

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R-9

Reedy

REPLY TO: 6730 Accident Investigation
(5100)

June 18, 1980

SUBJECT: Fatality Investigation, Mack Lake Fire



TO: Regional Forester

FOR OFFICIAL USE ONLY

Attached is the report of the investigating team which reviewed the circumstances which contributed to the death of James Swiderski on the Mack Lake Fire. The accident occurred while he was involved in suppression of a wildfire which resulted from the escape of prescribed fire on the Mio District of the Huron-Manistee National Forest on May 5, 1980.

We found that the Forests had met a good many of the standards for training, qualifications and procedures in the application of prescribed fire and suppression action on a wildfire; but there were some deficiencies in all three areas. This accident sequence contains a series of actions, decisions and unexpected occurrences which culminated in a fatality. The various factors involved are described in the report.

H. P. Gibson

H. P. GIBSON, Leader
Accident Investigation Team

Enclosure

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R-9

REPLY TO: 5190 Fire Management

June 18, 1980

SUBJECT: Mack Lake Fire 5/5-8/80

TO: Regional Forester

FOR OFFICIAL USE ONLY



After review of the facts and other historical information of the area of the Mack Lake Fire, I have recommendations in three general areas to advance to you and the Fire Analysis Review on July 2, 1980:

I. CONSIDERATIONS IN LONG RANGE LAND MANAGEMENT PLANNING

We know from research and experience that jack pine historically has reproduced as the result of wild fire through standing timber which has a supply of cones on the trees. There is mounting evidence that jack pine and other fires species at some time in their life cycle develop a condition which is conducive to the rapid spread of wild fire. In reviewing historical records we find that the Mack Lake area burned in 1946, when a fire reached 16,000 acres in size in one day and the same area burned on May 15, 1926 when a fire reached 25,000 acres before 5 p.m. on one day. There are a number of areas in the Lake States where jack pine is the dominant vegetative species. The age and vegetative condition of the stand which would encourage the spread of wild fire very likely exists in a number of these areas today. Over 90% of the forest fires in the Lake States are man caused. Therefore, on any given day the chances are good that an ignition source of some type will occur. This means that there is a potential for a fire of this kind to occur again in the Mack Lake area after the stand regenerates and at other places in the Lake States at any time when fire weather conditions are right. These pine stands continue to be popular locations for summer homes and year-round dwellings. The potential for wild fire in these areas and the resultant loss of life and property is always there but is often not taken seriously by home owners until fires like the Mack Lake and those which occurred in Wisconsin this year actually happen.

Recommendations

1. Work with Lake States Departments of Natural Resources in an expanded fire prevention program to provide information to home owners on the potential for fire damage, how to locate and landscape their homes to prevent loss and who they may call upon for fire protection in the event of fire.
2. Build into our land management plans a program for creating fuel breaks composed of stands of less flammable hardwoods. These stands should be large enough to have some effect in slowing or stopping a wild fire and to be managed for the production of timber, wild life and other forest products.

II. THE WORK PLANNING AND REPORTING SYSTEM

Production targets are scheduled and financed on a fiscal year basis. Reporting of accomplishments and evaluation of employee performance is on an annual basis. Some targets, such as tree planting, those which are reached through prescribed fire, and some others can only be accomplished when the weather conditions are right. There is presently flexibility for the land manager to adjust if these conditions do not occur, but it is not often used. The Mack Lake fire was planned for burning in 1979. It was postponed because of unfavorable weather conditions. It was planned again for the month of April and was postponed for the same reason. After the vegetation greens up in the spring, there is usually little chance of getting a fire hot enough to accomplish the objectives of the prescribed fire. Therefore, the burning crew was under some pressure to get the job done and it is our opinion that this contributed to the acceptance of marginal conditions under which to burn.

Recommendations

1. Strengthen the procedures for making adjustments of targets and financing from one forest to another within the Region when local differences in weather conditions provide some forests better opportunities than others for meeting the Region's goals.
2. Propose to the Chief considerations in future annual work planning for the deletion of targets and returning of financing in situations where weather conditions would create a potential for failure of the project or require the land manager to attempt the project under less than reasonable conditions.

III. THE IMMEDIATE FUTURE IN FIRE MANAGEMENT ACTIVITIES

The report identifies a number of deficiencies in meeting standards. This type of work has been done successfully in the past a number of times on this forest and this district and line officers must assure through a closer system of inspections and other administrative tools that, in the future, the job be done as well as we know how to do it. Some of the facts identified in this investigation indicate that there are some immediate changes which could be made which would reduce the potential for an accident of this type to happen again.

They are as follows:

Recommendations

1. Place an experienced observer in the contract air detection aircraft when the Fire Danger Rating is "High" or above if the pilot is not a qualified observer.

A pilot who was inexperienced in fire suppression was unable to provide the type of information needed in selecting suppression tactics. A similar situation occurred a year ago on another district on the Huron-Manistee NF.

2. Review the capabilities of the 6x6 tanker and establish policy on how it will be used, required crew size and its relationship to other pieces of equipment on the fire.

Three men are usually considered a minimum crew for a tanker of this size (Tank Truck Operator, Nozzleman and Crewman).

This tanker is capable of forcing its way through sapling to small pole size timber stands but this practice leaves little margin for error or equipment breakdown. Standard procedures might include working pumper and tractor within sight of each other. Consider safety of equipment operators, damage to the equipment itself and value of resources at risk.

3. Identify alternative methods for providing a basic prescribed fire and suppression force on the forest who are fully qualified for their assignments.

An analysis made during this investigation indicated that a high percentage of the qualification and procedure standards were met, but a few individuals had not completed training or did not meet physical fitness requirements.

Dispatching organization and procedures appear to need the most attention.

4. Designate a radio frequency which may be used as a clear channel for prescribed fire and fire suppression tactical activities.

Radio communication was provided the prescribed fire team but the frequency became crowded during and after the transition to suppression action. Heavy radio traffic is normal during a developing fire emergency. The capability to separate support traffic from tactical traffic will improve the safety and efficiency of both functions.

Suspension of routine administrative traffic on the regular administrative net will provide additional service.

5. Review training materials and procedures and assure that basic tactical procedures and standards are presented with reference to local fuel conditions.

The rule "keep a black line behind you" was not adhered to by management, the tractor operator or the tanker crew in flanking the north side of the fire. Recognition that the line could not be held in this fuel type came too late. A similar situation occurred on the Huron-Manistee during the 1979 fire season.

6. Use the principles of fire behavior as a basis for locating control lines and block boundaries.

The location of uncut aesthetic areas on the topography resulted in building some control line in indefensible locations. If the boundaries of uncut areas cannot be located properly from a fire control standpoint, the control lines should be located properly and some areas left untreated.

7. Work with Fire Research and Michigan DNR to determine whether a sudden substantial change in relative humidity can be predicted as a result of weather information presently in use. If it cannot be predicted, establish weather observation procedures which would measure it.

The sudden drop in relative humidity (80% - 23% between 0900 and 1100) was probably a major contributor to the unexpected behavior of the fire during the morning of May 5. A single weather observation taken at the site would not have detected it. If this phenomenon can be expected to cause future problems, it may be necessary to assign one individual the responsibility for a series of weather observations taken at short intervals.



H. P. GIBSON, Leader
Accident Investigation Team

REPORT OF INVESTIGATION

OF THE DEATH

OF

JAMES LEE SWIDERSKI, AGE 29

IN

MACK LAKE FIRE, MIO DISTRICT

HURON-MANISTEE NATIONAL FORESTS

EASTERN REGION, USDA FOREST SERVICE

MAY 5, 1980

Report of Investigation of the Death

of

James Lee Swiderski, Age 29

in Mack Lake Fire, Mio District, Huron-Manistee National Forest

Eastern Region, USDA Forest Service, May 5, 1980

H. P. GIBSON

H. P. Gibson

DATE

7/1/80

Director Fire and Aviation Management, Region 9

RICHARD SMITH

Richard G. Smith

DATE

6/17/80

Regional Safety Officer, Region 9

WILLIAM ERICKSON

William Erickson

DATE

6/18/80

Deputy Forest Supervisor, Huron-Manistee National Forests

HORACE LA BUMBARD

Horace La Bumbard

DATE

6/27/80

Timber Management Staff Officer, Huron-Manistee National Forests

Report of Investigation of the Death

of

James Lee Swiderski, Age 29

in Mack Lake Fire, Mio District, Huron-Manistee National Forest

Eastern Region, USDA Forest Service, May 5, 1980

H. P. GIBSON _____ DATE _____

Director Fire and Aviation Management, Region 9

RICHARD SMITH Richard G. Smith DATE 6/17/80

Regional Safety Officer, Region 9

WILLIAM ERICKSON William Erickson DATE 6/18/80

Deputy Forest Supervisor, Huron-Manistee National Forests

HORACE LA BUMBARD _____ DATE _____

Timber Management Staff Officer, Huron-Manistee National Forests

I. Fire Qualification, Training and Experience Records

Swiderski

- I1 Position Description and Correction Notice to Position Description
- I2 Form 227, Fire Job Qualification, Experience and Training
- I3 Erickson's 5/31/78 letter to files showing completion of "Effective Radio Use" programmed text
- I4 Letter of 10/17/79 from Swiderski and four others questioning Western fire detail policies and practices of Huron-Manistee NF
- I5 Huron-Manistee NF, Fire Staff Officer Reedy's 2/28/80 reply to 10/17/79 letter from five Mio employees
- I5A Forest Supervisor Mann's 8/14/80 letter establishing Huron-Manistee NF Inter-Regional Fire Crew.
- I6 Tom Bates' statement of 5/7/80 on Swiderski's Heavy Equipment Training
- I7 Don Stagg's statement of 5/9/80 on Swiderski's scheduled tractor qualification test.
- I8 Form SF-47, Physical Fitness Inquiry for Motor Vehicle Operators
- I9 Form AD 184, Application for Motor Vehicle Operator's I.D. Card
- I10 Form R9-7100-17, Incidental Driver's Road Test Score Sheet
- I11 Form HM-7130-8, Consent for Driving Record Check
- I12 Form R9-7130-37, Written Test for Crew Carrier Drivers
- I13 Form R9-7100-27, Written Test - All Wheel Drive
- I14 Form R9-7130-31, Written Test for All Motor Vehicle Drivers
- I15 Form R9-7130-43, Written Test for Wheel Tractor Operator

- I16 Form PS 2480, Postal Service Driving Record
- I17 Form PS 2485, U.S. Postal Service Certificate of Medical Examination
- I18 Form SF 78, U. S. Civil Service Commission Certificate of Medical Examination (for Biological Technician) with attached audiogram and 3/27/78 note of Personnel Clerk Pam Powell
- I19 Minutes of several Mio District Safety Meetings.
- I20 AD-278, Supervisor's Report of Accident, 5/4/78

Bates

- I21 Form SF-227, Fire Job Qualification, Experience and Training Record, 3/5/80
- I22 Form SF-227, Fire Job Qualification, Experience and Training Record, 3/12/79 with Reedy's 5/8/79 speed memo.
- I23 Forms AD-295, Record of Formalized Training:
 - March 5, 1971, Nat'l. Adv. Fire Prevention
 - May 1, 1970, R-3 Helitack Foreman
 - February 6, 1970, R-3 Fire Dispatcher's Workshop
- I24 Form AD-281 Request, Authorization and Record of Training in Business Management Principles 6/6/79
- I25 William Gardner's 2/20/79 6140 letter to files showing Bates' completion of Orientation Session on 4x4 Wheeled Tractors 1/23/79
- I26 Form SF-47, U.S. Gov't. Motor Vehicle Operator's I.D. Card, 10/11/78, Expires 10/1/81
- I27 Form SF-171, Personal Qualifications Statement, 8/2/78
- I28 Prescott NF Supervisor D. C. MacIntyre's 12/2/69 letter of commendation with attached Statement of Accomplishments

Bosman

- I29 Form SF-227, Fire Job Qualification, Experience and Training Record, 3/17/80

TABLE OF CONTENTS

TITLE PAGE

TABLE OF CONTENTS.

- I. ACCIDENT BRIEF
- II. ACCIDENT FINDINGS
- III. DESCRIPTION OF ACCIDENT SEQUENCE
- IV. NAMES AND REGULAR POSITIONS OF INVESTIGATION TEAM MEMBERS
- V. WHEN AND HOW INVESTIGATION WAS CONDUCTED
- VI. OUTSIDE EXPERTS AND COOPERATORS
- VII. APPENDIX
 - A. AD-278, Supervisor's Report of Accident
 - B. Maps, Drawings, Sketches
 - B1 Map of Eastern Region showing Huron-Manistee National Forest and location of Mack Lake Fire
 - B2 Map of Mack Lake Fire
 - B3 Plan Map, Crane Lake Prescribed Burn
 - B3A Supplemental Map, Crane Lake Prescribed Burn, showing acreages of burning blocks and some burn detail
 - B4 Map, Mack Lake Fire Origin
 - B5 Profile, Mack Fire Origin
 - B6 Map, Mack Lake Fire Initial Action
 - B7 Sketch by Sheriff Willet of tractor and body location
 - C. Photographs
 - C1 13 prints of tractor-plov/tanker line, tractor-plov and body locations, surroundings
 - C2 7 prints of equipment (except tractor-plov) on prescribed burn (photocopies of color polaroid)

2.

D. Exhibits

- D1 Mio Dispatcher's Log
- D2 Weather Records
- D3 Project Work Plan for Crane Lake Burn
- D4 Job Hazard Analysis For Wildlife Habitat Improvement Projects
- D5 Prescribed Burning Unit Plan (i.e., Prescription)
- D6 Organization Chart of Actual Organization on Burn
- D7 Personal Protective Equipment (PPE) of Crew
 - Bosman's two 5/14/80 letters to Chief regarding Burn Crew PPE and Floyd Moore's PPE
 - Baker's 5/9/80 statement regarding fire shelter on Mio tractor

E. Witness Statements

- E1 Tom Bates
- E2 Vendel E. Bosman
- E3 Michael W. Harnois
- E4 Tom Hahn
- E5 Randy Marzolo
- E6 Richard O. Lord
- E7 Tom Striker
- E8 Thomas H. McManis

F. Autopsy Report

G. Death Certificate

H. Maintenance Status of Equipment

William N. Baker statement of 5/10/80

Gordon L. Haase statement of 5/9/80

R. N. Smith statement of 6/10/80

5.

Harnois

I30 Form SF-47, U.S. Gov't. Motor Vehicle Operator's
I.D. Card, 3/25/80, Expires 3/1/83

Hahn

I31 Form SF-227, Fire Job Qualification, Experience and
Training Record 3/14/80

J. Cooperative Agreements

Emergency Equipment Rental Agreement with Floyd Moore

K. Other Agencies' Reports

K1 State of Michigan Incident Report

K2 Report of Fire Behavior Analysis

K3 Michigan Department of Police 5/20/80 laboratory
report on comparison of metal material found in
tractor with metal in fire shelter

L. Regional Forester's 6730 letter of 5/27/80 confirming
appointment of investigation team.

I. ACCIDENT BRIEF

This accident occurred on May 5, 1980 after a prescribed burn escaped on the Mio District, Huron-Manistee National Forests, Michigan. The prescribed burn area was immediately west of north-south State Highway M-33. Fuels were jack pine slash, mainly in scattered piles from tree length pulpwood logging in 1978, grass, ferns, blueberries and other low vegetation. Year old double plow lines plus short sections of additional new plow line surrounded the area. The plan was to do a perimeter burn along the east edge roughly parallel to M-33 to develop wide burned out area, followed by a head fire from the west edge. The written plan called for mid-afternoon burn. Plan for this day was to start burning at 9 a.m. and be completed by noon. Eleven men plus a John Deere 450 tractor-plow, a 1,000 gallon 6x6 tanker, a 125 gallon 4x4 slip-on tanker, a tilt-bed truck and two pickups, all radio equipped, were the burn crew and equipment.

A wild fire the previous day forced postponement of preparations for the burn until the day of burn. Consequently, ignition planned for 9 a.m. was delayed. Weather measurements were taken on site at 9:45 a.m. Burning index was not calculated. Wind was west at 10 mph, temperature 74° and relative humidity 37%. These readings were seen as being within the prescribed limits listed on the plan. The measurements would have been within limits prescribed for a mid-afternoon burn had they been obtained at mid-afternoon. The 5/4/80 AFFIRMS forecast and the National Weather Service forecast at 9 a.m. May 5, 1980 predicted relative humidity 23-40% and wind SW-W 10-15 mph, gusting to 20 for mid-afternoon with a weak cold front passing through between 3:00 p.m. and 5:00 p.m. and winds shifting to northwest.

Ignition was at 10:26 a.m. Three small spot fires over the line were easily controlled by the two tankers and ground crew. Head firing started after the perimeter fire had progressed about 1,000 feet. Shortly thereafter, fire spotted over the line a fourth time, this time into an area left uncut along the highway for aesthetic purposes. The tractor-plow, 1,000 gallon tanker and ground people controlled this spot fire with more difficulty than experienced in the first three spots. Firing stopped each time until the spot fires were controlled.

Two more small spot fires developed north of the aesthetic area. They were readily controlled by the tractor-plow and 1,000 gallon tanker.

During this phase the 125 gallon tanker had been pulled off a stump by the tractor and later, when it stalled, had been rescued by the tractor from the head fire.

About the time the tractor pulled the stalled 125 gallon tanker free, spot fire seven developed in a second aesthetic area about 600 feet north of the first. This was not controlled. Fire, probably from the aesthetic area, spotted across the highway into uncut sapling and pole size jack pine.

By 12:15 p.m. one or two and possibly three spot fires had started on the east side of M-33. The tractor and ground crew had controlled one when the Fire Boss called tractor to the second. The tractor, followed by a helper, and they in turn followed by the 1,000 gallon tanker, started a flanking attack on the north side of the second fire. This soon evolved into a flanking attack on the north side of the escaped fire which was now crowning and moving east and rapidly building to a rate of about two miles per hour.

The tractor helper decided the fire had escaped and returned to the highway to propose he go aloft as observer in the contract aircraft. Tractor and tanker continued east, plowing and laying down wet line.

After about one quarter mile of plowing through dense jack pine saplings and poles the tractor lifted its plow and made a left U-turn, eventually heading west. The tanker passed the tractor. There was visual contact between the operators but no radio contact. The tractor then turned, in place, back to the east and started to plow again, now following the tanker and leaving open line behind him. The plow, moving slower than the tanker, apparently gradually fell behind. About a half mile east of M-33 the tractor raised the plow, left the tanker line and moved north 80 feet or so again leaving open line behind him. There he turned easterly and plowed on arc for 200 feet, gradually heading toward the tanker line. At the end of the arc he raised the plow, turned northeasterly and travelled 115 feet. He left the tractor there.

After the tanker passed the tractor, it continued east making wet line. About 1/8 mile east of where the tractor stopped, the tanker crew radioed it was too hot and they were turning north to get away from the fire. The fire made a strong, though relatively brief run to the north, apparently due to a wind shift. The tanker, and probably the tractor, found itself in the path of the fire.

The tanker was able to escape to the north and northwest and eventually back to M-33. The tractor location and surrounding area were over-run by the fire. The tractor operator's body was found 276 feet northeast of the tractor. He died of pulmonary inhalation burns with severe acute pulmonary edema and hemorrhage.

The Fire Behavior Analysis portion of the Mack Lake Fire Analysis Report, Dale Gorman, Team Leader, is part of this report.

Refer to the complete Fire Analysis Report for further substantiating information.

II. ACCIDENT FINDINGS

The regeneration of jack pine for Kirtland's Warbler nesting-site development and for establishment of the next rotation normally involves prescribed burning. The Crane Lake prescribed burn was part of this program.

1. Crane Lake prescribed burn plan was written for FY 1979. Unfavorable weather conditions prevented accomplishment of burn in 1979. Rescheduled for any day in April 1980, it was postponed due to unfavorable weather. May 5th was the next target date.

2. The plan decided on by Ranger Bosman, with the advice of his staff, was to start prescribed burn at 9 a.m., 5/5/80 and finish by noon, before the weather changed as predicted by AFFIRMS and National Weather Service to occur in mid-afternoon.

3. AFFIRMS predicted worsening conditions for mid-afternoon of 5/5/80:

Temperature 71	Spread Component for C Model/Q Model	20/33
RH 40	Energy Release Component	9/27
Wind 16 NW	Burning Index	33/69
1 Hr timelag fuels-7	Ignition Component	34/32
10 Hr timelag fuels-12		

(C&Q - Fuel Models)

National Weather Service 5/5/80 9 am prediction was: Weak cold front moving SE from U.P. expected between 3-5 pm. Wind shift W-NW, 10-15 mph, gusts 20, 30% chance thunder storm, maximum temperature 82°, minimum humidity 18-23.

4. Written prescribed burn plan called for burn to start in mid-afternoon. Desirable pre-burn weather factors on the day of the burn were:

Air Temp. 45°
Wind West, 5-10 m.p.h.
Days since last measurable rain 2-5
Special weather forecast needed? Yes.
Relative Humidity 25-50%
SI Fuel Sticks 9-15 (BI 15-30, Model Q)

5. Weather measurements made by firing crew on the Crane Lake site at 9:45 a.m. E.D.T., 5/5/80:

Air Temp. 74°
Wind W, 10 m.p.h.
Days since measurable rain - 4
Spot weather forecast was obtained.
Relative Humidity 37%
SI Fuel Sticks (not on the site)
BI was not calculated

2.

National Weather Service predicted weather for 9 am 5/5/80 at the burn site was:

Air Temp. 64° at 1,000 feet
Wind SW-W, 6-10 mph
Relative Humidity 35%

6. Job Hazard Analysis of 6/26/79 for the "Fire Control and Use" job or subtask of Wildlife Habitat Improvement Projects requires the following personal protective equipment: fire shirts, eye protection, protective mask (for equipment operators), hard hat, gloves. (The Health and Safety Code dated 6/79 also requires fire resistant trousers and fire shelters for fire line work.)

7. A full complement of personal protective equipment was available to all fire line personnel. Personal protective equipment worn by burning crew was:

Bosman: Fire shirt, fire pants, hardhat, gloves, goggles

Fire Shelter Bates: Fire shirt, cotton pants, hardhat, gloves

Swiderski: Fire shirt, cotton pants, hardhat, gloves (possibly shelter*)

Harnois: Fire shirt, fire pants, hardhat, gloves, shelter*

Hahn: Fire shirt, cotton pants, hardhat, gloves, goggles, shelter*

Marzolo: Fire shirt, cotton pants, hardhat, gloves, goggles, shelter*

Batavia: Fire shirt, fire pants, hardhat, goggles, shelter*

Dick Lord: Fire shirt, cotton pants, hard hat, gloves

Tom Sadler: Fire shirt, fire pants, hard hat, gloves, goggles

Gordon Haase: Fire shirt, cotton pants, hard hat, gloves, goggles

Greg Stevens: Fire shirt, jeans, hard hat, gloves, goggles

* Fire shelter on tanker or plow

8. On Sunday, May 4, a fire shelter was on tractor 5-4, secured behind the operator in an area over the left shoulder. (See Baker witness statement)

9. Prescribed burn was ignited at 10:26 a.m. This was a delay from intended starting time of 9 a.m. Delay was due to placing two 300-gallon water bladders at pre-designated locations for use in refilling tankers. Setting out these bladders was planned for Sunday 5/4, but a wildfire on Sunday kept the crews occupied until too late to set them out.

10. Toward north end of burn inside the plowline (i.e. west of plowline) but fairly close to the line, there were some slash piles. The area between the plow line and M-33 was almost entirely free of slash.

3.

11. Because of the aesthetic areas, plow line was located on a side hill facing the wind which is not a defensible position.

12. Swiderski's radio worked at least until the time he started plowing east from M-33 because, when he was finishing second plowline around the first spot across M-33, Bates radioed him to move north if he could leave the spot and Swiderski radioed he just about had a double line around the spot and would do so.

13. Bates assigned Bosman to go with Swiderski when he started his attempt to plow line around second spot fire east of M-33.

14. When Swiderski left M-33 he started plowing east. Bates told him to start more northeasterly, "give it lots of elbow room, don't crowd it, the pumper is right on your heels."

15. After Swiderski left M-33 he gradually curved toward the south, then curved back east and north to the power line.

16. Bosman followed Swiderski to the power line.

17. Newspaperman Jim Davisson, Oscoda County News, engaged Bosman in discussion of fire while they stood on power line right of way. Swiderski continued to plow, eastward. 1000-gallon tanker followed plowline at some distance behind the tractor.

18. While he stood on power line clearing, Bosman decided fire was larger than they thought and aerial observation was needed. Pilot in patrol plane was inexperienced so Bosman went back to M-33 to discuss need with fire boss Bates.

19. Bates assigned Bosman to aircraft as observer. No assignment was made to replace Bosman as Swiderski's helper.

20. About one-quarter mile east of M-33, tractor lifted plow and circled back to north and west leaving open line. Tanker passed tractor at that point; tractor then turned east and followed tanker, leaving open line behind.

21. About 250 feet east of where tanker passed tractor, tractor plowed a circle north of the line; tanker continued east; tractor then continued plowing east in the tanker track.

22. About 800 east of place where tractor plowed the circle north of line, tractor raised plow and moved about 80 feet north leaving open line. Tractor then plowed an arc easterly for about 200 feet.

4.

23. Tractor lifted plow and blade at east end of arc and went north easterly about 115 feet. Tractor was found at this point.

24. Tractor was found with ignition off; range selector in neutral; gear selector in second gear; throttle in full open position.

25. There was no indication of tractor failure. Bill Baker, regular tractor operator, started the tractor on May 9. On May 10, he and Tom Bates chained up the plows and Baker drove the tractor back to Highway 33.

26. No radio transmissions from tractor were heard after he crossed the power line.

27. Tractor microphone was found hanging down from radio mounted overhead on underside of canopy. Microphone securing stud was not in radio bracket.

28. Amplified radio loudspeaker in tractor was in "ON" position when viewed by investigators.

29. Tractor was not hung up on stump or debris.

30. Body was found 276 feet north 26° east of tractor.

31. Hard hat, wallet, keys, glasses, and candy bars were found between tractor and body and within 60 feet of body.

32. Autopsy report shows death as a result of pulmonary inhalation burns with severe acute pulmonary edema and hemorrhage.

33. On Sunday, previous to fire, tractor was in good mechanical condition, per Bill Baker statement.

34. Estimates of working speeds of Mio tractor, 5-4 and 6x6 tanker 5-2 by Fire Researcher Dick Blank are:

Tractor	3 mph
Tanker	4-5 mph

35. Prescribed Burn Plan called for seven portable radios and five mobile radios. Radios on the Crane Lake Prescribed Burn and on the early stages of the Mack Lake Fire, 5/5/80, all in working condition except as noted, were:

Portable RadiosMobile Radios and Types of Equipment

Bosman	5-2	1,000-gallon tanker
Lord	5-3	1/2-ton pickup
Bates*	5-4	Tiltbed truck
Haase	5-4	Tractor
Sadler	5-5	125-gallon tanker
	5-6	6-passenger pickup

- * When Bosman went to the airport to become aerial observer he left his radio with Bates whose radio had "conked out".

36. All members of the prescribed burn crew met qualification requirements for their assignments with the following exceptions:

- a. Most did not have the basic course in firing equipment.
- b. Swiderski was not a licensed tractor operator. He had received formal training and had experience on prescribed and wild fires. He and examiner Donald Stagg had scheduled a tractor-plow certification test for the week of 5/5/80.
- c. All met physical fitness requirements except:

Step Test Score	
Bosman	39
Lord	33

37. The 10 Standard Firefighting Orders are as follows:

1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times--observe personally, use scouts.
3. Base all action on current and expected behavior of fire.
4. Have escape routes for everyone and make them known.
5. Post a lookout when there is possible danger.
6. Be alert, keep calm, think clearly, act decisively.
7. Maintain prompt communication with your men, your boss, and adjoining forces.
8. Give clear instructions and be sure they are understood.
9. Maintain control of your men at all times.
10. Fight fire aggressively but provide for safety first.

Analysis of Action in Relation to 10 Standard Firefighting Orders

1. The prescribed burning overhead took minimum weather measurements on the site and they knew the National Fire Danger Rating System forecast for mid-afternoon. Use of the Texas Instruments 59 calculator at time of firing would have provided additional information. The rapid drop in relative humidity at Mio (80% - 23% between 0900 and 1100) appears to have been a major contributor to rapidly changing fire behavior. It would probably not have been detected under normal firing procedures.

6.

2. When the fire escaped the overhead realized that they needed better information and assigned an observer to fly with the detection aircraft.
3. A flanking action was taken based on expected eastward movement of a fire too large for frontal attack.
4. Fire Boss's instructions to tractor operator "give it plenty of room, don't crowd it" were based on safety consideration. Specific escape routes were not discussed.
5. Part of tractor helper duties include those of lookout. Helper was not assigned full time to F.S. tractor. Helper was assigned full time to contractor.
6. The Fire Boss made specific assignments for suppression action and called for help.
7. Radio communication was operational at beginning of wild fire but the single frequency became crowded when fire crowned and ran.
8. During the transition from prescribed fire to wildfire, instructions were given quickly and not in much detail. They were short term instructions dealing with immediate situations with little reference to the overall situation.
9. After receiving initial, brief instructions, the 6x6 tanker and the tractor operated largely on their own. They were not in complete control of the Fire Boss due to distance and difficulty in use of a crowded radio frequency.
10. District personnel fought the fire aggressively, particularly in this transition from prescribed fire to wildfire. Instructions to individuals were lacking in long range safety considerations. The individuals themselves appeared to be engrossed in suppression action and not continually assessing the hazards of the particular jobs.

7.

38. On April 10, 1980 the subjects covered at the regular safety session were the 10 Standard Fire orders, use of fire shelter including the film "Your Way Out" and a discussion of dangerous fire line conditions.

39. The fire danger adjective rating for Fuel Model Q is as follows:

Rating -	Low	Moderate	High	High-High	Very High	Extreme
Index	0-17	18-34	35-49	50-68	69-88	89+

Fuel Model Q best fits the fuel type in which the prescribed fire and the wild fire occurred.

40. A report dated 5/20/80 from the Michigan State Police Laboratory indicated that the piece of charred aluminum found in the tractor was not identical to material in the fire shelter.

III. DESCRIPTION OF ACCIDENT SEQUENCE

This accident occurred on May 5, 1980 after the Crane Lake prescribed burn escaped on the Mio District, Huron-Manistee National Forests about four miles south of Mio, Michigan. The escaped fire killed James L. Swiderski, age 29, Mio District Biological Technician and, on this fire, tractor-plow operator. Two other firefighters were injured, neither severely. One private person suffered burns on arms and face. The fire burnt 24,790 acres and destroyed 44 summer homes and permanent residences.

Jack pine pulpwood had been tree length logged from the 186-acre Crane Lake prescribed burn area in early 1978. Through an oversight, in the timber sale contract the timber sale operator was not required to lop and scatter slash at the felling site. Whole trees were skidded to central processing points where they were limbed and bucked. Through an arrangement with the sale operator the skidders picked up bunches of slash and dropped them on the way back to cutting area for the next load of trees. The result was piles of slash scattered generally over the area and for the most part widely separated. Two clusters of slash piles were near the east plow line in the northeast part of burning Unit Ia. Other fuels were widely scattered seedling and sapling jack pine, grasses, fern, blueberry and other low vegetation.

The objectives of the Crane Lake burn in the written plan were three: Kirtland's Warbler (an endangered species) habitat development, fuel reduction, and site preparation for jack pine machine planting. The burn area was west of the north-south Michigan State Highway M-33. An unburned strip 200-300 feet wide was to be left between the burn and the highway. Three small (2-5 acres, estimated) areas of standing mature jack pine timber had been left at intervals between the highway and the proposed burn for aesthetic purposes.

The target was to do the prescribed burn in the Spring of 1979. Tractor-plow lines each about five feet wide had been plowed around the entire area. A northeast-southwest Forest Road (No. 4168) divided the area roughly in halves. A northwest-southeast plow-line and a northwest-southeast two-track further divided the area so that there were five burning blocks, three in the northeast Unit I and two in southeast Unit II. In Unit I new plow lines were made in two locations to widen the unburned area between the burn and the highway (See maps). Topography is rolling not precipitous. The intent was to prepare a backfire against the wind followed by head fire across the area after a safe burned out zone had been provided. All fuels one inch and less in diameter were to be consumed. The project was expected to take 3 to 5 hours.

Unfavorable weather prevented burning in 1979. Rescheduled for any day in April, 1980, the burn had to be postponed because of poor weather. Favorable weather conditions made May 5th the next target day.

The written plan called for a mid-afternoon burn. Desirable preburning weather factors were:

Air temperature	45°+	Relative humidity	25-50%
Wind direction	W	Velocity	5-10
Days since measurable rain	2-5	SI Fuel Sticks	9-15
		(BI 15-30 Model Q)	

Special weather forecast needed? Yes If so when? Day of burn

Aircraft and observer to locate spot-fires were planned. Crew size was not specified but organization was to include: Fire boss, two firing bosses, two pumper bosses, two tractor bosses and "YACC crew bosses and crews with hand tools" (number not specified). Equipment needed was not specified but by inference from crew organization and items 14, 15 and 16 of Prescribed Burning Unit Plan it included two tractor-plows and a power wagon (presumably a tanker), torches and hand tools. DNR, Sheriff and State Police were to be notified. Equipment on site was John Deere 450 tractor-plow, 1,000-gallon 6x6 tanker, 125-gallon 4x4 slip-on tanker, two pickups and a tiltbed truck.

An AFFIRMS (AF) forecast for mid-afternoon 5/5/80 was received on 5/4/80. A special weather forecast for the area was requested from National Weather Service (NWS) and was received shortly after 9:00 the morning of the burn. Weather measured on site at 9:45 a.m. May 5th, and weather forecasts by AFFIRMS and National Weather Service for 5/5/80 on the site were:

<u>Weather Components</u>	<u>9:45 am Measurement on site</u>	<u>AF for Mid- Afternoon</u>	<u>NWS</u>	
Air temperature	74°F	71°F	10 am	64°F
			12-2 pm	72-76°F
Wind direction	W	NW	10 am	SW-W
			12-2 pm	SW-W
			3-5 pm	W-NW
				(Shift)
Wind Velocity	5-10 mph	16	10 am	6-10
			12-2 pm	10-16/20 G*
			3-5 pm	10-15/20 G*
Days since Measureable rain	4			
Relative humidity	37%	40%	10 am	35%
			12-2 pm	23%
Burning Index	Not calculated	33 C Model 69 Q Model		

* G 20 = Gusting to 20 mph

NWS forecast a weak cold front to pass through area between 3 pm and 5 pm with winds shifting to west-northwest 10-15, G-20.

Crew assigned to prescribed burn, their burn assignments, fire qualifications (Red Card Rating) and regular positions on the district are shown in Exhibit D6. Listed below are crew names and burn assignments:

Tom Bates, Fire Boss

Jim Swiderski, Tractor-plow operator (John Deere 450 with hydraulically operated V-blade mounted forward and Michigan Fire plow at the rear)

Mike Harnois, Tank Truck Operator (1000 gallon 6x6)

Tom Hahn, Tank Truck Crewman (1000 gallon 6x6)

Randy Marzolo, Tank Truck Operator (125 gallon 4x4)

Dave Batavia, Tank Truck Crewman (125 gallon 4x4)

Dick Lord, Firing Boss (Torchman)

Ven Bosman, Firing Crewman (Torchman)

Gordy Haase, Crew Boss

Greg Stevens, Firefighter

Tom Sadler, Firefighter

Plan for the day had been to ignite burn at 9 am and finish by noon. But a wildfire on Sunday, May 4th forced a postponement of final preparations for the burn until the day of the burn. The plan had been to place two 300-gallon rubber water bladders, or tanks, on the burn site on Sunday for use in refilling tanker tanks. The wildfire Sunday occupied the crew until so late they were unable to set out the bladders. They had to place them, fill them and refill the 1000-gallon tanker Monday morning. This delayed ignition.

After measuring the weather at 9:45 am and discussing the situation with his staff, Ranger Bosman decided to start the burn. A test fire was not made. Ignition of the perimeter fire was at about 10:26 at the southeast corner of Block Ia. The early moments of the burn were considered the test fire. Bosman and Lord continued burning north along the east plowline. Three small spot fires occurred east of and adjacent to the line about 400 to 600 feet worth of ignition point. The tankers and ground crew controlled these easily. Firing stopped until the spot fires were controlled. Shortly after the third spot was extinguished Lord walked back to ignition point and prepared to start the head fire. Bosman continued to fire inside the east line.

Shortly after Lord went back, the perimeter fire jumped the line for the fourth time, this time in one of the small areas left uncut for aesthetic purpose. Mio 5-4, the tractor-plow, and Mio 5-2 the 1000-gallon tanker and possibly Mio 5-5, the 125-gallon tanker, plus the ground crew controlled this spot a little less easily than the first three spots. Mio 5-4 plowed a line around it and it spotted over that line. Mio 5-4 plowed around that second part of spot fire four, then for good measure plowed another line around the entire double spot. Firing stopped while this spot fire was being controlled.

About this time the Fire Boss directed the 125-gallon tanker to move north past the aesthetic strip and through a low draw back toward the highway and up on a hill where it could cover the northeast side of the burn.

Fire Boss then walked back to ignition point to confer with Lord on how to conduct the head fire.

In attempting to move to the hilltop, the 125-gallon tanker got hung up on a stump.

When the Fire Boss saw this he told Marzolo, the 125-gallon tanker operator, to run up and get the tractor to pull him free. While the tractor was on its way, the tanker crew wet down the burning grass as the perimeter fire approached the tanker.

When Fire Boss Bates saw that the tanker was free, he told Lord to start the head fire moving northwest along the southwest edge of unit Ia and using his judgement on how fast to fire. Bates then went back to the perimeter burn.

Spot fires five and six developed north of the aesthetic area. They were controlled by the 1000-gallon tanker and tractor plow without any difficulty. Firing stopped while these spot fires were controlled.

After the 125-gallon tanker was pulled free from the stump it then tried to get to Forest Road #4168 on the west side of Unit Ia between it and Ic intending to follow it around the north side of the burn to reach the hilltop on the east. On the way, while it paused for the crewman to remove obstacles, it stalled several times. Finally it would not start. Marzolo radioed the Fire Boss that his vehicle would not start. Lord couldn't see the tanker and had continued firing the head fire. Bosman continued firing the perimeter fire and was now moving northwest and then north along the west edge of the second aesthetic area. The 1000-gallon tanker and tractor-plow and ground crew waited north of the first aesthetic strip for any more spots which might occur. Marzolo and Crewman Batavia checked for disconnected or broken connections under the hood of the 125-gallon tanker. Bates checked the water tank and found it empty from use on the spot fires and the flames which threatened it while it was hung up on the stump. Bates called Swiderski to come pull the small tanker out of danger.

(Sometime near this time and specifically at 11:42 am on the Mio District Log, Bates asked for a Sheriff's patrol to help with traffic due to the heavy smoke on M-33.)

In response to Bates' call, Swiderski came down from the northeast side of the burn and pulled the tanker up onto Forest Road #4168 as the fire started to burn the grass under the rear bumper,. A short time later a logger driving on F.R. #4168 jumped the tanker's battery and got the tanker started.

About this time the perimeter fire spotted over the line the seventh time, this time into the northern aesthetic area. It moved rapidly east through this residual stand toward M-33. Harnois, in the 1000-gallon tanker, radioed Bates (at 12:06 pm according to Mio dispatcher log) that they had a big spot headed for the highway. Harnois and Hahn saw they could not control it from their position adjacent to the plowline and drove east to M-33 to try to put it out as it came to the highway. Meanwhile Swiderski, from where he pulled the small tanker to safety, drove the tractor across the unburned area and started plowing along the north flank of the spot fire. Bosman walked with him as his helper. (Somewhere here we assume Bates asked for more help from the Sheriff because Mio District log shows that at 12:08 Mio District asked for another patrol.)

Bates drove north along M-33 in Mio pick up 5-3 and saw that the fire was burning down the bank (back slope) on the lee side of the aesthetic strip, on the west side of the highway. The big pumper knocked it down. Bates sent Haase and his two crewmen to the east side of M-33 to watch for spot fires. They picked up one in the woods above the back slope so Bates directed the 1000-gallon tanker to get a line (hose) on it, which they tried to do. In attacking this spot fire they tried to drive at an angle up the slope but were not able to do so because of their angled, across-slope approach and resultant lack of traction.

About this time Swiderski reached the highway with his plow line along the north flank of the fire in the aesthetic area. (Bosman went back briefly to see whether the line held. Fire had crossed the line so he returned east to M-33). Bates directed Swiderski to work on the spot fire across the highway, which he did. He started in on the north edge at the top to the back slope, plowed around to the right about a quarter-acre and returned to the back slope south of where he went in. He then turned back and plowed a second line outside the first. Haase and his crew patrolled behind him.

Meanwhile a second spot fire developed north of the first. Bates radioed Swiderski to ask if he could move up to the second spot. Swiderski responded he was just finishing the double line and would do so. About this time Dick Lord suggested the 125-gallon tanker should go to Mio to refill its water tank and check the ignition (stalling) problem. Bates said OK and the small tanker left for Mio.

When Swiderski reached the second spot Bates directed him to start plowing along the north side of the fire, which was in fairly dense jack pine saplings and poles. Swiderski started to plow too close to the fire and Bates told him not to crowd it; "to give it plenty of elbow room, the pumper is right on your heels." He held Swiderski up a moment while he assigned Bosman to go with him as helper.

Swiderski plowed easterly a hundred feet or so and then, when he reached an open area, curved right, as though he were trying to encircle the spot. After another couple of hundred feet he gradually turned left and kept turning until he was headed approximately north - northeast. Bosman followed. Swiderski continued plowing this way through grass and scattered jack pine until he reached an east-west power line 200 to 400 feet north. There he raised the plow, crossed the power line, then turned and plowed east along the north side of the power line right-of-way.

About this time (between 12:20 and 12:47 in Mio dispatcher's log) Bates started calling for reinforcements including the Tri-Town 4x4 tanker, Floyd Moore's tractor-plow from Luzerne, Dennis Anderson, another tanker and help from other Districts on the Forest.

Shortly after Swiderski and Bosman started working on the second spot, Bates directed Harnois and Hahn to follow the tractor with the 1,000-gallon tanker.

Harnois and Hahn started along the plow line and shortly realized the fire was across that part of the line where Swiderski had looped south. They cut across the loop, laying wet line as they went, and intersected Swiderski's line where it had turned and was running northerly toward the power line.

When Swiderski and Bosman were plowing east along the power line right-of-way, Jim Davisson from the Oscoda County News appeared and discussed the fire briefly with Bosman. Swiderski continued plowing across a grassy opening with scattered jack pine, then angled slightly northeast into a dense stand of jack pine saplings and small poles. The tanker had not arrived at the power line yet.

At this time Bosman decided the fire had escaped and needed an aerial spotter. The contract detection aircraft was aloft but the pilot had little fire observation experience and, in Bosman's judgement, would probably not provide useable information. Bosman returned to the highway to discuss the need for aerial observation with Fire Boss Bates. Bates reassigned Bosman to the airplane as observer. Bosman left his portable radio with Bates because Bates' radio had "conked out." They stopped a passing car and it took Bosman to Mio District office where he got a pick up and drove a mile and a half north of town to the landing strip. The airplane picked up Bosman there and they returned to the fire.

About the time Bosman returned to the highway the 1000-gallon tanker reached the power line. It followed Swiderski's line across the power line right-of-way and then northeasterly,

gaining on the tractor plow. The two units proceeded eastward roughly parallel to the power line and 200 - 400 feet north of it, Swiderski plowing, Harnois driving the tanker, Hahn in the well immediately behind the tanker cab, using a live reel hose and water to knock down the base of the flames about 30 feet to the right. They were fairly successful with this tactic. After the fire, their water line was still evident with an intermittent strip of unburned ground fuels about 30 feet south of their line and a stringer of scorched jack pine timber above and on both sides of the plow line where the fire was not hot enough to consume the foliage. There were no fire fighters burning out any constructed line.

