and vehicle safe.
- 21.5-9. Driver should make daily mechanical check of vehicle before driving.
- 22. Incident Facility Safety
 - 4. Erect signs or barriers where hazards exist.
 - 5. Provide safe transportation for the firefighters.
- 51. Planning Section Chief
 - 15. Provide incident traffic plan.
- 51.2. Situation Unit Leader
 - 11. Prepare traffic plan, external and internal to the incident.

- 61.23. Ground Support Unit Leader
 - 3. Implement traffic plan developed by planning section.
 - 8. Provide Transportation service.
 - 11 Maintain incident roads.
- 62. Logistics Guidelines
 - 20. Carefully plan for transportation from fireline back to facility for both personnel and tools.
- b. Health and Safety Code Handbook FSH 6709.11:
 - 2.1. General Vehicle Travel.
 - Drive at a speed that permits full control of the vehicle.
 - Consider factors, such as posted speed limits, weather, visibility, traffic and road conditions, and safe stopping distance.
 - Keep well to the right side on narrow roads and blind curves, and be able to stop the vehicle within less than half of the visible distance.
 - When driving in convoy, keep at least 200 feet between vehicles, or farther if required by law.
 - Driving on Forest Service roads. Consider these factors when driving Forest roads:
 - 1. Road width. Forest Service roads, as a minimum, provide 12 feet of driving surface and are classed as single-lane with turnouts.
 - 2. Defensive Driving.
 - 3. Keep Alert. A driver must keep his mind alert to the multiple hazards of the road. Proper rest is the key to alertness.
 - 4. Emergency Driving.
 - Shifts should never exceed 12 hours.
 - Following the first 24 hours of an emergency driving period, drive no more than 8 hours a day. Whenever personnel are being transported, have a relief driver or an alert overhead person ride in the cab with the driver.
- c. FSM 7700 Transportation System
 - 7721.11 - Safety
 - Evaluate additional safety measures in terms of changed management direction, economics, volume and composition of traffic, and probability of accident occurrence and severity.

d. FSH 7709 Road Preconstruction Handbook

7709.56 Chapter 4, 4.24 Road Bed a.(single lane) Exhibit 2, 12 foot minimum travel width for roads with design speed of 20 mph or less.

e. Idaho National Guard Emergency Firefighting Plan

1. General, d. Policies:

(2) National Guard personnel must be qualified for the duty position to which assigned.

(3) National Guard personnel will be paid at the appropriate hourly rate from the time he reports for duty at home station until he arrives at the scene of the emergency. Thereafter, the task force commander, in conjunction with the incident commander, will develop work schedules on a shift basis. Normal shift schedules will provide for 12 hours daily work schedule. Personnel will not work, nor be paid for, more than 16 hours daily unless specifically directed by the incident commander.

(11) Common sense safety measures will be applied to all operations and activities involving National Guard personnel and equipment. Special attention will be directed to ensure good safety practices involving the use of heavy equipment, motor vehicles, aircraft and night operations. Supervisors will ensure that National Guard personnel receive adequate rest periods so that extreme fatigue does not jeopardize sound safety practices. The needs of emergency operations will not be used as an excuse for the abuse and misuse of military equipment under any circumstances except where necessary to save life. The use of alcoholic beverages by National Guard personnel will not be permitted at any time such personnel are involved with emergency duties, including off-shift rest periods.

1. General, e. Definitions: (Comments on this section) Definitions for the Incident Commander, Planning Section Chief, Logistics Section, Facilities Unit, Finance Section, and Time Officer/Time Recorder are included in this section. The section does not include definitions for Command Staff Liaison Officer, Ground Support Unit Leader, and Equipment Manager.

1. General, e. Definitions: (2) National Guard:

(b) Task Force Liaison Officer. Designated by the Adjutant General in coordination with the major headquarters furnishing the task force. He is responsible directly to the task force commander for assigned duties. Primary responsibility includes all

liaison functions to coordinate task force operations with appropriate officials of the supported agency.

2. Missions

b. (2) Ground transportation missions. Military trucks with qualified operators are available for transporting supplies and personnel in areas not suitable for common commercial vehicles. Equipment includes cargo trucks (5 1/2, 2 1/2, and 5-ton), Cml utility cargo veh (CUCV), 5-ton dump trucks and 1/4 ton trucks (jeeps).

(3) Liaison Officer:

(a) When the requirement exists; i.e., when supporting two or more fire camps or more than 20 National Guard personnel committed, a Task Force Liaison Officer will be dispatched to the fire headquarters.

(6) Task Force Manning Levels. National Guard equipment and functional teams will be dispatched from stations according to the following criteria when sufficient personnel are available. These manning levels anticipate 24-hour operations.

(c) Cargo trucks. Two drivers will be dispatched with each truck and two extra drivers will be included for each five trucks employed.

f. Anderson Creek Fire Policy. Drive with emergency flashers and headlights on.

3. QUALIFICATIONS

a. Overhead Team Personnel

(1) A Class I National Interagency Team from the Southwest Region of the Forest Service was assigned to the fire (30 members).