When Bosman reached the highway to talk with Bates about the aircraft, Floyd Moore had arrived with his tractor. After Bosman left, Bates assigned Moore, with Dick Lord as his helper, to plow a line along the north flank of the fire and north of the Swiderski-Harnois-Hahn plow and wet line. The fire had already crossed this line near the starting point so Moore and Lord angled farther north and plowed northeasterly for three-quarters of a mile or so, thence easterly to Road #489 north of Mack Lake.

Meanwhile, about a quarter mile east of M-33, after plowing through dense small jack pine, Swiderski raised the fire-plow and V-blade and made a wide U-turn to the left into a more open area. The tanker caught up to him at this point. Harnois and Swiderski had eye contact but did not talk in person or on the radio. Harnois had the impression Swiderski pulled aside to let the tanker pass.

The tanker turned north at the point where Swiderski raised his plow, travelled about 100 feet, crossed the tracks where Swiderski had headed west in his U-turn, then turned east and continued making wet line. Swiderski turned in his tracks, lowered his plow and, leaving about a 100 foot gap between the two lines, plowed east in the track made by the tanker.

About 250 feet east, Swiderski plowed a line around an area about 1/4-acre in size north of the line - probably a spot fire - then continued east behind the tanker. The distance between the two had lengthened because of the differences in speed of the two pieces of equipment and the time it took to plow around the spot. They were building line through rather young, heavy jack pine at times pushing over trees approximately 7 inches in diameter (When working the tractor moves at about 3 mph and the tanker at about 4-5 mph).

When the tractor was about a half mile east of the highway and the tanker about 300 yards farther, a wind shift began pushing the fire aggressively to the north. The tanker operator called on his radio to the fire boss telling him that they were leaving the line and discontinuing fire line efforts. They then proceeded, at the best speed the tanker would make in low-low 6 wheel drive, northeast turning gradually to the north. They stopped for a short time where they appeared to be out of immediate danger. The fire was south of them about 200 yards and rolling north toward them. They then radioed the fire boss that they were out of immediate danger and would return to the Highway 33. They continued in a northerly direction until they picked up a little used forest trail, followed this northwesterly to a sand two-track trail, turned west along it and went back to the highway.

After Swiderski plowed around what we assume was a spot-fire north of the line, he continued plowing east about 800 feet. He then raised the plow and V-blade and turned north for about 80 feet, leaving open line behind him, at which point he turned northeast and plowed an arc curving right for about 200 feet. He then raised the plow and V-blade and moved northeast about 115 feet. There he left the tractor. His body was later found 276 feet northeast of the tractor.

After Swiderski responded to Bates request that he move north along the highway to the second spot fire, no radio transmissions were heard from Mio tractor. (When the investigators examined the tractor on May 7th the radio and amplified-microphone switches were in the "ON" position and the microphone was dangling indicating Swiderski may have tried to use the radio.)

After Moore and Lord started plowing, Bates got a volunteer fire department to hold the line. Bates then drove north a mile to Road 489, then east two miles and south to the Mack Lake area. The fire was obviously a major problem then. Bates was busy trying to size up the situation, get people to evacuate the Mack Lake area, and organize the attack on the fire.

About three-quarters of an hour after Swiderski started plowing or roughly 1 p.m., Bates called Mio tractor. He wanted to see where Swiderski was so he could have him move over to the Mack Lake area and start building some effective line (Mio DNR tractor-plow, working in the Mack Lake area, was hung on a stump). When Swiderski didn't answer Bates felt his first sense of alarm. He asked someone to try to reach Swiderski by radio but does not recall who it was.

Still trying to cope with the fire problems he drove south of Mack Lake a short way, met Tom Striker, Harrisville District Assistant Ranger and designated him division boss on the south side of the fire. Bates then returned to north side of the fire.

At some point during this time Marzolo and Batavia returned from Mio with the 125-gallon tanker and worked at various jobs near where the fire crossed M-33 initially. Bates then radioed Marzolo to meet Dick Lord and Floyd Moore where they came out on Road 489. Marzolo was to give his tanker, Mio 5-5, to Lord and reassign Batavia to work with Floyd Moore as tractor helper. Lord was to start functioning in a new assignment as division boss of the north side of the fire. Bates asked Marzolo to see if he could locate Swiderski because "we still hadn't heard from him."

Marzolo drove back to the point of origin, took a radio, two fire shelters and a canteen and started walking east along the plowline through the blackened but cool burned area. Marzolo mistook Moore's line for Swiderski's and walked nearly a mile east before the aerial observer saw the tractor and what they thought was a person on the ground about 50 yards ahead of the tractor location. The observer directed Marzolo back to this point where he found Swiderski's body in an open stand of jack pine. The surrounding area was black. Marzolo quickly checked to determine if Swiderski was alive and determined that he was dead. He radioed this information to the aircraft. An ambulance was ordered and, accompanied by Marzolo and Sheriff's Officer Willet, went into the fire area and retrieved the body.

The burn crew wore personal protective equipment (PPE) or had it available as indicated in Exhibit D7. Bill Baker operated the tractor-plow on Sunday May 4th and recalls that on that day a fire shelter was attached by a bungee cord to the rear protective screen behind the operator and over his left shoulder. The team found bungee cord hooks on the protective screen above the left shoulder of the operator position. No evidence of a shelter was found on or near the tractor, between the tractor and the body or in an area about one-half mile square from the tractor east and north. (We theorized Swiderski may have used the shelter or tried to and that it was blown away. At our request Mio District people searched the half-mile square area). With the body were found boots, gloves and fragments of fire shirt collar, bandana, cotton trouser waist band, and underwear waist band. Fiberglass hardhat (with plastic components almost completely consumed) and other articles were found on the ground near the body as shown in Sheriff Willet's sketch.

Dr. Harvey S. Wilks, M.D., Associate Pathologist, Kent County Medical Examiner's Office, Grand Rapids, Michigan performed an autopsy on May 7th. A preliminary report of autopsy shows Jim Swiderski's death was due to pulmonary inhalation burns with severe acute pulmonary edema and hemorrhage.

When the tractor was retrieved after the investigation the fuels on the ground under the track pads were found to be unburned.

IV. NAMES AND REGULAR POSITIONS OF INVESTIGATION TEAM MEMBERS:

H.P. Gibson, Regional Director, Fire and Aviation Management (Team Leader)
Richard N. Smith, Regional Safety Manager
William Erickson, Deputy Forest Supervisor, Huron-Manistee National Forests
Horace LaBumbard, Timber Staff Officer, Huron-Manistee National Forests

V. WHEN AND HOW INVESTIGATION WAS CONDUCTED

Mio District notified Forest Supervisor Mann about 4:00 p.m. EDT, 5/5/80, that Jim Swiderski had died in the fire. Mann telephoned available information to Regional Safety Manager Smith about 4:30 p.m., EDT. Mann then appointed Erickson and LaBumbard to begin investigation at the Forest level as soon as possible. They arrived at Mio by car about 7:30 that evening. Meanwhile, Smith met with Gibson, Fiscal Management Director Gordon Marshall and Carl Webb, Regional Personnel Officer. They decided on the Regional Investigation Team.

On Tuesday, Gibson and Smith travelled by Forest Service aircraft and car from the Regional Office to Mio, arriving shortly before noon. They met with Erickson and LaBumbard immediately and continued the investigation.

The team met with Swiderski's brother, Robert and friend Kevin Debie, listened to their concerns and explained our purpose and procedure. Later that day and during the next four days, Gibson talked by telephone several times with Kevin or Robert to keep them informed on what we had learned. (The team also assured them they would have access to the team's official report.)

We interviewed the following witnesses individually in one of our motel rooms free from noise and interruptions: Bosman, Marzolo, Bates, Harnois, Hahn and Striker. We explained our purpose: an objective investigation into the circumstances surrounding Jim's death. We told each that we would like to tape record our discussion, have it typed, have each go over his own statement, make changes as needed and then sign the statement. Each agreed. We then asked them to tell us their experience with the events of that day starting with the prescribed burn and ending when they learned of Jim's death, after which we asked questions until we were all satisfied that we understood the statement. Signed statements are included in this report. At various other times during the next four days one or more of the team interviewed Lord, Haase, Baker, Floyd Moore; and Sheriff's Officer Tom McManis, and got their signed statements.

Wednesday morning, with Randy Marzolo, we looked at the prescribed burn area, plow lines, tanker lines, tractor, location of body and surrounding area and the tanker route. Later that day we returned to these locations with Mike Harnois, operator of the 6x6 1,000-gallon tanker. Another day we returned to these locations with Bill Baker, the regular operator of the tractor.

The balance of Wednesday, Thursday, and Friday were spent in reviewing witness statements, interviewing additional witnesses, reviewing project work plan, job hazard analyses, prescribed burn plan, weather data and dispatcher's log; sharing findings with Michigan State Police detectives, gathering records of training and experience, mapping (Wednesday Tom Hahn and an assistant made the Initial Action map with a Redi-Mapper for the team) developing a list of findings, telephoning information for a brief to the Regional Office and preparing a draft summary. Friday we hired a professional photographer to take the black and white photos which are part of this report. On Thursday, May 15, at our request, Mio District people searched for Swiderski's fire-shelter in a half-mile square east and north, i.e., "down wind" from the tractor location. We sent samples of burned material to Michigan State Police laboratory for comparison with a fire shelter.

The team leader conferred periodically with the fire analysis team and other team leaders.

The team separated Saturday afternoon and continued to develop the draft report over the next few weeks. On Wednesday, Thursday, and Friday, May 28, 29, and 30, Gibson, Smith, and Erickson met in East Lansing, Michigan, with Team Leader Dale Gorman and members of the Fire Analysis Team to compare information and resolve differences.

VI. OUTSIDE EXPERTS AND COOPERATORS

The Michigan State Police are required to investigate any accidental death. They are doing an independent investigation. The Sheriff's Office was contacted as well as the Michigan DNR Office at Mio. We hired Richard Cay, Mio professional photographer to photograph the scene.

Available
later

U.S. DEPARTMENT OF AGRICULTURE
SUPERVISOR'S REPORT OF ACCIDENT

1. REPORT STATUS	2. NO. OF EMPLOYEES INJURED IN ACCIDENT
<input checked="" type="checkbox"/> 1. ORIGINAL <input type="checkbox"/> 2. SUPPLEMENTAL <input type="checkbox"/> 3. CORRECTION <input type="checkbox"/> 4. DELETE	0, 1

3. NAME OF EMPLOYEE (LAST, FIRST, & MIDDLE INITIAL)	4. AGE	5. AGENCY CODE	6. SOCIAL SECURITY NO.	7. EMPLOYMENT GROUP CODE	8. REPORTING OFFICE (CITY AND STATE)
SWIDERSKI, JAMES L.	29	1, 1	3, 7, 9, 5, 6, 7, 6, 2, 6, 0, 1		Mio, MI

9. KIND OF ACCIDENT	10. DATE AND TIME OF ACCIDENT	11. NO. HRS. ON DUTY	12. WAS OCCURRENCE OUTSIDE REGULAR WORK HOURS	13. EMPLOYEE PERSONAL FACTORS	14. TREATMENT BY PHYSICIAN	15. INJURY/ILLNESS CLASS
2 (CODE)	8 0 0 5 0 5 1 6 0 0 0 0 8	0	<input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES	0 0 (CODE)	<input type="checkbox"/> 0-NO <input checked="" type="checkbox"/> 1-YES	3 (CODE)

16. DATE WORK STOPPED	17. DATE RETURNED TO WORK	18. NO. FULL WORK DAYS LOST	19. DID INJURY RESULT IN: A. TRANSFER TO ANOTHER JOB OR TERMINATION OF EMPLOYMENT	B. LOSS OF CONSCIOUSNESS OR RESTRICTION OF MOTION	C. EMPLOYEE UNABLE TO PERFORM NORMAL ASSIGNMENT
8 0 0 5 0 5	didn't work	0	<input type="checkbox"/> 0-NO <input checked="" type="checkbox"/> 1-YES	<input type="checkbox"/> 0-NO <input checked="" type="checkbox"/> 1-YES	<input type="checkbox"/> 0-NO <input checked="" type="checkbox"/> 1-YES

20. NO. PRIVATE PERSONS INJURED OR KILLED	21. MOTOR VEHICLE DAMAGE	22. VEHICLE INFORMATION	23. OTHER PROPERTY DAMAGE
0	A. GOVERNMENT 0 \$ B. PRIVATE ON OFFICIAL USE 0 \$	A. OWNERSHIP 1. GOVT. 0 (CODE) 2. PVT. ON OFF. BUS. 10 (CODE)	A. GOVERNMENT 0 \$ B. PRIVATE 10 \$

24. REPORTING UNIT ORGANIZATION IDENTIFICATION (WRITE IN)	25. UNSAFE ACT
Huron-Manistee NF - Mio RD 11 09 04 0005	K 559

26. FUNCTIONAL ASSIGNMENT	27. SPECIFIC SITE OF ACCIDENT
Firefighting (Prescribed Burn) 102	SW SE Section 6, T25N, R3E Michigan Principal Meridian 63

28. HAZARDOUS CONDITION	29. ACCIDENT CAUSE
Lack of adequate communication 324	Fire 1720

30. COMPLETE DESCRIPTION OF BODILY INJURY AND/OR OCCUPATIONAL ILLNESS (INCLUDE EXACT PART INJURED)	
Death due to pulmonary inhalation burns	120 850

31. COMPLETE DESCRIPTION OF ACCIDENT (WHAT HAPPENED, HOW IT HAPPENED, WHAT WAS INVOLVED, WHAT LED UP TO ACCIDENT)	
Deceased was operating a bulldozer plowing a fire line flanking the fire. Fire spotted over the line behind him. A wind change caused the flanking fire to become a head fire in front of the operator. The operator, seeing he was in trouble, left the tractor to outrun the flames in back and in front of him but was overcome by them.	151

32. ACTION TAKEN TO PREVENT SIMILAR ACCIDENTS	34. MANAGER'S COMMENTS ON CORRECTIVE ACTION
Complete investigation has been held on both the fire and the fatality	

33. WHAT OTHER ACTION SHOULD BE TAKEN
Follow the actions that the fire analysis and fatality investigation team recommend.

35. MANAGEMENT ORGANIZATIONAL FACTORS (CODE FROM INSTRUCTIONS)
019

SIGNATURE OF WORK SUPERVISOR	DATE	SIGNATURE OF REVIEWING OFFICER	DATE
<i>Richard O. Lord</i>	6/18/80	<i>Shelton</i>	6/20/80
<i>J. J. Powell</i>	6/19/80	11/0904	

MACK LAKE FIRE

May 5-8, 1980



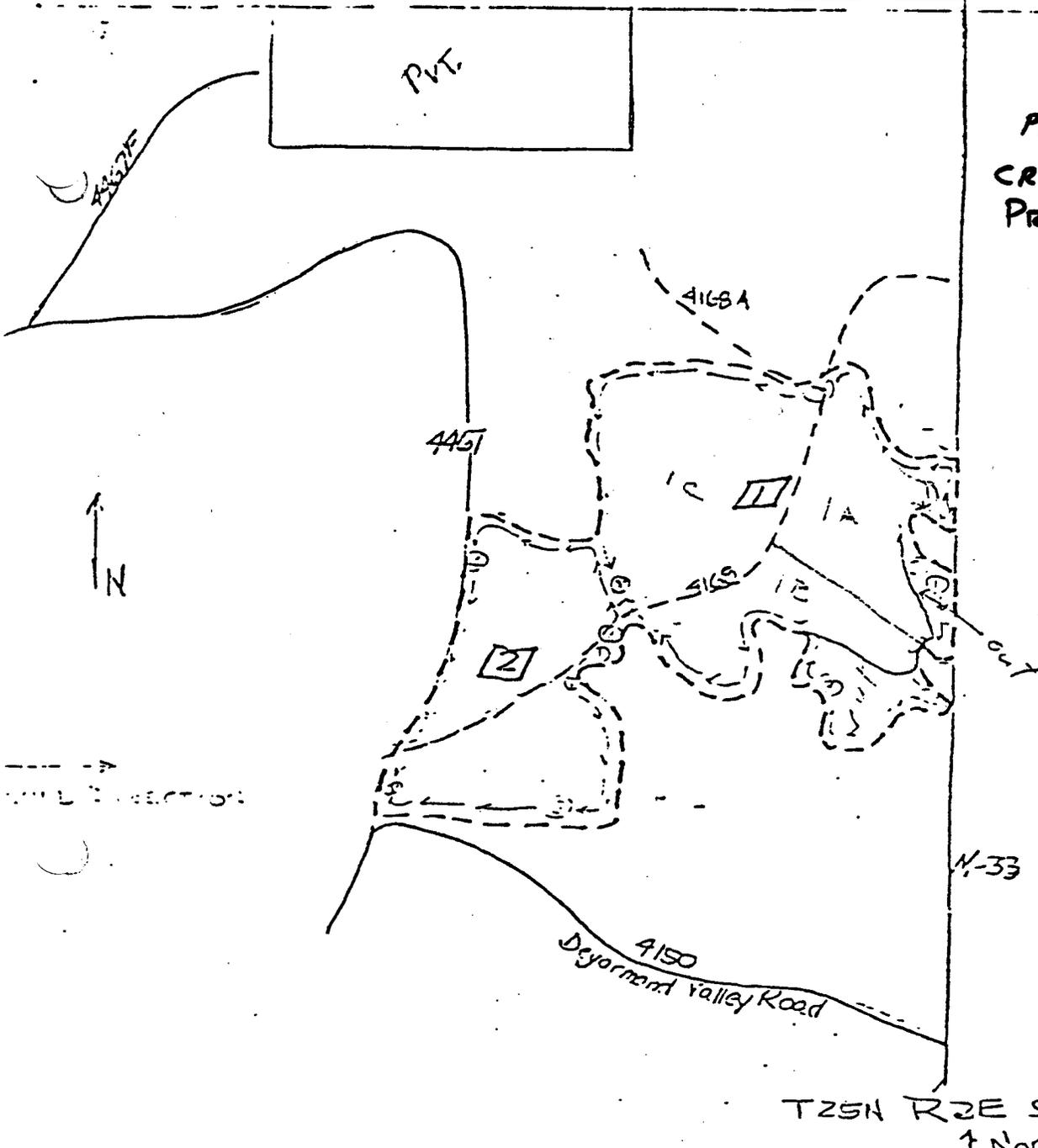
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
JOHN R. McGUIRE, CHIEF

NATIONAL FORESTS AND FOREST SERVICE FIELD OFFICES

0 50 100 150 200 MILES

- NATIONAL FORESTS
- PURCHASE UNITS
- NATIONAL GRASSLANDS
- LAND UTILIZATION PROJECTS
- REGIONAL BOUNDARIES
- REGIONAL HEADQUARTERS
- SUPERVISOR'S HEADQUARTERS
- FOREST AND RANGE EXPERIMENT STATIONS
- LABORATORY (MADISON, WIS.)
- AREA DIRECTOR STATE AND PRIVATE FORESTRY PROGRAMS

PLAN MAP
CRANE LK.
PRESCRIBED BURN



LEGEND

H Fire Boss Hqtrs.

W Water Source

----- Burning Unit Boundary

① Firing Order

———— Plow Line

② → → → → Direction of Firing

-X-X- Disc Line

Wind → Wind Direction

-O-O- Dozer Line

↔ A ↔ Sectors

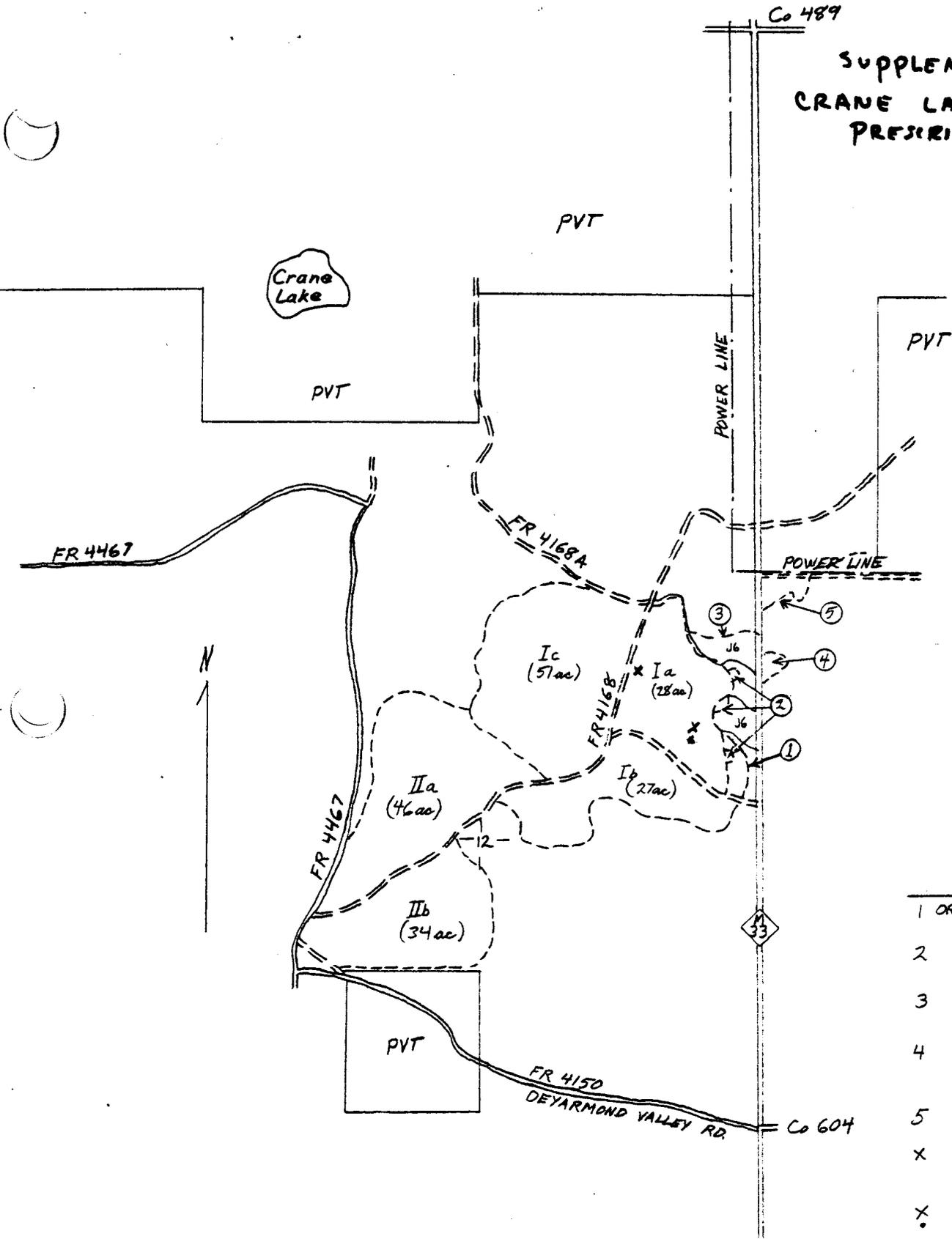
Use standard map legends for other features.

A to Burn 210

Scale: 4 Inches = 1 Miles

Date prepared 6/16/78 Initials JK

SUPPLEMENTAL MAP,
CRANE LAKE
PRESCRIBED BURN



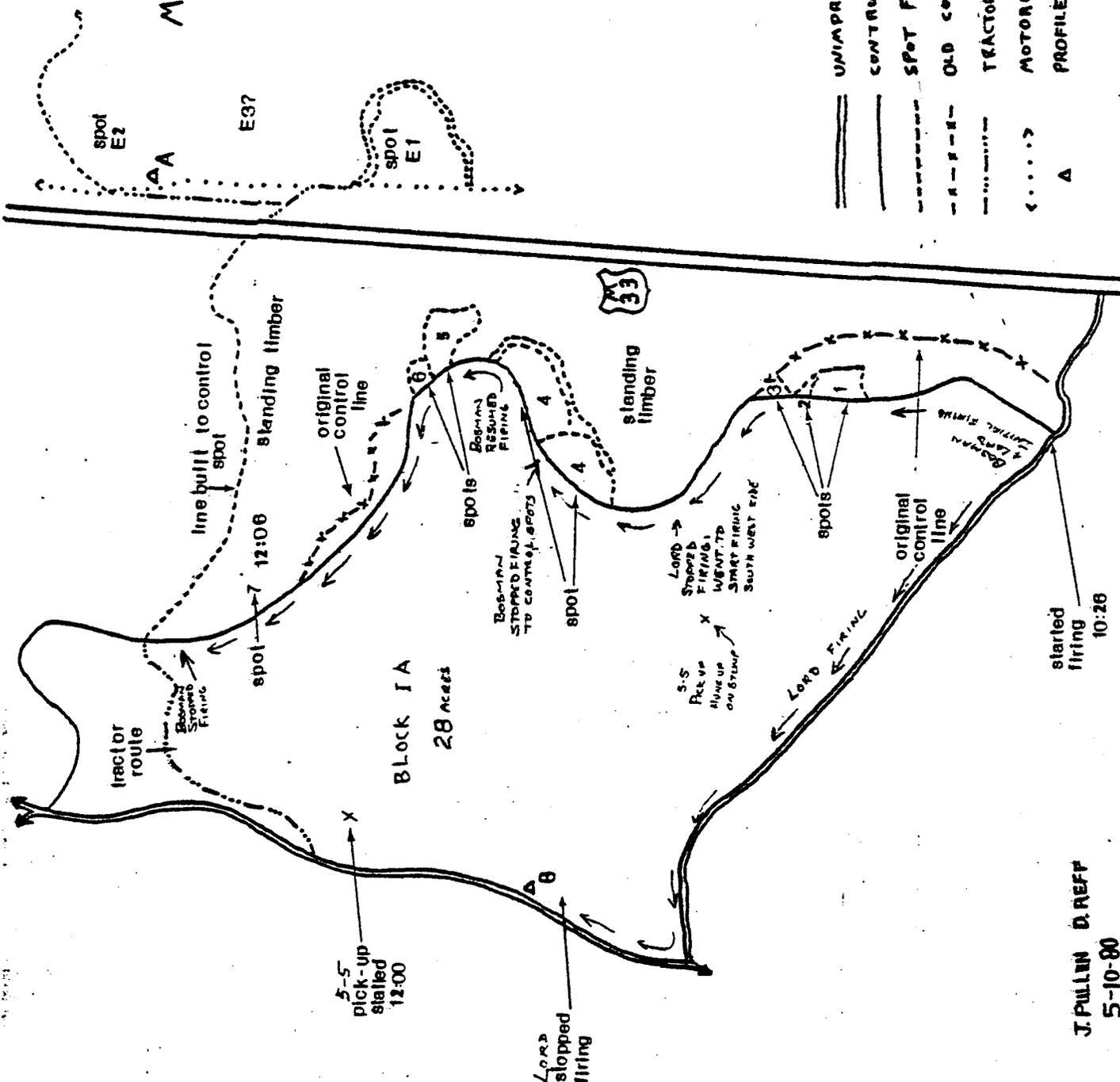
- KEY
- 1 ORIGINAL DOUBLE PLOW LINE (SPRING 79)
 - 2 SPOT FIRES WITH CONTROL LINES (SIX SPOT FIRES)
 - 3 PLOW LINE TO CONTAIN ESCAPE (SPOT FIRE #7)
 - 4 1ST SPOT ACROSS M33 WITH DOUBLE PLOW LINE
 - 5 START OF LAST PLOW LINE
 - x LOCATION WHERE S-S STALLED
 - x LOCATION WHERE S-S HUNG UP ON STUMP

SCALE: 4 INCH = 1 MILE
DATE 5/29/80
[Signature]

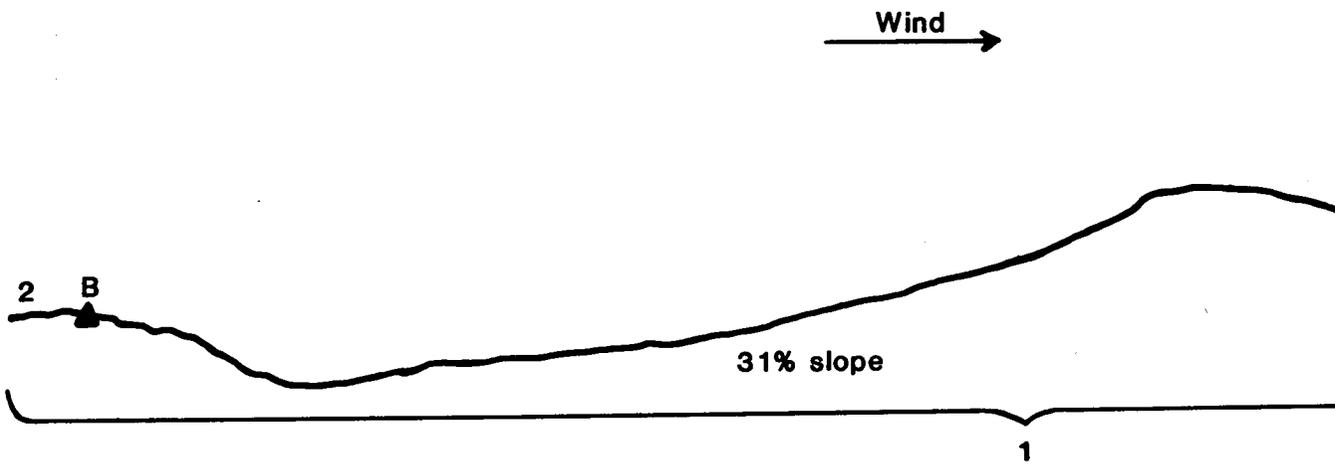
MACK LAKE FIRE
 FIRE ORIGIN
 SCALE: 1" = 200'



- UNIMPROVED ROADS
- CENTRAL BURN FLOW LINE
- SPOT FIRE FLOW LINES
- OLD CENTRAL FLOW LINE
- TRACTOR TRAIL
- MOTORCYCLE TRAIL
- PROFILE LINE TERMINALS



J. PULLIN D. REFF
 5-10-80



- | | |
|-------------------------------------|-------------------|
| 1 - Prescribed Fire Area | 5 - Torching |
| 2 - Dirt Road | 6 - Spot Ignition |
| 3 - Planned Edge of Prescribed Fire | 7 - Torching |
| 4 - Standing Timber | 8 - Crown Fire |

MACK LAKE FIRE

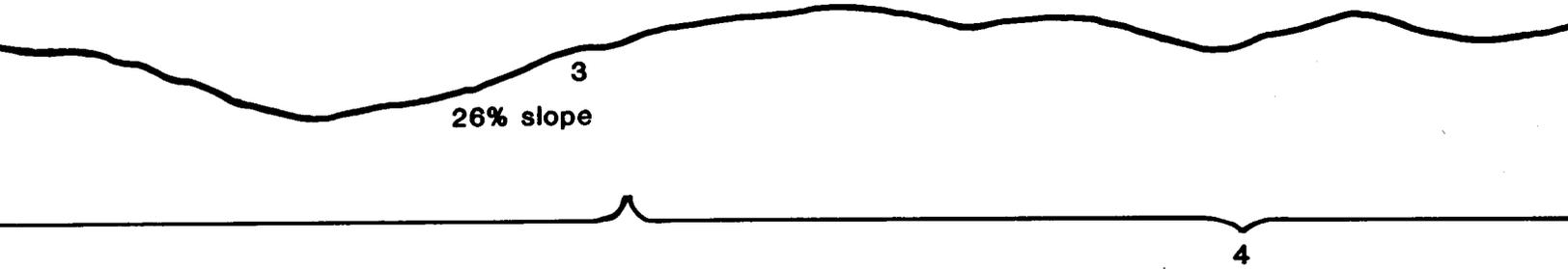
Origin Profile

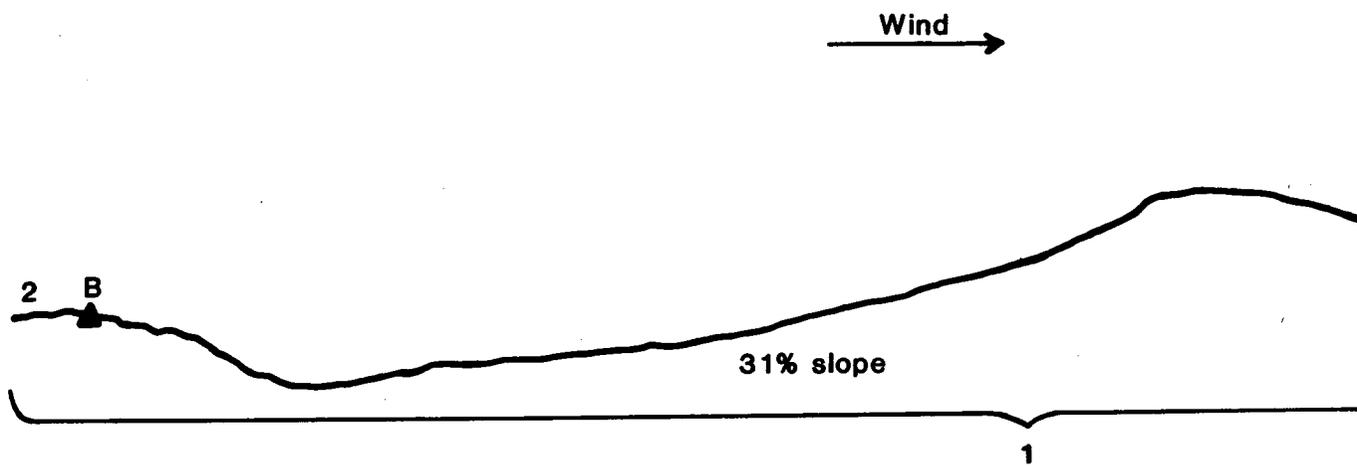
Scale 1/2" = 40'

PROFILE AS SEEN FROM SOUTH
(LOOKING NORTH)

Profile Line Terminals ▲

Overall Line Length 1524.80'





1 - Prescribed Fire Area

2 - Dirt Road

3 - Planned Edge of Prescribed Fire

4 - Standing Timber

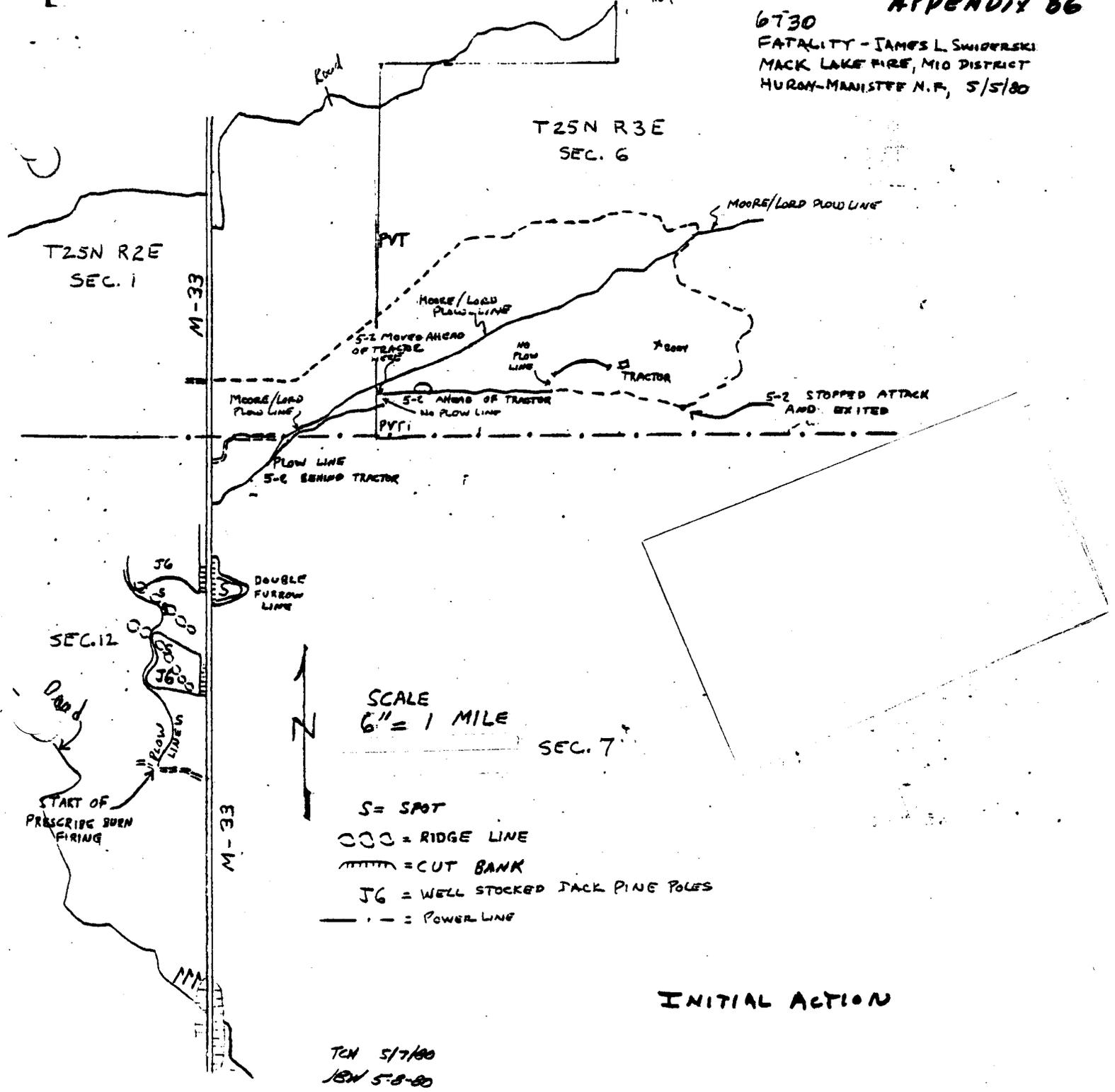
5 - Torching

6 - Spot Ignition

7 - Torching

8 - Crown Fire

6730
FATALITY - JAMES L SWIDERSKI
MACK LAKE FIRE, MID DISTRICT
HURON-MANISTEE N.P., 5/5/80



T25N R3E S6

MAY 5, 1980

APPENDIX B7



JAMES LEE SWIDERSKI

POWER LINE
1 Mile SOUTH
Co. Rd. 489
ZIMOWSKI ROAD.

HARD HAT

POCKET WATCH

WALLET

GLASSES

JOHN DEERE
TRACTOR PLOW
350

FURROW FROM PLOW

276'

110'

507'

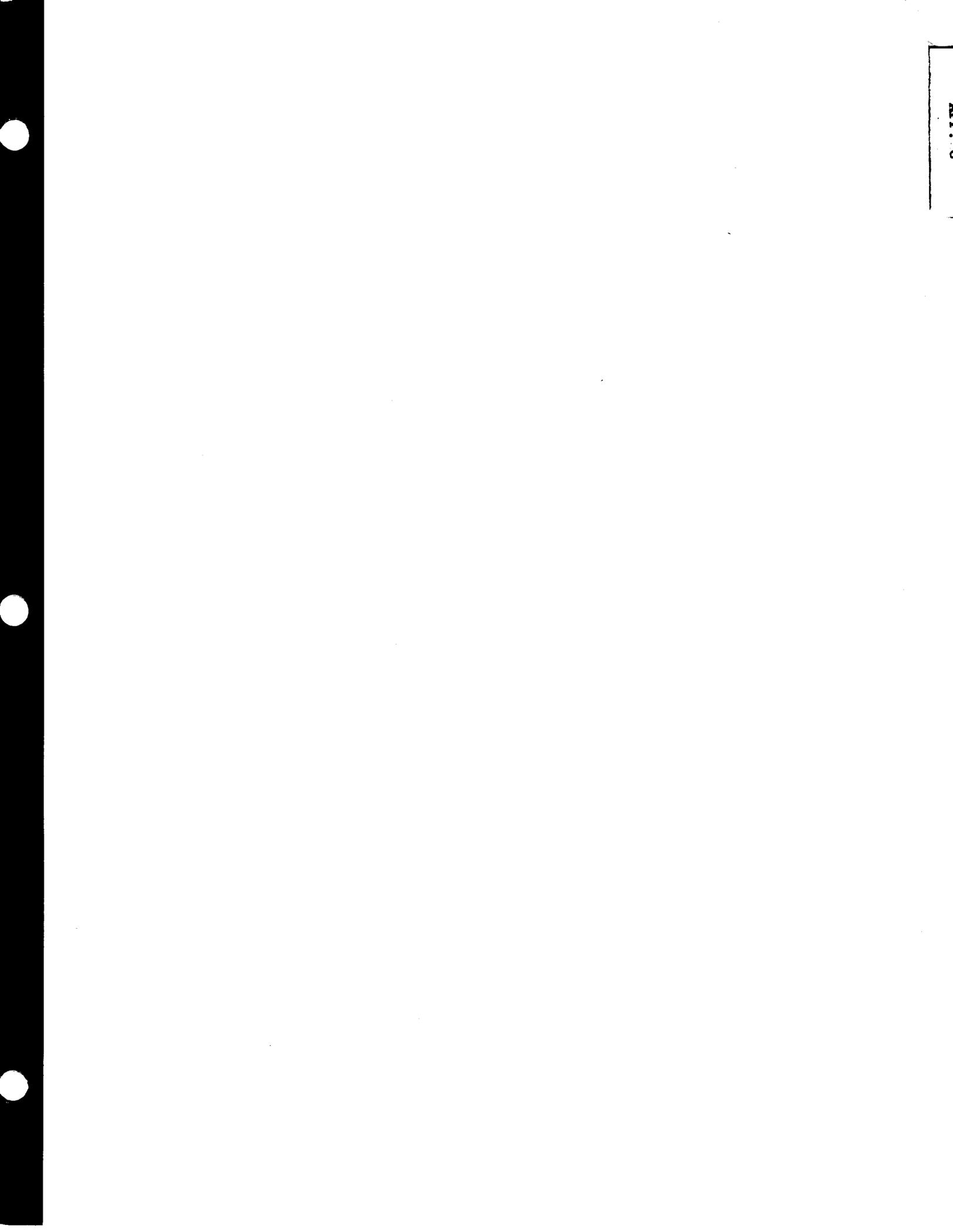
1/2 MILE
POWER LINE

TRL. ROAD

50'

MS 3 MT TOM ROAD

JAMES R. WILLETT
OSCODA Co. SHERIFF DEPT



Photographs

13 prints of tractor-plow/tanker line, tractor-plow and body location, and surroundings.

Photo #:

1. Looking west on power line from location about 300 feet south of east end of tractor plow-line.
2. Effects of tanker - unburned grass and tree tops with crown-fired trees in background.
3. Looking east along tanker path from point where tractor lifted plow and turned north.
4. North from turning point toward tractor. Tractor visible through trees to right of photo.
5. Front view of tractor.
6. Full view of tractor.
7. Looking ahead of tractor in direction of body.
8. Back of tractor showing tools and antenna.
9. Finger points at melted metal from air-cleaner cartridge. Visible near top of photo are dangling hooks from bungee cord which secured fire shelter to protective screen behind operator.
10. View of ignition, throttle, gear selector, and range selector. Ignition "Off"; throttle at "full throttle"; gear selector in "2nd"; range selector in "neutral".

11. Radio mounted overhead under tractor canopy (finger points at loudspeaker switch in "on" position. Note microphone support stud is not in bracket on right side of radio.)

12. Personal effects (not in locations where found by Marzolo and Sheriff.)

13. Location of body (marked with branch in front of person standing at right).



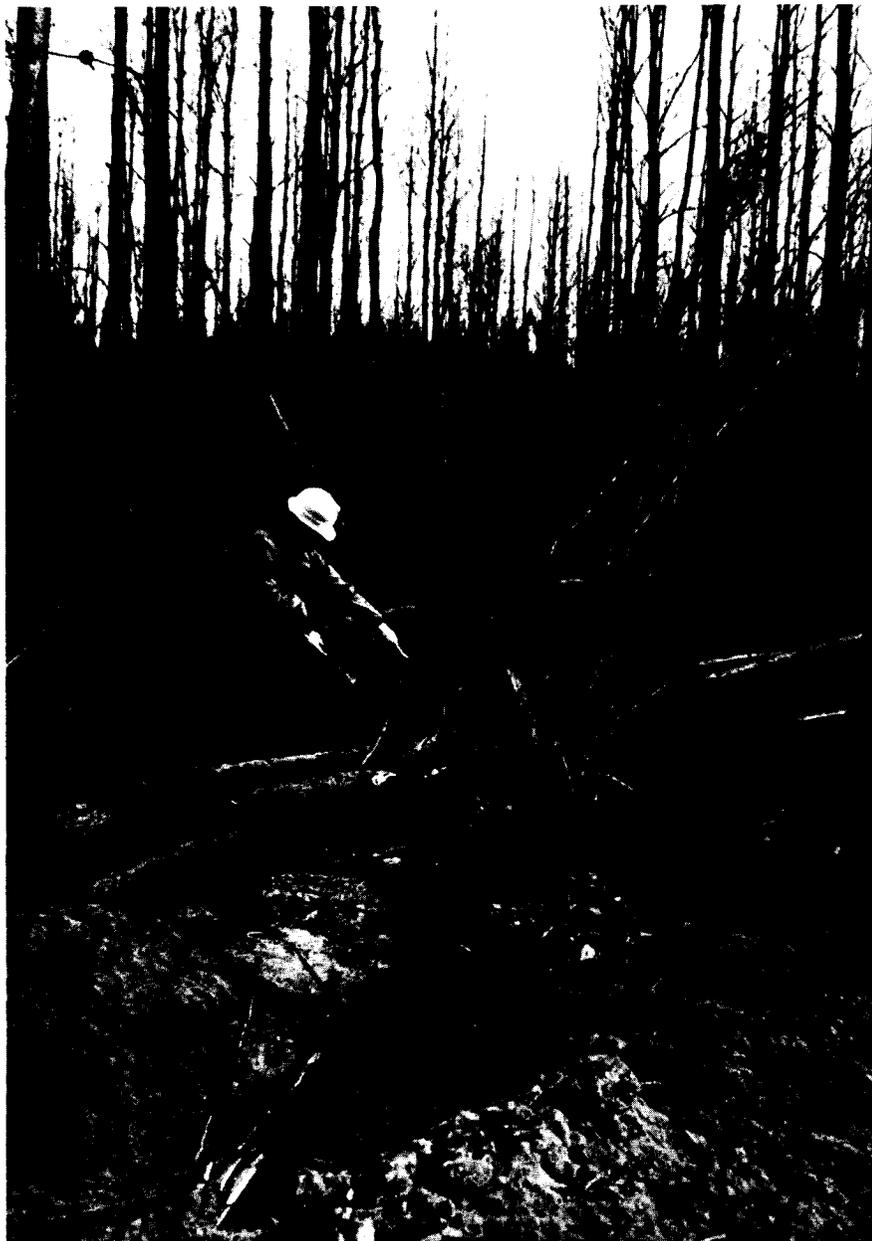
Looking west on power line from location about 300 feet south of east end of tractor plow-line.



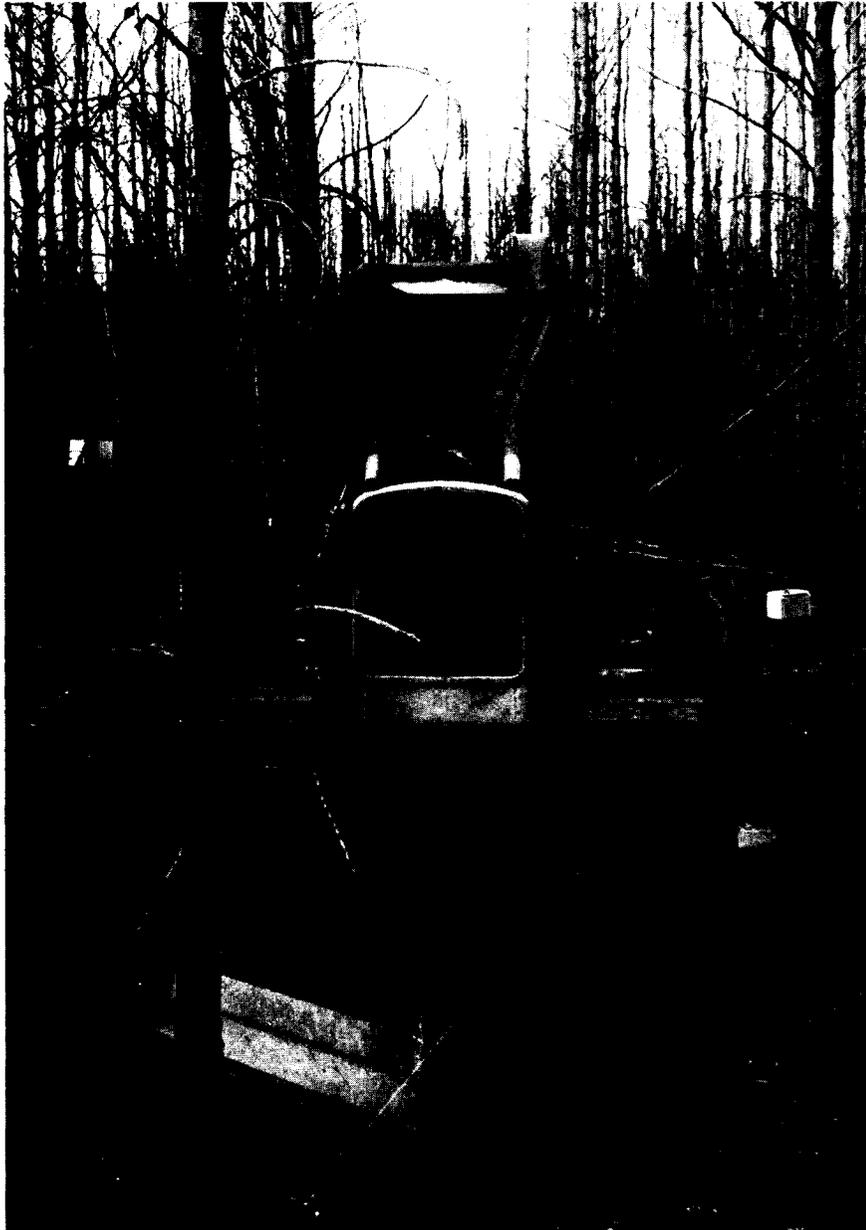
Effects of tanker - unburned grass and tree tops with crown-fired trees in background.



Looking east along tanker path from point where tractor lifted plow and turned north.



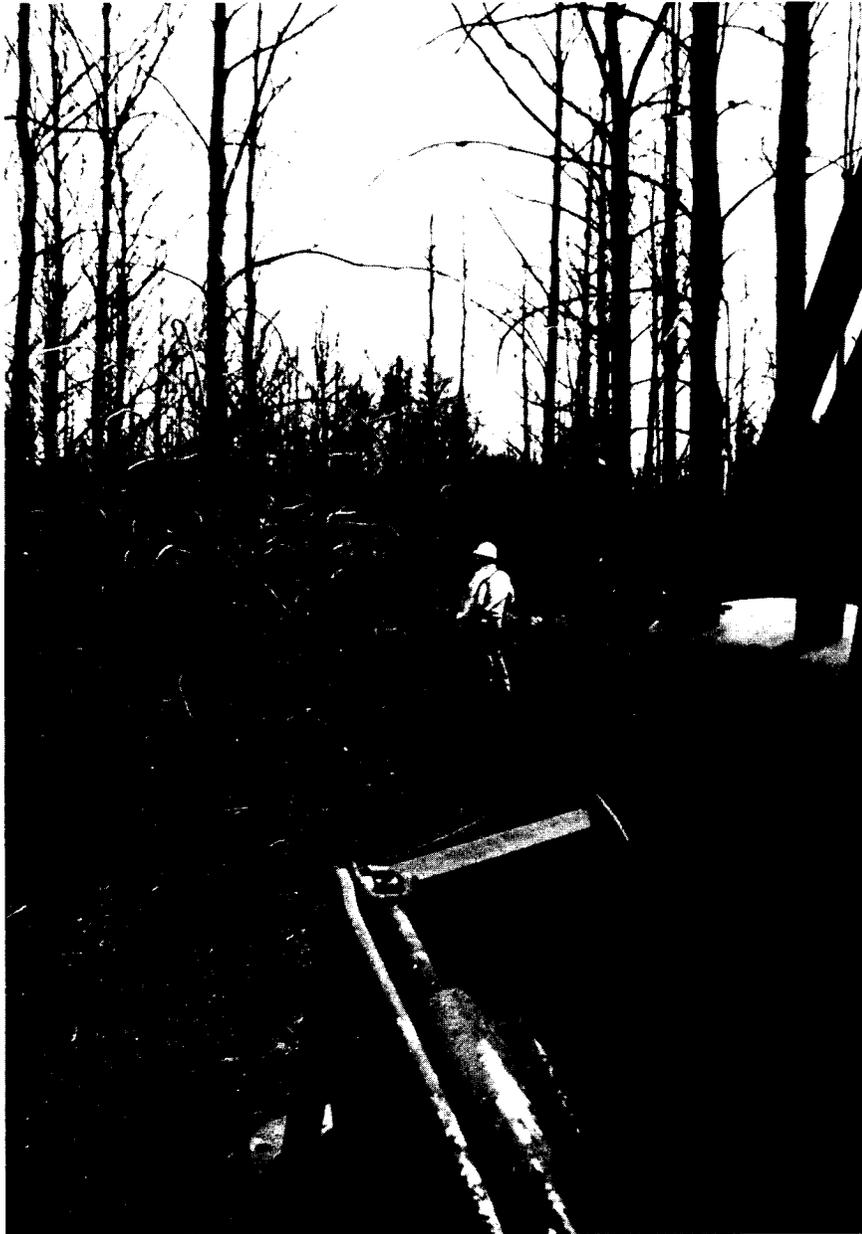
North from turning point toward tractor. Tractor visible through trees to right of photo.



Front view of tractor.



Full view of tractor.



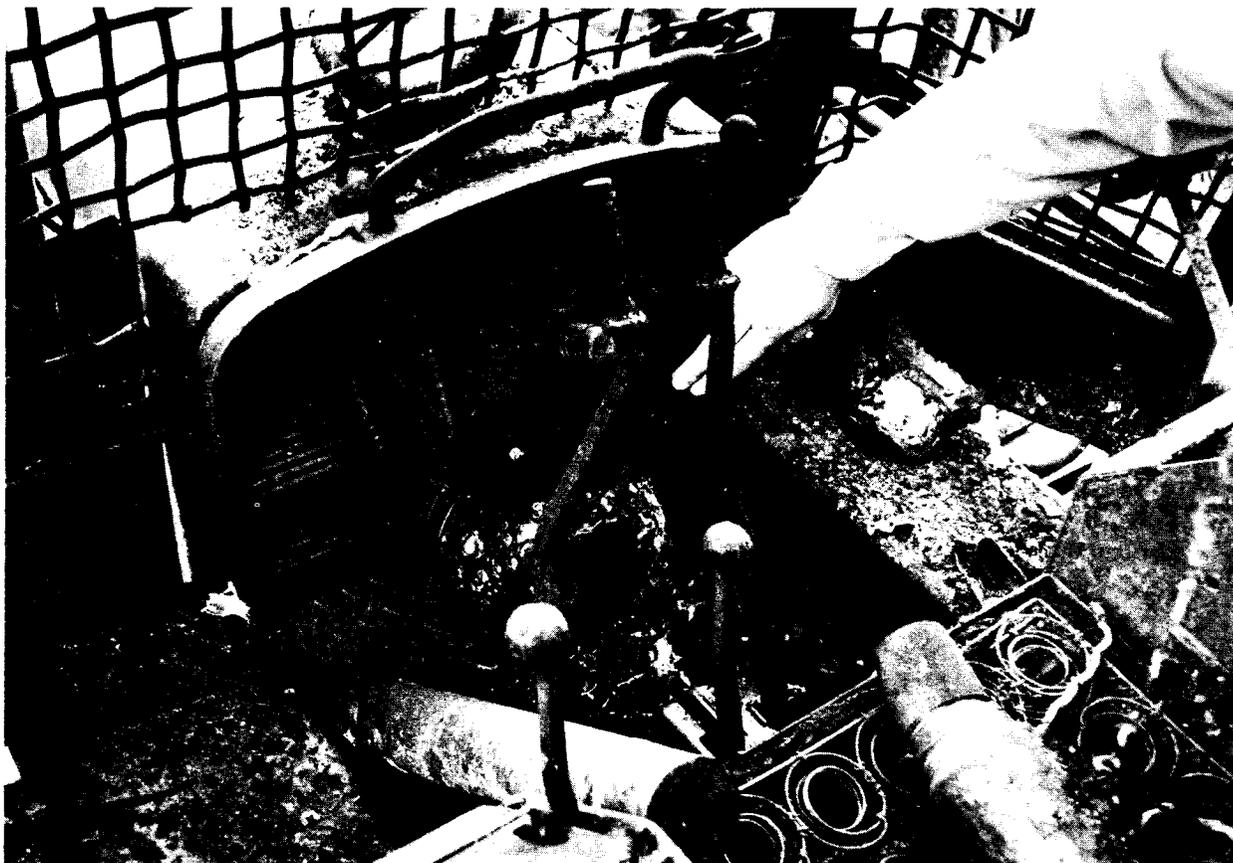
Looking ahead of tractor in direction of body.



Back of tractor showing tools and antenna.



Finger points at melted metal from air-cleaner cartridge. Visible near top of photo are dangling hooks from bungee cord which secured fire shelter to protective screen behind operator.



View of ignition, throttle, gear selector, and range selector. Ignition "Off"; throttle at "full throttle"; gear selector in "2nd"; range selector in "neutral".



Radio mounted overhead under tractor canopy (finger points at loudspeaker switch in "on" position. Note microphone support stud is not in bracket on right side of radio.)



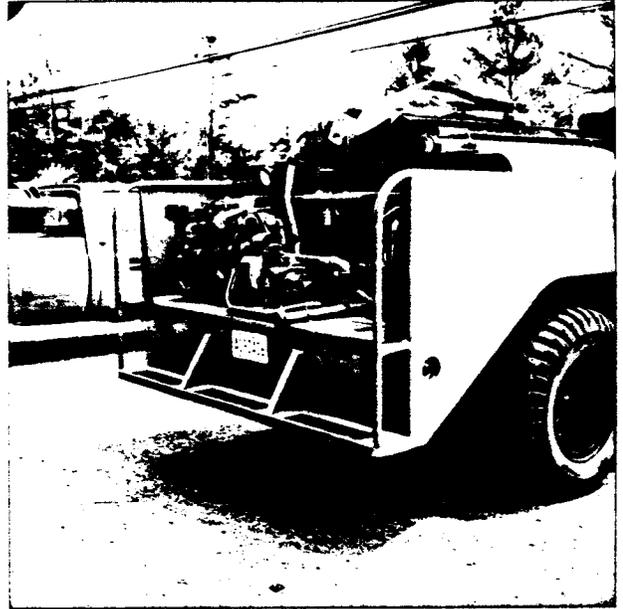
Personal effects (not in locations where found by Marzolo and Sheriff.)



Location of body (marked with branch in front of person standing at right).



Mio 5-2
1000-gallon
6x6 Tanker



Mio 5-2
1000-gallon
6x6 Tanker



Mio 5-3
4x2 Dodge 1/2-ton p.u. with 8' bed



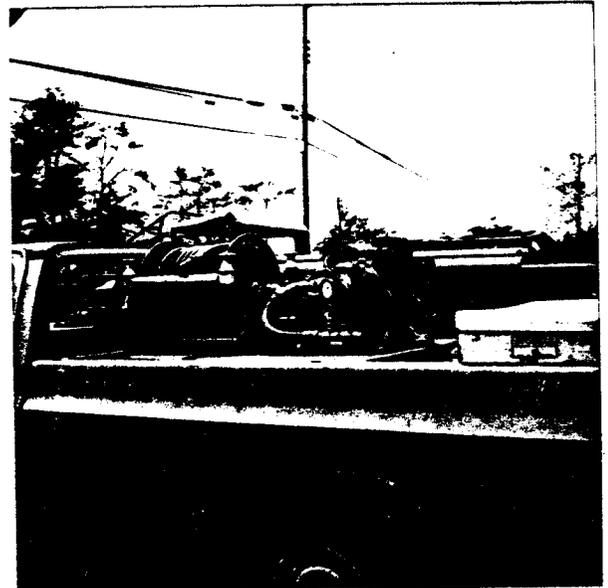
Mio 5-4
Tilt-Bed
4x6 (Hauled Mio 5-4 tractor)



Mio 5-4
Tilt-Bed
4x6 (Hauled Mio 5-4 tractor)



Mio 5-5
4x4 chev p.u.
w/125-gallon slip-on tank



Mio 5-5
4x4 chev p.u.
w/125-gallon slip-on tank

OC QUATIC 11EET

RECORD OF MESSAGES REQUIRING DOCUMENTATION (SUCH AS, TIME OF DISCOVERY, TIME OF ARRIVAL OF FORCES, CONTROL OF FIRE AND LOG OF OTHER NECESSARY ITEMS).

TIME	MESSAGE (PERSON TO PERSON)	
	FROM	TO
1020	F.B.	MIC
1105	Reynolds	MIC
1100	MIC	F.B.
"	F.B.	MIC
1110	MIC	F. Moore
1115	MIC	MIC
1117	MIC	MIC
1118	Reynolds	MIC
1120	MIC	F. Moore
1124	James	MIC
1125	F.B.	James

5-2 is here we are stacking to fire it up

Report of fire on 6:00 490 just past Big Creek - 1250 215 Sec 4

Same fire in buyers, they are going out who do you want me to send?

Send Floyd Moore will send unit out ASAP local Floyd will call back in min he is out in yard. Same Floyd location he will load up and be right out there.

Lay Mahoney wanted to know where fire is, they said big truck out to it.

Buyer has fire under control.

Called F. Moore and cancelled tractor.

Block is having problems w/ plans. They cancelled a buyer one up the have the reg one up 12:35 to 1:30

no more than 1 hour delay w/ reg plane ok

DAILY LOG (Continuation of R9-5120-8)			Date
Time (24 Hour)	Message		Record of Conversation (such as time tower manned, time of arrival of forces, control of fire, and log of other pertinent fire activity.)
	(Person to Station) From	To	
1142	F.B.	MPD	Call Sheriff need car for traffic control ^{Substation} across road
"	MPD	Sheriff	10-4 will send out car now.
1200	Rayman	MPD	all fire is out here you need report?
1200	MPD	Rayman	call in reports when you get back to station.
1200	5-2	F.B.	Name by jobs heading for highway
1208	MPD	Sheriff	need another car (not available right now)
		called	State Highway Dept they will send someone out
		and Sheriff	will relieve ASAF.
1220	F.B.	MPD	from 7th town. Sheriff will dispatch
1221	"	"	and Floyd Moore, dispatched Moore from home in Eugene.
1230	F.B.	MPD	you can get another tanker & Dennis Anderson
1230	DAK	MPD	Jones has dumped 33, brought across from where your burning

DAILY LOG (Continuation of R9-5120-8)		Message		Bearing	Record of Conversation (such as time tower manned, time of arrival of forces, control of fire, and log of other pertinent fire activity.)	Date
Time (24 Hour)	(Person to Station) From To					
1252	Called Sherry to Dennis. Don & me				dispatched 7xi-700 Tanker. 1240 Called	
	F.B. Mio				Jerry is about 1/2 MI E of 33 road,	
1245	Call Lunge				get more trucks out. 10-4 Ray will get out	
1245	Mio				Bob will get Pump Truck	
1245	Called Dave to come in.					
1247	Get help from other Dispatches. Called Bal in Tower					
					will get other people on way.	
1253	Spd				Ray is 10-8 on way to fire.	
1255	Mio. Harris				is calling the Tracker. has one on standby	
1305	MFO				REQUESTED ROSE CITY 4 1800 AND	
	SEE PG. 5				4X4	
1340					Dennis and pumps on way	
1345	F.B. Mio				Tom Steiner will coordinate things & command	
					of Egg Harbor & Co. 1.	

SEE Page 6
NO 827-262

DAILY LOG (Continuation of R9-5120-8)			Date
Time (24 Hour)	Message		Record of Conversation (such as time tower manned, time of arrival of forces, control of fire, and log of other pertinent fire activity.)
	From	To	
1809	Mir	Dennis	Heller is on his way to get Dennis.
1310	F.B.		600-700 acres across 489 by M. Lt Dwight NE (Towards houses)
1315	F.B.	MFO	IN HOUSES - NEED TANKERS
	MFO		CANCELED MFO VFD, LYBURN VFD & FARVIEW VFD. (in houses)
1325	Huyen - F.B. Hoying	E.	across 4146 about half a mile.
1327	CALLE CV - MFO	F.F. at ch.	BUILDING W SIDE OF MACK LT N SIDE OF MACK LT SOUTH
	S.O. RATED "MACK"		
1333	RAY Lutz	VFD	WILL SEND 1 MORE TANKER
1331	Elmer Schindler - Mack		he is on his way to fire.

SEE P. 4

DAILY LOG (Continuation of R9-5120-8)		Date		
Time (24 hour)	Message		Bearing	Record of Conversation (such as time tower manned, time of arrival of forces, control of fire, and log of other pertinent fire activity.)
	From	To		
1140	S.B.	MIA		SP CASUALS UNDER CHECK. ONLY SAND DOR
1745	MFO	FOSTER	D-17	(NOTHING SMALLER) (SENDING M-3) 9000 being killed - (2 PEOPLE TO CAMP)
1753		McKibbin V.F.D		out of gas
1755	S.O.	MIO		HELICOPTER COMING FROM MANISTEE
1806	TOWNS	MFO		Walah (Only) will get up in another plane.
1820	HELICOPTER	MIO		ETA 7:45 (PER F.B.)
1825	C.O. (BUR)	MFO		FIRE HEAD IS 4-5 MILES NW OF S. BRANCH. S. BRANCH

WS FORM D-96 (11-78) U.S. DEPT. OF COMMERCE NATIONAL WEATHER SER. PRES. BY WSOH D-Q
 AGENCY: U.S. Forest Service
 UNIT: U.S. Forest Service
 STATION NAME: U.S. Forest Service
 STATION NUMBER: 2021 802
 FIRE DANGER AND FIRE WEATHER RECORD
 DATE: 5/11/80
 STATION ELEVATION: 1050'
 FUEL MODEL: C
 CLIMATE CLASS: 3
 SLOPE CLASS: 1
 BASIC OBS TIME (LST): 1300 EST
 PERIOD OF RECORD (MONTH, DAY, YEAR): 5/11/80
 OBSERVER: [Signature]
 CHECKED BY: [Signature]

DAY OF MONTH	STATE OF MONTH	TEMPERATURE		RELATIVE HUMIDITY (%)	OBSERVED FUEL STICKS	10-11 TL FUEL MOISTURE	1-8 TL FUEL MOISTURE	HERB. VEG. CONDITION	FINE FUEL MOISTURE	BURNING INDEX			OCCURRENCE INDICES					
		MAXIMUM	MINIMUM							WIND DIRECTION	WIND SPEED	DIR. INDEX	SPREAD COMPONENT	ENERGY RELEASE COMPONENT	IGNITION COMPONENT	LIGHTNING RISK	LIGHTNING OCCURRENCE	MAN-CAUSED RISK
1	2	65	49	57	20	23	13	P	8	2	3	8	0	0	55	4	2	
2	1	75	56	28	12	14	7	G	8	2	3	10	0	0	55	8	12	
3	0	78	56	22	10	12	5	G	8	7	9	12	0	0	90	29	28	
4	0	80	56	19	9	11	5	G	6	10	14	12	0	0	100	42	37	
5	1	80	58	24	9	11	5	G	7	18	25	11	39	49	100	49	44	

DAY OF MONTH	TEMPERATURE			RELATIVE HUMIDITIES			DAILY (24 HOUR) DATA												1000 - HR TL FUEL MOISTURE					LIVING FUEL MOISTURES					AR
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	AVERAGE	PRECIPITATION	LIGHTNING			100-HR TL FUEL MOISTURE	7-DAY AVERAGE	1000-HR. TODAY'S	7-DAY AVERAGE	CHANGE 1000-HR	1000-HR TL FUEL MOISTURE	MOODY FUEL MOISTURE	MOISTURE X1000	HERB. FUEL MOISTURE VALUE	FB	COMP								
22	65	49	78	57	26	27	0	BEGAN	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	GD	L77	L75F	GD	
23	76	40	64	28	28	64	0	BEGAN	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	GD	L77	L75F	GD	
24	78	42	61	22	22	61	0	BEGAN	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	GD	L77	L75F	GD	
25	80	39	59	19	19	59	0	BEGAN	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	GD	L77	L75F	GD	
26	84	44	59	20	20	59	0	BEGAN	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	GD	L77	L75F	GD	

1-800-482-2855

U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL WEATHER SERVICE

WS FORM D-1
(2-71)
Pres. By WSOM D-41

FIRE WEATHER (SPECIAL FORECAST) REQUEST

(See reverse for instructions)

APPENDIX D2 P9.3

REQUESTING AGENCY WILL FURNISH:

1. NAME OF FIRE OR OTHER PROJECT CRANK LAKE	2. CONTROL AGENCY U.S.F.S.	3. REQUEST MADE TIME: 1000 1200	DATE 5/5/80
---	--------------------------------------	---	-----------------------

4. LOCATION (By 1/4 Sec - Sec - Twp - Range) A 1/2 SEC 12 T25N R2E	5. DRAINAGE NAME N/A	6. EXPOSURE (NE, E, SE, etc.)
--	--------------------------------	-------------------------------

7. SIZE OF PROJECT (Acres)* 200	8. ELEVATION* TOP 1200 BOTTOM 1150	9. FUEL TYPE Grass & light slash	10. PROJECT ON: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> CROWNING
---	--	--	--

11. WEATHER CONDITIONS AT PROJECT OR FROM NEARBY STATIONS (See example on reverse)

PLACE	ELEVATION	OB TIME#	WIND DIR.-VEL.	TEMP.		1 (Lv. Blank)		REMARKS (Indicate rain, thunderstorms, etc. Also wind condition and 10ths of cloud cover.)
				DRY	WET	RH	DP	
2029002 1118	1050'	0800	W 11	55	50			dry light - mod. ^{fuel} slicks 16

12. SEND FORECAST TO: Ann Arbor	PLACE Ann Arbor	VIA Telephone	ATTN: (Name, if applicable)
---	---------------------------	-------------------------	-----------------------------

11 - FIRE WEATHER FORECASTER WILL FURNISH:

TIME # AND DATE: **0900 5/5/80**

13. FORECAST AND OUTLOOK

Winds SW-W 6-10 Temp 64 at 1000
 35% humidity 20% clouds cov. w/ cumulus
 1200-1400 SW-W 10-15 mph gusts 20
 Temp. 72-76 humidity 23% cloud cov 30-40
 Weak @ front mov. SE from U.P. expected
 to move thru area between 3-5 p.m.
 Wind shift W-NW 10-15 mph gusts 20
 30% chance of thunder storm
 Max temp 82° Min hum. 18-23
 Wind at 1000' W at 75-25 mph

NAME OF FIRE WEATHER FORECASTER Cathy Putnam	FIRE WEATHER OFFICE Ann Arbor
--	---

III - REQUESTING AGENCY WILL COMPLETE UPON RECEIPT OF FORECAST	TIME # 0900	DATE 5/5	NAME [Signature]
--	-----------------------	--------------------	----------------------------

IV. FORECAST RECEIVED:	TIME # 0900	DATE 5/5	NAME [Signature]
------------------------	-----------------------	--------------------	----------------------------

Explanation of symbols: {

- * Use 24-hour clock to indicate time. Example: 10:15 p.m. = 2215; 10:15 a.m. = 1015.
- * For concentrations (as groups of lightning fires) specify "Concentration"; then give number of fires and size of largest. If concentrations are in more than one drainage, request special forecast for each drainage.
- † No entry necessary. To be computed by the Fire Weather Forecaster.

05/05/80-083-18:31GMT

STATN NSCC BY EST FM 1# 1# V WS SC EC BI IC W3 FL PPARY HU TH WDT HEB

12982	G1P3	5	08	24	11	5	0	18	25	11	39	49	49	44	2.87	16	34	183	52
12982	G1P3	5	08	24	11	5	0	18	48	39	79	45	45	64	0.88	16	34	183	52
12982	K1P3	5	08	24	11	5	0	18	18	27	51	48	48	58	6.87	16	34	78	5

MIO RANGER DISTRICT
HURON-MANISTEE NATIONAL FOREST

STATION # 202902

ACTUAL NFDRS components and indices as calculated by AFFIRMS from observational data obtained at 1300 local time on May 5, 1980.

***** END-OF-FILE ENCOUNTERED

***** REMINDER: NAMES OF CURRENTLY-MAILED FILES ARE LISTED

BELOW, FOLLOWED BY LAST-DATE-ACCESSED:

MAILED FILES, USER NUMBER AM18984
05/05/80 TIME 12:32GMT

MIO RANGER DISTRICT
 HURON-MANISTEE NATIONAL FOREST

STATION #202902

FORECAST NFDRS components and indices as calculated by AFFIRMS from National Weather Service input. Data shown was received on May 4, 1980 and was targeted for 1400 local at that station on May 5, 1980.

-----05/04/80-----FCST-----121500Z-----
 WSEC BY EST 04 10 14 DIR WS SC ED BE IC PO PL TRJ WPT WPK P1 P2

5	01P3	5	71	48	12	7	NW	16	28	9	33	114	24	34	74	95	24	0	0
5	01P3	5	71	48	12	7	NW	16	33	27	68	22	32	54	74	95	35	0	0
5	01P3	5	71	49	12	7	NW	16	14	24	44	33	33	39	74	95	36	0	0

INPUT END-OF-FILE ENCOUNTERED

021 COST: 0 0.77

297.76 CRU 6381.82 TCH 8381.32 KC

F AT 121500Z 05/04/80

FM 5120-1
(4/76)

FIRE WEATHER FORECAST FOR LOWER MICHIGAN

DATE: 5/4/80
TIME: _____

APPENDIX D2 P.6

E DANGER TREND

Little Change _____

Lower _____

Higher _____

Warning _____

very high decrease Mon

WEATHER DISCUSSION:

~~SEA L pres now~~
~~SE Hudson B...~~
~~E of Lake Erie~~
Weak cold front over Mon

FORECAST FOR TONIGHT

1. CLOUDS

A. Little Change

B. Clearing _____

C. Increasing _____

D. Variable _____

2. PRECIPITATION PROBABILITY

A. Unlikely (less 20%) _____

B. Chance (30-40%) _____

C. Likely (50-75%) _____

D. Most likely (80%) _____

TYPE

A. Rain _____

B. Showers _____

C. Thundershowers _____

D. Snow _____

AMOUNT

A. .10" or less _____

B. .11 - .30" _____

C. .31 - .70" _____

D. .71 - 1.20" _____

Dur. _____

Where _____

When _____

3. WIND DIRECTION

shifting to W at (time) _____

WIND SPEED 5-10

4. LOWEST TEMPERATURES

40

5. DEW/FROST

None _____

Light _____

Moderate _____

Heavy _____

Drying off by _____

SMOKE PATROL: Visibility Restrictions good except in haze

Turbulence Intensity light or moderate

TENDED OUTLOOK FOR NEXT THREE DAYS:

Temperature Trend warmer - high 60's 70's

Precipitation light drizzle thru increase WRT

Clouds no rain

Sunny

1. CLOUDS

A. Sunny _____

B. Cloudy _____

C. Variable

D. Increasing _____

E. Decreasing A.M. P.M. _____

2. PRECIPITATION PROBABILITY

A. Unlikely (less 20%) _____

B. Chance (30-40%) _____

C. Likely (50-75%) _____

D. Most likely (80%) _____

TYPE

A. Rain _____

B. Showers _____

C. Thundershowers _____

D. Snow _____

AMOUNT

A. .10" or less _____

B. .11 - .30" _____

C. .31 - .70" _____

D. .71 - 1.20" _____

Dur. _____

When _____

Where _____

3. WIND DIRECTION

shifting W at (time) 10-20 10 AM 4 PM

WIND SPEED 10-15

4. TEMPERATURE Afternoon High 70's

5. LOWEST AFTERNOON HUMIDITY 35-40

1 5120-1
(4/76)

FIRE WEATHER FORECAST FOR LOWER MICHIGAN

DATE: 5/5/80
TIME: _____

WEATHER DANGER TREND

- Little Change _____
- Lower _____
- Higher _____
- Warning _____

FORECAST FOR TONIGHT

CLOUDS

- A. Little Change _____
- B. Clearing _____
- C. Increasing _____
- D. Variable _____

PRECIPITATION PROBABILITY

- A. Unlikely (less 20%) _____
- B. Chance (30-40%) _____
- C. Likely (50-75%) _____
- D. Most likely (80%) _____

TYPE

- A. Rain _____
- B. Showers _____
- C. Thundershowers _____
- D. Snow _____

AMOUNT

- A. .10" or less _____
- B. .11 - .30" _____
- C. .31 - .70" _____
- D. .71 - 1.20" _____

Where _____

When _____

WIND DIRECTION

shifting to _____ at (time) _____

WIND SPEED _____

LOWEST TEMPERATURES

DEW/FROST

- None _____
- Light _____
- Moderate _____
- Heavy _____
- Drying off by _____

SMOKE PATROL: Visibility Restrictions _____
Turbulence Intensity mod-severe

EXTENDED OUTLOOK FOR NEXT THREE DAYS:

Temperature Trend high 10-15 then 40-45
Precipitation none
Clouds scattered

WEATHER DISCUSSION:

Updated
cool & overcast
the week
Today
Mon.

FORECAST FOR TOMORROW

1. CLOUDS

- A. Sunny _____
- B. Cloudy _____
- C. Variable _____
- D. Increasing _____
- E. Decreasing _____

2. PRECIPITATION PROBABILITY

- A. Unlikely (less 20%) _____
- B. Chance (30-40%) _____
- C. Likely (50-75%) _____
- D. Most likely (80%) _____

TYPE

- A. Rain _____
- B. Showers _____
- C. Thundershowers _____
- D. Snow _____

AMOUNT

- A. .10" or less _____
- B. .11 - .30" _____
- C. .31 - .70" _____
- D. .71 - 1.20" _____

When _____

Where _____

3. WIND DIRECTION

SW-W
3-5 (shifting W-NW time) 10-15 gusts 20

4. TEMPERATURE

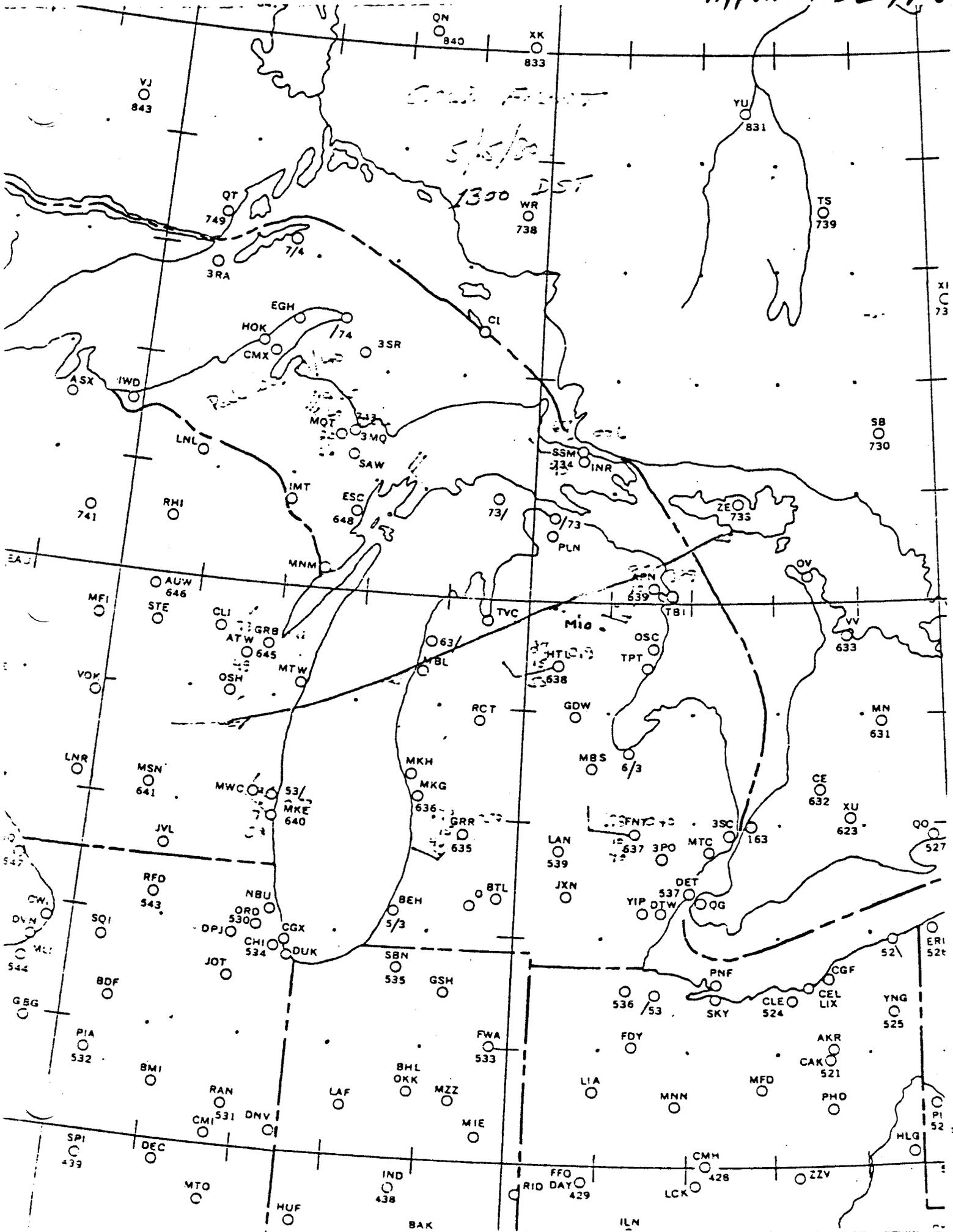
Afternoon High 80's

5. LOWEST AFTERNOON HUMIDITY

18%

10 miles lower in to less
than 3 in showers.

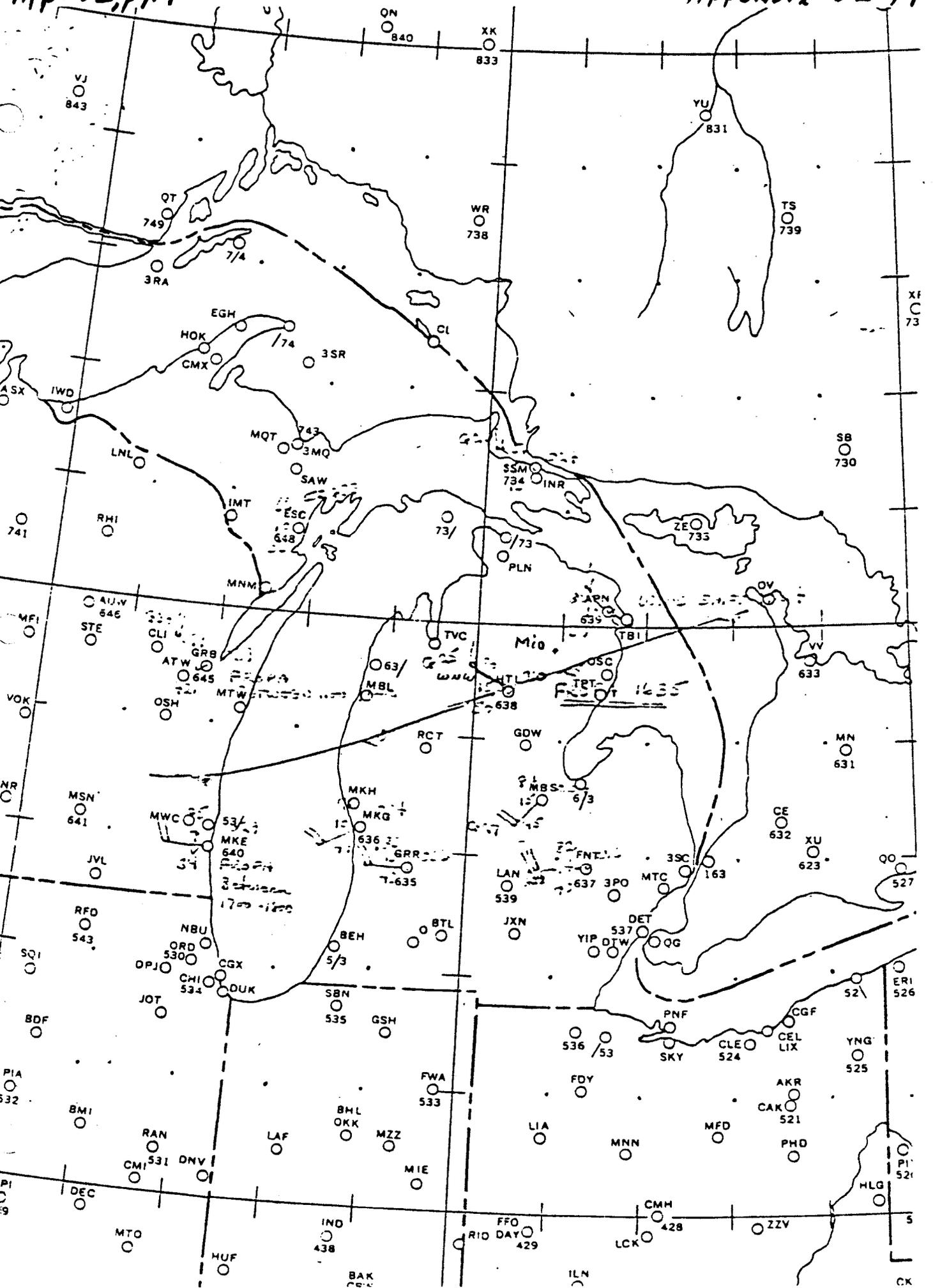
APPENDIX D2 pg. 7



XI
C
73

C
PI
52

C



PROJECT WORK PLAN

1. UNIT
Huron
SUB-UNIT
M10

2. MANPOWER (List by Name)	DAYS	DAILY RATE	PLANNED COSTS	
			TO BE FINANCED	CONTRIBUTED
PROJECT LEADER OR FOREMAN Bates	15	67.94	1020	
Baker	15	42.37	635	
Swiderski	10	48.47	485	
Marzolo	10	48.47	485	
Hornis	10	58.40	585	
Hahn	10	60.60	605	
Fox	10	63.36	635	
Site Admin. Tech M & Intyre	10	61.45	615	
	10	64.12	640	
3 crew days overtime			1745	

PROJECT NO. 5080 FISCAL YEAR 1980

PROJECT NAME, LOCATION & DESCRIPTION
HABITAT IMPROVEMENT, THREATENED AND ENDANGERED SPECIES (XV)

Prescribe burn 813 acres to prepare site for planting Jack Pine.