(2) Clint Dotson - Ground Support Unit Leader

-First time for this position.

-Red card qualified as a equipment manager.

-Not red card qualified as Ground Support Unit Leader.

(3) Ben Ross was replaced as Ground Support Unit Leader as assigned as Equipment Manager.

(4) Gary Foreman, Deputy Logistics Chief, assigned to assist Logistics Section Chief with special emphasis on overseeing ground support functions.

b. National Guard Personnel

Driver Steven McCord, 35 years old.

- (1) Valid SF46 for the vehicle he was operating.
- (2) Checked out under Sgt. Casper as to driver qualifications.
- (3) Verification of ability confirmed by at least three other drivers and LT May.
- (4) Had driven road 9 times including at least one time at night.

4. SAFETY FACTORS.

a. Jerry Deiter was assigned as the Class I Safety Officer and 7 safety assistants were assigned to him.

b. LT Kelly gave the National Guard drivers orders to:

- (1) Keep transfer case in low range.
- (2) Keep vehicles on high side of road.
- (3) Cover the emergency blinker light inside the cab to avoid reflection off windshield.

c. LT May

- (1) Gave drivers a safety briefing at least every other day.
- (2) Enforced Anderson Creek Fire policy to drive with blinkers and headlights.
- (3) Modified distance between vehicles in convoy to allow for dust.

d. Sgt. Casper

- (1) Instructed drivers to stay on uphill side of the road.
- (2) Instructed drivers to be cognizant of fatigue factors and change drivers.
- (3) Sgt. Casper traveled with an unidentified Forest Service employee and indicated points to be flagged or maintained. He specifically mentioned the road at accident scene should be widened.

Factors discussed with the Forest Service employee by Sgt. Casper:

- (a) Grading high spots off the road
- (b) Grading the dust off the road surface
- (c) Marking hazardous corner and soft road bases
- (d) Installation of culverts to drain water off the road.

No evidence that the (c) and (d) recommendations were completed.

e. Thomas Herron - National Guard co-driver in accident vehicle was asleep in cab at time of accident.

f. Major Dillon from Boise, Idaho, made at least 2 trips for safety review and inspection of the National Guard Unit at the motor pool near the fire camp.

g. Forest Service

- (1) Daily shift plans emphasized human safety takes priority over all other values.
- (2) A safety message was made a part of each shift plan.
- (3) Anderson Creek - Danskin Road was for one way use (up Anderson, down Danskin).
- (4) Safety assistants reported general incident safety information to Class I Safety Officer.
- (5) There was no evidence of preliminary road assessment based on its intended use.
- (6) There was no evidence of Job Hazard Analysis for Drivers.
- (7) Jerry Hagen (Drop Point Coordinator) requested roads be maintained and watered. There was no evidence of improvements at the accident site prior to the incident.
- (8) Several days earlier a similar National Guard vehicle slipped off the left fork of Danskin Road. There were no damages to the vehicle or injuries to the driver. No formal investigation or known followup action was taken. Neither McCord nor Herron were involved in this incident.

5. OPERATIONS.

- a. A formal "Statement of Reasons for use of National Guard Personnel in Excess of 16 Hours per Shift During the Boise National Forest Fires" was developed for the period August 11-18, 1986. Statement includes solutions designed to reduce hours on duty.
- b. Driver McCord shift duty averaged 15 hours per day for the nine-day period August 15-23, 1986, ranging from a minimum day shift of 11.5 hours to a maximum of a 20.5 hour shift. Eight days were over 12 hours. McCord went off-shift at 2200 August 23 and went back on-shift at 0230 August 24. He was awakened at 0130.
- c. Co-driver Herron shift duty averaged 14.6 hours per day for the nine-day period August 15-23, 1986, ranging from a minimum of 12.5 hour shift to 20.5 hour day shift. Herron went off-shift at 2200 August 23 and went back on-shift at 0230 August 24. He also was awakened at 0130.
- d. Lt. Kelley stated the National Guard drivers were recently on 24-hour rest and recuperation, however, this is not supported by time sheets.
- e. On Saturday, August 23, the Motor Pool Dispatch Log recorded Herron and McCord out at 0720 and in at 1110, then out again at 1800 and in at 2200.

- f. Liaison Officer position in Command Staff was not filled. As a result the National Guard was not able to interface with this position regarding safety concerns.
- g. There as no evidence to indicate that the Safety Officers or the the Planning and Logistics Sections made a safety and maintenance needs assessment of the roads used for personnel transportation. Considerable confusion with the Incident Command System was apparent, particularly over responsibility for road systems maintenance.
- h. Approximately 400 trucks transporting tools and personnel had traveled the road and passed by the accident site from the beginning of the fire until the time of the accident. Fifty-five vehicles traveled the route on August 23.
- i. The Incident Commander and the District Ranger considered establishing spike camps on the line to reduce personnel transportation. No suitable sites were found. Some coyoting (leaving crews out over night) was used to reduce transportation needs.