Assigned Target: 500 ac

(Need Additional \$4000 in 024 030)

EQUIPMENT (F.S. and Rental)	MONTHS F.O.R.	HOURS OR MILES	F.O.R. OR USE RATE	PER DIEM, TRAVEL AND MEALS	
2100 (6x6 Tanker)	6	500	300 -	1800	
2690 (JD. 450)	4	50	175 -	700	
120 (Tiltbed)	2	250	40 -	220	
3216 (S.O.T.)	6		30 -	180	

BEGIN WORK 10/1/79 COMPLETE WORK 9/30/80

SPECIAL SKILLS NEEDED	DAYS	WHEN

MATERIALS AND SUPPLIES	QUANTITY		UNIT PRICE
	TO BUY	ON HAND	

4. PROPOSED BY DATE

STAFF REVIEW BY *W.H. Bumball* 11/6/79

APPROVED BY *[Signature]* 11/13

CONTRACT	
TOTAL PLANNED COST	FINANCED + CONTRIBUTED 12000
	FUNDS ALLOCATED BY

3. FINANCE AND ACCOUNTING DATA

APPROPRIATION	STAT CODE	ACCOUNT OR ACTIVITY	FUNCTION		SUB-UNIT	DOLLARS PLANNED AND ALLOCATED
			MAJOR	SUB		
024			080			8000

5. ACCOMPLISHMENT RECORD

DATE	INITIAL

TOTAL ALLOCATED

PLANNING AND ACCOMPLISHMENT NOTES

APP-D 3 ②

Use this space for expansion of data shown in the blocks on the other side or for other notes.

Project Name	Comm*	Start	Acres
Crane Lake	177*	25	210
Hughes Lake	152*	7	151
	152*	10	7
	152*	19	10
Jenkins Road	125*	12	48
	125*	39	19
	125*	3	32
MT. PINDUS	102*	18	28
Rock Camp Long	72*	35	149
J-Nine	63*	4	159
			813

INSTRUCTIONS

GENERAL:

This form is used to document plans for direct project work. It may also be used to allocate funds from unit to subunit for approved projects.

Direct project work is defined, and additional instructions for use of form 1300-4 in annual work and financial planning are provided, in FSM 1314 and 6520.

This form should be completed in long hand rather than type-written. Number of copies depends on distribution on each unit.

If a project extends into two or more fiscal years, a separate 1300-4 will be made for the work planned during each fiscal year.

SPECIFIC PROCEDURE: Instructions are keyed to the five-numbered blocks on the face of this form.

1. a. Print unit and subunit names and code numbers.
- b. Enter project number and fiscal year. Project numbers may be either structured or unstructured as needed for Regional or local use.
- c. Enter name, location, and narrative description of project. Include planned number of units to accomplish, if any, such as MBM, miles, acres, or PAOT's. Refer to relevant environmental analyses.
- d. State planned dates to begin and complete project.
- e. Indicate special skills needed, such as engineer, landscape architect, or soil scientist, that are not available on the planning unit or subunit.
2. a. List manpower by name, if known, or by position and grade. Show number of man-days planned on the project for each. Include contributed manpower not charged directly to project funds. Enter days to be contributed by a cooperator on a separate line. If more room is needed, write two names in each space or list on a supplemental page.
- b. Enter daily rate, including all employer-paid benefits, for both project-financed and contributed manpower. Circle or put parenthesis around rate for contributed people.
- c. Multiply days planned by daily rate and enter in the appropriate Planned Costs column, either To Be Financed or Contributed. Round to the nearest dollar. Enter the value of contributed cooperator time (not cash deposits) in the Contributed column.
- d. Enter any costs for per diem, travel, and meals.
- e. List vehicles and other equipment needed for the project, months (if any) to charge fixed ownership rate to the project, estimated hours or miles of use, and applicable FOR and use rate. Enter project cost for each piece of equipment, to the nearest dollar, in the To Be Financed column. If any equipment FOR cost or use is contributed by another project or a cooperator, enter this value in the Contributed column.
- f. List materials, tools, and supplies needed for the project, quantities to be purchased from project funds and on hand, and unit prices. Enter costs of materials and tools to be purchased in the To Be Financed column and estimated value of materials on hand in the Contributed column. Do not enter any contributed value for tools or equipment that are on hand and will not be used up or worn out on the project. If more space is needed, use a supplemental page.
- g. Enter costs of any work that will be accomplished by contract. Identify contract portion of the job in the project description.
- h. Add both To Be Financed and Contributed cost columns. Enter sum of financed plus contributed costs in the Financed Plus Contributed block.
3. Enter finance and accounting data in the standard format for all funds available to complete this project. Include both appropriated and deposited cooperative funds. Total allocated must equal total of the Planned Costs To Be Financed column. If not, reduce units to be accomplished or otherwise adjust plan to conform with available funds.
4. a. Person who prepares the plan sign and date.
- b. Applicable program staff people review for conformance with unit programs and standards, sign and date.
- c. Unit line officer, or person designated by him, approve and date.
- d. After approval, unit financial management officer or his designated representative verify finance and accounting data, date, and certify that allocation has been processed.
5. Project manager enter accomplishment at least quarterly for projects active during the quarter and certify when project is completed. Inspecting officers should also record accomplishment, especially adherence to standards and quality of work.

JOB HAZARD ANALYSIS TO DETERMINE PROTECTIVE EQUIPMENT NEEDS

PART I - SIMPLIFIED JOB HAZARD ANALYSIS

THE HAZARDS OF A JOB ARE IDENTIFIED BY EXAMINING EACH SUBTASK FOR HAZARDOUS ENERGIES. SEE FSM 6740 FOR EXAMPLE. INJURIES OCCUR WHEN EXCESSIVE ENERGIES REACH THE BODY.

JOB SUBTASKS	HAZARDS (Briefly identify how this energy exists in this subtask)					
	MECHANICAL	ELECTRICAL	CHEMICAL	THERMAL	ACOUSTICAL	RADIOACTIVE
1. Chain Saw Operation	-cut from chain during operation or transporting. -Falling timber -Injury from brush piling		-Gasoline fumes -Explosive quality of gas -Bee stings	-Muffler burns	-Hearing damage from engine noise	
2. Weather	-High winds -Slippery conds. -due to rain -Falling ice & snow from trees or branches	-Lightning		-Heat exhaustion from hot weather Hypothermia		
3. Foot Travel	-Tripping on brush causing strains or sprains -Snowshoe hazards			" " "		
4. Fire Control & Use	-Burns -Smoke inhalation -Vision Impairment -due to smoke -Falling snags					
5.						

(IF MORE SPACE IS NEEDED, USE ADDITIONAL SHEET)

SIGNATURE OF ANALYST: James Herdorski UNIT: 410 R.O. DATE: 6/26/79
 Previous edition of this form is obsolete (CONTINUED ON REVERSE) 6700-7 (11/75)

PART II - HAZARD EVALUATION GUIDE

OBJECTIVE: THE OBJECTIVE OF THIS DECISION MATRIX IS TO DETERMINE WHETHER PERSONAL PROTECTIVE EQUIPMENT (PPE) IS REQUIRED OR OPTIONAL. THIS WILL ALSO SERVE AS THE JUSTIFICATION FOR PURCHASING PREVIOUSLY UNAPPROVED PPE.
DESCRIBE BELOW THE SPECIFIC JOB HAZARD IDENTIFIED BY THE JOB ANALYSIS (Part I)

	FILL IN RISK POINTS FROM TABLE BELOW				SPECIFY WHETHER PPE IS REQUIRED OR OPTIONAL. REQUIRED IF SCORE IS 25 ¹ . LIST ITEMS AND COSTS.
	CONSEQUENCE 1	EXPOSURE 2	PROBABILITY 3	RISK SCORE 4	
1. Chain Saw Operation	25	10	15	50	Chaps, Hardhat, Eye Protection, Ear Protection, Gloves, Steel Toed Boots, Safety Chain Brake, Tip Guard.
2. Weather	10	3	1	14	Non-skid boot, warm clothing for winter, salt tablets.
3. Foot Travel	10	10	5	25	Non-skid boot, warm clothing in winter.
4. Fire Control and Use	25	1	15	41	Fire shirts, Eye protection, protective mask, hard hat, gloves.
5.					

¹CONSEQUENCE - The most probable result of the potential accident. What is the likely consequence of this kind of accident?

- 50 Points - Fatality.
- 25 Points - Extremely serious injury. Loss of member. Permanent disability.
- 10 Points - Lost time accident of temporary total nature.
- 5 Points - Medical treatment.
- 1 Point - Minor cuts, bruises, of first-aid type.

²EXPOSURE - The frequency of exposure of the hazard event.

- 10 Points - Continuously (Many times daily).
- 5 Points - Frequently (Approximately once daily).
- 3 Points - Occasionally (One per week to once per month).
- 1 Point - Seldom (Once per month to once per year).

³PROBABILITY - The likelihood that an injury will occur once the energy form is set in motion.

- 15 Points - Is quite possible, not unusual, 50/50 chance of occurring.
- 5 Points - Would be unusual or unexpected occurrence.
- 1 Point - Highly improbable; only remotely possible.

⁴RISK SCORE - Consequence + exposure + probability.

SIGNATURE _____ EVALUATOR _____ UNIT _____ DATE _____

USDA - Forest Service
PRESCRIBED BURNING UNIT PLAN
 (Instructions in R-9 FSM 5152.23)

Burning Unit	Acres
Crane Lake	210
F.Y.	Planned Burning Month
79	October - May
Forest	District
Huron	Mio

Location: Section 12 Township 26N Range 2E Comp. No.
 Est. Cost _____ Fund Acct: P&M _____ KV 3150 Other _____

1. Objectives:
- | | | |
|---|---|---|
| a. <input checked="" type="checkbox"/> Fuel reduction | d. <input checked="" type="checkbox"/> Site preparation | g. <input checked="" type="checkbox"/> Wildlife habitat |
| b. _____ Hazard reduction | e. _____ Range improvement | h. _____ Other (explain) |
| c. _____ Insect & disease | f. _____ Cover type convers. | |

2. Specific Objectives To 1) prepare the site for machine planting and 2) to provide for the future growth of the plant associations favorable to the endangered Kirtlands Warbler.

3. Type of Burn Needed to Meet Objective All portions of the area should be burned leaving only the heavier fuels unburned (sticks over 1" in diam.).

4. Area Description:
- Overstory (type, size, density) The area was cut over in early 1978
 - Understory (type, density, average height) A few small jackpine remain - wiregra
 - Fuels (type, density, arrangement) Logging was very complete leaving only scatte clusters of logging slash as fuel. Most of the area is free of slash.
 - Soil type Grayling Sand
 - Topography Rolling but not precipitous.
 - History of area Old growth jackpine harvested 1977-78

5. Desirable Preburning Weather Factors:
- Air temperature 45° + Relative Humidity 25-50%
 - Wind direction W Velocity 5-10
 - Days since measurable rain 2-5 ~~DO~~ FLI _____ SI Fuel sticks 9-15 (BI-15-Model G)
 - Special weather forecast needed? Yes If so, when? Day of burn

6. Publicity and I&E Steps Needed Article in Oscoda Co. Paper would be desirable. Adjacent landowners to be contacted.

7. Preparation of Area for Burning:
- Line to construct (kind and chains) Single plow furrow around perimeter
 - Existing natural or existing line (kind and chains) M-33 - 2 chains
FR-4467 30 chains
 - Snag felling necessary? No If so, where and how far from line? There are a few along the cage but most were eliminated in the harvesting operation.

8. Firing:
 a. Starting time at daymid afternoon Hours to complete 3 to 5
 b. Method(s) of firing See attached map. Prepare backfire against wind and head fire across when save burned out zone is provided.

9. Detection Needs for Spots and Breakovers Utilize aircraft & observer to locate spots

10. Crew Organization:	11. Water Supply Source
a. Crew size _____	Ranger Station in Mio _____
b. Overhead organization (by name):	
Fire Boss <u>Ranger (or delegated)</u>	
Sector Bosses _____	
Crew Bosses <u>YACC crews w/hand tools</u>	
Firing Boss <u>Forester WL Technician</u>	12. Communication Needs:
Pumper Boss <u>Salv Prep Tech Salv Adm Tech</u>	a. Mobile radios <u>5</u>
Tractor Tanker Boss <u>(2) Fire Tech TSI Tech</u>	b. Portables <u>7</u>

13. Equipment Needed (How many?):

a. _____ Dozer	e. _____ Stake trucks	i. _____ Drip torches
b. _____ Tractor/plow	f. _____ Power saws	j. _____ Fuel
c. _____ Tanker wagon & pumps	g. _____ Portable pumps	k. _____ Other _____
d. _____ Slip-on tankers	h. _____ Hose (size _____)	

14. Special Precautions to Prevent Fire Escaping to Private or Other Lands
Tractor & plow to follow each torchman along the line to put furrow around spots. YACC crews with hand tools to be 100' outside lines to look for spot fires.

15. Suppression Plan if Fire Escapes Dired attack - 2 tractors & power wagon ACC crews to be diverted if needed.

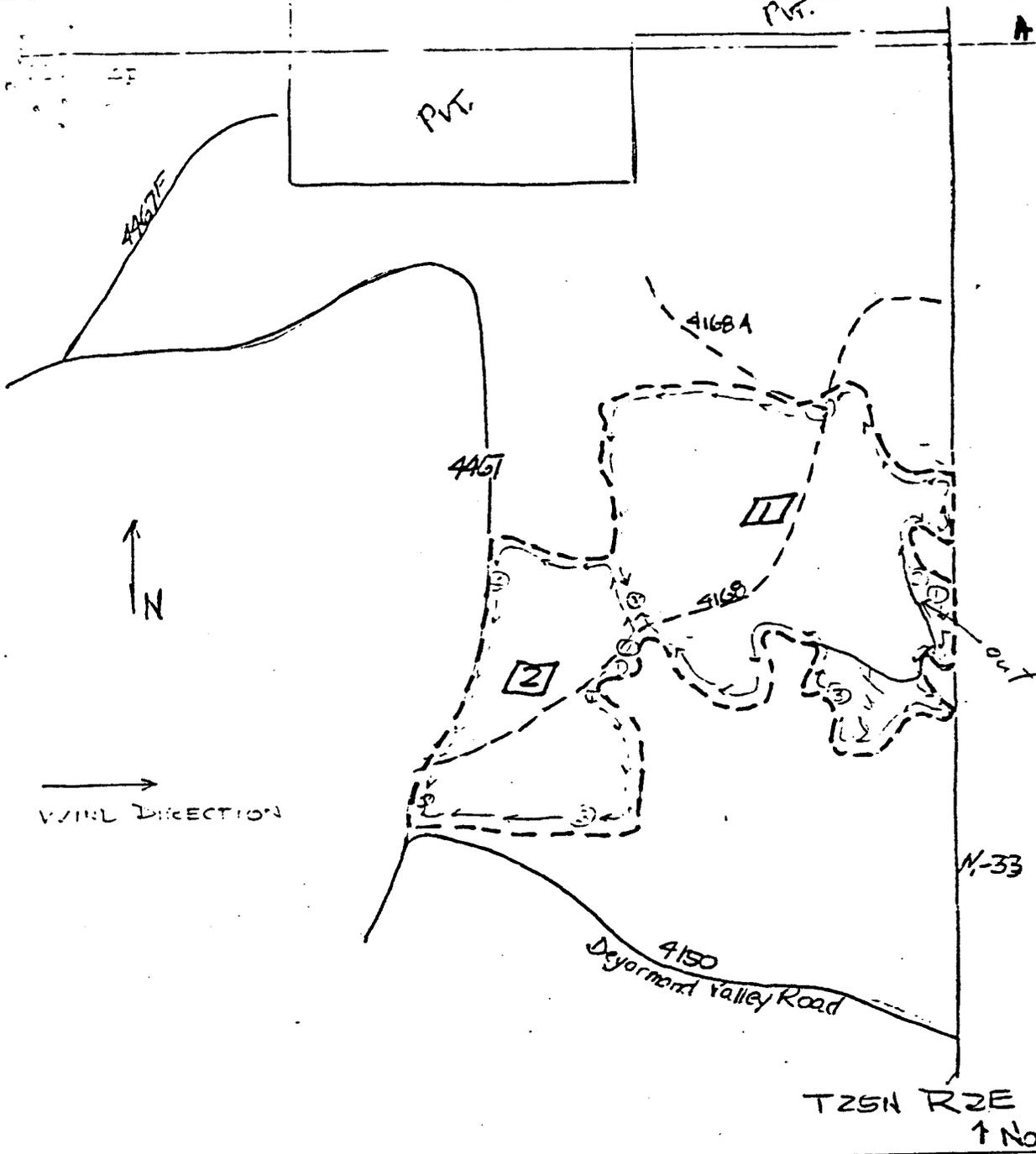
16. Patrol and Mopup Plan Powerwagpn Crew to remain until dark. Patrol following dark plus mop up.

17. Correlation with Research or Other Agencies DNR in Mio to be informed. Also Sheriff & State Police. Traffic control on M-33 may be necessary when smoke is close to the highway.

18. Erosion Control Measures Needed After Burn None

19. Multiple Use Coordination Check (initials):	20. Special evaluation or analysis for Wildlife																														
<table border="0"> <tr> <td></td> <td><u>RD</u></td> <td><u>SO</u></td> <td></td> <td><u>RD</u></td> <td><u>SO</u></td> </tr> <tr> <td>Engineering</td> <td>_____</td> <td>_____</td> <td>Timber Mgt.</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Fire</td> <td>_____</td> <td>_____</td> <td>Watershed</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Lands (forage)</td> <td>_____</td> <td>_____</td> <td>Wildlife</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Lands (usage)</td> <td>_____</td> <td>_____</td> <td></td> <td></td> <td></td> </tr> </table>		<u>RD</u>	<u>SO</u>		<u>RD</u>	<u>SO</u>	Engineering	_____	_____	Timber Mgt.	_____	_____	Fire	_____	_____	Watershed	_____	_____	Lands (forage)	_____	_____	Wildlife	_____	_____	Lands (usage)	_____	_____				(soils, wildlife, etc.) need <input type="checkbox"/> before <input checked="" type="checkbox"/> after <input type="checkbox"/> prescribed burn.
	<u>RD</u>	<u>SO</u>		<u>RD</u>	<u>SO</u>																										
Engineering	_____	_____	Timber Mgt.	_____	_____																										
Fire	_____	_____	Watershed	_____	_____																										
Lands (forage)	_____	_____	Wildlife	_____	_____																										
Lands (usage)	_____	_____																													

Prepared by	Signature and Title	Date
Reviewed by District Ranger	Signature <u>James H. Reyer</u>	Date <u>6/20/78</u>
Reviewed by Fire Control Staff Officer	Signature <u>[Signature]</u>	Date <u>6/21/78</u>
Approved by Forest Supervisor	Signature <u>[Signature]</u>	Date <u>6/21/78</u>



LEGEND

- H Fire Boss Hqtrs.
- Burning Unit Boundary
- Plow Line
- X-X- Disc Line
- O-O- Dozer Line

- W Water Source
- ① Firing Order
- ② → → → → Direction of Firing
- Wind → Wind Direction
- ↔ A ↔ Sectors

Acres to Burn 210

Use standard map legends for other features.

Scale: 4 Inches = 1 Miles

Date prepared 6/10/78 Initials R

22. "Prior to Burn" Checklist:

a. Day Before:

- Weather forecast favorable _____
- Necessary lines constructed _____
- Adjoining landowners notified _____
- I&E work finished _____
- Cooperators notified _____
- Crews notified _____
- Equipment ready _____
- Camera available _____

b. Day of Burn:

- Pertinent crew-briefing points _____
- _____
- _____

23. Summary and Evaluation Immediately after Burn:

- a. Date burned _____ Time set _____
- b. Rain - _____ days since _____ inches of rain.
- c. Acres burned _____ d. Cost _____

e. Person in charge _____

f. Weather factors:	At start	During Burn
Wind direction and velocity	_____	_____
Wind behavior	_____	_____
Temperature (dry bulb)	_____	_____
Relative humidity	_____	_____
BUI	_____	_____
SI	_____	_____

Rate of spread average during major part of burn ft/min.

Back Fire _____ Head Fire _____

- g. The objective was was not was partially met because (also include unusual conditions, such as spotting, fire whirls and etc.) _____

24. Attach special evaluations or analyses made before or after burn.

Evaluated by (signature and title)	Date
------------------------------------	------

25. Evaluation and Recommendations after One Year:

The objective was was not met because _____

Examined by (signature and title)	Date
-----------------------------------	------

ORGANIZATION CHART
 CRANE LAKE PRESCRIBED FIRE
 MACK LAKE FIRE 5/5/80

<u>Name</u>	<u>Fire Assignment</u>	<u>Fire Qualifications</u> (1980 Red Card Rating)	<u>District Position</u>
Thomas F. Bates	Fire Boss	Fire Boss III	Forestry Technician
James L. Swiderski	Fire Plow Operator	Squad Boss	Biological Technician
Michael W. Harnois	TTO (1,000 gallon 6x6)	Squad Boss***	Forester
Thomas C. Hahn	Crewman (1,000 gallon 6x6)	Squad Boss	Forester
Aurelio Marzolo	TTO (125 gallon 4x4)	Firefighter***	Forestry Technician
David Batavia	Crewman (125 gallon 4x4)	Firefighter	Forestry Tech. (Seasonal)
Richard O. Lord	Firing Boss	Crew Boss*	Asst. Rgr. ORA
Vendal E. Bosman	Firing Team Member	Squad Boss**	District Ranger
Tom Sadler	Firefighter	Firefighter	Forestry Tech. (Seasonal)
Gordon Haase	Firefighter	Firefighter	YACC Crew Leader
Greg Stevens	Firefighter	Firefighter	YACC Enrollee

*Physical Fitness Score 33, not qualified for Firing Boss

**Physical Fitness Score 39, not qualified for Squad Boss

***Licensed for all wheel drive

TTO = Tank Truck Operator

ORA = Other Resources Assistant

YACC = Young Adult Conservation Corps

APPENDIX D7
17①

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Mio Ranger District

REPLY TO: 6740 Personal Protective Equipment and Clothing

May 14, 1980

SUBJECT: Fire Clothing worn by Personnel -
Crane Lake Prescribed Burn



TO: Chief

Protective gear worn by Personnel on Crane Lake prescribed burn:

Mike Harnois: Fire shirt, pants, gloves, hard hat, and
fire shelter *

Tom Hahn: Fire shirt, gloves, hard hat, goggles, and fire
shelter *

Randy Marzola: Fire shirt, hard hat, goggles, gloves, and
fire shelter *

Tom Bates: Fire shirt, hard hat, gloves

Dave Batavia: Fire shirt, pants, hard hat, goggles, and
fire shelter *

Tom Sadler: Fire shirt, pants, hard hat, gloves, and goggles

Ven Bosman: Fire shirt, pants, hard hat, gloves, and goggles

Gordon Haase: Fire shirt, hard hat, gloves, and goggles

Greg Stevens: Fire shirt, hard hat, goggles, and gloves

Dick Lord: Cotton pants, fire shirt, hard hat, and gloves

All personnel not wearing fire pants were wearing cotton
field uniform pants except Greg Stevens who was wearing
jeans.

* Fire shelters were in pumpers that these crewmen were
operating.

Vendel E. Bosman
VENDEL E. BOSMAN
District Ranger

*5/22/80 In telecon w/ Ven Bosman
today he said "pants" means
fire pants. Where no pants
are mentioned it means cotton
field uniform pants - except
Stevens, who wore jeans.
R. W. Smith*

APP. D7, pg. ②

APPENDIX D7
pg. ②

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Mio Ranger District

REPLY TO: 6740 Personal Protective Equipment and Clothing
SUBJECT: Fire Clothing - Floyd Moore, Contractor
TO: Chief

May 14, 1980



Floyd Moore while he was operating his tractor on the
Mack Lake Fire:

Hard hat, leather gloves, long sleeve cotton shirt,
heavy cotton jeans and high leather boots.


VENDEL E. BOSMAN
District Ranger

Received
5/16/80
JWB



MAY 9, 1980

I, WILLIAM N. BAKER, OPERATED THE
MIO TRACTOR #2690 ON A FIRE CALL
ON MAY 4, 1980. THE FIRE SHELTER
WAS ON THE TRACTOR AND SECURED
BEHIND THE OPERATOR IN AN AREA OVER
THE LEFT SHOULDER.

William N. Baker

WITNESS STATEMENT

TOM BATES

(Investigators Questions)

Starting with the beginning of the prescribed burn, I'll try to recall everything that took place the morning we started the burn; the whole step by step. The area we were to burn was approximately 200 acres. On my sketch here this is Highway 33. These are timber access roads, that one being blocked off and the other going around up into another unit. Most of the sale is obviously not shown; it lies back to the west like this. We were gonna burn it off in sections between these roads. This road goes on out and comes out down below on another road. In blocks that is, moving along as fast as I felt the weather would allow us to do. We had prep line in. The plow lines were in. This road served as a real good break and gave us probably about a 40 acre increment. The next was figuring about the same, I guess and the last one biggest of all. The idea was that we were going to burn, depending on the winds, either this ^South unit first and then this one. What we have been doing is just burning the perimeter, the plow line out and then doing a perimeter fire, rather than any strip burning. I don't feel we have had conditions yet where we have had to do that and it has worked well. So anyway, we had a southwest - west wind shifting to northwest forecast and, number one, I intended to drop at this point, and again down here a bit., a 300 gallon rubber bladder tank for refill for the tanker on Sunday previous to burning. On Sunday we had a wildfire that started kind of late in the afternoon and we didn't get in till late, so I didn't get that done. So the first thing Monday we wanted to start burning at the earliest we could, like 9:00, to get these lines burned out to cover as much ground as we could before we got any substantial winds. I had Mike Harnois and Ton Hahn go out and spot these two tanks that fill our 1000 gallon pumper and gave them instructions to fill it,

refill the tanker, come back and we'd start. That turned out to be a delay - oh probably a delay of an hour at least - and so we ended up, equipment wise, with a 1000 gallon 6x6 and a 125 gallon 4x4, tractor plow, and lets see, one YACC crew leader, one YACC'er and one timber crew type person - those three people were our line ~~con~~^{PT}trollers looking for hot spots. We had two people on our 125 gallon slip on and two on the big pumper, so we were shorthanded. We had three folks over at the law enforcement school. Anyway, it didn't seem like a problem. So about 10:30 we took some weather documentation the first one around 9:00 or 9:30 (It's recorded on the form check list for the time), but as I can remember we had a 10 mile an hour wind and a 37 relative humidity. I took another one about, oh just after we started I had it written down and I didn't have time to compute. I got busy doing something else but the humidity was up because the wet bulb was up. So anyway we started, there was some heavy slash, actually there was some old plow lines. Ven wanted to not burn up quite as close to the road. We had a training session, a joint district training session, last year in which we did some tractor plow work - well you guys were over here. That the same spot, that's were we started; right, that's were the burn was. So we had really some built up back up lines in here. They didn't go all the way. I think they pooped out over here (NOTE: showing the south end of the area) but was quite alot of heavy slash right reasonably close to the line, so we started with that just started firing the line and on the Lee side of a couple of piles. As it moved along slowly this kind of dropped down into a little low spot, came up on a hillside coming around this point. Dick Lord and Ven were doing the firing. We had one little spot over down here and another slop over down here. Then we had, right up on the point here on top we had some slash within these two lines as a result of our moving our plow line perimeter back. So as you came on top of the hill this was 11 atanding timber, mostly jack pine. We lined it and ran the pumper through there and then moved on out to here which wasn't any problem. About this time 5-5; a Chevy ½ ton

3.

4x4 with a 125 gallon slip-on, had been cooling off this slop over and had a brush pile inside of it (and so I had to move around.) This was very sparse in here not much slash at all. It was just no problem to walk through even though it had been burned. So I told Randy I wanted him to move around into this opening, it was kind of a draw that came down through here. It was a natural gap and then the bank started up again here and this was a cut in the highway probably, oh 15 to 20 feet high, and told Randy to just slip down, suggested that he come back out to the road. I said why don't you just go ahead and slip down here, its really easy going (there was the two of them) and come around over here and Ven probably had the fire until about this point at that time. So I went down the line to check it and started off in that direction. I asked him (~~Mike~~ Randy ^{T.B.}) how they were doing for water. He said he had a $\frac{1}{2}$ tank. Let's see. I can't recall exactly at this poin, I must have gone back through here to check where this slop over had been. Yeah, I think I did. I got back up in here and watched them working on this spot. They had that knocked down and no problems, just real light flash fuel. Randy had started around and I was expecting to see him. Well he got hung up on a stump down in here. Uh, my time frame I think is off a little bit. What I had done, I hadn't gone back yet. I had gone around here to talk to Dick Lord who was waiting to fire this out here, and Randy got hung up on a stump, so I told him to run up and get Jim on the tractor to come down to pull him out. This was no problem yet because we hadn't started the firing on the backside. So I could see he got him off, then I started back up around and told Dick to go ahead, because I can remember, and start firing this off, using his own judgement on how fast to fire because I consider him a capable person. Then I went back up in here and saw how they were doing and then I dropped off. They were still firing up to this point. This drops down the hill; this is kind of a notch. I didn't see the 4x4 and I got down over about here and its sitting about of ~~the~~ 100 feet from the road and Randy and Dave Batavia had the hood up. They said it just quit and it was dead; it quit and they couldnt get it started, there was no starter engagement. And Dick had, in

Bates

4.

Bates 4

At the same time, started firing this back side and was oh perhaps and Ven, had continued up around here. At that point this was a concern, because Dick was hidden and we couldn't see this truck and he didn't know they were there, I didn't know they were there, and they hadn't indicated that they had any problem. So we had fire probably in here and it was not a, you know, a hard wind a steady wind. It was just kind of, it was this way a bit, mostly to the ~~west~~^{EAST T.B}. Well I was concerned..(To the east?) Yes to the east. I said, start checking out your wire to see if you pulled something loose under there and I jumped up and looked in their tank, because I felt quite like you might have to burn it out to save the truck, and the tank was dry. So we had a failure on how much water we felt we had. Actually they thought they had half a tank because they hadn't done any pumping. (What was the distance from there to the truck?) OK, I'm not following you. (How far was it from where the fire was, about now to where the truck was stuck?) Oh probably 5 chains. It was not making a frontal move towards the truck, but it's mere ~~pressure~~^{ANCE T.B} had me alarmed. Especially when I saw the tank was dry. So I kept trying to get it started, and I was going to call Jim and tell him to bring the tractor down and get this thing pulled out. Which I did. Then started back around and he was plowing in the spot up here. I thought, to make double sure, so that we don't have to take him off the line, I'll get the tiltbed and bring it back here and put a chain on it and pull him out. By the time I had got up here, Ven said it had come alive here and spotted over. Anyway, we had to deal with some real strong activity up on top of the hill and so I got in Randy's pickup and came up to this point and the big pumper was just coming out and that just run right to the top of the bank and was ~~crowning~~^{Torching} out ~~A couple of~~^{T.B} trees there and had just started to sneak down the bank on the lee side. So we knocked it down with 5-2, the big pumper here and had Gordy and his two people go across to watch for spot fires. They picked up one

What was starting to get a little size on them, I asked 5-2 to jump up here and get a hose on this and secure it, which they did. And in the interim, they got this rig started ^(The 4x4 7.0) and the tractor plow came up and plowed this one in, and had another little one start right here. Dick advised about this time that the Chevy should go to town to refill and try to get on top of the electrical problems. Well I guess we didn't have this spot yet. We didn't I'm sure of it. So I said OK. So they scooted off to refill and then this spot showed up -- right here and I asked Jim to come on down to catch it and 5-2 to move down on it, which they did. At that point, the tractor with Jim probably due to this gap in here, it was starting this kind of stuff, i.e. run east and northeast and Jim started to angle off and 5-2 was coming behind him, that's the big pumper. I thought he was pointed right, kind of at the base of the fire and I stopped him and I said give it lots of elbow room don't crowd it, the pumper is right on your heels. So he slid off more this direction, north easterly, and as best can recall Ven was with him with a radio. Yeah, I know he was. They began and disappeared into the smoke and 5-2 behind him, up the cut bank - not on this side well yeah, the cut was up in here, (NOTE Showed a location south a little along highway) At this point it had flattened out, so he actually, he didn't go up a bank he kind of went right into a little depression and it flattened out. And visually that's the last I saw them. This was not doing a whole lot here it was in the lee side of this hill and it was moving to the north a little bit. But Gordy said this was , I felt they wouldn't have any problem catching this one. I think one mistake - may have been a mistake, may have not - they anticipated that he would have dropped, and this is Jim's lack of experience because he hasn't had ^{Much F.O.} ~~any~~ on a going fire) that he wouldn't have it like this, that he would have swung around cause you know just swung in and plowed it in. Cause at that point it could have been done. It hadn't just picked up the punch. (He got in to close to soon?) Well, he gave it some lee way here and you know, and then what happened I don't know, but then all I can try to do is remember radio traffic. They didn't get in too far before the fire jumped the plow line and I

think that 5-2 picked that up. But if -at this point it just went bananas; it just really went bananas. For as small acreage wise as it was it really wasn't big enough. Of course, at that same point too, we had influence of this kind of a funnel through- through this little notch and we did have a marked, well I'm sure that is why we lost it up on top- A very sudden marked increase in wind gust and then on it just really started to march, principally to the west, or I mean to the east, with some movement back to the north and I can remember them being out in uh, they hit a powerline, - cleared powerline - at some point out there and you know everyting there is fuzzy. They just weren't doing any good. It had gotten too much a front and I was busy trying to get support from the districts. OK then we started getting the volunteer fire dept. to hold here, and I went up to the next east-west road(489)and started in east to get a look at it. And, this is pretty open, this is a replanting, trees maybe 3 or 4 foot high hack pine, and the fire was really walking headed for Mack Lake. I went down a couple miles on 489 which drops down a 1/2 mile and swings on to the east past the Mack Lake campground and then right in here it hooks right around the lake where the houses are. When I got down here there were people and cars down here I had to chase their butt out of here because this thing had just gone. Got down to the corner stopped the volunteer fire department. There was an old guy on it that was really, you know, one of the Mack Lake people. Had me worried just because of his age and his excitement. Ok, I talked to him and he didn't know where to go; he was looking for his other truck, and then we could here them coming. So it appeared as though it was going to spare Mac Lake at that point it just started swinging to the north and east and it spotted across the road and started in here and then that baby just kind of turned sideways and came in and there was spots by the time I turned to ^{The T.O.} corner here. I started down to see if everyone was out of there. In the meantime Barbara had advised that at some point past the Sheriff's Department had evacuated every body from Mack Lake. But you know they tell them to get out but they're till in there; and you know, they're still trying to come out. And I

They still want to see the fire; they want to see the flames even though they are leaving. They don't want to leave without seeing them. And that's no kidding. Okay this is just starting to spot down in here already; and so then I pulled over-the Mack Lake Fire Department was right behind me and he said they were going up and see if they could do anything with the houses. I told them to be careful. In the meantime I had some radio traffic with the Mio DNR tractor-plow unit. He had one of our portables, and he had come in - not sure where he unloaded; I never did see their truck, but he ended up just right at the Old Mack Lake ranger station site. Later I saw his plow lines heading out for the lake. He got hung up on a stump and I was asking him, you know where he was and I heard him say he was hung up on a stump and then the radio ----- Well that bothered me a bit, the way things were going. So I called the Mio tractor, Swiderski, to see where he was so that I could pull him off so we could get some effective line work going over on this side. And I couldn't get him. So at that point I thought, it has been 3/4 of an hour since I knew he was okay, and so I can't recall who I mentioned first about not hearing from Jim and that was my first, when he didn't respond, sense of alarm. And I don't know who tried to reach him at my request, I can't remember that. So I went on out through Mack Lake and came on, - well I met Tom Striker, who had come in from Harrisville District down here and we kind of saw the last of them out and came out at 604 and Eggleston Road here, with the idea that - and I told him I wanted him to be in charge of the southern division and I was going to put Dick Lord in the northern division and try to stage, right here, equipment coming in. At this point the fire was going like, this nearly a mile, 1/2 mile from 604 and not moving on but with it. So, let's see, I went back down in fact Tom and I went back down. There were a lot of people here saying, you know, there's people still in there, so we made a stab at getting back down in here (actually up, toward Mack Lake) and by this time it had swept across and there was just no way. So I came back out, I left him there, Tom Striker, and he got his gear and radio out of my truck and put it in his car and he was going to start staging things

Bates

8.

Bates 8

things there for work on this side, because we had, we didn't know what we had coming. We knew we had heavy equipment coming or in the process. OK I can't recall if I went I'm sure I must have gone back around, as, in the interim I had gotten hold of Randy and I can remember asking cause I wanted him to take a rig down to Dick Lord who was, ah hooked up with a cooperators tractor plow (Floyd Moore) and they had started plowing somewhere in here and we were plowing this north flank. I told Dick I wanted him as quick as Randy got to him with the truck to pull off from Floyd Moore and we would put whoever with Randy and Floyd Moore. I wanted him (Dick) to get mobile as a Division Boss and getting this back together on this side. And I asked Randy, also to see if he could locate Jim, because we still hadn't heard from him. And so, I met up with them all where they transferred Lord to the truck and the plow (Moore) took off again. This was a mile east of here - with a new man. Randy went back with his pickup, which left Dick with a 4-wheel drive Chevy pumper, with instructions from me to start following that plow line, get whatever help he needed, to find Swiderski, because I felt at that point he was in bad trouble, Because (You felt what?) Jim was in trouble. (I see) Or had had it one of the two. (What time do you suppose that was, any idea?) Oh probably I'll just say one o'clock. (That was your first real gut reaction?) Well, it was my first real gut reaction that we weren't going to see him again alive because Jim is a real - I've got to get myself together here - cacluating person. He is not an impetuous person that would have gotten run out and gone back in and tried to pick it up, you know. like some you know, like Dennis Anderson ~~_____~~
~~_____~~ T.B. He would have gone out to the road and that's

9.

ere he would have been until he got hooked up with someone else or got an assignment. And there was just too much time had passed, quite simply. If it was, you know, someone like well, some people you know, someone that just uh, there's no keeping them out of there you might not have been so apprehensive, but I just really felt it was bad news. And from that point on I was just ... I'd talked with Ven, he was in Patrol 7 by this time. Oh, OK I can't quite pick up the sequence, but we got Ven a ride. Ven came back out, that was it, I forgot that, Earlier when he started in with Jim and he had been in here with Jim and 5-2 and then he came back out and we kinda evaluated the situation. He felt that someone should get up in the air- Patrol 7 was in the air by this time. So we stopped the car and he got in and they took him to the Mio Airport to hook up with ^{PATROL T.P} 5-7. So I asked Ven here after, at some point after Randy started back that way, if he would see if he could contact Swiderski because this is maybe another 1/2 hour had passed. So he tried visually to spot it, but there was too much smoke there yet,

ldn't get a response and he just pursued that until he finally spotted the tractor - burned up. ^{DON'T KNOW WHAT THIS MEANS T.B} (And that's about all that's right on top) OK? (How did they get the truck off the stump?) With the tractor. (OK Over there on the west side?) Yeah. There was I guess it's the same old story in retrospect, a pattern of failures that ultimately led up to -- Usually you know, you can absorb the small failures and things come out alright but on the wrong day you can only absorb so many and the cup runneth over and it doesn't work out. (Did you ever use those bladders of water that are down there?) No. (You had two bladders put out there, right?) You never did use them?) No. This is a sure failure on my part, was that I didn't insist they refill here rather than leaving. Things weren't that bad at this point that I held that truck. I just used Dick's judgement that they should go go Mio to refill in order given that nature of what the problem was. But that's you know, what we had them there for to just save time cause - oh theres a pond up by that Restaurant. That's a good refill spot. But this was no time left. (Tom, this Moore, you said you started him in, where did he start?) Well I didn't start in, Dick did, but he started coming in from the corner of 33 and 489.

I'm not sure where they unloaded to work. But it must, Dick must have held him in well because that held. (Was that on the north side?) Yes. (Was it north of the powerline?) I can't relate it to the powerline. (OK) I never saw the powerline. (Oh, OK The powerline didn't come right out to the highway?) Well, if it did, I don't know where it is. (Did you say that line held?) The plow line? (Did that hold?) Yes. it held. Oh, it may have all as I know, it held. Of course by this time we had - the fire wasn't really confronting the line, it was moving with it. And then, you know, it started moving under the northwest influence. (garbled) -

So that it was ^south of the plow line south of 489. (It would be the northern?) It's the existing northern perimeter of the fire. When Ven left to go - I forget. He was with Jim for a while and then he left. yes. (Did you know he was leaving at that point?) No. I didn't know he was until I saw him back out on the road. (Was it at that point that you flagged down the car or something, and he went up to the airport, or did he go in town and come back?) No, he caught a ride and they took him. We had called Patrol 7, directed them to the airport to pick him up. As far as I know they took him directly to the airport. (And when he left to come back, the 6-by was with the cat?) I'm sure that's right from the best I can remember radio traffic. (Did you ever hear those two, the cat and the 6-by talking?) No. No, I can't, uh, the only ^sconversation that I can remember I was between Ven and I and was describing the powerline clearing as a good spot to try hold that plow and water. And then I think it probably wasn't very long before he realized that, no way, and he came out to get up in the air which I thought was sound too, because we were limited there to what the fire was doing. (In the organization, really what you had to fight the escape fire was what you started with with the prescribed fire that's right?) That's right. (Where did Jim fit in that operation?) Jim was the tractor operator from the beginning. (Ok I've been working with him putting in plowing in - well he plowed in the Crane Lake sale and most of the Jenkin Road Sale and most of the Hughes Lake sale probably in the last two or three weeks we've been gettin them ready and I've been working with him. To get experience. Because we don't have Bill Baker, who's seasonal fella, is our only other qualified, or experienced and qualified operator, and he was at the law enforcement school. Bill I would have had Bill on the tractor if he had been available. (Jim had been on some going fires with the tractor?) He was on the Pendus Fire that we had that was about

11

150 acres a couple weeks ago. (Then this work that he was doing in the previous three weeks was just getting ready for these burnd?). Right. I felt comfortable with him. I told Ven, well after the Pendus Fire, cause we were plowing at that time that started. He seemed to have good judgement and good feel for where he should go and where he shouldn't go and so I was not uncomfortable with him in this situation. (Where is that radio on the cat? Is it located in a little deal right behind the operators head?) Right above the operators head. (Sets on a little box or something?) Yes, it has a power speaker. (On the canopy?) Yes. (How does he transmit?) He reaches up and removes it, just like a dash clip. (A regular mike?) (A mike that comes off?) Yes (You didn't hear any traffic between him though and the 6x6?) No. (Radio in the 6x6 working ok?) Fine. (Radio in the cat working ok, because you had communications over on the left side there?) No radio problems. Unless there was a radio failure. But I don't think that was the case. (That doesn't mean that they didn't know each other was there. Well the indication we got was that the 6x6 worked behind him for awhile then passed him and worked in front of him for a while. So they would have to be in contact, at least visual contact, with one another for sometime?) (He would have seen him at least go by?) Yes. (What happened to the six-by after?) I don't know. I haven't talked with either Tom or Mike about what actually happened. At some point in time they obviously got the hell out of there. When that was or where Jim was when that happened I just don't know. (The weather, Tom, wasn't deteriorating or getting any worse after two tries at taking it and that sort of thing, so in your mind the weather was getting more conducive to a burn rather than getting more of a problem?) Yes, I didn't feel the weather was a problem. You know without looking, I'm sure we were in the guidelines of the plan. Except perhaps right at the end of the "perfect day" that it would have got out up here. I'm sure it got out because of some very definite wind gusts that hadn't been a problem to speak of before. (These brush piles involved the way they were?) Yeah, there were piles - to reemphasize this was our fire line we were working with. We had put in, in this training session last year, some lines closer to the road. I think either two or three, just for practice, which were on the

Bates

12.

Bates 12

the boundary which were taking in all the slash and they were - what it also did was eliminate some, as I can remember, some reproduction, some screening and some stuff Ven wanted to save for aesthetic and natural regeneration purposes so we bumped back and relocated a little bit. I think the slash, as best I can remember, they were all from the hill, where it got out up here, back down to the two track entrance. (Was there a fire shelter on the tractor?) I don't think so. (Did Jim have one on his belt?) I don't know that. I just don't know that. It has been a practice. We had one on with a bungy cord all last year. We've had that tractor apart this year putting on a new plow and the hydraulic lash-up in the back and moved the lights. The tool carriers have been off, their back on now, but they I don't think there was a shelter mounted on it. I don't know whether Jim - I don't know. I tend to think, you know, that he's the kind of guy that would have. I also, he's the kind of guy that would have tried to get inside if he'd had one. (How was, how would he have made out in that type of terrain in a shelter?) I don't know how far he was from the tractor. I don't know how far he got or I just haven't heard anyone talk about it yet. I would think he would have time to get in it. I don't know where he was when he was overcome. I never penetrated that area. I was right on the road. The other guys were either wearing or had three, normally we carry a three-man crew on fire, the big pumper. There's three of them mounted in there. (They have them on their belts?) I can remember they're mounted right behind their head. I remember Mike strapping one on at some point in time yesterday. I think it was him. I'm sure it was him. I wouldn't put one on myself if I was in the truck, it's too awkward to get in out of the seat all the time. It's really handier right where they're at, that was the idea- you could just snatch one and rip it open if you needed it. (What about his physical condition?) I don't know anything but a plus, I think he's quite lean, in good condition. Good man. (Have any illnesses you know of?) No. I think anyone that passed the step test was in good shape. (Was he active physically?) I'm kind of not really in touch with that because I've in Roscommon so we don't I don't see anything of these fellows. But I would guess he's very conservative, you know, real bachelor, I see these things you know because I, you always like when you have a

God lunch, you know well balanced lunch. This you know well wrapped put together. This kind of tells you something about his character, his personal gear and his desk, he just had things together. (Have you ever been to his house?) No (You asked Ven to go out with him?) I don't know whether I asked him of if that was just taken for granted he would and should be in there. I can't remember. Taken for granted because we would want a man with the tractor. Ven, from an initial attack standpoint would want to know what's happening, but I can't recall saying, you know, take Jim in there. (Did he seem to like what he was doing?) Yeah, I talked to him as he was coming along, I told him I felt he was really competent (Not just the tractor but the job, yeah, he really was into it, you know, he loved his work. It meant a lot to him. He was really fussy about it. How it was done, what was accomplished etc. I don't know all that he does but just, you know, in watching him operate I can sense that. (what kind of training did he have for that job - a standard course, how did he get to be a tractor operator?) Last, I don't, I'm not aware of the standard course. Last year he started getting some tractor experience in his wildlife projects where they had some dozing to do. So he got in you know, about 40 hours. (How did he start out - just get on the machine?) No, I worked with him a bit in the beginning, and Gary Long was a YACC crew leader - was with him cause I think they were using YACC people too, so he was a qualified operator. Jim had a license and Gary worked with him a while and, I can't remember if there was anything beyond that last year. He's been running the 4 wheel-drive wheel tractor with his discing projects and this year really the prep work was the first training on simulated firefighting that he had. He probably put in 16 hours of operating and then about 3-4 hours on the Pindux Fire operating. (You're an operator too - qualified operator, tractor operator?) Yes. (Is that written on your SF-46?) Yes. (Could I see yours?) Sure. (To verify the records - not that it helps you, but if anybody ever does ask why I can say yeah, I saw it. Bill Gardner signed off on that. '77 good thru '81, pick-up tractor, trucks, 43,000GVW, tractor-crawler.) Now Jim wouldn't have had his license stamped yet because he hadn't completed all the hours necessary or he hadn't applied for it?) I'm not sure, I think that Jim had been in contact with Don Stagg about having him come over and license him. That runs in my mind, and I'm not sure whether it ever happened or not. (Don Stagg is the C & M Foreman on this side)

Tom Bates

WITNESS STATEMENT

VEN BOSMAN

(Investigators Questions)

(I guess just explain to us what happened) Okay. (What you know about it from a conversational approach.) We started the morning with an updated forecast to do the prescribed burn at Crane Lake. The prediction was for wind shift between 2:00 and 4:00 PM but we had 10 mile winds from the west and we took the temperature, relative humidity, and wind speed at 9:45 before we started the fire - the prescribed burn at Crane Lake. It was going good for about the first hour from about 10:00 to 11:00. Then about 11:00 it started to spot along the line, over the line once to an uncut area. We contained that and we were working northward parallel to 33 burning out the line and when we got at the north end of the strip before it turned and went west away from M-33. There were some slash piles fairly close to the line we were burning out, but about 3 chains to 5 chains from M-33 were free of slash, I guess 3 chains maybe. I think when those slash piles started burning they picked up sparks that the wind carried across the road. That is how I thought it ignited across the road. We had some spotting in the grass between the slash piles and 33 but we had our 1000 gallon pumper right there and we had Tom Sadler on the ground on foot with a portable radio looking for spots. We had Mike Harnois and Tom Hahn with the pumper and they were putting out the spots, plus we had the tractor there. (This was on the east side.) No this wall all on the west side of the highway cuz there was room between the prescribed fireline and the highway. Probably 3 chains between the highway and the prescribed burn line. (Ven, excuse me did you say the fire turned and headed west?) No we started firing west. The prescribed fireline was running west. OK so those were the people we had there at the head of the back fire in the prescribed burn. What happened then, there was a vehicle hung up and I'm not sure which one it was, but it was back in the interior of the cut area that we were going to burn and so Swiderski was driving the tractor and he was

sitting there adjacent to where we were back burning when Tom Bates called him to go pull out that vehicle. So he went west and he was gone from the area when the fire jumped M-33. Ok he was out pulling out that vehicle. The tanker then was working the area between the prescribed burn line and M-33. I wasn't there to know exactly how it was burning on the other side of the road, cuz I was in to the west along the prescribed fire line and then I heard Harnois and Hahn say it spotted across and then 5-4, the tractor Swiderski was operating came from pulling the vehicle out. (Was Swiderski alone in the tractor?) Yes he was alone in the tractor. No one was working with him and so when he came up by me then I went with the tractor. The fire had crossed the prescribed line at the north east corner of the prescribed burn into the uncut area on the west side of the road. I don't know what was happening on the east side of M-33. Swiderski was plowing a line in a northeasterly direction along the fire that had spotted north of the prescribed burn west of the road so I went along behind him. I got out to the road and Tom Bates was out there and Tom said 5-2 was over on the other side of M-33 picking up a spot and so I guess after he got out to the road I let him go cuz I wanted to see how that line was holding behind me. It jumped the line he plowed so I couldn't do anything with it so I got out to the road. In the meantime he had gone south apparently along 33 and worked in conjunction with the pumper on the east side of M-33. He had crossed the road and I wasn't appraised of the situation on the east side but Tom said they had worked the south side of the spot with 5-2 and 5-4 and Swiderski was going to come around and run around the north side of the spot on the east side of the road. OK when Swiderski came along on the shoulder of 33 on the east side, Tom said why don't you go with him and I said OK. So Jim took off in an easterly direction and I was following him to watch the line. It was more important to see how things were going behind from the south. I don't know where the pumper, 5-2 came from but they came on to his plow line. (One of your district units?) Yes - this is 5-2, our 1000 gallong 6x6 with Tom Hahn and Mike Harnois operating (You're strung out with the tractor followed by you followed by the pumper?) Ok now the tanker came in behind the tractor and then there was a power line there and I could see down the power line pretty good. ran due east and west. Perpendicular to the highway. The wind was from

the west the fire was burning into the east. And so about that time 5-2 was going along behind the tractor, Swiderski, and Jim Davidson from the local newspaper showed up. He asked me a few questions and I talked with him for a few minutes and then I could see that the fire was going to roll on to the south of the line now that they were putting in and Davidson was there and I said we're doing the best we can and it was really starting to cook. Right then it came across the power line to the north. Ok, that's when then I came back to the road, (The fire crossed the fire line?) Yes. It came across the power line, (Was the plow still running north of the power line?) No at that point it was angeling north farther down and as they were working east it was angling north of the power line. (At that point then the fire went across the power line?) Yes at that point the fire was crossing the line. (It was north of the plow line?) Yes, and that's when I returned to the road and I talked with Tom Bates and I was concerned about the way it was going and we had the aircraft overhead and it was Patrol 7 and we had had experience with them on a fire the week before. He wasn't doing us a good job at all because he was a new pilot and he wasn't giving us any information about what was on the ground. It was just nonusable information, so I felt we needed an observer up there with him, I talked with Tom and he said yes you better go. He talked with the pilot and he agreed to sit down at the Mio Airport - DNR strip north of town-mile and a half. I caught a ride with a passing vehicle up to the ranger station. Then I took a pickup truck from the ranger station, got on the plane and started looking at the fire. I don't know when the fire crossed the road, I'd say around 11:30. That's my estimated time of when the fire crossed the road. Yes M-33. (Do you have any idea when you got the ride?) No, Horace it was probably 15 minutes after that--quarter to twelve or so. I didn't hear anything about Swiderski until about 2:00 when Tom Bates called me and said we haven't heard anything from Swiderski, would you take a look and so we tried to follow his plow line. We followed it and it just got so smokey that we couldn't see anything. So we took a look at the fire some more and came back to it about a half an hour later and the smoke had cleared and we got a better look down there and then I spotted the tractor. I could see where the tractor was sitting. (Was that about 3:00 then?) I'm guessing it was in the neighborhood of 3:00. I may be off on these times but I'm guessing maybe 3:00. Marzolo had been sent by Bates to find Swiderski and Randy was wandering around on the ground down there. We finally

spotted Randy and then we talked to him on the bull horn and steered him to the tractor. It was about 6/10ths of a mile in from 33 to the east and on the north side of the power line maybe 5 chains. Randy was east of that -- he was about a mile in from M-33 when we first saw him so we talked him down to the power line then back to the west and up to the tractor. When we were circling around there when the pilot saw the body. So then we talked Randy into where the body was. (How far from the tractor was he?) I'm guessing maybe 5 chains to the north (He was five chains from the tractor?) He was apparently running in a northerly direction from the tractor. Randy told me his stuff and hard hat and various items were strewn behind him. (This is all in the burn area?) In the burn area to the north of the powerline. Randy did give me a set of keys he found and I don't know what they're for. (I bet they are for the apartment, those boys were looking for something like that) Well the keys themselves are useable. (That looks like a piece of leather that got hot, doesn't it?) (Kawasaki - does he have a motorcycle?) No. (This is a FS key, I bet one is an apartment key, the boys are looking for it) I thought I better hang on to them until we get clearance. Randy picked those up. (I'll tell you what we ought to take those and tag them.) Yes. (Where did you pick up the keys?) Apparently just in the burned area near somewhere. (So they were kind of scattered, they weren't right next to the body?) Yes I understand his clothes were completely burned off him. (I asked that of Randy this morning and that was what his response was). (What was he wearing?) He was wearing fire shirt and fire pants, and a hard hat. (Did he have a shelter?) Shelters, I can't verify that but shelters should have been with the tractor. (But he did have the required?) Yes he did. (OK do you want to hold it I have a couple of questions, you measured weather conditions at 9:15 and they were within prescription?) Right. (OK 9:45 alright, you expected to be through with the burn before the wind shift?) That is correct. We had the area divided into smaller blocks. There is about 200 acres there and we had it divided so we could burn 100 acres on the east side of it and we figured that we could get that burned and if it got bad we would just quit. (When was the shift predicted, you said but I forgot?) Between 2:00 and 4:00 PM. (Did it occur about then?) Yes it just came more out of the northwest it was directly out of the west and then it shifted to the northwest. (It must shifted about 3:00 when you..)

Well actually when we could see the tractor it was not so much because of the wind shift so much but because the fire was dying down. (But anyway it did shift between 1400 and 1600?) Yes. (At that time was the fire already to Mack Lake or was it considerably back?) I think it got to Mack Lake about 1:30 or so. (It was that far already by 1:30) It got over there incredibly fast. (It traveled 3 or 4 miles in a $\frac{1}{2}$ hour or less) It sure did, I would say maybe an hour I don't know. (You know what we really need is his diagram of this, I have a diagram Ven drew earlier this morning. (Erickson and Ven review the diagram)

You can see the area within the fire that 5-2 sprayed with water is not burned. Harnois and Hahn said it got too hot for them and they went north, and I asked them if they talked to Swiderski on the radio and he hadn't talked to them. The wind was pretty much out of the west. (How many people were out there?) We'd have to make a head count, I don't have that exact figure now. Approximately 10 but lets make a count, Tom Bates, Dick Lord, Myself, Ton Hahn, Mike Harnois, Jim Swiderski, Tom Sadler, Randy Marzolo, Gordon Haase, a YACC- Steve Perkins, Dave Bataviz. (How did Swiderski get out there, what vehicle did he have?) Tiltbed truck. (Do you know who rode with him?) Dick Lord and he went out to Mack Lake to plow some furrows before the fire for a soil moisture study.

They went out in the morning before 8:00. From there they went over to the Crane Lake Burn. (Did he have a radio and did Harnois have a radio?) Yes they each had a radio. (You had a radio?) Yes. (You were all in touch?) Yes. (Tom Bates was the Fire Boss?) Yes. (Did all of the other fellows have radios?) Yes they all had radios. (The tractor was found before it reached the end of where the pumper thruned north, is that right?) I don't know where the pumper turned north - that's a question mark in my mind. I didn't see where it turned north, I know from talking with Tom and Mike it turned north. (You said the tractor quit?) I saw where i stopped from the air, I don't have any indication if it broke down, I never heard any communications. When I left the fire I left my radio with Tom Bates, his radio conked out on him so I gave him my radio. (Is the tractor pretty well burned?) From what I saw from the plane I'd say its pretty well burned. (What was the humidity?) 37%. (And the wind was 10 mph?) Right from the west. (You think the trigger was the slash piles?) Yes I could see it after we

got going that the slash piles were too close. The slash piles were hauled from the processing area, it was a whole tree harvested area and they took them away from the processing area and scattered them around with a skidder. They were tops of jack pine slash and there were just big loads of them. They had scattered them so they would be out in the burn area when they cut it but they had too many too close to the edge. The rest of the area was just grass, there was grass and then these slash piles. We were concerned about getting that area burned this spring before it greened up cuz we knew once it greened up we couldn't burn it cuz we didn't have anything to carry it between the slash piles. That's why we put the priority on burning that area first. (Once it got across the road it was out side the area?) Right. (Think of anything else?) Questions about Jim - I thought that he was in good health, I wasn't aware of any bronchial problems, I just wasn't aware that he had any. (Far as you know had he said anything about not wanting to be around fire?) No he never expressed anything like that. (He didn't resist taking the STEP test?) No he didn't resist. (He was an alternate on a Regional Team?) I think so. I know he was on a team last year and he was disappointed at he didn't get called to go. (There were several employees who wrote a letter, was he one who signed that letter asking why he didn't get to go?) Yes he signed that letter. There were about 4 or 5 employees in the office who signed the letter. Sorenson, Fox, Harnois, Hahn and I think Swiderski too. They wanted an explanation why this forest didn't send a crew. (Cliff responded to the letter - it was last fire season?) Right. (We sent people 3 times last year, we didn't send anyone from this forest) We sent them 1 week to California. They got on a fire for just a short time. So I think his name is on that letter. (I've got his fire job qualification experience and training record and it showed a rating of 45. Everything is coded, would you have one of your girls write in what the codes mean?) OK. (Course numbers and everything are fine but anybody not familiar with those codes wouldn't realize what that meant?) OK. (Have you ever been to his house?) No I have not been to his house.

Added later:

One additional event occurred that I had forgotten during the interview. A contract dozer and plow operated by Floyd Moore arrived at the fire sometime between the time Swiderski started plowing line east of M-33 and when I left to go up in the airplane. Tom Bates had assigned Dick Lord to go along with Moore's tractor. They started plowing in a northeasterly direction from M-33 just north of Swiderski's plow line.

Wendel E. Bosman

WITNESS STATEMENT

MIKE HARNOIS

(Investigators Questions)

First of all Tom Hahn and I were on 5-2, that's our 6x6 tanker, and we had set out a couple of 300 gallon tanks at a couple spots around the burn. We did that in the morning, and then we went in to Mack Lake and topped off our tank, so we were at capacity of 1000 gallons. We came back and pretty much every body was already there. They were waiting on us. About midway in Block 1 along the highway there was a two-track road that runs about northwest. We started burning the part north of that road. Dick Lord and Ven Bosman were the torchmen, Ven was out in front. They were working together along the line and we pulled Dick back, Ven ahead. There weren't too many problems with it until we got to the edge of the leave strip, and we had to run in with the tractor and 5-2 to knock that down, and we got a line around pretty good and quick, it wasn't very big. Then we got into an open area north of the leave strip and our line kind of slipped across the open area. We were about 5 chains west of the highway. (So you had trouble within the first half hour or twenty minutes of firing?) I'd day within the first hour. We had on/slop over. In that open area we had a couple of small spots, but we were sitting there with the tanker and we just put them out as they happened. And that again wasn't much of a problem, they were just over the line into the grass. The first problem we had was when we got past that open area and up against some jack pine leave area to the north. Ven was firing along a line and we lost sight of him around a corner. We were sitting in that open area waiting to go where ever we were needed when we saw that it had jumped the line into the jack pine. We started over that way to hit the crossover, but it was starting to build real fast so we pulled back to 33 and at that point we got our 1½ inch water hose out and started along 33 to knock it down as it came out to the road. There was a lot of smoke across the road at that time and there was a little bit of a problem with traffic. I believe at that point or shortly before that point, Fire Boss called for some traffic control. It may have been a little before or a little after, but we were having problems. I got the tanker out onto the highway and we were having problems maneuvering it because of

the traffic and heavy smoke. But the fire jumped the road in there. I would say that this was after 11:00, probably near to 11:30. (Did it jump 33?) Yeah. Somewhere in that time. We flipped over to the other side with the tanker and parked. We weren't too effective, there's a cut back there. We could not climb the cut bank. With the truc, we couldn't climb it, it was too soft and too steep to get up with the load that we had. So the tractor got across the road sometime in there and I don't, I can't say when, because I didn't see him cross the road; it was all smoke. But he did plow in the spot on the east side of the road. He wasn't in very long. I saw him go in just a little ways north of us and come out just a little ways south of us. It couldn't have been very big because he was in there maybe 5 minutes. He just plowed in around and we knew Gordon Haase was in there and 1 YACC was in there. (Gordon was one of them?) Yeah. He was one of the line crew. It was shortly after that, I don't know whether the fire jumped farther north on 33, or it if slopped over that spot. I don't know what the source of it was, but we turned around and headed north to where the cut bank dropped down and where we could get off the road and tie up with Swiderski's plow line. He was heading a NE direction, and eventually an easterly direction. It started out kind of angling to the northeast and then curved around to the east. We were following his line and knocking down fire as we went. At that point, Tom Hahn was in the well behind the cab with a hose. I was driving. (You say knocking down fire, fire that was coming up to the plow line?) It was coming up to the plow line. (So, you were kind of going behind the tractor with the tanker?) We could not see the tractor at that point, he was well ahead of us. We were knocking down fire along the plow line, more or less following it as best we could. (Were you on the south side of the plow line or the north side of the plow line?) We would flip back and forth, we were straddling it, pretty much depending on the trees and how we could maneuver thru there, we might slip north or south of it. We crossed the power line following the plow line, the tractor was still out it front of us somewhere and we were just following his plow line. (It crossed the power line going northeast, is that right?) Pretty much

east at that point, when we got to the power line we were heading pretty much east. Near as I could tell. The power line I believe runs northwest/southeast, roughly as I recall. (actually east-west) We crossed it at a diagonal. We weren't very far from the power line for quite a ways. I radioed in and asked Fire Boss if that power line was dead or not, because we were spraying a lot of water in there, just for caution. (Did he know?) He did not know. He came back and he said he didn't. So with that in mind, at least in my mind, that was something that we had to be careful of. We were getting into young jack pine at that point. Between the road and the powerline there were young jack pines, some fairly open and scrubby areas, but not real heavy cover. Once we got in across the power line we were into large sapling, small sapling, some doghair jackpine and even small pole size jackpine. It was pretty thick and we were trying to stay as much with the plow line as we could. I was outside the plow line quite a bit of the time just because I couldn't follow the line very closely. Maneuvering was tough. I had it in 6-wheel low and we were just pushing through knocking down the fire as we went. I don't know how long a period (Coming right up to the line, the fire was?) The fire was pretty much inside the line. There wasn't, we didn't see anything outside the line, we were hitting it inside the line. (So, at that point the line was effective and you were keeping the line effective? Behind you, you didn't see anything cross over behind you?) We did not see any cross over behind, and I was looking for spots ahead and we were not seeing any spotting across there. Sometimes the fire was backing sometimes it was running. It seemed it wasn't real clear; sometimes we were in a little bit of smoke, not often in heavy smoke. But it wasn't quite backing, laying in; there wasn't much wind down in ^{the trees}. We were more or less cooling it off as we went, just knocking it down, so it wouldn't burn too hot. It was a little ways farther on that we came upon Swiderski. We were heading pretty much east at that point. He pulled out to the left to get out of our way, or so it seemed. As I recall, to the north things were somewhat open, there was some shrubby growth but you could see some distance, ^{and} not ~~right~~ in front of you. Since we were a little bit faster our plan was to continue along the fire front and knock it down, because we were also knocking down trees.

I figured that he would follow in behind. (You said fire front- do you really mean fire front?) Well, no. At that point, no it was pretty much a flanking action, however, shortly things started to deteriorate, ~~our situation~~. It was more like a front at that point, it swung around and it seemed to be running to the north. We got in there a little ways along and I don't know if Jim followed us or not from that point. I couldn't see thru my mirrors any more, they were all pushed aside. The only thing^u that I would occasionally look back and see Tom in the well behind the cab. (Was he in a position where had he looked back he could have seen whether or not Jim was there?) Tom? (As he stood in the well? Or is there something that would block his view?) No, not really, he could have seen. I'm pretty sure that he was concentrating on getting water on the flame and wasn't paying too much attention to what was behind us. We got a little bit farther in, I don't know maybe 5-10 minutes, my sense of time isn't real accurate, when it was crowning out on us in that young stuff and it was getting so hot that we couldn't knock it down with water and at that point I radioed to Fire Boss that we were getting out. We swung to the left and headed north thru the jackpine and at that point we were running at right angles to the fire. We were running north and the fire^r the line of the fire was pretty much east west. The fire was coming towards us, it was crowning towards us. We moved north quite a ways. (At a slow speed?) I was in low low and I didn't look at my tack, but I'm sure I was red lining it. I had the pedal right down to the floor cause we needed the power and the momentum to push thru the trees. It was difficult to steer, we don't have power steering on that rig. I was just holding the wheel over to the left and kind of waiting for the truck to come around by itself because with all the stuff tied up underneath the truck it was difficult to maneuver. I glanced back shortly before we turned off to the north at Tom Hahn and he was squatting down in the well. We were getting quite a bit of radiation heat and ^{HE WAS} wetting himself down with a hose. I think he only did that once. Then we headed out to the north and pulled out a little ways until we got into some more open areas, some oak, scattered pine and some popple, ^{all} saplings pretty much. We held up out there for a minute, I took a quick look around the truck. We were

just covered over with brush at that point. There ~~was~~^{were} some (Branches?) branches, mostly dead branches, jack pine needles, and the whole thing. The truck was running hot at that point, and I wondered if it lost any coolant. I looked under neath and there was some dripping in front but not a great amount. Most of the reason why it was running hot was ^{that} the radiator was completely packed. We have the guard on the front and ^awinch and it was just piled in there and the fine stuff had been sucked against the radiator and it built up so it couldn't fall back out. At that point, we radioed the fire boss that we were out of immediate danger, we had turned back toward the west and kind of watching it to the south, on our left, (How far would you say you were from the front?) That part of the fire was really rolling a lot of black smoke. It was heading towards us and I'm guessing that it would have been a couple hundred yards to our south. (Did the fire boss respond when you told him that you were turning north and that you were then headed west?) When I told him that it was getting hot in there and that we were getting out, I don't think he responded at that point. When we told him that we were out of immediate danger, I believe he responded then. Just with an OK. (Mike, did you say you headed west some after you reached your north point, you headed west?) Yeah, we started heading back for 33. (OK) Because we were out of immediate danger, but the way the fire was approaching us we couldn't stay where we were. We were in a fairly open grassy area, like I say with some popple, there was some pine. We headed pretty much west maybe a little bit the north of west until we picked up a two track. Rather than plow it away thru the woods, I kind of followed that out. That two track came back out to 33. We followed that out to the west to 33. That two track came out immediately across from where the sale road 4416 came out. At that point we tied in with Tom Sadler who is one of the timber crew, who ~~is~~^{was} one of the ground troupes. We held up there for a little while for radio traffic to clear and to find out where we were going to go next. Tom was still sitting in the well and I started to pull off some of the branches from around the radiator and to get underneath the truck to see if we sustained any major damage. My big concern when we were in there and we were trying to get out was that the truck would break down, in which case we would have been in a pretty tough spot. I was pushing the truck hard to get out, so I was looking for damage at that point. (How fast does it go in mph when you're in 6 wheel low?) I

I think about 5 or 6 miles an hour. It was moving right along. At points we weren't going that fast because we were pushing trees ~~and at other points when we were out in the open.~~ When I hit the two-track I shifted up to 2nd and then as the two track got better I hit 3rd. We were still in low range 6 wheel. Then when we could get thru to Fire Boss, he told us to check our water supply and to head up to 489, head north to 489 then east on 489. Which we did until we ~~got to~~, I think its two miles east, ~~we~~ reached Luzerne tanker sitting on the corner where 489 turns south to go into Mack Lake. We topped off our water tank, we were about half full. We held tight there waiting instructions. It was shortly after that that I became aware that we hadn't heard any traffic from Mio tractor on the radio. That we were hearing most of the other units, but not Mio tractor. At that time, I'm sure that Fire Boss was aware of that because he was trying to raise Mio tractor. Patrol 7 was trying to raise Mio tractor and I'm not sure of the time span, but I guess that we sat on the corner 15-20 minutes; just holding up waiting ^{to see} where we could best be used. Fire Boss sent us into Mack Lake area on the west end of the lake, south west end of the lake to see what we could do in the way of saving whatever homes we could. There were several volunteer fire departments in there at that time. We were in there working more or less house to house, we weren't trying to save any houses that were already on fire. We just didn't have any capability to do that. We were pretty much trying to protect those homes that weren't yet burned ^{out} or threatened. Fire Boss was trying to get Randy Marzolo back into Mio tractor. (Did you talk to the tractor at all on your radio as you went by him?) No. There was no traffic when we passed him, ^{THERE} ~~it~~ didn't seem to be any problem. There really didn't seem to be any need to talk to him. I had my hands full with the wheel, Tom was in the well and its difficult to play with the mike. (Was he plowing then?) He was plowing up to the time that we got to him. He lifted his plow and backed up a little bit to get out of, well it seemed that he was getting out of our way. It looked like he was backing up to his plow line again. But I didn't see him drop the plow. (Did he look at you or anything?) Yeah, he saw us, that we were there and he

was watching out for us as we were passing by because he did start back with the tractor. It seemed to me that he was facing his V-blade kind of facing to the north. He turned off towards the north and then he was backing up and well I had to do a little bit of maneuvering there so he had to stop and hold it for me, so he knew that we were there. (You actually did see him start backing out a little bit before, he stopped and waited for you to go by?) Yes, that's correct. (How far past that point do you suppose it was Mike that you had to turn and go north to get out of the heat?) I'd say between 100 and 200 yards, I don't know. (Not too far then?) No, it wasn't too far past that, I'm thinking. I'm really not too sure of the distance. (That's a difference of another ½ mile or something like that) Now from my memory of the way things were lying on the ground and the way our passes go thru there, I could probably go back thru there and find that spot and then we could probably find where we turned out and went north. I think that its possible that we could figure out just how far that was. (We might want to consider that.) I was talking with Tom Hahn earlier this afternoon and we had kind of hoped to get out there early tomorrow morning to take a look, ^{to} find out exactly. We think we should be able to find out where he picked up his plow to get out of our way. Then if he put it back down again or not, we should be able to find that out. (There should be an interruption in the plow line there somehow?) Yeah. And if there is an interuption the plow line and our tracks where we were pushing trees over, we might be able to find that. (Did you ever see another plow line? North of the one Jim was making?) No. When we headed down to Mack Lake, from ~~the~~ ^{WHERE} corners ~~square~~ we tanked up, we passed Dick Lord with Floyd Moore, and his tractor had come out to Eggleston Road. They had come from the west and were heading east. (oh ok) and we met them at Eggleston Road as we were heading south. (Ok, this is after you turned off where 489 is?) Yeah, where 489 swings to the south. (What were those two names, Dick Lord and?) Dick Lord, TMA here at Mio, was leading Floyd Moore. (That's the state?) No, its not. Floyd Moore is a cooperator. (Dick was taking Moore east on 489?) No. They were, 489 goes east and west for a couple miles and then 489 swings south. They were south of 489 heading to the east and where the road 489 swings south, they had intersected the road and they were traveling in an easterly direction and they plowed ~~out~~ a

line out to the road. (From the west?) From the west. (Dick was with Moore plowing the line from 33?) Right. Dick was the line scout working with Floyd. (They plowed from 33?) I don't know where they started their line. But they were coming from that direction. (You must have come back into 33 below their line then?) I don't know. Either that or we crossed in front of them, Before they put a line in. (There was a scout with that tractor?) Yeah. I don't know at what point Floyd got his rig out there. But I assume that as soon as he did, he hooked up with Dick Lord. (You don't have any estimate of how far you were in from 33 when you turned north?) (It would have to be a wild guess.) My wild guess is a half-mile. Because we traveled quite a bit, quite a distance to get back out again. So, I would say that it was about a half-mile, it could've been more. (When you went north then you headed west, was that fire burning west?) (I don't know if I'm explaining it quite right, but I got the impression that ahead of you the fire had moved across when you were going east, the fire kind of moved up, eh, then you swung north and that fire was coming up?) Well, the fire was coming up from the south toward the north, and we were flanking it, so we were turning with the fire a little bit, but at the point we decided to turn north, it was to get away from the fire and we were not following the fire. (Then when you swung west, was the fire still going north?) Yes. (It hadn't swung and started heading west?) No. That's why we were heading west. (Then the power line whether it comes out to 33 or not we don't know but it didn't go straight east it was more like this?) Yeah. and somewhere along the way you crossed, but maybe that's too sharp, but, you were out here and you passed Jim, the fire was going this way at that point, but now 100 to 200 yards perhaps, passed Jim you're not sure, well, it started doing this on you. (Coming towards you.) Well, all of the time that we were flanking the fire it was of course burning towards the east. The main head of the fire may have been to the east, but it was expanding towards the north. (But now it seems to be coming at you almost as though it was the front moving north. The wind might have shifted?)

Yeah. (It was getting too hot?) It was getting very hot. It was crowning. It was moving to the north although at that point I'm sure that the main head of the fire was heading east. But the flanks were acting like the head of many fires I've been on. (But in some dead stuff maybe it was just so hot you couldn't stay there? Up to that point you had been flanking the fire moving along with it and suddenly the thing started kind of moving toward you. Is that right? It started going further north?) What was happening was, we were flanking the fire and it was moving in all directions. It was like one minute we were knocking it down, we were by no means trying to hold line, We were just trying to knock it down. Then the next moment ~~it was~~ ^{we were} trying to get out. (You turned here and then you looked back to see this billowing black smoke.) Yeah. We had moved a couple hundred yards north and we were out of immediate danger, but we were not safe. (So then Mio tractor wouldn't have been too far from this heavy accumulation, whatever it was that caused this hot condition, when you turned, he wasn't that far behind you, so he was evidently feeling the same thing?) He was, he had been plowing thru it and where we had passed him it was somewhat open but there was a lot of dead stuff and slash around so that in terms of fuels it was still heavy. (It was probably about that time it was heading NE so, that's what you're describing - it was expanding rapidly up that way?) Yes. (As well as going out like this?) We had no idea what was goin on down here until we got up on 489 and we could see it just cooking. (But what was the flank beginning to move out faster?) Yeah. (You never saw Jim then after you passed him?) After we passed him, no. (This must have been right around noon because if that thing jumped, it jumped the lin there at 11:30 This all happened within a half hour or so after that activity, wouldn't you say?) It may have been, we were kind of holding up on the highway for a while there so it could have been 12:30 or so by the time this happened. Maybe even 1:00. (Ok no later than that probably?) I don't think so. (Probably between 12:30 and 1:00 would be the accurate time ?)

(Did you know if he had any health problem?) No. I wasn't aware of any health problem. As far as I know he had passed the step test. He was getting to be a pretty good cat skinner. He had had quite a bit of recent experience with that tractor and with the new plow that we had on it. That day I would say, that of the people that were out there, Jim was the best qualified one on that piece of equipment. At that time, with the people we went out with to burn. (Spend any time at his house?) Sometime sure. When we'd go over there for a beer every once in a while. (Watch TV ?) No (real often. Jim was, I guess on the quiet side. He wasn't withdrawn or anything. I suppose he was probably as close to Dave Sorenson, Wildlife Biologist, because of their mutual interest in wildlife biology. He's a pretty professional guy. You know it was like having a biologist right there who worked with us on our compartment prescriptions. It got to the point where we'd work up initial data and just turn it over to Jim and he'd build the wildlife out of what we had. Like wildlife input, and we'd design the prescription around his input. A good sense of humor, he's a good equipment manager, fleet manager. (Do you think he enjoyed doing that kind of stuff-having to do with equipment?) Well, the thing is ~~fleet manager there's a whole~~, ~~why~~ if anything breaks, why he's got to find somebody to fix it, and there's a lot of paperwork involved. (Was he your District fleet manager?) Yes he was and so its not something that anybody jumps at the chance to get. But he was good at it and, you know, you'd come in with a busted vehicle and tell Jim and he'd get it fixed. I guess maybe your question is was he a bug on heavy equipment. He wasn't. (On the other side of the coin was he really unhappy as far as you could tell that he had that particular task assigned to him?) No I don't think so. To a certain extent in his work and in wildlife opening development, it was one of his tools and so he was pretty confident with that. You know some guys really get off on equipment and handling equipment and things like that. But

11.

Jim wasn't one of those. (Necessary evil like cleaning paint guns if you want to mark timber?) Yeah, somewhere in there. (We asked what Mike thought Jim felt or thought about the fire-fighting?) I guess he seemed about like most of us, that when there was a fire, he was ready to go. He was qualified for western details. He kind of missed the trip last fall, he wasn't heart broken over it, but I think if we would have been able to get in touch with him he would have come out on a western detail. (Did he ever make one?) No, he didn't. He was on the first crew to go last fall but we couldn't get in touch with him when we went out to Southern California. (He wasn't home or something?) Yeah, he was away from his house and we didn't get in touch with him. He didn't go. Otherwise he would have. (You did?) Yeah, I was one of the alternates and I'm not sure, but I think Jim was on the crew. I guess I wouldn't call Jim a full-blooded smoke chaser but he appreciated the overtime as much as anybody. I suppose his adrenaline got going along with everybody else's when we had a smoke. (It was an adventure to a degree to go on a western fire detail?) I'm sure that if given the choice of a career as a firefighter, he'd just as soon be a wildlife biologist. (But given a choice on going on a fire or not, he'd have gone on the fire?) Yeah, I think that he wasn't real disappointed last fall because he was kind of getting over a cold and wasn't feeling right up to snuff anyway. But he might have been disappointed if he had felt better.

Michael W. Harnois 5-10-80

WITNESS STATEMENT

Tom Hahn:

(Investigators Questions)

I was with the Mio pumper unit 5-2, I was working the pumper's water end of it. Let me start from here. It is after it jumped 33. We were prescribed burning and we got our first major spot, it got away from us on the prescribed burn and we had our first spot across the highway. We had a steep bank here so the pumper unit couldn't get up the bank. We did get the tractor in and Jim put a line tied to the top of the bank. He ran a line around. I saw him here. It took him about 5 minutes as far as I can remember. Then he ran another one back around. By that time, or shortly thereafter, it jumped that line again. I'm guessing its probably to the northeast. (How big was that spot?) The spot at that point, guessing now, probably 100 feet across. It wasn't that bad. Like I say it took him about 5 minutes to come around his thing. That's a pretty good guess, I think. O.K. so she spotted again and started running this way, going with the winds. At that point we pulled the pumper unit and we were parked on M-33 here because we couldn't run line up to the spot. We just couldn't reach it to do anything. We did have some people on this line with Jim with handtools and backpacks. (Who was on that line?) Gordon Haase, one of his YACC'ers, I believe Tom Sadler was in there too, on our marking crew. We got our pumper unit up on the bank, there was a spot to get in here and at this point we tied in with Jim. Jim started along this NW flank of that thing. (Northeastern?) Well, yeah, northern flank, we'll call it. The thing's running in a northeasterly direction. We're going this way. He started plowing line here. When he started plowing, he was out in front of us. It took us a little bit to get around here and start tying in. Ven Bosman was behind the tractor acting as safety man. Whether or not he had a radio or not, I can't say for sure. From this point, what happened is, we tied in, the pumper, with Jim's line and we started spraying. Knocking this flank down and we were behind him.

(Now Ven was ahead of you at that time?) Ven was ahead of us. Because he was behind^{4*} the tractor. At that point I believe he pulled away feeling that we were going to work together and just stay like that. That we'd be safe and he with the smoke and everything, I don't know, maybe he felt he was in danger. That's speculation. I'll just stick to the facts here. So, we were running behind him in tandem. (You had no communication with him then?) With Jim? (With Ven.) I had no communication. I was in the back of the pumper. I was outside of the cab, I was in the cuppyholeTH in the back with the spray. So, if there was any communication, I would have no idea. (But you had seen him?) I had seen, yeah, we had seen Ven at this beginning point. (Could you see Jim at that point?) Yeah. He was well ahead of us at that time. (How far would that be?) Oh, 1/8 of a mile. (400 yards?) Something like that. He was far enough away that we could still see him but he was a good ways ahead. (Think Ven was up there near him?) Yeah. I can't tell you for sure how far he plowed and we stayed behind him. (You're going NE all that time?) Again my directions may not be good, we were on the north side of the fire, it was to our right, as we were moving. Whether it was going E or NE, you got me there. I don't know how far we went, it was a fair distance. We started getting into some young jack pine, 10 to 15 foot tall. At some point in time up here, we came up on to Jim. We were right behind him. Whether it was too hot, too smokey, I can't say for sure, but at that point he stopped and he backed up. He let us go by first. We started hitting the head of the fire again, not the head but the flank again. Killing the flames as best we could and laying a wet line. At that point, that's the last I saw him. He was backed up here and sitting there. (You never did see him start up again and go forward?) No. I glanced behind and it didn't appear he was in trouble at that time. That he was hung up or anything. (It looked like he backed up to let you go on by?) He did, he backed up and came in here, pulled his plow and backed up. (You're almost positive that's why he did that?) To let us go by? My feeling is that maybe it was too hot, because we were flanking it pretty close. The heat might have been too much for him and he might have wanted us to go ahead and knock it down so he could come thru. Another possibility is that in that young jack pine, a tractor has problems. It was fairly thick in spots

and further up the line it was even thicker. But where we were, he could have problems in that thick stuff. Whereas we could lay it down in front of him and the tractor wouldn't have to do so much work. (What problems?) The tractor could get hung up. The V-blade, when the V-blade starts pushing thru thick, young jack pine, there's a lot of resistance and it doesn't chop it a lot, it just kind of lays it over. It's a tough situation, maybe he wanted us to go forward and knock that stuff over because the big pumper can handle that stuff with no problem. (He didn't wave as far as you know? He didn't indicate that's what he wanted?) I didn't notice any hand communications. I glanced behind after him, I wasn't sure what was happening. I do remember glancing back, looking at him. (Did you stop?) No we were still moving. (What happened then?) O.K. what happened after that is we kept plowing, not plowing, we kept moving breaking it, spraying as best we could, trying to kill some flames. We got ahead of him and (You lost sight of him?) I lost sight of him. (Why did you lose sight of him?) We were moving fast, the pumper normally moves faster, unless we stay behind him. (Did you look back to see, you couldn't see him or you were just so busy or -- why did you lose sight of him?) I tried to see him a lot. I remember glancing behind me looking at the conditions of the fire after we left him. I was concerned about the crowning because we were in small stuff and it looked like the possibilities of it crowning behind us, making a line. (When you say small stuff, Tom, how big is it?) I'm talking 10 to 15 foot. (What were you thinking that if it crowned?) If it crowned, I was thinking we'd better get out of there. Because it would run. It had the possibility of running onto us. (Go over the wet line.) At the point in here it was on the ground. (Was there much smoke at this point?) No. We were moving with the wind and smokewise, I don't remember it being that bad. We continued and like I say I glanced around looking at conditions around us more than looking for Jim. I have to admit that. I can't tell you how long we moved, it might have been a ¼ mile, it might have been ½ mile more. We were moving along and it was some amount of time. Things started crowning pretty well. Both just immediately to my right and a little bit to our right in front of us. As that time I signaled to Mike, who was

driving, and said we better get out of here. At which time we went I don't know what direction, perpendicular we pulled away from the fire and eventually we circled around and hit a two track and it came out onto 33. (Tom, did you say how long it was after you passed Jim before you turned?) Since the last time I saw him before we turned away from the fire? I'm guessing, 5 minutes anyway, maybe after 10 minutes. That's a guess, it may be more than 5 minutes. (You never did see him start forward again from that spot?) No. (Did you cross a powerline?) I think coming out we did. (You don't remember one going?) I don't remember it down here, but when we came out. If we go back on the ground we can see the path we took pretty evidently because of the tracks. But coming out, we definitely came out north of where we went in on 33. I do remember the powerline, crossing underneath a powerline. (On your way out?) Come to think of it, I may be wrong. No, on the way in, because I remember signaling Mike. After we started at that point I don't remember if we were still behind Jim or in front of him. But I remember seeing the powerline, and signaling Mike that the powerline was there hoping that he'd get on the radio and get the thing shut off. That I do remember. I don't know what else I can add. (You had no communication other than hand signals with Mike?) Not unless we stopped. And he opened the door. But it was basically hand signals. Mike and I have worked pretty well together and we both kind of think alike. When I pointed out the crown, it triggered him immediately. (You don't have any way of signaling him, like we have those horns and stuff on planting machines - you know if he's really concentrating on his driving, you don't have any way to signal to him?) I rap on the top of the cab. (That's the only signal you have?) Right. (Are you right behind the cab?) There's a window, I'm sitting, I'm directly behind the cab, there's a cubbyhole, oh say 3' x 3'. (I was thinking you were more to the back?) No, I'm right behind him and there's a window. (So you can bang on the cab?) I can bang, bang on the window. (Do you ride facing back or sideways?) There's a lot of room, you can kind of crouch down behind the cab - it's a pretty safe spot. You can use your nozzle, hose and nozzle out to the side, either side. (You felt an element of fear when you rapped on the cab and pointed - you evidently thought that was enough right there?) I was thinking ahead,

you know, as I'm spraying, I'm constantly looking around, seeing what's happening. Because the driver has his hands full. I'm just keeping that thing going and I was looking around as we went up the line and I didn't see any problems until she started, she left the ground and started crowning. It did start crowning well back, 200 - 300 feet back in the woods. But at that time, the possibility of it making a run right behind us was a little more than I think both of us wanted. (How well did you know Jim?) Pretty well. We were hunting buddies most of the time. We hunted together. (What did you hunt?) Oh, deer and woodcock, partridge, fishing smelt. (Did he have any health problems that you know of?) Not that I know of. (He was on the intra-regional fire team - were you?) Yes. (Did you go up on details to the West?) I went to California for that week. (He didn't go?) No he didn't. (Did he ever talk to you about it?) Not directly I don't think. You know we talked, thru the summer, and with a group, everybody that was on the crew, about going. (But afterwards, he didn't get to go?) No. Jim, in my opinion was a hell of a nice guy, very easy going. Nothing ever really upset him. Always open that I know of. Just a heck of a guy. (How about his house - was he a very meticulous person?) He was neat. (Would he go out and leave it open?) Yes, I think so on occasion. I don't know if he always kept it locked or unlocked, I can't say for sure. (Did he use drugs or alcohol?) Alcohol. (Much?) No, mostly beer, mostly in groups. (How about Sunday - do you know if he had any drinks?) I was on standby. (Was he on standby?) I don't remember. (He was fleet manager on the District, what was his attitude toward that?) I think it was duties he would rather not have had, but it didn't

Hahn

6.

Hahn 6

make him perform any less than he should have. I think he done a darn good job. (How about his fire training - can you shed any light on that?) I guess the only knowledge I have on that is the training he got on the District. (Any fire behavior training?) I believe he did. Jim and I both came on the District at about the same time within a month or so of each other and I believe that first spring we had a several day session on the District on basic fire fighting and behavior slide tape presentation. (Was it the simulator?) No. We did have this spring another one or two day session and we had talked about using the simulator and I guess we decided against it, but we made up our own. I guess mostly Tom Bates drew up the slide tape presentation on an actual fire situation and how they handled it and we critiqued it afterwards so training-wise it served its purpose as a simulator. (Are you familiar with the simulator?) I haven't been in the hot seat myself, but I'm familiar. (Where did you go to school?) The University of New Hampshire.

Questions to Hahn - Herbelshermer-- Martin

0945 - 5/9/80

(Tom, We've read this statement you gave the other day and have a few questions to clarify our observations.)

Okay. (How did you handle hose nozzle?) We laid a few lengths of hose while working on the spots at the original prescribed burn. After we crossed Highway 33 and started working on the escape, I was in the "cubbyhole" and remained there until we got back to the Highway 33.

(How was the length of hose lost?) When we left the spot on the west side of Highway 33 we just threw the hose up on top and it was sort of piled loose and a limb must have caught and pulled it off. I was not aware of it at the time, but thats how it must have happened.

(Did you have water left when you returned to Highway 33?) Yes, we still had about 500 gallons, half a tank.

Tom Hahn

WITNESS STATEMENT

RANDY MARZOLO

(Investigators Questions)

My name is Randy Marzolo and I'm going to describe what my day was like. I started working at 7:00 o'clock in the morning. I took 5-3 which is a pick-up truck with a big bed on it. I had to drive to Fairview where our trees are stored and pick up a load of trees and take them out to the planters over on Brush Road. I then was supposed to go after delivery, go to the prescribed burn area. I did that and I got out to the prescribed burn area between 9:30 AM and 10:00 AM. I went over to where we were meeting at, then I was supposed to transfer over to 5-5, which is a four-wheel pick-up with a tanker on it. So I parked 5-3 and got into 5-5. Dave Batavia was my partner on that truck. We were waiting for 5-2 at the time. It wasn't there yet. Our tractor was there, everybody was waiting for the other truck before we began burning. After everybody got assembled, we decided to touch it off. My job with 5-5, which has a pump on it, was to cover the area between the burn and M-33, which is about 20-30 yards from the prescribed burn area between the burn area and it consists of mostly just grasses and some slash. So, we touched it off over in the corner, Unit 1-a on the map. It seemed to be going alright, we had a couple little spot fires up in there, and I was called over between the burn and the highway and we put those out using water. One spot got knocked down with water, then we called the tractor to have a line put around it. It was a small spot, but it was big enough to put a line around. We did control that. After we controlled that, the burn they were touching off further in and more North and Tom Bates asked me to go across the burn area and go up top of the hill. I picked my way up there as best I could and got on top of the hill where they were going to touch off some more so I could cover the area East of the burn. As I attempted to go up, I got near the top but it was a little bit too steep for the 4-wheel drive in the sand and the stumps, and I couldn't go up any further so I had to back down some. As I was backing down, I got snagged on a little stump but it went under the differential and I couldn't get off of it. So I called for the tractor to come pull me out of there. There was some fire,

grass fire, coming toward the truck so I used water to keep it cool around the truck. Then a tractor came and we tied a chain to it and he pulled me off the stump and got me out of the burn area. I got on a grass area where it hadn't been fired up yet -- where it wasn't burned. It was then I tried to pick my way over to the road between the prescribed burn area 1-a and 1-c. As I was going toward the road, we had to stop along the way and remove a couple of snags so I could get thru easier -- Dave was in front of me taking a couple out of the way. A couple of times when I had stopped the truck for Dave to remove some stumps to pick my way better, the truck did stall out, but we got it restarted and kept going. I got near the road, the two-track, maybe about 10 yards and the truck stalled again as we tried to remove some timber so I could get thru easier. There were no flames around me at the time, it was in a non-burned area. Then the truck stalled out and I couldn't restart it, there was no -- it wouldn't even turn over at all. Then the flames that Dick had started south and west of me, were coming up my way and the truck was in limbo -- wouldn't start. We called for a tractor to come and get us out of there. The tractor was on top of the hill, we couldn't really see it from where we were standing. The flames were getting pretty close to the truck, as a matter of fact they were real close to the bumper. The tractor then went to the top of the hill so it was half enroute and hurried down. The flames were real close to the truck. I had pulled my gear off of it and gone up the road already. As the tractor came down, me and Dick and Batavia went down to the truck and hooked up a chain to the bumper just as fast as we could and pulled it out of there up into the road. As we were watching, the flames engulfed the area where my truck was. It wasn't real big flames - more of a grass type fire. A pickup truck, carrying loggers had equipment, (Maintenance equipment) for their tractors. Whatever they had, I asked them to jump on it and we got it started after a little bit. I was running short on water because I used it to cool off the truck and to take care of those first spots. Dick said to fill up the tank with water, so we headed up the two-track and went up north.

MAR 20 10 3

3.

We hit 33 and went into Mio to fill up the tank with water. We did so, and filled it up with water and came back down. We came down 33 and we saw a lot of smoke as we were coming down 33. We thought it was a lot of smoke coming from the prescribed burn but as we got closer we realized that the fire had jumped and there was an awful lot of smoke coming up. The road was pretty well invisible in some places because of the smoke. So we stopped by the road where we had come out and we started stopping traffic and directing some of the people. At that time there was some casuals that asked if we could work them. I took some of them and had them watch traffic and stop traffic after a while. Then I used a couple of them to watch the line as it burned up towards the road, two-track. At that time there was no fire north of the two-track, prescribed burn area. Dick Lord was asking for a radio at the time, a good radio. This is probably, a good hour or so after I was directing traffic. So he called/they called me to take 5-5 over to Dick. My truck, pickup, was still down in the prescribed burn area where I parked it. So I drove Batavia down to the truck. The 5-3 pickup truck didn't have very much gas in it at that time and so we took it up to Mio to fill up with gas. Then I took Batavia over to where Dick Lord was and I went up and we gave the truck to Dick and we drove the other one back. So now Dick has the 4 x 4 with the pumper and I've got the pickup truck which is called 5-3. I stayed up at Road 489 and Even's Road where I had given the truck to Dick. As he went down to find out about the fire down Even's Road I stayed in that corner, standing by. There was a lot of casuals, a lot of equipment out there. We decided that because if the smoke was going to start coming pretty quick we moved the trucks and all the vehicles to a safer area from there. About close to this time, this is a few hours later anyway, somebody was asking me if I had seen Jim and I responded I didn't. I hadn't seen him since we left the burn area, since he pulled me out of that when I was stuck. So Tom, I think it was Tom Bates, said well let's start looking for Jim and he gave me the description where he had gone in on 33 East of the prescribed burn area. They said he was making a fire line from the North of where we started burning and where it jumped over. So I gathered some equipment, I took a couple of fire tents and a canteen and a radio, picked up a portable radio, and I walked the fire line until I found a

Mar 30/0

4.

MAR 30/0 4

line north of the burn area. I must have walked that line about a mile and the fire line just continued on. At this time the airplane had spotted the tractor which was burned. And that it was only a $\frac{1}{2}$ mile from M-33 close to the power line. I knew I was a lot further in than a $\frac{1}{2}$ mile so then I knew that I was on the wrong fire line. I backed up and cut across to try to find another fire line south of where I was. Then I made radio contact with the plane. I started to head south to hit the powerline and walk that back up but along the way I hit some two=tracks. So I walked them. At that time I was having direct communication with the airplane and he flew over me and I informed him that he was just over me because he couldn't see me. He looked out a little bit closer and he did see me. He then told me he was going to fly over the site and dip his wings a little bit. I saw where, approximately where he was so I headed right for that direction. As I got closer to it he came down a little bit lower and started using a bullhorn, not the radio to direct me right to the -- where the dozer was. As I was walking along there he remarked that he may have seen where Jim was. A little distance away from the tractor. He then directed me right to the tractor using a bullhorn. I walked up to the tractor and then he directed me toward Jim's direction which is probably about a good 50 yards away from the tractor. I could see as I walked that distance I could see where Jim, or where something was. It looked like possibly it could have been Jim from a distance. So I walked over there and I realized it was the body laying on the ground. As I approached the body, I found a hardhat, which was laying probably 20-30 yards away from the body. And as I was walking toward the body more, I found some keys and I picked those up. Then I walked over to the body and I noticed that it was, had been burned. The clothes had been burned and there was no chance for survival. The plane then radioed to ask if that was Jim and I confirmed it. He asked me if he was dead and I confirmed that. I then tried to call the Mio Office to send an ambulance down there. I couldn't make contact with Mio so I had the plane call Mio to get the ambulance down there. Which they did. I went over to the powerline from there and waited. I was waiting for the ambulance. The ambulance and the Sheriff Department were dispatched to it but they had a hard time, I could tell by radio, they had a hard finding a spot where to come in. So then I started walking out to 33

along the powerline. I went out to 33 and I saw the Sheriff was on the road. The ambulance had started on the wrong two-track. So I had the Sheriff go up and get the ambulance to where I was. The ambulance went up in front and I rode with the Sheriff to the site I had left the belt/tent where I had turned off to the tractor. So we went up to that point and the ambulance crew took the stretcher, hand stretcher. We walked down to the body and we looked, the Sheriff looked around at first and the ambulance crew was wrapping the body and putting it on the stretcher. I assisted in the tying the body to the stretcher. So we started to take the body out and two of them started out but it was probably a good hundred yard walk and they were getting tired so I assisted carrying the body out. The Sheriff and one of the Conservation Officers also assisted carrying the body away. We got it to the ambulance and put it inside the ambulance and then they called the doctor who arrived real shortly and pronounced him dead. I guess they had called the one of the morgues to take the body over there, I think, I'm not really sure at that point. I proceeded to ride with the Sheriff out to my truck. I got in the truck and headed out to I believe it was 489 again and proceeded fighting the fire. Then I worked with the hand line crew on the north end. Most of those crew were casuals and we secured the north boundary along the road and Evens Road, (I believe it was.)

The plow on the tractor had been lifted up and the fire line ended and the tractor kept going for about 10 yards not plowing the line, which indicated that he had tried just to get out of there. Then he must have stopped the tractor and started running. The body was about 40 yards away from the tractor. The tractor was about probably 10-15 yards away from the fire line.

I'd like to mention a little bit about what Jim was like as a person. He had helped me a lot on my house putting on my deck, doing little projects on the house. I used to go over to his place quite often, sometimes after prescribed burns or a hot day we'd go over to his place and have a beer or two. He was not an alcoholic by any means, but after a hot day he liked to have a beer. He had been taking pictures out back of my place where he was trying to take a grouse drumming. The day before we had planned on going up to Drummond Island to do

some fishing after planting season was over. Probably he was the best friend I had here on our District. Always ready to do anybody any favors they needed. I had him watch my dog when I was away quite often - I really can't think of one thing I didn't like about Jim. He was well liked by everybody around here. He didn't mind fires. He wanted to go out west and try a hand at fighting fires out there. I think he had passed the step test so he was qualified to go on a Forest team. He wanted to advance and become a professional but he was a little frustrated in that because of the few opportunities there are for a male wildlife technician to join the professional ranks at this time. He was operating our planting machine before he was released to build fire lines these past few weeks for these prescribed burns and also to do his own wildlife seeding with the farm tractor. His experience on a tractor was limited this past year. Most of it he got this past year. He was becoming our number one tractor operator, but I believe he is still in the training position a trainee on a tractor that is. He had been on these other fires we had here. He was a tractor operator on those and he did a pretty good job on those. So all I at this time can really say about Jim was that he was well liked by everyone. I don't know anybody that even disliked him for any reason at all and I'm sure he'll be sorely missed here by everyone for a long time.

Randy Marzolo
5-13-1980

MACK LAKE FIRE

APPENDIX E6
LORD

R. Lord
5/7/80

We started igniting at the SE corner of the prescribe burn, Unit 1A, about 1000 on 5/5/80. By 1130, I was at the NW corner of the Unit and Ven Bosman was at the NW corner of the last patch of residual timber south of the NE corner of the Unit. At that time, some spotting was occurring in the residual timber. The District fire-plow, 1000 gal. tanker, and 175 gal. tanker were in the vicinity of the spots and I stopped igniting until the spots were controlled. About 15 minutes later, the fire spotted on the E side of M-33 and Fire Boss Bates ordered tractor-plow units. By approximately 1230 I was instructed by Bates to intercept Floyd Moore (Tractor-plow) and begin line construction on the North side of the fire where the district plow began. Moore arrived and we began our line in a NE direction thru sparsely stocked Jack Pine and along the fire edge. Occasionally, we entered well stocked Jack Pine pole timber stands but fuels generally were poor to medium stocked pole timber with grass and blueberry. Winds were mostly out of the West and NW but we experienced one severe windshift from the South. We constructed line NE and then Easterly to FR 4146 (between ^{sections} 3 & 4, T25N, R3²~~E~~). About 1400, Bates informed me I was to be Division Boss on the North Division with several tractors and a hand crew. I travelled East in a pickup about 1430 to try to scout the head of the fire but it was SE of Section 1, T25N, R3E, by then. I continued through the afternoon to deploy dozers and hold the North line with dozers and a 30-man hand crew. My observations of the fire's behavior is that it rapidly became a crown fire and travelled to the E and SE. Following the crown fire, unburned ground fuels ignited and burned in all directions to the control lines.

LORD 2

Lord

2.

After the North line was reasonably secure, I met Tom Striker near Emly Lake and assigned a dozer to him for line work. By this time, it was dark. The fire was beginning to lie down some and short, finger-like ^{PH} runs were being made on the South side. I continued through the night coordinating efforts to construct line and returned to Mio about 0430 on 5/6/80.

Richard O. Lord



STRIKER

WITNESS STATEMENT

TOM STRIKER

(Investigators Questions)

I would say about 1:00 to 1:15, I remember looking at my watch but I don't remember what it said, I had been working with some DNR fellows at the gravel pit in the Three Lakes area. They left and about 12:30 I was setting on the shore of the Three Lakes eating my lunch and I could see the Prescribed Burn smoke. I had a mini pack with me and things got kind of excited on the radio and I heard somebody say that it had jumped 33. I don't know what time that was 12:30 - 1:00 somewhere in there I would guess. So I got in my little car and I started heading west and I went down 604 to the intersection of 33 and there was a State Patrolman there and a bunch of people and the patrolman didn't really know what was going on, but he was trying to keep traffic away. I talked to him for a minute and I asked him if he knew where anybody was or if they had a fire headquarters forming or anything like that and he didn't know. Then a lady from Detrick Realty came to me; ^{she is} ~~she~~ had a truck with a name on it and she said that the Mack Lake Fire Dept. needed help there at Mack Lake. If they had a couple more people they thought they could hold it. So I told her to show me how to get there and she showed me. I went in there, I had a rental Chevette and an empty back pack can, a shovel and a Mc Cloud and my fire pack and a couple of radios. Anyway I went in there and I got into just below the lake at that flat area there, and I met Tom Bates and he stopped and so did I and we agreed that the best thing to do was to get people out of there. At that point looking to the northwest you could see big balls of flame upon the hill, you could kind of look upon the ridge there and people were, or most of the people were out at that time. There were a few that weren't. Finally a fire truck came out and he said that he was the last so we pulled out. I went back to the intersection of 604 and Eggleston Road and Bates came out and he said alright this is your division of the fire. We are going to try to hold it at 604 and Eggleston Road. I said

Striker

2.

Striker 2

alright, do you want to start torching right away or do you want to wait a minute. He said well lets get some equipment in. About that time a couple or three of the township pumpers came in, there were guys with short sleeves and shorts on, the whole thing. A DNR truck came up with a big skidder on it, he had a big plow and we were just getting that ready to get it off the truck and we sent one truck back up Eggleston Road with the idea that they would defend any cabins that they could. Anyway, we sent the pumper up there with the idea that they would defend cabins and before they went in I asked them if they could get out to the east, they said yes there is a road that connects through. I said if it gets hot, then get the hell out of there. So they said that was fine and they started in and the smoke was so thick they couldn't make it so they came back. At this time Bates was back up in there and I called him and I said its really bad and they can't get in. Can you get out? and he said that he'd already gone all the way through to the north. This was maybe ten minutes time. At this point we could see the flames at the junction of 604 and Eggleston Road and it was starting to get a little bit worse. About that time an ambulance came up and the fellow driving the ambulance said he was looking for, or he had had a report of some hurt people, people with smoke inhalation and stuff down there. I said I didn't know anything about it, but I would try to find out for him. I had to get on the radio and call back to base and I could see the flames coming and it was getting close so I told people to get out of there and to go east and south and get away from the fire. And before I could get through to Bates it was getting so hot and so close that I told the ambulance driver to get out of there too. The DNR fellow whose name I did not get had started to take the chains off the skidder on the low boy and he could see the flames coming too so he started to fasten it back together, and got it loaded up. I was parked in front of him so he couldn't move till I did, So I just ran down there opened my car and got in. It was warm enough that I singed a little hair on the back of my neck. I was pointing south and so was he so we both just took off and we went probably a 1/4 mile and a 1/2 mile south on Eggleston Road which would be 4458 and there is kind of a high s

there and he kept going and I stopped and looked back and I could see fire all along the north edge of 604 at that point. I don't know whether it had jumped yet, I could still see the pavement here. Then I went on off to the next intersection which would be 4461 and the junction of 4458 and the DNR fellow was there and I talked to him for a minute and I suggested that he just keep going south and/or east till he could get in touch with somebody, he had radios and stuff in his truck. Then I started going east on 4461. I talked with that man 3 to 4 minutes maybe. Then I drove at a reasonable pace on a sand road, maybe 20-25 mph east and got to the next road which would be 4147 and I looked north and I could see fire there. Maybe half way up or a little more than that. I continued east to the next road which would be 4460 and I looked north again and I could still see fire. So it was moving pretty quickly at that point. (Do you have any idea now what time it was when you were at the intersection of 4461 and 4460?) I don't really know what time it was. It was no more than about 10 minutes since I had left that junction there. But, (The junction was 604 and Eggleston Road) we were just barely ahead of the fire at that time. I felt safe, but I knew it was coming. I just kept going east and I knew that I could get out on the Mack Lake Trail in a couple of miles, 489. From there I thought maybe I could get upto the north end of the fire, which was where everybody seemed to be. That was where the organization was at that time I think. Mio equipment was working up there and there was alot of volunteer fire trucks and so on. But I got out to 489 and looked up and it was real smokey and you could see flames in this area, it had looked like it had gotten around to the north end of Mack Lake and it seems to me that I remember somebody saying it was around the north end. So I went SE on Mack Lake Trail to, I think it was this junction here, Mack Lake Trail and 4545. There was an open area there, this was on the Harrisville District and we had planned to burn that this spring, it was a real grassy open area. There were a couple people there and I stopped to talk to them and ask them if they had seen any Forest Service people or anything. At that time looking back I could see a big ball of flame and smoke kind of towards the north.

Striker

4.

Striker 4

Towards Mack Lake, and another one which was considerably south of that. So at that point there was two real hot spots there that I could see. We stayed there for maybe 5 minutes or so and you could feel the heat again so we left. I met some of those people a little bit later on. I headed down to 489 and I got onto 4451, which was a pretty good road off of Mack Lake Trail and I took it north then up to 604 and, I know what I was going to do. I figured I couldn't get through on the radio, I had been calling repeatedly trying to let them know what the fire was doing and I couldn't get through. I don't know if it was the radio or not. You couldn't hear an awful lot, I think maybe the fire was interrupting it, there was so much turbulence and smoke. So I figured out that I would go to the Curtisville Store, in Curtisville. Frank ~~the~~^{Matwycok is} owns that and he is one of our Wardens. I figured I would use his phone and call Mio and try to get through. So I got up to 604 just about where 4001 comes into it, about the junction there, which would be I guess about right in there. Those fire trucks that had been with me at 604 and Eggst Road. So I talked with them for a few minutes and they didn't know what was going on. There was no communication at that point. And so I checked their water and fuel situation and most of them were in pretty good shape, so I suggested that they go up to the 4001 bridge over the AuSable River and I would go into Curtisville and make my call. I would explain where the equipment was and stuff and I would join up with them again. So they agreed to do that. I went into Curtisville and the store was closed so then I kept on going into Glennie and I went to the Glennie Office. I tried both lines at Mio on the phone and I couldn't get through so I called Harrisville and I asked them to relay a message by phone or radio as soon as they could saying that I had equipment and people at that bridge. That also the fire had burned well south of 604 and I think I kind of explained where it had went and about that time I met Chuck Lilly who was driving Harrisvill'e big pumper and I sent him up to that 4001 bridge to rondevou with those pumpers and just kind of wait till I got in

touch with Mio by radio. After a while, after several times, then they said go back to 604 and Eggleston Road and I checked to see if the route was safe and they said it was and that it had burned out on both sides at that point. So we headed back that way up 604 to Eggleston Road. On the way over, and this would have been, probably 4:00 PM by this time. On the way over we got into the eastern most part of the fire at 604 at about a mile east of the Emily Lake private property, in here someplace. It was burning on the ground in the hardwoods. (Near 4454?) Right, that would be the area. It wasn't doing much there at that time and our assignment was to go back to that intersection so we went in and waited for instructions. It was still pretty much confused and there didn't seem to be any real assignment for us. Then I called ~~base~~ ^{Bates} and suggested that I take my crew back and we start working on that ground fire. He said that's fine so we went back and we worked that area until, oh early the next morning at one o'clock or so the next morning. Eventually a tractor came in and plowed in the back pack line that we had put in. By then it was starting to cool. That was basically what went on the first day. (About 8 miles in 4 hours? - That's a mile a half hour, $\frac{1}{2}$ mile in 15 minutes) At that one point, well I don't know, you're kind of excited and everything, but at that one point I think it was probably even faster than that. Because in that 10-15 minute period from when I left 604 and Eggleston Road to when I went a mile south and east two miles and looked north then I could see fire then so that was 2 miles in 15 minutes or so. I don't know if that's possible or not. It was really going! (To begin with it was $\frac{1}{2}$ mile in 15 minutes, so it would have doubled that with it really moving. O, boy! I can't imagine a fire moving that fast, but you double that and with it really moving it probably wouldn't be too far out of line) Oh boy! it was unbelievable, there were flames. Well what it reminded me of you know you see films with sun spots, where the big flames come up and there is flames isolated in the air, just a ball of flames? Well it was doing that. (Was there any tops in there?) Yeh, they are really slicked off, it's black and there is no green left. So she was hot! (Is there anything else? We need to go back on the time just a little more. To get the

Striker

6.

Striker 6

times that it possibly crossed 33. When you heard some traffic, early in the beginning you talked about) Yeah. I don't remember where that was from. It seems to me there was a plane up and I think maybe the plane reported it. (It was about 1230, the plane reported it, the DNR plane. About 1230 did you hear a plane or transmission?) It was DNR to Mio, Fire has jumped 33 straight across from where you are burning. That was about 12:30. That would be about right. I got done with those DNR people at the gravel pit about 10 after or maybe 5 after 12. I had never been to the Three Lakes area so I thought I had better go take a look. (Do you remember hearing any call right away to call Sheriff to dispatch Tri Town Tanker?) Ok, I remember in my travel from Three Lakes to 604 - 33 intersection that at least one of the Luzerne trucks were on the way. It seems to me that there were two Luzerne trucks on the way. (They^s were dispatched pretty quickly.) It was kind of spooky down there on 604, It could have been a lot tighter than it was, we got out of there but it was... (You said you got the back of your neck scorched. Were the flames that close or was it the heat?) No it was just the heat. I didn't even know it till later on in the day. It may have been someplace else but that's the only place I got very close to it at all. (The flames were still back though?) Oh yeah, it was probably several hundred yards. But yet, there was that much heat in front of it? Well, the hair, it would seem so. Maybe in someplace else. (Your recollection was ~~it~~^{that} there was plenty of heat?) Oh yeah, it was hot. (Before you got into that pickup?) Oh yeah, it was really hot. (The heat was pushing ahead of it that far?) Yea. (How many yards ahead?) When I stopped in that little grassy clearcut that I talked about and I had the two walls of flame, one to the North and one just about west of me, I could feel that heat and the fire was at least a half-mile away. It was noticeably warmer. The sky was all yellow, ~~some~~^{SUN} blocked out and everything. (That morning or when you were working for the DNR^s folks, did you have a feeling like the fire danger was extremely high? Or did you feel like it was just a moderate or what was you feeling regarding the fire danger that day?) We had

a little fire on Sunday. Somebody set fires with some garbage in it. It was in jackpine kind of stuff. Between the Alcona County Line and the River on Tawas District. That was about 2 acres and it didn't seem to be doing that much. But we figured that with the number of trout fisherman and turkey hunters in the woods that we'd probably get something popped up on Monday. I threw some fire tools in the car, I had that little rental Chevette. We were kind of looking for it. About 11:00 or 11:30 when I was working with those DNR guys I was going to get back and see if I could reach either our planting crew or Mio District for a relay and tell them to put one of the tractors on the truck. We had three tractors operating. As the day warms up we would ordinarily put our tractor, the Harrisville tractor, with a good plow and the V-blade on it on the truck so its ready to go. By the time I got back to my radio, things were already happening. In looking at time sheets and stuff they'd been dispatched about 12:30 or so. That might help verify the time. The first Harisville tractor I reported going toward this Mack Lake Fire at about 12:30. They were told to load up and get going. That would tie in closely with ..(the fire probably would have reared across 33?) Right. (That would bring us back to that 12:06 - 12:15 maybe or something like that. Who is Dennis Anderson? He builds spec roads for us, he's got heavy equipment.) It was, let me see now I was asked once I don't know what time it was, whether I had seen Swiderski; I said no and then you could detect voices over the radio, there was quite a bit of concern. Nobody had seen him for at least an hour maybe. Then the plane finally located the tractor and they followed the ~~power~~ ^{plow} line in ~~with~~ ^{to} him. Again I can't help you much as far as time () I don't know, a lot depends on the operator and the terrain. (Where he was working was sand, nothing very steep, he was not backing up and pushing trees, he was just sneaking thru), Was it small stuff or fairly good size? (The biggest one we measured was 6 6/10 inches, no 7.6 - but he didn't push any of those, a lot of it was 3, 4, 5, inch and dense, he was going pretty much straight ahead.) I suppose a fast walk maybe (3 miles/hr) . A lot depends on like I said, the operator, and the circumstances. Claude Rickel is our expert operator.

Something left out. I didn't know who Anderson was.

could a tractor travel while plowing line?

Striker

8

Striker 8

He probably moves a little faster than that. If you're working with him its hard to keep up. He's good at picking ^{a route} ~~around~~, so he doesn't get hung up on something.

Tom Stisher 5/15/80

VOLUNTARY STATEMENT

This officer had check out at my residence at 1252 Perry Crk Rd., at 11:37 a.m. At approx. 11:45, I was TX by the dispatcher that there was a lot of smoke on M-33 at the prescribed burn and that the Forest Service wanted a patrol car there for traffic. At approx. 1205, I arrived at the point of the burn. The smoke was quite heavy blowing across M-33. The wind at this time was strong. The smoke was not going up into the air but was being blown along the ground. I saw the Forest Service vehicles parked off the road on the west side, just south of the burn. I turned my vehicle around and went past the State Highway Dept. that was putting in a culvert on the east side of M-33. I went back through the smoke to the north side of the fire. At this point which was approx. 1215, I saw a man from the Forest Service going toward his truck. I went down to talk to him. He got out of his truck and started towards me. Then he climbed back into his truck and went north on M-33. I followed him. He stopped his truck in the middle of the road because the hill on the east side of the road was starting on fire. Because the truck was in the middle of the north bound lane of M-33, I went south to Co. 604 and blocked off M-33. I called for another car to do the same at Co. 489 and M-33. We started to route the traffic down Co. 604 to Eggleston, over to Co. 489, and back to M-33. We routed traffic in this direction until approx. 1250. At this time the fire was getting close to Eggleston and Co. 489, so we stopped and routed traffic to the west around the burn. I moved from Co. 604 to Valley Road at approx. 1:00 p.m. and routed traffic west on Valley Road to Co. 489 and north. I stayed at this post until around 10:15.

s/Thomas H. McManis
dated/May 9, 1980

VOLUNTARY STATEMENT
(NOT UNDER ARREST)

I am _____, am not under arrest for, nor am I being detained for any criminal offenses concerning the events I am about to make known to _____.
Without being accused of or questioned about any criminal offenses regarding the facts I am about to state, I volunteer the following information of my own free will, for whatever purposes it may serve.

I am _____ years of age, and I live at _____.

This officer had checked out at my Res. on Perry Rd at 1252 Perry Cal Rd, at approx 11:32 AM. At approx 11:45 I saw T.L. By the dispatcher that there was a lot of smoke on M-33 at the Pine Barren and that the Forest Service wanted a patrol car there for traffic. At approx 12:05 I arrived at the point of the house. The smoke was quite heavy blowing across M-33. The wind at this time was strong. The smoke was not going up into the air but was being blown along the ground. I went through the smoke and past the house I saw the forest service vehicle parked in the off the road on the west side just south of the house. I turned my vehicle around and went past the State Highway Dept. that was sitting in a culvert on the east side of M-33. I went back through the smoke to the north side of the Fire at this point which was approx 12:15 I saw a man from the Forest service ~~get out~~ get out of his truck. I went down to talk to him. He got out of his truck and started towards me. Then he climbed back into his truck and went North on M-33. I followed him. He stopped his truck in the middle of the road because the hill on the East side of the road was starting on fire. Because the truck was in the middle of the North Bound lane of M-33 I went south to Co-604 and blocked off M-33. I called for another car to do the same at Co-498 and M-33. Traffic on both sides started to back up. Traffic down Co-604

I have read each page of this statement consisting of _____ page(s), each page of which bears my signature, and corrections, if any, bear my initials, and I certify that the facts contained herein are true and correct.

Dated at _____, this 9 day of May 19 80.

WITNESS: _____

Thomas K. McMonis

Signature of person giving voluntary statement.

WITNESS: _____

VOLUNTARY STATEMENT
(NOT UNDER ARREST)

_____ am not under arrest for, nor am I being detained for any crimina

_____ ses concerning the events I am about to make known to _____.

Without being accused of or questioned about any criminal offenses regarding the facts I am about to state, I volunteer the following information of my own free will, for whatever purposes it may serve.

am _____ years of age, and I live at _____.

to Eggleston over to CO-489 and back to M-33.
we routed traffic in this direction until approx 1250.
at this time the fire was getting close to Eggleston
and CO-489 was not we stopped ~~to~~ and I started
to route traffic to the west, around the
bureau of road from CO-604 to Valley Road at approx
1100 AM and routed traffic down Weston Valley Rd to
CO-489 and North, I stayed at this post until approx 10:15

I have read each page of this statement consisting of _____ page(s), each page of which bears my signature, and corrections, if any, bear my initials, and I certify that the facts contained herein are true and correct.

and at _____, this 9 day of May 1980.

WITNESS: _____
WITNESS: _____

Thomas H. McManis
Signature of person giving voluntary statement.

BLODGETT MEMORIAL HOSPITAL
GRAND RAPIDS, MICHIGAN 49506

May 8, 1980

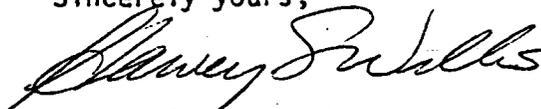
Mr. Barry L. Shantz, Esq.
Prosecuting Attorney
Oscoda County Court House
Mio, Michigan 48647

RE: James Lee Swiderski, A-12,311

Dear Mr. Shantz:

An autopsy was performed on the body of Mr. James Lee Swiderski at Blodgett Medical Center on 7 May 1980 with positive identification established with dental examination by the deceased's dentist, Dr. Melford Garvin. The autopsy revealed the subject died as the result of pulmonary inhalation burns with severe acute pulmonary edema and hemorrhage being the immediate cause of death. The blood carboxyhomeglobin level was 12% which is significant, but not in of itself a lethal level. This is consistent with the nature of the fire being an open intense flash flame rather than a smoldering type of conflagration. A complete report will be forwarded within 3-4 weeks. I have also informed Dr. Warren Bontrager, Oscoda County Medical Examiner and Sgt. Helgren, Michigan State Police of this preliminary information. Please do not hesitate to contact me if there are any questions.

Sincerely yours,



Harvey S. Wilks, M.D.
Associate Pathologist
Kent County Medical Examiner

HSW/rmw

CC: Dr. Warren E. Bontrager
Sgt. Dorius Helgren



LF _____
CF 15-80



STATE OF MICHIGAN
DEPARTMENT OF PUBLIC HEALTH

APPENDIX G

STATE FILE NUMBER

0027695 B

CERTIFICATE OF DEATH

1. DECEDENT NAME James Lee Swiderski				2. SEX Male	3. DATE OF DEATH (Mo., Day, Yr.) 5-5-80
4. RACE - (e.g., White, Black, American Indian, etc.) (Specify) White	5a. AGE - Last Birthday (Yrs.) 29	5b. UNDER 1 YEAR MO. DAYS	5c. UNDER 1 DAY HOURS MIN.	6. DATE OF BIRTH (Mo., Day, Yr.) November 8, 1950	7a. COUNTY OF DEATH Oscoda
7b. LOCATION OF DEATH (Check one and specify) <input type="checkbox"/> INSIDE CITY LIMITS OF: <input type="checkbox"/> INSIDE VILLAGE LIMITS OF: <input checked="" type="checkbox"/> TWP. OF: Mentov			7c. HOSPITAL OR OTHER INSTITUTION - Name (If not in either, give street and number) In Forest T25N R3E Sec 6		
8. STATE OF BIRTH (If not in U.S.A. name country) Michigan	9. CITIZEN OF WHAT COUNTRY U.S.A.	10. MARRIED, NEVER MARRIED, WIDOWED, DIVORCED (Specify) Never	11. SURVIVING SPOUSE (If wife, give maiden name) None	12. WAS DECEDENT EVER IN U.S. ARMED FORCES? (Specify Yes or No) No	
13. SOCIAL SECURITY NUMBER 379-56-7626	14a. USUAL OCCUPATION (Give kind of work done during most of working life, even if retired) Crew Leader & Supervision		14b. KIND OF BUSINESS OR INDUSTRY U.S. Forestry Service		
15a. CURRENT RESIDENCE - STATE Michigan	15b. COUNTY Oscoda	15c. LOCALITY (Check one and specify) <input type="checkbox"/> INSIDE CITY LIMITS OF <input checked="" type="checkbox"/> INSIDE VILLAGE LIMITS OF Mio <input type="checkbox"/> TWP. OF	15d. STREET AND NUMBER 607 S. MORENOI		
16. FATHER - NAME FIRST MIDDLE LAST Adam J. Swiderski			17. MOTHER - MAIDEN NAME FIRST MIDDLE LAST Florence Graczyk		
18a. INFORMANT (Signature) Adam J. Swiderski		18b. MAILING ADDRESS STREET OR R.F.D. NO. CITY OR TOWN STATE ZIP 6329 McCords Ave Alto, Michigan 49302			
19. IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), AND (c).) PART I (a) Massive Total Body Burns DUE TO, OR AS A CONSEQUENCE OF: (b) (c)					Interval between onset and death Immed
PART II OTHER SIGNIFICANT CONDITIONS - Conditions contributing to death but not related to cause given in PART I				20. AUTOPSY (Specify Yes or No) Yes	21. WAS CASE REFERRED TO MEDIC EXAMINER? (Specify Yes or No) Yes
22a. PLACE OF DEATH (Home, Nursing Home, Hospital, Ambulance) (Specify) Forest		22b. IF HOSP. OR INST., Indicate DOA, OP/emer. Rm., Institution (Specify)		24a. (Check one box) <input type="checkbox"/> This case reviewed and determined not to be a medical examiner's case. <input checked="" type="checkbox"/> On the basis of examination and/or investigation, in my opinion death occurred at the time, date and place and due to the cause(s) stated. Oscoda Co	
23a. To the best of my knowledge, death occurred at the time, date and place and due to the cause(s) stated. (Signature and Title) W.F. Bontrager MD DATE SIGNED (Mo., Day, Yr.) 23b.		23c. HOUR OF DEATH M NAME OF ATTENDING PHYSICIAN IF OTHER THAN CERTIFIER (Type or Print) 23d.		MEDICAL EXAMINER (Signature and Title) W.F. Bontrager MD Med Examiner DATE SIGNED (Mo., Day, Yr.) 24b. 5-5-80 PRONOUNCED DEAD (Mo., Day, Yr.) 24d. ON 5-5-80	
25. NAME AND ADDRESS OF CERTIFIER (PHYSICIAN OR MEDICAL EXAMINER) (Type or Print) W.F. Bontrager MD PO Box 8 Mio MI 48647		26a. ACC. SUICIDE, HON. NATURAL OR PENDING INVEST. (Specify) Acc.		26b. DATE OF INJURY (Mo., Day, Yr.) 5-5-80	
26c. HOUR OF INJURY at 4:15 PM		26d. DESCRIBE HOW INJURY OCCURRED caught in fire while fighting forest fire			
26e. INJURY AT WORK (Specify Yes or No) Yes		26f. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify) Forest		26g. LOCATION STREET OR R.F.D. NO. CITY, VILLAGE, OR TOWNSHIP STATE T25N R3E Sec 6 Mentov Twp Oscoda Co MI	
27a. BURIAL, CREMATION, REMOVAL OTHER (Specify) Burial		27b. CEMETERY OR CREMATORY - NAME St Patricks Cemetery		27c. LOCATION CITY, VILLAGE, OR TOWNSHIP STATE Alto, Michigan 49302	
27d. DATE (Mo., Day, Yr.) May 8, 1980		28a. NAME OF FACILITY Jonkhoff-Roetman Fun'l Hm		28b. ADDRESS OF FACILITY Box 147 Caledonia, MI 49316	
28c. FUNERAL SERVICE LICENSEE (Signature) Charles R... 28d.		28e. REGISTRAR (Signature) Paul... 28f.		29. DATE RECEIVED BY REGISTRAR (Mo., Day, Yr.) MAY 8, 1980	

IF DEATH OCCURRED IN INSTITUTION, SEE MANUAL REGARDING COMPLETION OF RESIDENCE ITEMS

PARENTS

CONDITIONS IF ANY WHICH GAVE RISE TO IMMEDIATE CAUSE STATING THE UNDERLYING CAUSE LAST

CAUSE OF DEATH

CERTIFIER

DISPOSITION

B-36b (1/78)

APP. H

Mio Ranger Dist. Mio, Mich. May 10, 1980

I, William N Baker, was operator on Tractor #2690 on May 4, 1980. Upon arriving at the station for duty, I proceeded to do a maintenance and mechanical check on the tractor. This is a normal procedure for me when reporting for fire stand-by duty. I went completely through the check procedure. The tractor was in excellent mechanical condition and the hydraulic system was in perfect working condition according to my findings. I could not find anything wrong mechanically or otherwise with the tractor on that date.

William N. Baker

5/10/80

At some point during the prescribed burn the line boss requested mio tractor to move northerly if he could leave the spot which he was working on. Mio tractor responded that he just about had a double line around it and would do so.

Gordon J. Haas

5-9-80

The information here is from a telephone conversation June 10, 1980 with Mio Assistant Ranger, Dick Lord.

Radios on the Crane Lake Prescribed Burn, 5/5/80 and on the early stage of the Mack Lake Fire were:

Portable Radios

Bosman
Lord
*Bates
Haase
Sadler

Mobile Radios

5-2 1,000-gallon tanker
5-3 ½ ton pick-up
5-4 Tiltbed truck
5-4 Tractor
5-5 125-gallon tanker
5-6 6 passenger pick-up
**5-1 ½ ton pick-up

* Bates' radio worked until sometime after he asked Swiderski to move north to the second spot-fire on east side of M-33. When Bosman went to become aerial observer, he left his radio with Bates. Aircraft had a F.S. radio.

** May have been driven to the burn project morning of 5/5/80 but this has not been confirmed.

R. N. Smith

R. N. SMITH

Position Number 09040309

Wildlife Technician (Wildlife), 25-411-5

1. INTRODUCTION

Serves as fish and wildlife technician on the Mio Ranger District, Huron-Manistee National Forests, with responsibility for performing a variety of non-professional duties involved in the protection and management of the resources of the District with primary responsibilities in wildlife management.

2. PRINCIPAL DUTIES AND RESPONSIBILITIES

Wildlife Management - Under the general supervision of the other Resources Staff Assistant, incumbent is responsible for posting and maintaining control over entry to the Kirtland's Warbler areas, corresponds with individuals interested in information pertaining to the Kirtland's Warbler and other wildlife, creates and maintains interpretive materials and displays pertaining to the District wildlife program, and participates in the annual census of Kirtland's Warbler and other species. 25%

The incumbent participates in the preparation of plans for prescribed burning. On occasion makes out the actual plans, maps and post burn reports. In this capacity the wildlife technician will assist with the selection of areas to be burned by providing data on the condition of slash present. Supervises and/or participates in the preparation of areas to be burned by operating a tractor or directing operations of a 3-5 man crew preparing fire lines. Will participate as a crew member in the actual burning procedure (500 acres per year). 10%

Under the technical supervision of the Timber Management Assistant is responsible for on the ground layout of wildlife projects. These projects will vary but typically might be maintaining cutting schedules in the implementation of habitat plans for critical Kirtland's Warbler habitat, improvement of wetlands, opening maintenance and/or establishment, planting of shrubs, pruning of abandoned apple trees, and other similar projects. The wildlife technician prepares the District annual wildlife reports. Participates in cooperative fish and wildlife surveys with Forest and MDNR Biologists. 35%

The incumbent serves as an integral part of the District fire organization with capability of serving as a tractor operator, pumper foreman, or crew leader. 5%

During the periods of the year when wildlife and fire tasks are of a lesser concern the incumbent assumes timber management responsibilities. Under the supervision of the cruiser technician, cruises timber, establishes boundaries and performs timber stand

Position Number 09040309

improvement. Instructions are furnished but judgement in the field is exercised in the determination of trees to be marked or tallied, location of boundaries to be cut or contracted, and stand improvement practices undertaken.

10%
~~20%~~

Fleet Manager - Serves as District Fleet Manager. Coordinates use of equipment and makes necessary arrangements to avoid conflicts. Is responsible for maintaining fleet equipment in good mechanical and safe working condition. Makes minor repairs as needed. Requests assistance on major repairs from commercial shops. Maintains an adequate stock of gasoline, diesel fuel, lubricating oil, and grease to meet District requirements. Completes monthly review of District fleet use and initiates any corrective action necessary. *Serves as district license examiner*

15%
~~5%~~

Performs other duties as assigned.

3. CONTROLS OVER THE POSITION

Work is performed under the supervision of the Other Resource Assistant. Finished work conforms to established regulations, procedures and policies. Incumbent is furnished instructions or on-the-job guidance in new work situations, with periodic inspections made of his work.

UNITED STATES DEPARTMENT OF AGRICULTURE - FOREST SERVICE
CORRECTION NOTICE
For AD-332 Position Description

Position No. **I 13**
09040309

INSTRUCTIONS: Submit six copies as a request to Personnel Management, signed by immediate supervisor and initialed by the Forest Supervisor or Staff Director or their designated acting. The proposal, when approved by the classification delegate will be distributed as shown below. (FSM 6151.14A).

Position Title, Series, Grade: Biological Tech. (wldlfe), GS-404-5
Incumbent: James L. Swiderski

Organization Unit (Forest, Staff Group, District or Civilian Conservation Centers, etc.): Huron-Manistee NF - Mio RD

CHANGE DUTIES (also percentage of time if involved):

Delete:

Add: Under 2. Duties as last sentence of paragraph 6:
Serves as District License Examiner

Change: Under 2 Duties, percentages as follows
Paragraph #5 from 20% to 10%
Paragraph #6 from 5% to 15%

CHANGE SUPERVISOR	To Position No.	Title, Series, Grade
	From Position No.	Title, Series, Grade

I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships, and that the position is necessary to carry out government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false or misleading statements may constitute violations of such statutes or their implementing regulations.

Richard O. [Signature]
(Signature of Immediate Supervisor)
#09040287, Forester
(Title and Position Number)
3/30/79
(Date)

Classification Approval	Date	Signature	Title
Distribution (check to mail)			WO (GS- 13 and above)
	RO Classification File (Orig.)		Unit (2 copies)
	Personnel Folder		Incumbent

FIRE-JOB QUALIFICATIONS EXPERIENCE AND TRAINING RECORD

(See Privacy Act Statement on Back)

PAGE 1 OF 1 PAGES

NAME

JIM SWIDERSKI

DATE

3/14/80

REGION OR AGENCY (1-2) 019	UNIT OR AREA HURON-MANISTEE (3-4) 014	SUBUNIT OR DISTRICT M10 (5-6) 015
SOCIAL SECURITY NO. 379567626 (7-15)	STATUS CODE (CODE 2 AND CARD TYPE 1 WILL DELETE RECORD FROM THE MASTER FILE)	
INSTRUCTIONS: SUBMIT ONLY CARDS FOR WHICH YOU HAVE PERTINENT DATA	1 ORIGINAL 2 DELETION 3 ADDITION	(16) 3

CARD NUMBER 1-BASIC INFORMATION (17) 1

YEAR OF FIRE QUALIFICATION (18-19) 810	NAME (LAST, FIRST, MIDDLE INITIAL) (20-39) SWIDERSKI JAMES L		
DATE OF BIRTH (MONTH AND YEAR) (40-43) 111850	TRANSFER TO	UNIT OR AREA (44-45)	SUBUNIT OR DISTRICT (46-47)
PHYSICAL FITNESS RATING (48-49) 45	LINE BEST FUNCTIONAL ASSIGNMENT		
1ST (50-51) 211	2ND (52-53)	3RD (54-55)	

CARD NUMBER 2-TRAINING (17) 2

TRAINING COURSES NEEDED		TRAINING COURSES COMPLETED		
COURSE CODE (18-21)	YEAR COMPLETED (46-47)	COURSE CODE (42-45)	YEAR COMPLETED (52-53)	YEAR COMPLETED (58-59)
FIRING EQUIPMENT (18-21) S2115	718	BASIC FIRE FIGHTER (42-45) S1130	719	719
CREW BOSS (22-25) S230		BASIC FIRE ORIENTATION (48-51) S1110		
		INTRO TO FIRE (54-57) BEHAVIOR (54-57) S1190		

CARD NUMBER 3-FIRE EXPERIENCE (17) 3

LAST CALENDAR YEAR'S FIRE EXPERIENCE OR, IF ORIGINAL INPUT, EXPERIENCE FOR LAST FIVE YEARS (ADDITIONAL CARDS CAN BE USED IF NEEDED)

JOB CODE (18-19)	YEAR (20-21)	NO. OUAL. FIRES (22-23)	NO. TRNG. FIRES (24)	MGMT. LEVEL (25)	RATING (26)
211	719		4	4	12
211	719		1	5	12
211	719	01		4	12

CARD NUMBER 4-INTERAGENCY FIRE-JOB QUALIFICATION CARD DATA (17) 4

FIRE QUALIFICATIONS		ON-JOB TRAINING NEEDS	
TITLE	NUMBER (18-19)	TITLE	NUMBER (24-25)
	(20-21)		(26-27)
	(22-23)		(28-29)

(OVER)

FIRE FIGHTER

CARD NUMBER 5 - PRIOR FIRE EXPERIENCE

JOB CODE	NO OF FIRES	JOB CODE	NO OF FIRES	JOB CODE	NO OF FIRES
1 (18-19)	(20)	8 (39-40)	(41)	15 (60-61)	(62)
2 (21-22)	(23)	9 (42-43)	(44)	16 (63-64)	(65)
3 (24-25)	(26)	10 (45-46)	(47)	17 (66-67)	(68)
4 (27-28)	(29)	11 (48-49)	(50)	18 (69-70)	(71)
5 (30-31)	(32)	12 (51-52)	(53)	19 (72-73)	(74)
6 (33-34)	(35)	13 (54-55)	(56)	20 (75-76)	(77)
7 (36-37)	(38)	14 (57-58)	(59)	21 (78-79)	(80)

CODES			CODES			CODES	TRAINING COURSE
F	J		F	J			
C1	01	GHQ Fire Manager	S1	03	GHQ Service Coordinator	S110	Basic Fire Orientation
C1	04	Fire Boss I	S1	07	Service Chief I	S130	Basic Fire Fighter
C1	10	Fire Boss II	S1	13	Service Chief II	S190	Introduction to Fire Behavior
C1	17	Fire Boss III	S1	41	Camp Officer		
L1	05	Line Boss I	S1	42	Tool Manager	S211	Water/Pumps
L1	11	Line Boss II	S2	43	Equipment Officer	S212	Power Saws
L1	16	Division Boss	S3	44	Tractor Manager	S213	Tractors
L1	18	Sector Boss	S4	45	Tanker Manager	S214	Ground Tankers
L1	19	Crew Boss	S5	46	Truck Manager	S215	Firing Equipment
L1	20	Squad Boss	S6	47	Supply Officer	S230	Crew Boss
L1	21	Fire Fighter	S7	48	Air Service Officer	S260	Fire Bus. Mgt., Principles
L2	15	Air Attack Boss	S8	49	Air Service Mngr. Airport	S270	Basic Air Operations
L2	22	Air Traffic Boss	S8	52	Mixmaster		
L3	23	Air Tanker Boss	S9	50	Air Service Mgr. Heliport I	S320	Organizing Fire Suppressio
L4	24	Helicopter Boss	S9	51	Air Service Mgr. Heliport II	S330	Sector Boss
L5	25	Tractor Boss	S0	53	Communications Officer	S331	Crew Liaison Officer
L6	26	Tanker Boss	S0	54	Radio Operator	S341	Maps-Records Officer
L7	27	Firing Boss	F1	08	Finance Chief I	S343	Infrared Imagery Interpr.
L8	28	Felling Boss	F1	14	Finance Chief II	S351	Air Service Mgt., Airport
L9	29	Line Locator	F1	55	Time Officer	S352	Air Service Mgt., Heliport
L9	30	Line Scout	F1	56	Time Recorder	S353	Mixmaster
L0	31	Crew Liaison Officer	F1	57	Commissary Manager	S354	Camp Officer
P1	02	GHQ Plans Coordinator	F2	58	Injury Compensation Officer	S355	Equipment Officer
P1	06	Plans Chief I	F3	59	Obligations Officer	S356	Supply Officer
P1	12	Plans Chief II	F4	60	Claims Officer	S370	Intermed. Air Operations
P1	32	Maps-Records Officer	A1	09	Safety Chief	S380	Safety Management
P2	33	Intelligence Officer	A1	40	Safety Officer	S390	Fire Behavior
P2	34	General Scout				S420	Fire Org. and Management
P3	35	Infrared Imagery Interpr.				S440	Plans Chief
P4	36	Fire Behavior Officer				S450	Service Chief
P5	37	Fire Information Officer				S451	Air Service Officer
P6	38	Training Officer				S460	Finance Chief
P7	39	Liaison Officer Coordinator				S470	Air Attack Boss
						S520	Fire Generalship
						S580	Adv. Fire Safety Mgt.
						S590	Fire Behavior Officer
						S620	Fire Command

Privacy Act Statement

All information requested on this form is voluntary and is solicited under the authority contained in Title 16 U.S.C. Section 551. It will be used to determine and certify the fire suppression positions for which the individual is qualified. It is available to the State and Federal Agencies responsible for fire suppression. Withholding information will jeopardize the possibility of fire-suppression position assignment. Social Security numbers will be used as identifying number only.

I certify that I have read the above statement.

3/14/80

Date

James Sioderski
Signature

Huron-Manistee NF

6140 Employee Development

May 31, 1978

"Effective Radio Use" Programmed Text

Files

James Swiderski has completed the "Effective Radio Use" Programmed Text.

WILLIAM C. ERICKSON
Deputy Forest Supervisor

cc: OPE
EDF
Employee

5100 Fire Management

October 17, 1979

Off Forest Fire Details

District Ranger - Mio, Fire Staff Officer, Forest Supervisor

As members or alternates for the "Off Forest Fire Crew, we would appreciate answers to a few questions.

What criteria is used to decide which R-9 Forests furnish crews for western fires? What individual or group of people is responsible for this decision?

Why, during the 1979 fire season, did a number of R-9 Forests furnish crews on three occasions and the Huron-Manistee only once? Why was this the only R-9 Forest that did not send a crew to Washington in October? (ref. Situation Report 1100 10/10/79) Is some of our work higher priority? Are we more tied to project goals than other Forests? Is our crew less qualified than others? If so, wouldn't we benefit from more experience?

Opportunity for involvement, training and experience in large scale fire operations is limited for R-9 Personnel. We feel fire details should be regarded as opportunities and more equally distributed to R-9 Forests. We would also like to see more information regarding the western fire situation reach the district level, whenever possible, especially while on "Alert" status.

Lee Fox
LEE FOX Forester Trainee

TOM HAHN Forester Trainee

Mike Harnois
MIKE HARNOIS Forester Trainee

Jim Swiderski
JIM SWIDERSKI Wildlife Tech.

DAVE SORENSON Wildlife Biologist

Wm. J. L...

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Huron-Manistee N.F.'s

APPENDIX 15 ①

REPLY TO: 5100 Fire Management

January 28, 1980

SUBJECT: Off-Forest Fire Details



TO: ✓ Lee Fox, Tom Hahn, Mike Harnois, Jim Swiderski,
and Dave Sorenson

THROUGH: District Ranger, Mio RD

This memo will attempt to answer the questions listed in your memorandum concerning off-Forest fire details. The questions will be addressed verbatim.

Question:

What criteria is used to decide which R-9 Forests furnish crews for western fires?

Answer:

The criteria used primarily in deciding which crews will be dispatched to western fires are purely logistical in nature, involving the designated major pickup points in the eastern region, the number of crews requested, and the time element involved in picking up the crews.

The designated pickup points are Boston, Harrisburg, Indianapolis, St. Louis, Milwaukee, and Duluth. These points are centrally located to the availability of the most crews, including state crews, and the adjacent area. The pickup point for Huron-Manistee crews would be Milwaukee, or in some instances, at Duluth. This sometimes poses a problem in getting our crews to the major pickup points in Milwaukee within a stated period of time. In most cases it involves not only in getting crew members from the more extreme locations on the Forest to a point such as Grand Rapids where they can be transferred to a regularly scheduled commercial airlines to Milwaukee or Duluth, but there has to be seats available for it to work in an orderly manner.

Question:

What individual or group of people is responsible for this decision?

Answer:

The Regional Office, Division of Aviation & Fire Management. The Group Leader in charge is Dave Seaberg.

2.

Question:

Why, during the 1979 fire season, did a number of R-9 Forests furnish crews on three occasions and the Huron-Manistee only once?

Answer:

The first request for assistance was in early August for the Mortar Creek fire in Idaho. The reason that the Huron-Manistee crew was not requested is that we could not meet the time frame to catch the charter plane from Milwaukee or whatever other central location was used to pick up the crew.

The second fire which involved Woodward and Sage fires in California occurred around the middle of September when this Forest was experiencing a drought situation. We requested that the Huron-Manistee crew be sent only after other crews were committed.

The third fire situation was in the state of Washington during the first week of October and although we were placed on alert, the fires were extinguished and under control before our assistance was needed. If further crews had been needed, we would have been dispatched to this fire..

Question:

Why was this the only R-9 Forest that did not send a crew to Washington in October?

Answer:

We were not aware that this was the only Forest that did not have a crew in Washington. We did not have a copy of the 10/10/79 situation report to check this. A copy of the October 4 situation report showed that 3 Forests were not dispatched to these particular fires. As a matter of fact, there were more state crews on these fires than there were Forest Service crews.

Question:

Is some of our work higher priority?

Answer:

No

3.

Question:

Are we more tied to project goals than other Forests?

Answer:

No

Question:

Is our crew less qualified than others?

Answer:

Definitely not! The Regional Office is well aware that this Forest is as committed or more committed than any other Forest in the Region in maintaining a fully qualified inter-regional fire crew.

Other Forests have approached the Regional Office on the same subject matter as you presented in your memo. The Division of Fire Management in R-9, I feel, is very sensitive to the wishes of the Forests training needs, and to the personal wishes and career needs of each crew member. I believe that they are doing the best they can to equally distribute the request for fire suppression assistance.

So far as keeping the families informed during the tenure of a crew assigned off-forest duty, we have continually passed along to you all the information we had at hand. As a matter of fact, there have been several times when we have asked the Regional Office for more information when it appeared that such information wasn't coming through in a timely manner.

I hope the answers given are satisfactory. If you still have some questions, I would be happy to discuss this with you personally.


CLIFFORD A. REEDY
Fire, I&E, WS, Staff Officer

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

APPENDIX ISA ①

Huron-Manistee N.F.'s

REPLY TO: 5130 Suppression

August 14, 1979

SUBJECT: Forest Inter-Regional Fire Crew



TO: District Rangers, S.O. Staff

Attached are the red cards for 1979 (if not given to you individually over the past several days).

The crew list, alternates, and overhead are shown on the attached pages. In the event of a call for the crew to go on a fire, the crew will be mobilized as follows:

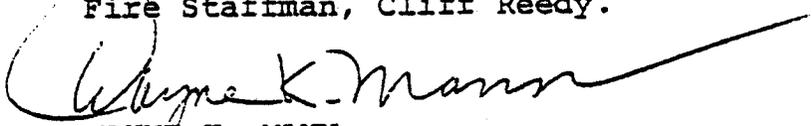
1. The Forest Fire Staff Officer notifies the designated Crew Boss.
2. The Crew Boss notifies the designated Squad Bosses.
3. The Squad Bosses notify members of their squads.

In all of the above actions individuals will be informed of the fire situation, where to report, travel method to use, etc. Ground travel will be utilized as much as possible to hold down costs. If the crew is to meet a charter plane in Lansing or Grand Rapids, some air flights may be used to get crews to these locations, especially for people on the Huron Forest.

If for some reason a crew member cannot make a detail, the Squad Boss will recommend an alternate to the Crew Boss. An alternate for a Squad Boss who is unable to make a detail will be jointly agreed upon by the Crew Boss and the Fire Staff Officer.

Please check the phone numbers to see if they are listed correctly.

Any comments regarding this roster should be directed to Fire Staffman, Cliff Reedy.


WAYNE K. MANN
Forest Supervisor

Enclosures

8/10/79

63.1 - INTER-REGIONAL CREW

Huron-Manistee N.F.'s

CREW BOSS	DAVID P. SNYDER	Tawas/(517)362-8063
SQUAD BOSS	HARRY K. RICHARDS	Cadillac/(616)775-5912
	Leon F. Blashock	Cadillac/(616)775-0940
	Peter M. Griffin	Cadillac/(616)775-2150
	Timothy A. Sapak	Manistee/(616)723-8723
	Terrence L. Richards	Manistee/(616)848-4518
	Michael E. Ojanen	Cadillac/(616)775-1616
SQUAD BOSS	OREN L. STRATTON	White Cloud/(616)689-6446
	Daniel R. Valley	S.O./ (616)775-9325
	Kevin G. Walsh	White Cloud/(616)652-6616
	Lawrence P. Stillwell	White Cloud/(616)689-1539
	Michael W. Miller	Manistee/(616)723-4456
	Dennis D. Neitzke	Baldwin/(616)745-2536
SQUAD BOSS	DAVID J. SORENSON	Mio/(517)826-5784
	Joseph G. Drozdowski	Tawas/(517)362-3775
	James R. Bernier	Harrisville/(517)736-6031
	Thomas C. Hahn	Mio/(517)826-5915
	Gerald G. Smith	Tawas/(517)469-2792
	<u>James L. Swiderski</u>	Mio/(517)826-5806

ALTERNATES FOR INTER-REGIONAL CREW

<u>NAME</u>	<u>UNIT</u>	<u>QUAL.</u>	<u>TELEPHONE #</u>
J. Pullen	Cadillac	FF	(616) 829-3296
J. Benz	Cadillac	SB	(616) 839-2553
W. Johnson	Cadillac	SB	(616) 775-7465
P. Knudson	Cadillac	SB	(616) 775-4282
M. Sands	Cadillac	SB	(616) 775-6020
J. Norton	Cadillac	FF	(616) 775-1698
L. Jarvinen	Manistee	SB	(616) 723-5063
J. Pennell	Manistee	FF	
M. Harnois	Mio	SB	(517) 826-5186
G. Long	Mio	FF	(517) 848-5237
S. Hartsig	Tawas	SB	(517) 362-8919
D. Hoppe	Tawas	SB	(517) 362-6517
D. Morarity	Tawas	SB	(517) 362-2082
T. Wilson	Tawas	SB	(517) 362-6294
J. Parry	Tawas	FF	(517) 362-3209
S. Chandler	Harrisville	SB	(517) 724-6144
E. Nahgahgwon	Harrisville	SB	(517) 739-2498
T. Striker	Harrisville	SB	(517) 724-6344
C. Gebhardt	S.O.	SB	(616) 775-7983
D. Krejcarek	S.O.	SB	(616) 775-7115
M. Solomon	S.O.	SB	(616) 775-4766

OTHER OVERHEAD

- E. Kroepel - Crew Boss, Crew Liaison Officer. Telephone (616) 723-6346.
- F. Kollar - Sector Boss, Crew Liaison Officer. Telephone (616) 839-2429.
- B. Spinner - Sector Boss. Telephone (616) 775-8644.
- J. Price - Finance Chief I. Telephone (616) 775-5744.
- C. Reedy - Line Boss II, Reg./Agency Liaison Officer. Telephone (616) 775-9351.

TOM BATES STATEMENT
Regarding Jim Swiderski's Heavy Equipment Training

In April of this year, I instructed Jim in the operation of the new plow unit which had been installed on the Mio District crawler tractor. The tractor is a John Deere 450 equipped with a "V" plow in front and a "Michigan" fire plow at the rear.

Jim spent approximately 20 hours operating this plow unit in preparation for burning on the following timber sales, Crane Lake, Hughes Lake, and Jenkins Road. I also showed Jim where to locate lines in the event of a wildfire. Jim was the tractor plow operator on the 150 acre "Pindus Fire" a short time later and performed very well. He was careful with his equipment and seemed fully aware of its capabilities.

Tom Bates

Tom Bates

*Taken from Tom Bates on May 2, 1980
at Mio, Mich.*

H. P. Gibson

Appendix I T

APPENDIX I T

Forest Supervisor
Huron-Manistee National Forests
421 S. Mitchell St
Oshtemo, Mich. 49601 -

May - 9 - 1980

Mr. Erickson

I was contacted by Mr. Jim Swiderki on or about April 27, 1980 by phone from his office to make an appointment with me some time during the week of May 5th at which time Mr. Swiderki would be planning to be qualified on the crawler tractor, Mr. Swiderki has been operating crawler tractor as an operator trainee. I Don Stagg is the heavy equipment examiner on the Huron Nat.

Donald C. Stagg
Eng. Equip. Operator Foreman.

PHYSICAL FITNESS INQUIRY FOR MOTOR VEHICLE OPERATORS

1. LAST NAME—FIRST NAME—MIDDLE NAME SWIDERSKI, JAMES L.	2. DATE OF BIRTH 11/8/50	3. TITLE OF POSITION BIOLOGICAL TECHNICIAN
4. HOME ADDRESS (Number, street or RFD, city or town, State and ZIP code) RT 2, Box 968 MIO, MI. 48647		5. EMPLOYING AGENCY US FOREST SERVICE

6. HAVE YOU EVER HAD OR HAVE YOU NOW (Place check at left of each item):

YES	NO	DEFECT OR DISEASE	YES	NO	DEFECT OR DISEASE
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Poor vision in one or both eyes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Arthritis, rheumatism, swollen or painful joints
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Eye disease	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Loss of hand, arm, foot, or leg
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Poor hearing in one or both ears	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Deformity of hand, arm, foot, or leg
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Diabetes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Nervous or mental trouble of any kind
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Palpitation, chest pain, or shortness of breath	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Blackouts or epilepsy
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dizziness or fainting spells	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sugar or albumin in urine
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Frequent or severe headaches	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Excessive drinking habit (ALCOHOL)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	High or low blood pressure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other serious defects or diseases
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drug or narcotic habit			

7. IF YOUR ANSWER IS "YES" TO ONE OR MORE OF THE ABOVE QUESTIONS, EXPLAIN FULLY IN THIS SPACE, INDICATING DATE OF ORIGINAL CONDITION AND CURRENT STATUS:

:reabM wthoes Isioe2

:exrsmes

8. (A) DO YOU WEAR GLASSES (OR CONTACT LENSES) WHILE DRIVING? YES NO

(B) DO YOU WEAR A HEARING AID? YES NO

I certify that my answers above are full and true, and I understand that a willfully false statement or dishonest answer to any question may be grounds for cancellation of my eligibility or my dismissal from the service and is punishable by law.

SIGNATURE <i>James Swiderski</i>	DATE 4/18/78
-------------------------------------	------------------------

REVIEW AND CERTIFICATION BY DESIGNATED OFFICIAL

I certify that I have reviewed this physical fitness inquiry form and other available information regarding the physical condition of the applicant, and that I have made the following determination:

There is no information on this form or otherwise available to indicate that the applicant should be referred for physical examination.

On the basis of items checked on this form or other information, this applicant must be referred for physical examination before he is authorized to operate a Government-owned motor vehicle or his current authorization is renewed.

Items checked on this form or otherwise available do not warrant referral for medical examination because of the following facts:

SIGNATURE OF DESIGNATED OFFICIAL <i>Stacy S. Nott</i>	DATE 4/18/78
--	------------------------

REPORT OF PHYSICAL TEST

Clearness of vision (i.e. 20/20, 20/60 etc.) Left eye 20/20 Right eye 20/20
 Depth Perception S, Hearing S, Stability S
 Color Perception S, Field of vision in degrees S
 General Physical Condition S

U = Unsatisfactory S = Satisfactory

Birth Place: GRAND RAPIDS, MI.

Social Security Number:

379-56-7626

Remarks:

APPLICATION FOR MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD

SECTION I - TO BE COMPLETED BY APPLICANT

INSTRUCTIONS: Answer all questions completely, include your private, commercial and Government vehicle experience. If answer to any item is "None", write "None". If necessary, use additional sheets.

1. NAME JAMES SWIDERSKI 2. SOC. SECURITY NO. 379-56-7626 3. TITLE BIOLOGICAL TECHNICIAN

4. NAME AND ADDRESS OF OFFICE BY WHICH EMPLOYED (Agency and Division)
US FOREST SERVICE MIO RANGER DISTRICT RT #2 BOX 968 MIO, MI 48647

5. SEX M 6. DATE OF BIRTH 11/8/50 7. PLACE OF BIRTH GRAND RAPIDS, MI 8. HEIGHT 5'8" 9. WEIGHT 135 10. COLOR HAIR BROWN 11. COLOR EYES GREEN

An applicant is required to have a license in state where station is located or where he is currently domiciled.

12. NO. OF YOUR STATE DRIVER'S LICENSE 5-362-367-497-858 13. STATE IN WHICH ISSUED MICHIGAN 14. DATE LICENSE EXPIRES NOV. 8, 1980

15. SHOW ANY RESTRICTIONS IMPOSED ON ANY DRIVER'S LICENSE YOU HELD DURING THE LAST FIVE YEARS (Indicate if currently applicable) NONE

16. DRIVING EXPERIENCE (During last five years)

NO. OF MONTHS EXPERIENCE	TYPES OF VEHICLES	SIZE	ESTIMATED YEARLY MILEAGE	SPECIAL LICENSES OR TRAINING RECEIVED	
				A	B
<u>60</u>	<u>PASSENGER</u>		<u>15,000</u>		
<u>2</u>	<u>PICK-UP</u>		<u>15,000</u>		
<u>2</u>	<u>VAN</u>	<u>7-PASSENGER</u>	<u>2,000</u>		

17. LIST OF ARRESTS OR SUMMONSES FOR VIOLATION OF MOTOR VEHICLE LAWS AND CONVICTIONS, IF ANY, DURING LAST FIVE YEARS. (Exclude parking violations)

DATE	PLACE	OFFENSE CHARGED WITH		WAS DRIVER'S LICENSE REVOKED OR SUSPENDED	
		KIND	DISPOSITION	YES OR NO	FOR HOW LONG
A	B	C	D	E	F
<u>NONE</u>					

18. MOTOR VEHICLE ACCIDENT RECORD (During last five years)

DESCRIBE EACH ACCIDENT. (Show date, place, circumstances, and dollar value of damages incurred. State whether you were charged with any law violation and the disposition of such charges.)

NONE

19. TYPES OF VEHICLES FOR WHICH PERMIT IS REQUESTED (If trucks, show gross vehicle weights)
Sevens & pickups ~~2~~ & AWD
12 Passenger Vans Wheel Seated
Trainers on Crawler Tractor + tractor equal D-4

20. MAIL OPERATOR'S IDENTIFICATION CARD TO FOLLOWING ADDRESS
U.S. Forest Service
mio Ranger District
mio, Michigan 48647

I certify that the statements made by me in this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith.

21. SIGNATURE OF APPLICANT James Swiderski 22. DATE 4/18/78

SECTION II - TO BE COMPLETED BY SUPERVISOR (FOR OPTIONAL USE)

23. APPLICATION IS FOR ORIGINAL PERMIT RENEWAL OF PERMIT REPLACEMENT OF LOST PERMIT

24. IF RENEWAL OR REPLACEMENT, SHOW PRESENT GOVT. PERMIT NUMBER | 25. EXPIRATION DATE

26. SHOW EMPLOYMENT STATUS OF APPLICANT FORMAL APPOINTMENT LETTER OF AUTHORIZATION APPOINTMENT NON-FEDERAL (Cooperative)

27. UPON BEING ISSUED SF-46, APPLICANT WILL BE ONE OF THE FOLLOWING
 OPERATOR - Any employee whose status regularly requires the operation of motor vehicles. (Chauffeurs, Mounted Messengers, Truck Drivers, Garagemen-Drivers, Guard-Drivers, etc.)
 INCIDENTAL OPERATOR - Any employee in other than an operator's position who is required to operate a motor vehicle in order to properly carry out his assigned duties.
 OTHER OPERATOR - One not falling in above categories.

28. IF APPLICANT IS IN "OTHER OPERATOR" CATEGORY, EXPLAIN NEED FOR PERMIT

29. I HAVE REVIEWED THE APPLICANT'S STATEMENTS ON THE FACE OF THIS FORM AND THE PHYSICAL FITNESS INQUIRY FORM COMPLETED BY HIM AND RECOMMEND HE BE ISSUED A MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD.
 This individual's duties do not require him to drive more than one day a week on the average.
 Visual acuity adequate as indicated by three-year visual acuity check required for renewal of State driving license.
 Visual acuity adequate as measured by test administered as required by DPM 930 - Appendix A - A-5a(4)(b).

30. SIGNATURE OF SUPERVISOR | 31. DATE
Richard O. Lord

SECTION III - TO BE COMPLETED BY THE OFFICE ISSUING OPERATOR'S IDENTIFICATION CARD

Table with 2 columns: YES, NO. Row 1: Applicant meets physical fitness requirements of the basis of a. SF-47, Physical Fitness Inquiry for Motor Vehicle Operators (YES checked). Row 2: b. SF-78, Certificate of Medical Examination (YES checked). Row 3: Applicant passed Road Test (YES checked). Row 4: Road Test was waived.

35. THIS APPLICANT IS QUALIFIED TO DRIVE THE FOLLOWING TYPES OF VEHICLES: Sedans, Pickups - 4x4 1T, Van 12-passenger AWD.

36. I certify that I have reviewed the above form and other information available and determine this applicant should be issued a Motor Vehicle Operator's Identification Card with the following restrictions (eyeglasses required while driving, etc., as indicated on SF-47 or SF-78): None

37. SIGNATURE | 38. TITLE | 39. DATE
James H. Price | AO | 4/20, 38

USDA - Forest Service

INCIDENTAL DRIVER'S ROAD TEST SCORE SHEET
(FSH 7109.15)

My name and address are:

JIM SWIDERSKI
(Name)70. 584
(Street & No. or RFD Route)Mio. Mi.
(City and State)48647
(ZIP Code)4/18/78
(Date)

EXAMINER

Stacy S. Nish

Qualified to Operate Sedans, Pickups & Trucks
upto 25,000 Gvw & Over
12 Passenger Pickups

Vehicle Type Used 12 Passenger Van

Score

4

Date

4/18/78

 Pass or Fail

INSTRUCTIONS: During the road test, watch carefully the driver's performance and place a tally mark (/) in front of each error made. If the same error is repeated, use added tally marks (///) for each time the error is made. File in employee development folder.

(The following specific instructions to be given drivers are included for the examiner's convenience.)

I.

Before testing the driver the examiner should say: "You are being given this driving test to determine whether you are a skillful and safe enough driver to qualify for being issued a U. S. Government Motor Vehicle Operator's Identification Card, or, if you do not qualify in this first test, to determine what additional instructions or practice you need to qualify. At first, we will give you a chance to get the feel of the vehicle and to try it out a little and show me that you have enough control over the vehicle to take it out over the test course. You will not be scored on this practice. After this practice you will operate on a five-mile test course where you will be judged on your observance of good safety practices and on your skill in operating.

"I will not tell you of any mistakes you may make while you are driving. These will be discussed after the test."

II.

Before entering the vehicle say to the driver being tested: "This is the test sheet on which your performance will be checked. In the top left block, write your name, your complete address, and date." (NOTE: Do not show checklist on reverse side.) Also say: "You should satisfy yourself before you start that this vehicle can be driven safely. You may want to adjust the seat and mirror and get ready, before you start the motor."

III.

After the individual has indicated he is willing to start, say to him: "Now you will be given an opportunity to practice driving in some traffic and get the feel of the vehicle. Go to (indicate starting point of test course)."

IV.

After trial operation, stopped at curb, parking brake on, say to the driver being tested: "Your road test will start now. From here you will be judged most on how safely you drive, also on how well you operate the vehicle. Pull out now and - - ." (Examiner should tell the driver the direction in which to proceed.)

V.

Instructions for Maneuvers and Problems:

Turn - At least 300 feet from intersection: "Please make a right (left) turn at - - - (for example, the next corner)."

Backing - Stopped at curb: "Now I want to see how well you can back in a straight line. Back along the curb from here to - - - (or, until I tell you to stop). Do not touch the curb. Park as if you were going to get out and leave it for an hour."

Hill Park - "I want to see how well you can park in that space." (Indicate) "You may take as many movements as you need. Be sure you are parked properly when you are through, as if you were going to get out and leave it for an hour."

Temporary Stop - "On the job, you sometimes have to stop for a package. Now act as if you have to do it. Pick your own place to park. Now the stop will be at - - - (for instance, the doorway at - - -). Make your signal for a stop, park legally, and do not double park." - - - (After he stops): "Please turn off the motor. Now I am going to step out. Act as if you are all alone. Step out of the vehicle, just as if you are going to call for a package, at - - -. Then, stand at - - - until I tell you to return. Remember to act as if you are in charge."

VI.

If test is for a Civil Service examination, with a public announcement: "You have finished. Thank you. I'm not allowed to tell you how well you've done. The same office that mailed you your examination rating will mail you a notice."

Examiner: Write Pass or Fail in blank in score box: Pass if score is 23 or less, Fail if it is 24 or more. * SAFETY ITEMS: Any violation will automatically fail an applicant.

- 1 - BEFORE OPERATION CHECK IF FAILS TO:**
- 2 ___ Check tires for inflation, cuts, etc.
 - 3 ___ Check oil, fuel, water level
 - 1 ___ Check lights and signal devices
 - 1 ___ Check all glass
 - 1 ___ Check rear view mirror and adjusts
 - 1 ___ Check horn
 - 2 ___ Check brakes (service & emergency)*
 - 1 ___ Adjusts seat

- 8 - RAILROAD CROSSINGS CHECK IF FAILS TO:**
- 2 ___ Stop where required
 - 2 ___ Slow down
 - 2 ___ Look both ways
 - 2 ___ Select proper gear before crossing

- 2 - LEAVING CURB CHECK IF FAILS TO:**
- 1 ___ Fasten seat belt*
 - 2 ___ Look back to check traffic conditions*
 - 2 ___ Give proper signal
 - 2 ___ Wait for passing traffic
 - 2 ___ Release parking (hand brake)

- 9 - HILL PARKING AND DRIVING**
- 1 ___ Wheels not turned properly
 - 1 ___ Tires not properly in contact
 - 1 ___ Brakes (lever) not set

- 3 - USE OF CONTROLS**
- 1 ___ Fails to make smooth start
 - 2 ___ Both hands not on wheel
 - 1 ___ Races engine
 - 2 ___ In gear, clutch depressed, no brake at intersection
 - 1 ___ Rides clutch
 - 1 ___ Clashes or selects wrong gear
 - 1 ___ Slips clutch to hold vehicle

- 10 - OVERTAKING - PASSING***
- 2 ___ Begins passing run too close behind overtaken vehicle
 - 2 ___ Fails to signal (hand, light, horn)
 - 2 ___ Cuts in too soon
 - 2 ___ Passes in intersection
 - 2 ___ Passes on hill, curve, etc.

- 4 - ATTITUDE***
- 2 ___ Depends too much on others for safety
 - 2 ___ Insists on legal right-of-way
 - 2 ___ Denies pedestrians their right-of-way
 - 2 ___ Fails to give vehicles their right-of-way
 - 2 ___ Unnecessary horn blowing
 - 2 ___ Overconfidence or cockiness
 - 2 ___ Timidity or lack of assurance

- 11 - MAINTAINING LANE AND DISTANCE**
- 2 ___ Follows too closely
 - 2 ___ Fails to maintain proper lane

- 5 - TURNING AT INTERSECTIONS**
- 2 ___ Approaches in wrong lane
 - 2 ___ Turns from wrong lane
 - 2 ___ Turns into wrong lane
 - 2 ___ Cuts corner
 - 2 ___ Turns too fast
 - 2 ___ Turns without proper signal

- 12 - SLOWING OR STOPPING CHECK IF FAILS TO:**
- 2 ___ Give proper signal
 - 2 ___ Make gradual smooth stop
 - 2 ___ Make full stop, in proper position, at stop signs or signals
 - 1 ___ Slow down by compression

- 6 - SPEED***
- 2 ___ Exceed speed limit
 - 2 ___ Drives too fast for conditions
 - 2 ___ Varies speed too much
 - 2 ___ Drives too slowly for conditions

- 13 - PARKING CHECK IF FAILS TO:**
- 2 ___ Give proper signal
 - 1 ___ Park within two backings
 - 1 ___ Avoid bumping or scraping curb
 - 2 ___ Avoid hitting vehicle
 - 1 ___ Set brake or lever
 - 1 ___ Park within 12 inches of curb
 - 1 ___ Allow space to next vehicle

- 7 - BACKING***
- 2 ___ Look behind vehicle first
 - 2 ___ Back slowly (sound horn if necessary)
 - 1 ___ Back smoothly

- 14 - ATTENTION*CHECK IF FAILS TO:**
- 2 ___ Anticipate actions of other drivers or pedestrians
 - 2 ___ Keep attention on driving
 - 2 ___ Observe sign or signal

- 17 - FOREST ROAD OR OFF ROAD DRIVING (OPTIONAL)**
- 2 ___ Heads into turnout for purpose of turning around instead of backing into spur
 - 2 ___ Fails to sound horn on blind single lane curve
 - 2 ___ Fails to adapt speed to road conditions
 - 1 ___ Takes vehicle far into soft or high center road conditions. Drives on soft shoulders
 - 1 ___ Fails to engage 4 wheel drive where needed

- 15 - FREEWAY RUN**
- 2 ___ Entry too cautious
 - 2 ___ Entry too reckless
 - 2 ___ Fails to signal for exit
 - 2 ___ Exit too fast

- 16 - TEMPORARY STOP**
- 1 ___ Illegal parking
 - 1 ___ Leaving keys
 - 1 ___ On - side exit
 - 1 ___ Fails to refasten seat belt

Consent for Driving Record Check

The individual identified below has applied for employment. The job we have available requires the operation of the Forest Service vehicle. Please furnish us the driving record of this individual; you may limit this record to the past three years.

Sincerely,

I, JAMES LEE SWIDERSKI, S-362-367-497-858,
(full name) (license number)

11/8/50 do hereby authorize the MICHIGAN
(date of birth) (state)

Department of Motor Vehicles to release my driving record to the above organization.

James Swiderski 4/6/78
(signature) (date)

*No violations on record
RLO*

USDA Forest Service

Name

TIM SWIDERSKI

Date

2/8/78

Forest

DURON-MANISTEE

Location

Mid, Mi

WRITTEN TEST FOR CREW CARRIER DRIVERS
(20 Passenger)

Instructions: Circle the correct word.
See Answer Guide, form R9-7130-44.
One mistake allowed.

11

1. All passengers in a crew carrier must have seats. TRUE FALSE
2. Crew carriers must come to a full stop at RR grade crossings. TRUE FALSE
3. Crew carriers must stop at drawbridge -- 50 ft. minimum. TRUE FALSE
4. Crew carriers with passengers aboard may be pushed or towed. TRUE FALSE
5. All exits must be operable. TRUE FALSE
6. Crew carrier must come to a complete stop before opening doors. TRUE FALSE
7. It is not necessary to close crew carrier doors before the motor is started. TRUE FALSE
8. The minimum distance in which you are permitted to follow another crew carrier is 200 feet, or farther if required by State law. TRUE FALSE
9. A crew carrier driver always has the right of way. TRUE FALSE

USDA Forest Service
WRITTEN TEST - ALL-WHEEL DRIVE

10

Name	James Lee Swiderski
Date	4/10/78
Forest	
Location	Huron-Manistee Mio Ranger District

Instructions: Circle the letter ahead of the correct answer. See Answer Guide, Form FD-38. Two mistakes allowed.

When an all-wheel drive vehicle is furnished:

- To enable you to drive any place a tractor can go.
- To haul heavier loads.
- To travel at slow speeds over rough or steep terrains.

6. You should stop the vehicle to engage the front wheel drive:

- A. To avoid damage to the gears, clutch, axles, etc.
- B. To avoid the extra noise.
- C. To check the road before proceeding.

When front-wheel drive should be engaged:

- After the vehicle is stalled.
- When you see that greater power and traction will be required than is furnished by the rear wheels.
- Any time you are traveling on unsurfaced, hilly roads.

7. The reason for restricting all-wheel drive to 40 MPH maximum speed on dirt is:

- A. The manufacturer recommends this maximum speed.
- B. Because of design and construction, the all-wheel drive is more susceptible to skids and upsets.
- C. The brakes are not adequate.
- D. The load is usually too heavy.

Tires, including the spare, should be switched:

- To be sure of maximum traction.
- To avoid uneven wear which will cause damage to the gears, plus hard shifting when in all-wheel drive.

8. You should check the motor oil in all-wheel drive vehicles immediately before operating over steep terrain because:

- A. The vehicle will use more oil.
- B. When tipped at steep angle the oil pump will sometimes fail to pick up oil if the pan is not full.
- C. The steep climb will cause the motor to heat.

Check the condition of all the tires.

When driving hubs are installed on all-wheel drive vehicles:

- To permit front wheels to turn freely without turning axle and differential when not in front wheel drive.
- To give greater traction.
- To permit heavier loading.

9. Special emphasis should be placed on the safety and preventive maintenance checks of all-wheel drive vehicles because:

- A. They cost more to purchase.
- B. They are mostly used for fire work.
- C. Of the type of use and the hazardous conditions under which they are operated.

When shifting into low range without the front wheel drive in gear:

- You may increase your power for short pulls.
- Do not place too much stress on the transmission, drive shaft, and rear axles, causing severe damage.

Prevent the vehicle from slipping on slick roads.

USDA Forest Service

WRITTEN TEST FOR ALL MOTOR VEHICLE DRIVERS

Name James Lee Swiderski
 Date 4/18/78
 Forest Huron-Manistee
 Location Mio Ranger District

Instructions: All incidental drivers must complete this examination. Complete other written tests as they apply. Select the correct answer to each question and circle the word or letter. See Answer Guide, form R9-7130-44. Four mistakes allowed.

- The operator is responsible for safe operation and care of Government equipment. TRUE FALSE
- Before starting you should check all safety features such as brakes, steering, mirrors, tires, horn, lights, windshield wipers, and seat adjustment. TRUE FALSE
- When refueling, it is not necessary to stop motor. TRUE FALSE
- The service brakes must be able to stop a truck from a speed of 20 mph on level, hard-surfaced road within 80 feet. TRUE FALSE
- Trucks must not be driven with rocks lodged between duals. TRUE FALSE
- All vehicles going to fires shall abide by traffic control lights and stop signs unless escorted by police. TRUE FALSE
- Good headlights, night driving is not any more dangerous than driving in daylight. TRUE FALSE
- Coasting downhill is permitted in order to save gasoline. TRUE FALSE
- If the vehicle has air brakes, the air tank should be drained of water daily through the drain cock. TRUE FALSE
- When entering a public highway from a driveway or alley, I must: (Circle two)
 (A) Sound my horn and proceed cautiously.
 (B) Give a hand signal, then turn into street.
 (C) Stop and look for approaching traffic.
 (D) Yield right of way to closely approaching vehicles.
- If I am in an accident resulting in death, injury, or such damage to a vehicle that it cannot be driven away, I must: (Circle two)
 (A) Stop and see if anyone is injured and give aid.
 (B) Report the accident to the nearest police or Sheriff's Department and to my supervisor.
 (C) Have the driver who is at fault report accident to the police.
 (D) Continue on my way if it was not my fault.

- 12. It is unlawful to overtake and pass a vehicle: (Circle two)
 (A) On a hill where I cannot see ahead to pass safely.
 (B) When the vehicle ahead is trying to slow down or stop.
 (C) At a railroad crossing.
 (D) When I would have to cross yellow line painted to the right of the center line.
- 13. Another car has the right of way if it: (Circle two)
 (A) Is traveling at an unlawful speed.
 (B) Turns on a flashing red arrow (light).
 (C) Enters the intersection first.
 (D) Is to my right and we enter the intersection at the same time.
- 14. Safe speed on a highway: (Circle two)
 (A) Depends on my ability to estimate distances.
 (B) Is the same for all cars.
 (C) Depends on traffic and road conditions.
 (D) Means I can stop within a car length.
- 15. When I hear the siren and see the red lights of a fire truck or ambulance coming from the rear, the law requires me to: (Circle two)
 (A) Turn right at the next corner.
 (B) Pull to the right-hand side of road or street.
 (C) Speed up so as not to delay them.
 (D) Stop my vehicle.
- 16. A driver under the influence of alcohol has a false confidence which causes him to take chances. TRUE FALSE
- 17. Safety belts should be used regardless of length of trip. TRUE FALSE
- 18. At least one vehicle length must be allowed for each 10 mph of speed. TRUE FALSE
- 19. Come to a full stop at all stop signs. TRUE FALSE

USDA Forest Service WRITTEN TEST FOR WHEEL TRACTOR OPERATOR	Name	TIM SWIDERSKI
	Date	8/17/79
Instructions: Circle the correct answer. See Answer Guide, form R9-7130-44. Two mistakes allowed.	Forest	HURON
	Location	M10 R.D.

1. Always engage the latch, thus locking both front brakes together, when driving on the highway in high gear. TRUE FALSE
2. When greasing, oiling and fueling tractor, keep motor running to save time. TRUE FALSE
3. When greasing, oiling or cleaning cutter bar on mower attachment, the tractor motor shall be shut off. TRUE FALSE
4. When going down hill, have gear shift in neutral and coast to save gas. TRUE FALSE
5. Danger of a tractor overturning increases four times, when speed is doubled. TRUE FALSE
6. To get proper tension on power take-off drive chain, leave motor running when the adjustment is being made. TRUE FALSE
7. Clutch pedal clearance is very important. TRUE FALSE
8. Proper adjustments on brakes, clutch, and motor are found in Operator Manual issued by the equipment manufacturer. TRUE FALSE
9. Wobble of wheels can be corrected by proper tightening of lug bolts TRUE FALSE
10. Crankcase breather shall be serviced more often when operating under dusty conditions. TRUE FALSE

9. Have You Had Any Motor Vehicle Accidents Within The Last Seven Years While You Were Driving? Yes No

(If "Yes," furnish the information below for each accident)

ACCIDENT NO. 1	Date Of Accident <u>SEPT 1970</u>	Place (City or town, and State) <u>GRAND LEDGE, Mich.</u>
----------------	--------------------------------------	--

Circumstances (Describe how the accident happened)

WAS STOPPING FOR PERSON IN FRONT OF ME WHO WAS MAKING A LEFT HAND TURN ON A TWO-LANED ROAD WHEN PERSON HIT ME FROM BEHIND.

Amount of damage to your car \$ <u>500</u>	Amount of damage to the other party's car \$ <u>UNKNOWN</u>	Did you or your insurance company make payment to the other party? If "Yes," give amount, \$ <u>UNKNOWN</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	--	--	---

Was anyone killed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Were you judged at fault? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	---

Give name of court or other legal body which made the judgment.

ACCIDENT NO. 2	Date Of Accident	Place (City or town and State)
----------------	------------------	--------------------------------

Circumstances (Describe how the accident happened)

✓

Amount of damage to your car \$ _____	Amount of damage to the other party's car \$ _____	Did you or your insurance company make payment to the other party? If "Yes," give amount, \$ _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	---	---	--

Was anyone killed? <input type="checkbox"/> Yes <input type="checkbox"/> No	Were you judged at fault? <input type="checkbox"/> Yes <input type="checkbox"/> No
---	--

Give name of court or other legal body which made the judgment.

ACCIDENT NO. 3	Date of Accident	Place (City or town and State)
----------------	------------------	--------------------------------

Circumstances (Describe how the accident happened)

Amount of damage to your car \$ _____	Amount of damage to the other party's car \$ _____	Did you or your insurance company make payment to the other party? If "Yes," give amount, \$ _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	---	---	--

Was anyone killed? <input type="checkbox"/> Yes <input type="checkbox"/> No	Were you judged at fault? <input type="checkbox"/> Yes <input type="checkbox"/> No
---	--

Give name of court or other legal body which made the judgment.

If you had more than three accidents within the last seven years, provide the information requested above for each on additional sheets.

I certify that all of the statements made in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

Signature Of Applicant <u>James Surderski</u>	Date <u>11/21/73</u>
--	-------------------------

U. S. POSTAL SERVICE

CERTIFICATE OF MEDICAL EXAMINATION

Part A. TO BE COMPLETED BY APPLICANT OR EMPLOYEE (typewrite or print in ink)

1. NAME (last, first, middle) SWIDERSKI, JAMES LEE	2. SOCIAL SECURITY NO. 379 56 7626	3. SEX <input checked="" type="checkbox"/> MALE <input type="checkbox"/> FEMALE	4. DATE OF BIRTH 11/8/50
5. DO YOU HAVE ANY MEDICAL DISORDER OF PHYSICAL IMPAIRMENT WHICH WOULD INTERFERE IN ANY WAY WITH THE FULL PERFORMANCE OF THE DUTIES SHOWN BELOW? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <i>(If your answer is "YES" explain fully to the physician performing examination)</i>		6. I CERTIFY THAT ALL THE INFORMATION GIVEN BY ME IN CONNECTION WITH THIS EXAMINATION IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. James Swiderski <i>(signature of applicant)</i>	

Part B. TO BE COMPLETED BEFORE EXAMINATION BY APPOINTING OFFICER

1. PURPOSE OF EXAMINATION <input type="checkbox"/> PREAPPOINTMENT <input type="checkbox"/> OTHER (specify)	2. POSITION TITLE Distribution Clerk, PTF5
3. BRIEF DESCRIPTION OF WHAT POSITION REQUIRES EMPLOYEE TO DO Position consists of sorting letters, magazines, small parcels, etc. The work is mainly night work and requires long hours of standing in one place, dextrous use of fingers, and good eyesight. The applicant will be required to lift mail sacks weighing 70 pounds.	

4. Circle the number preceding each functional requirement and each environmental factor essential to the duties of this position. List any additional essential factors in the blank spaces. Also, if the position involves law enforcement, air traffic control, or fire fighting, attach the specific medical standards for the information of the examining physician

A. FUNCTIONAL REQUIREMENTS

- Heavy lifting, 45 pounds and over
- Moderate lifting, 15-44 pounds
- 3. Light lifting, under 15 pounds
- 4. Heavy carrying, 45 pounds and over
- 5. Moderate carrying, 15-44 pounds
- 6. Light carrying, under 15 pounds
- 7. Straight pulling (hours)
- 8. Pulling hand over hand (hours)
- 9. Pushing (hours)
- 10. Reaching above shoulder
- 11. Use of fingers
- 12. Both hands required
- 13. Walking (hours)
- 14. Standing (hours) **CONTINUOUS**

- 15. Crawling (hours)
- 16. Kneeling (hours)
- 17. Repeated bending (hours)
- 18. Climbing, legs only (hours)
- 19. Climbing, use of legs and arms
- 20. Both legs required
- 21. Operation of crane, truck, tractor, or motor vehicle
- 22. Ability for rapid mental and muscular coordination simultaneously
- 23. Ability to use and desirability of using firearms
- 24. Near vision correctable at 13" to 16" to Jaeger 1 to 4

- 25. Far vision correctable in one eye to ^{20/20} and to 20/40 in the other
- 26. Far vision correctable in one eye to 20/50 and to 20/100 in the other
- 27. Specific visual requirement (specify)
- 28. Both eyes required
- 29. Depth perception
- 30. Ability to distinguish basic colors
- 31. Ability to distinguish shades of colors
- 32. Hearing (aid permitted)
- 33. Hearing without aid
- 34. Specific hearing requirements (specify)
- 35. Other (specify)

B. ENVIRONMENTAL FACTORS

- 1. Outside
- 2. Outside and inside
- 3. Excessive heat
- 4. Excessive cold
- 5. Excessive humidity
- 6. Excessive dampness or chilling
- 7. Dry atmospheric conditions
- 8. Excessive noise, intermittent
- 9. Constant noise
- 10. Dust

- 11. Silica, asbestos, etc.
- 12. Fumes, smoke, or gases
- 13. Solvents (degreasing agents)
- 14. Grease and oils
- 15. Radiant energy
- 16. Electrical energy
- 17. Slippery or uneven walking surfaces
- 18. Working around machinery with moving parts
- 19. Working around moving objects or vehicles

- 20. Working on ladders or scaffolding
- 21. Working below ground
- 22. Unusual fatigue factors (specify)
- 23. Working with hands in water
- 24. Explosives
- 25. Vibration
- 26. Working closely with others
- 27. Working alone
- 28. Protracted or irregular hours of work
- 29. Other (specify)

Part C. TO BE COMPLETED BY EXAMINING PHYSICIAN

1. EXAMINING PHYSICIAN'S NAME (type or print) M. S. PISKIN, M.D.	3. SIGNATURE OF EXAMINING PHYSICIAN M.S. Piskin <i>(signature)</i>
2. ADDRESS (including ZIP Code) 1077 Leonard St., N.E. Grand Rapids, Mich. 49503	11/21/73 <i>(date)</i>

IMPORTANT: After signing, return the entire form intact in the preaddressed "Confidential-Medical" envelope which the person you examined gave you.

NOTE TO EXAMINING PHYSICIAN: The person you are about to examine will have to cope with the functional requirements and environmental factors circled on the other side of this form. Please take them, and the brief description of job duties above them, into consideration as you make your examination and report your findings and conclusions.

1. HEIGHT: 5 FEET 9 INCHES. WEIGHT: 128 POUNDS.

2. EYES: (A) Distant vision (Snellen): without glasses: right 20 left 20; with glasses, if worn: right 20 left 20

(B) What is the longest and shortest distance at which the following specimen of Jaeger No. 2 type can be read by the applicant? Test each eye separately.

Jaeger No. 2 Type
employees in the Federal classified service as may be requested by the Civil Service Commission or its authorized representative. This order will supplement the Executive Orders of May 29 and June 18, 1923 (Executive Order, September 4, 1924).

without glasses: R. 5 in. to 26 in. L. 5 in. to 26 in.
with glasses, if used: R. _____ in. to _____ in. L. _____ in. to _____ in.

(C) Color vision: Is color vision normal when Ishihara or other color plate test is used? [X] YES [] NO
If not, can applicant pass lantern, yarn, or other comparable test? [] YES [] NO

3. EARS: (Consider denominators indicated here as normal. Record as numerators the greatest distance heard.)

Ordinary conversation: RIGHT EAR 20, LEFT EAR 20. Audiometer (if given): Table with columns 250, 500, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000.

4. A. BLOOD PRESSURE: Systolic 130, Diastolic 82. B. PULSE: Initial 78, Immediately after exercise 94, After 2 Min. rest 78.

5. URINALYSIS: gr. _____ Ph. _____ Alb. 0 Sugar 0 Casts _____ Blood _____ Pus _____

HERE PRESENT OR IS THERE A HISTORY OF: (Check each item)

Table with columns YES/NO and rows for various medical conditions: DISEASES OF THE FOLLOWING SYSTEMS (A. DIGESTIVE, B. NERVOUS, C. RESPIRATORY, D. CIRCULATORY), TUBERCULOSIS, FUNCTIONAL HEART DISEASE, ORGANIC HEART DISEASE, IMPERFECT SPEECH, MENTAL DEFICIT, NERVOUS BREAKDOWN, VENEREAL DISEASE, EPILEPSY (Seizures, fits), SPINAL CURVATURE OR DISEASE, SKIN DISEASE, WEAKNESS OF ABDOMINAL WALL, HERNIA, BACK INJURY RECENT OR REMOTE, BACK AND/OR NECK SURGERY.

7. CONCLUSIONS: Summarize below any medical findings which, in your opinion, would limit this person's performance of the job duties and/or would make him a hazard to himself or others. If none, so indicate.

[X] No limiting conditions for this job
[] Limiting conditions as follows:

Has grade I functional systolic murmur
He is fit to work
W.S. Pukin

APPENDIX I 18 DA.

TO BE GIVEN TO PERSON EXAMINED WITH A PRE-SESSSED "CONFIDENTIAL-MEDICAL" ENVELOPE.

UNITED STATES CIVIL SERVICE COMMISSION CERTIFICATE OF MEDICAL EXAMINATION

Form Approved Budget Bureau No. 50-R0073

Part A. TO BE COMPLETED BY APPLICANT OR EMPLOYEE (typewrite or print in ink)

1. NAME (last, first, middle) SWIDERSKI, JAMES L. 2. SOCIAL SECURITY ACCOUNT NO. 379 56 7626 3. SEX [X] MALE [] FEMALE 4. DATE OF BIRTH 11/8/50 5. DO YOU HAVE ANY MEDICAL DISORDER OR PHYSICAL IMPAIRMENT WHICH WOULD INTERFERE IN ANY WAY WITH THE FULL PERFORMANCE OF THE DUTIES SHOWN BELOW? [] YES [X] NO 6. I CERTIFY THAT ALL THE INFORMATION GIVEN BY ME IN CONNECTION WITH THIS EXAMINATION IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF Biological Technician, GS-404-5 (signature of applicant)

Part B. TO BE COMPLETED BEFORE EXAMINATION BY APPOINTING OFFICER

1. PURPOSE OF EXAMINATION [X] PREAPPOINTMENT [] OTHER (specify) 2. POSITION TITLE 3. BRIEF DESCRIPTION OF WHAT POSITION REQUIRES EMPLOYEE TO DO Performs work which often entails strenuous physical demands and occasionally long hours. The majority of the time is spent in active field work throughout the four seasons of the year. 4. Circle the number preceding each functional requirement and each environmental factor essential to the duties of this position. List any additional essential factors in the blank spaces. Also, if the position involves law enforcement, air traffic control, or fire fighting, attach the specific medical standards for the information of the examining physician. A. FUNCTIONAL REQUIREMENTS 1. Heavy lifting, 45 pounds and over 2. Moderate lifting, 15-44 pounds 3. Light lifting, under 15 pounds 4. Heavy carrying, 45 pounds and over 5. Moderate carrying, 15-44 pounds 6. Light carrying, under 15 pounds 7. Straight pulling (hours) 8. Pulling hand over hand (hours) 9. Pushing (hours) 10. Reaching above shoulder 11. Use of fingers 12. Both hands required 13. Walking (hours) 14. Standing (hours) 15. Crawling (hours) 16. Kneeling (hours) 17. Repeated bending (hours) 18. Climbing, legs only (hours) 19. Climbing, use of legs and arms 20. Both legs required 21. Operation of crane, truck, tractor, or motor vehicle 22. Ability for rapid mental and muscular coordination simultaneously 23. Ability to use and desirability of using firearms 24. Near vision correctable at 13" to 16" to Jaeger 1 to 4 25. Far vision correctable in one eye to 20/20 and to 20/40 in the other 26. Far vision correctable in one eye to 20/50 and to 20/100 in the other 27. Specific visual requirement (specify) 28. Both eyes required 29. Depth perception 30. Ability to distinguish basic colors 31. Ability to distinguish shades of colors 32. Hearing (aid permitted) 33. Hearing without aid 34. Specific hearing requirements (specify) 35. Other (specify) B. ENVIRONMENTAL FACTORS 1. Outside 2. Outside and inside 3. Excessive heat 4. Excessive cold 5. Excessive humidity 6. Excessive dampness or chilling 7. Dry atmospheric conditions 8. Excessive noise, intermittent 9. Constant noise 10. Dust 11. Silica, asbestos, etc. 12. Fumes, smoke, or gases 13. Solvents (degreasing agents) 14. Grease and oils 15. Radiant energy 16. Electrical energy 17. Slippery or uneven walking surfaces 18. Working around machinery with moving parts 19. Working around moving objects or vehicles 20. Working on ladders or scaffolding 21. Working below ground 22. Unusual fatigue factors (specify) 23. Working with hands in water 24. Explosives 25. Vibration 26. Working closely with others 27. Working alone 28. Protracted or irregular hours of work 29. Other (specify)

Part C. TO BE COMPLETED BY EXAMINING PHYSICIAN CHARGE FEE TO EXAMINEE

1. EXAMINING PHYSICIAN'S NAME (type or print) L. Jeffrey Price, M.D. 2. ADDRESS (including ZIP Code) 6143--28th ST SE Grand Rapids, MI 49506 3. SIGNATURE OF EXAMINING PHYSICIAN [Signature] 3/21/78 (date) IMPORTANT: After signing, return the entire form intact in the pre-addressed "Confidential-Medical" envelope which the person you examined gave you.

78-110

DOCTOR: PLEASE COMPLETE THE REVERSE

STANDARD FORM NO. 78 OCTOBER 1969 (REVISION) CIVIL SERVICE COMMISSION FPM 339

NOTE TO EXAMINING PHYSICIAN: The person you are about to examine will have to cope with the functional requirements and environmental factors circled on the other side of this form. Please take them, and the brief description of job duties above them, into consideration as you make your examination and report your findings and conclusions.

1. HEIGHT: 5 FEET, 8 1/2 INCHES. WEIGHT: 138 1/2 POUNDS.

2. EYES: (A) Distant vision (Snellen): without glasses: right 20 left 20; with glasses, if worn: right 20 left 20

(B) What is the longest and shortest distance at which the following specimen of Jaeger No. 2 type can be read by the applicant? Test each eye separately.

employees in the Federal classified service as may be requested by the Civil Service Commission or its authorized representative. This order will supplement the Executive Orders of May 29 and June 18, 1923 (Executive Order, September 4, 1924).

without glasses: R. _____ in. to _____ in. L. _____ in. to _____ in. with glasses, if used: R. _____ in. to _____ in. L. _____ in. to _____ in.

(C) Color vision: Is color vision normal when Ishihara or other color plate test is used? [X] YES [] NO If not, can applicant pass lantern, yarn, or other comparable test? [] YES [] NO

3. EARS: (Consider denominators indicated here as normal. Record as numerators the greatest distance heard.) Ordinary conversation: Audiometer (if given):

Table with columns for frequencies: 250, 300, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000. Rows for RIGHT EAR and LEFT EAR.

4. OTHER FINDINGS: In items a through l briefly describe any abnormality (including diseases, scars, and disfigurements). Include brief history, if pertinent. If normal, so indicate.

a. Eyes, ears, nose, and throat (including tooth and oral hygiene) NORMAL e. Abdomen NORMAL

b. Head and back (including face, hair, and scalp) NORMAL f. Peripheral blood vessels NORMAL

c. Speech (note any malfunction) NORMAL g. Extremities NORMAL

d. Skin and lymph nodes (including thyroid gland) NORMAL h. Urinalysis (if indicated) Sp. gr. 1.014 Sugar NEG Blood NEG Albumen NEG Casts NONE Pus NONE

i. Respiratory tract (X-ray if indicated) NORMAL

j. Heart (size, rate, rhythm, function) SIZE NORMAL, RHYTHM, NORMAL Blood pressure 100/50 GRADE II-III/III SYSTOLIC (M) E SUGG Pulse 88 + REG KADIATION INTO CAROTIDS EKG (if indicated)

k. Back (special consideration for positions involving heavy lifting and other strenuous duties) NORMAL

l. Neurological and mental health NORMAL

CONCLUSIONS: Summarize below any medical findings which, in your opinion, would limit this person's performance of the job duties and/or would make him a hazard to himself or others. If none, so indicate.

[X] No limiting conditions for this job [] Limiting conditions as follows:

02-100-1

316 26 1888

110000

AUDIOGRAM

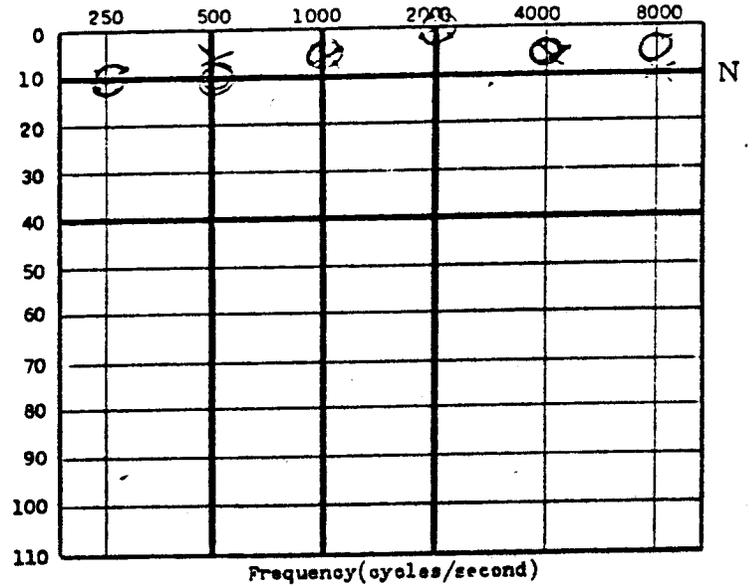
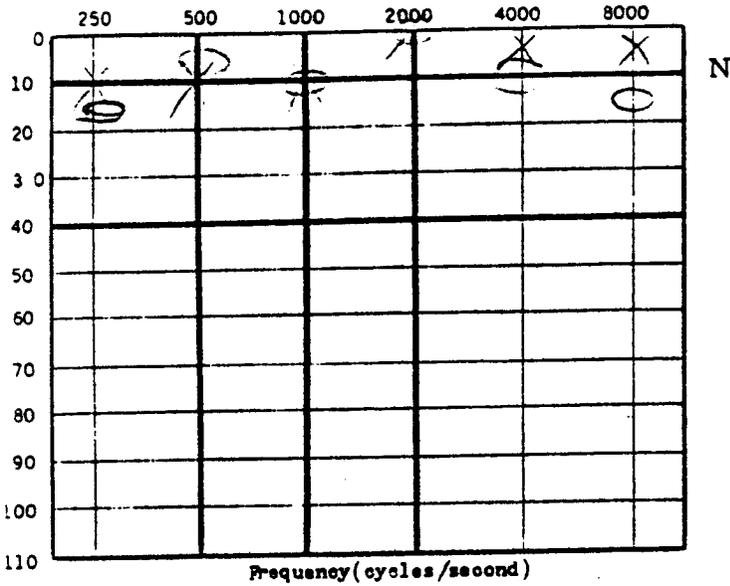
NAME J. S. Sanderaki, James

Date 9-12-77 Examiner JL

Date 11-21-77 Examiner J

No. M-1

No. m-2



Remarks _____

Remarks _____

Normal hearing

audiogram unchanged

Rt.	ISO	Lt.
red	1964	blue
O	A. C.	X
[B. C.]

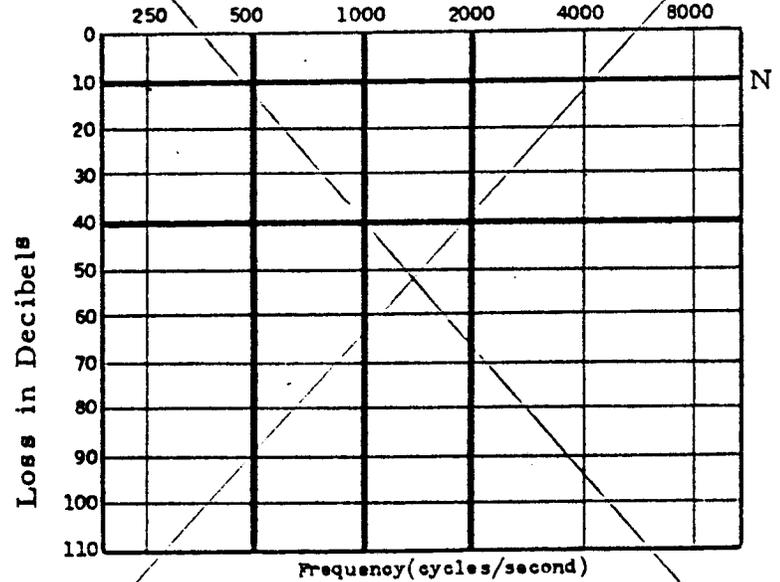
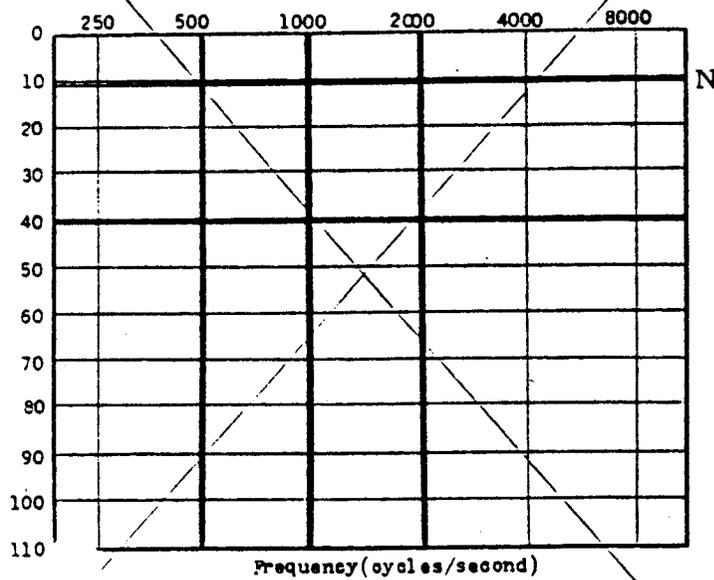
OK Shahrokh
11/22/77

Date _____ Examiner _____

Date _____ Examiner _____

No. _____

No. _____



Remarks _____

Remarks _____

3/27/78

Phoned Mr. Price's office regarding
Mr. Sunderski's low blood pressure
and notation regarding heart murmur.
Doctor states that Sunderski's blood
pressure is normal for him. The
murmur noted is no problem ^{or defect} with his
heart. It is strictly a noise made
by the blood vessels as the blood
passes through his heart. Doctor
assures no problem for position
that we are hiring him for.

J. J. Powell
Pers. Clk

1360 - Meetings

HM 1360-2

MINUTES OF DISTRICT SAFETY MEETING

File

Mio _____ District _____

Meeting held (date) 4/10/80 Time 0900

(place) District Office

Forest Officer in Charge Thomas F. Bates

MIO RANGER DISTRICT
DATE REC. <u>4/28</u>
RANGER
TMA
S.A. TECH
S.P. TECH
TSI TECH
WDLF TECH
ORA
REC. TECH <u>✓</u>
COMPEX FORESTER
FRST. TR. 1
FRST. TR. 2
FRST. TR. 3
DISTRICT CLERK
CLERK-TYPIST
BIOLOGIST
YACC
FILE
INFORMATION

Employees Attending:

V. Bosman	R. Lord
R. Moore	G. Hasse
<u>J. Swiderski</u>	C. Reedy
R. Marzola	B. Baker
C. Hough	T. Hahn
P. Wolf	
B. Pavlovich	
M. Harnois	

Topics discussed 10 Standard F. F. orders

Fireline safety - film "your way out"

use of shelters - dangerous line conditions

Safety suggestions offered _____

[Handwritten signature]

[Handwritten signature]
 Thomas F. Bates
 Fire and Recreation Technician

CC: Marzola
Erickson ✓

Districts - A Reminder - Have you covered use of Fire shelters this season? mio HAS!

WJ

- SUPV
- ~~PLNR~~
- F. I&E
- Hydrlgst
- Soils
- MnpwrA't
- TM
- Compex
- Sales
- Silv
- Wildif
- ENG
- CviEng#1
- CviEng#2
- Fleet
- RECRTN
- Archlgst
- LArch
- PLNR
- LUP
- RvrPlnr
- LANDS
- Asst #1
- Asst #2
- Asst #3
- RltySpit
- Geolgst
- AO
- Adm.Srv
- B&F
- Pars
- Supv. Clk
- RGRS
- C&M(H) (W)

MINUTES OF DISTRICT SAFETY MEETING

M10 District

Meeting held (date) 3/24/80 Time 0800-1030

(place) WORKSHOP

Forest Officer in Charge T. HAHN

- Employees Attending:
- | | |
|---------------------|--------------------|
| <u>V. BOSMAN</u> | <u>T. WRIGHT</u> |
| <u>D. LORD</u> | <u>J. SEMAK</u> |
| <u>M. HARNOLD</u> | <u>L. BAKER</u> |
| <u>L. FOX</u> | <u>H. NEWTON</u> |
| <u>A. MARZOLLO</u> | <u>R. WELCH</u> |
| <u>J. SWIDEPCKE</u> | <u>R. MCINTYRE</u> |
| <u>R. MOORE</u> | <u>G. HOBBS</u> |
| <u>T. BATES</u> | <u>D. WELLMAN</u> |
| <u>G. HAASE</u> | |
| <u>L. WEDSFORCH</u> | |
| <u>V. WILLOBEE</u> | |
| <u>S. UREN</u> | |

Topics discussed WORKSHOP POWER TOOLS;
REVIEW RECENT CA-1 + PLANNED TO REWORK
SPOKE SHAVES.

MAJOR Safety suggestions offered REPLACE ALL BAD ELECTRIC
CARDS + PLUGS; REFER TO INSTRUCTION MANUALS OF
GET HELP BEFORE USING UNFAMILIAR TOOLS; ONLY
AUTHORIZED PEOPLE USE RADIAL ARM SAW.

CC: D. Reedy - S.O. Tom Hahn
D. Murphy - Mgr.

MINUTES OF DISTRICT SAFETY MEETING

Mio Ranger District

Meeting held (date) August 24, 1979 Time 9:00

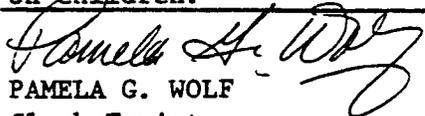
(place) Mio Administrative Site

Forest Officer in Charge Pam Wolf and Diane Anderson

Employees Attending: Ven Bosman, Dick Lord, Roger Moore,
Tom Hahn, Lee Fox, Gordon Haase,
Gary Long, Dick Waligore, Jack Vining,
Jim Swiderski, Tom Mireau, Dave Sanborn,
Jim Lazar, Randy Marzolo, Russel Hawley,
Barb Pavlovich, Pam Fritz, Linda Willobee,
Tina Wixom, Val Willobee.

Topics discussed Drving Safety, wearing safety belts.

Safety suggestions offered Wear safety belts at all times
while driving in a vehicle. Keep some kind of restraints
on children.


PAMELA G. WOLF
Clerk-Typist

CC: Marzolo
Reedy

App I 19 (4)

I 19 (4)

1360 - Meetings

HM 1360-2

MINUTES OF DISTRICT SAFETY MEETING

Mio Ranger District

Meeting held (date) 05/18/79 Time 0830

(place) Mio Ranger Station

Forest Officer in Charge STANLEY S. NISTLER

- Employees Attending:
- | | |
|--------------------|---------------------|
| <u>D. Sorenson</u> | <u>T. Hahn</u> |
| <u>M. Harnois</u> | <u>D. Batavia</u> |
| <u>L. Fox</u> | <u>G. Haase</u> |
| <u>R. McIntyre</u> | <u>J. Swiderski</u> |
| <u>A. Marzolo</u> | <u>J. Luebke</u> |
| <u>D. Griese</u> | <u>B. Pavlovich</u> |
| <u>D. Martin</u> | <u>R. Moore</u> |
| <u>T. Bates</u> | <u>V. Bosman</u> |

Topics discussed Emergency Medical Treatment for Bee Stings.

Safety suggestions offered Execute emergency treatment
of sting victims when symptoms are recognized by using
Medihaler-Epi & Insect Sting Emergency Medication USFS-Kit II.

Stanley S. Nistler
 STANLEY S. NISTLER
 Forestry Technician

cc: Marzolo (MIO)
 Reedy (SO)

MINUTES OF DISTRICT SAFETY MEETING

Mio District

Meeting held (date) 3/21/79 Time 10:15 am

(place) Mio Ranger Office

Forest Officer in Charge James L. Swiderski

Employees Attending: Elick Lord

Randy Marzolo

David Sorenson

Tom Bates

Gordon Haase

Gary Long

Tom Hahn

Mike Harnois

Topics discussed SHOP AND TOOL SAFETY

General Discussion on a checklist for shop safety and on the tools in the shop

Safety suggestions offered On Power Tools that are in a stationary place, provide a pair of safety glasses on a hook that can be used for each tool.



JAMES L. SWIDERSKI
Wildlife Technician

cc: S.O. Safety Coordinator (Cliff Reedy)
District Safety Coordinator (Randy Marzolo)

1360 - Meetings

HM 1360-2

MINUTES OF DISTRICT SAFETY MEETING

Mio Ranger District

Meeting held (date) 5/31/78 Time 10:00

(place) Mio Ranger Dist.

Forest Officer in Charge Stan Nistler

Employees Attending:

<u>Alan E. Stevens</u>	<u>Dick Lord</u>
<u>David Sotnik</u>	<u>Barb Pavlovich</u>
<u>David Batavia</u>	<u>Fam Wolf</u>
<u>Tim Miller</u>	<u>Jim Swiderski</u>
<u>Paul. Laut</u>	<u>Fon McIntyre</u>
<u>Dick Griese</u>	<u>Gordon Haase</u>
<u>Kevin Gibson</u>	<u>Jim Rogers</u>
<u>Daniel Martin</u>	

Topics discussed Boating & swimming safety

Safety suggestions offered Loading & unloading boats,
rules of the road, common accident causes.

Stanley S. Nistler
 STANLEY S. NISTLER
 Fire/Recreation Technician

cc: S.O., Forest Safety Coordinator (Reedy)

U.S. DEPARTMENT OF AGRICULTURE SUPERVISOR'S REPORT OF ACCIDENT										1. REPORT STATUS <input checked="" type="checkbox"/> 1. ORIGINAL <input type="checkbox"/> 2. SUPPLEMENTAL <input type="checkbox"/> 3. CORRECTION <input type="checkbox"/> 4. DELETE		2. NO. OF EMPLOYEES INJURED IN ACCIDENT <i>Record</i> 0, 0	
3. NAME OF EMPLOYEE (LAST, FIRST, & MIDDLE INITIAL) Swiderski, James L.				4. AGE 27	5. AGENCY CODE 1, 1	6. SOCIAL SECURITY NO. 3, 79, 56, 76, 26, 01		7. EMPLOYMENT GROUP CODE 0, 1	8. REPORTING OFFICE (CITY AND STATE) Mio, MI				
9. KIND OF ACCIDENT 1 (CODE)		10. DATE AND TIME OF ACCIDENT YR. MO. DAY HR. MI. 7, 8, 05, 04, 15, 00			11. NO. HRS. ON DUTY 7	12. WAS OCCURRENCE OUTSIDE REGULAR WORK <input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES		13. EMPLOYEE PERSONAL FACTORS 0, 8 (CODE)	14. TREATMENT BY PHYSICIAN <input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES	15. INJURY/ILLNESS CLASS 0 (CODE)			
16. DATE WORK STOPPED DIDN'T		17. DATE RETURNED TO WORK		18. NO. FULL WORK DAYS LOST 0	19. DID INJURY RESULT IN: A. TRANSFER TO ANOTHER JOB OR TERMINATION OF EMPLOYMENT <input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES			B. LOSS OF CONSCIOUSNESS OR RESTRICTION OF MOTION <input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES	C. EMPLOYEE UNABLE TO PERFORM NORMAL ASSIGNMENT <input type="checkbox"/> 0-NO <input type="checkbox"/> 1-YES				
20. NO. PRIVATE PERSONS INJURED OR KILLED 0		21. MOTOR VEHICLE DAMAGE A. GOVERNMENT 0 3 1 1 28 B. PRIVATE OR OFFICIAL USE 0 1			22. VEHICLE INFORMATION A. OWNERSHIP 1. GOVT. 2. PVT. ON OFF. BUS. (CODE) 0 1		B. TYPE 2 6 (CODE)	23. OTHER PROPERTY DAMAGE A. GOVERNMENT 0 3 B. PRIVATE 0 3					
24. REPORTING UNIT ORGANIZATION IDENTIFICATION (WRITE IN) U.S. Forest Service, Huron NF, Mio Ranger District								25. UNSAFE ACT 6 10 9					
26. FUNCTIONAL ASSIGNMENT Wildlife Management				27. SPECIFIC SITE OF ACCIDENT Comp 101 SW, NE Sec 33 T25N, R1E on a 2-track road. 0 8 10 7 1									
28. HAZARDOUS CONDITION Brush and trees encroaching on roadway. Visibility obscured. 7 2 0				29. ACCIDENT CAUSE Log which laid near edge of 2-track 5 17 0 0									
30. COMPLETE DESCRIPTION OF BODILY INJURY AND/OR OCCUPATIONAL ILLNESS (INCLUDE EXACT PART INJURED) None													
								30A. NATURE OF INJURY 0 10 0		30B. PART OF BODY INJURED 0 10 0			
31. COMPLETE DESCRIPTION OF ACCIDENT (WHAT HAPPENED, HOW IT HAPPENED, WHAT WAS INVOLVED, WHAT LED UP TO ACCIDENT) A fallen tree blocked my forward progress and no available spot in which to turn around. Proceeded to back up, but view was partially blocked out rear window due to a water pumper in the truck bed. Used side mirrors but did not see log lying at the road edge at the turn in the road. The tip of the log dented the right rear fender. When I proceeded to go around bend.													
								31. ACCIDENT TYPE 3 12 2					
32. ACTION TAKEN TO PREVENT SIMILAR ACCIDENTS Alert all drivers to check area into which they back vehicles for obstructions.					34. MANAGEMENT'S COMMENTS ON CORRECTIVE ACTION O.K. W								
33. WHAT OTHER ACTION SHOULD BE TAKEN Employee presented his accident during district planning meeting for discussion and alerted other drivers of hazards of driving two-track roads.					35. MANAGEMENT ORGANIZATIONAL FACTORS (CODE FROM INSTRUCTIONS) 0 1 7								
36. NAME OF WORK SUPERVISOR <i>Richard O. Powell</i>				37. DATE 5/10/78		38. SIGNATURE OF REVIEWING OFFICER <i>JAC [Signature]</i>			39. DATE 5/16/78				
36. COOPER'S NAME P. J. Powell				37. DATE 6/7/78		38. EMPLOYING OFFICE CODE 11/0904							

5210

FIRE-JOB QUALIFICATIONS EXPERIENCE AND TRAINING RECORD

(See Privacy Act Statement on Back)

PAGE 1 OF 1 PAGES

NAME
Tom Bates

DATE
3/5/80

REGION OR AGENCY (1-2) 019	UNIT OR AREA Huron	(3-4) 04	SUBUNIT OR DISTRICT M10	(5-6) 05
SOCIAL SECURITY NO. (7-15) 368265237		STATUS CODE (CODE 2 AND CARD TYPE 1 WILL DELETE RECORD FROM THE MASTER FILE)		
INSTRUCTIONS. SUBMIT ONLY CARDS FOR WHICH YOU HAVE PERTINENT DATA		1 ORIGINAL 2 DELETION 3 ADDITION (16) 1		

CARD NUMBER 1-BASIC INFORMATION (17) 1

YEAR OF FIRE OUALIFICATION (18-19) 80	NAME (LAST, FIRST MIDDLE INITIAL) (20-39) BATES THOMAS F			
DATE OF BIRTH (MONTH AND YEAR) (40-43) 0931	TRANSFER TO	UNIT OR AREA (44-45)	SUBUNIT OR DISTRICT (46-47)	
PHYSICAL FITNESS RATING (48-49) 45	BEST FUNCTIONAL ASSIGNMENT			
	1ST (50-51) L1	2ND (52-53) S1	3RD (54-55) P1	

CARD NUMBER 2-TRAINING (17) 2

TRAINING COURSES NEEDED		TRAINING COURSES COMPLETED		
COURSE CODE (18-21)		COURSE CODE (42-45)	YEAR COMPLETED (46-47)	
5341		5420	168	
5440		5590	170	
		5370	166	
		5330	165	
		5320	167	
		5260	169	

CARD NUMBER 3-FIRE EXPERIENCE (17) 3

LAST CALENDAR YEAR'S FIRE EXPERIENCE OR, IF ORIGINAL INPUT, EXPERIENCE FOR LAST FIVE YEARS (ADDITIONAL CARDS CAN BE USED IF NEEDED)

JOB CODE (18-19)	YEAR (20-21)	NO. OUAL. FIRES (22-23)	NO. TRNG FIRES (24)	MGMT. LEVEL (25)	RATING (26)
117	79		P.B 11	5	2
117	79		P.B 12	4	2
217	79		P.B 12	4	2
211	79	1	1	4	2
217	78		2	4	2

CARD NUMBER 4-INTERAGENCY FIRE-JOB QUALIFICATION CARD DATA (17) 4

FIRE QUALIFICATIONS		ON-JOB TRAINING NEEDS	
TITLE	NUMBER (18-19)	TITLE	NUMBER (24-25)

APP I 21 (2)

APPNDX
I 21 (2)

CARD NUMBER 5 - PRIOR FIRE EXPERIENCE

117

JOB CODE	NO OF FIRES	JOB CODE	NO OF FIRES	JOB CODE	NO OF FIRES
1 (18-19) 07	(20) 11	8 (39-40) 311	(41) 5	15 (60-61)	(62)
2 (21-22) 34	(23) 11	9 (42-43) 119	(44) 100	16 (63-64)	(65)
3 (24-25) 26	(26) 12	10 (45-46)	(47)	17 (66-67)	(68)
4 (27-28) 116	(29) 12	11 (48-49)	(50)	18 (69-70)	(71)
5 (30-31) 117	(32) 30	12 (51-52)	(53)	19 (72-73)	(74)
6 (33-34) 118	(35) 13	13 (54-55)	(56)	20 (75-76)	(77)
7 (36-37) 310	(38) 11	14 (57-58)	(59)	21 (78-79)	(80)

CODES			CODES			CODES	TRAINING COURSE
F	J		F	J			
C1	01	GHQ Fire Manager	S1	03	GHQ Service Coordinator	S110	Basic Fire Orientation
C1	04	Fire Boss I	S1	07	Service Chief I	S130	Basic Fire Fighter
C1	10	Fire Boss II	S1	13	Service Chief II	S190	Introduction to Fire Behavior
C1	17	Fire Boss III	S1	41	Camp Officer	S211	Water/Pumps
L1	05	Line Boss I	S1	42	Tool Manager	S212	Power Saws
L1	11	Line Boss II	S2	43	Equipment Officer	S213	Tractors
L1	16	Division Boss	S3	44	Tractor Manager	S214	Ground Tankers
L1	18	Sector Boss	S4	45	Tanker Manager	S215	Firing Equipment
L1	19	Crew Boss	S5	46	Truck Manager	S230	Crew Boss
L1	20	Squad Boss	S6	47	Supply Officer	S260	Fire Bus. Mgt., Principles
L1	21	Fire Fighter	S7	48	Air Service Officer	S270	Basic Air Operations
L2	15	Air Attack Boss	S8	49	Air Service Mng. Airport	S320	Organizing Fire Suppre
L2	22	Air Traffic Boss	S8	52	Mixmaster	S330	Sector Boss
L3	23	Air Tanker Boss	S9	50	Air Service Mgr. Heliport I	S331	Crew Liaison Officer
L4	24	Helicopter Boss	S9	51	Air Service Mgr. Heliport II	S341	Maps-Records Officer
L5	25	Tractor Boss	S0	53	Communications Officer	S343	Infrared Imagery Interpr.
L6	26	Tanker Boss	S0	54	Radio Operator	S351	Air Service Mgt., Airport
L7	27	Firing Boss	F1	08	Finance Chief I	S352	Air Service Mgt., Heliport
L8	28	Felling Boss	F1	14	Finance Chief II	S353	Mixmaster
L9	29	Line Locator	F1	55	Time Officer	S354	Camp Officer
L9	30	Line Scout	F1	56	Time Recorder	S355	Equipment Officer
L0	31	Crew Liaison Officer	F1	57	Commissary Manager	S356	Supply Officer
P1	02	GHQ Plans Coordinator	F2	58	Injury Compensation Officer	S370	Intermed. Air Operations
P1	06	Plans Chief I	F3	59	Obligations Officer	S380	Safety Management
P1	12	Plans Chief II	F4	60	Claims Officer	S390	Fire Behavior
P1	32	Maps-Records Officer	A1	09	Safety Chief	S420	Fire Org. and Management
P2	33	Intelligence Officer	A1	40	Safety Officer	S440	Plans Chief
P2	34	General Scout				S450	Service Chief
P3	35	Infrared Imagery Interpr.				S451	Air Service Officer
P4	36	Fire Behavior Officer				S460	Finance Chief
P5	37	Fire Information Officer				S470	Air Attack Boss
P6	38	Training Officer				S520	Fire Generalship
P7	39	Liaison Officer Coordinator				S580	Adv. Fire Safety Mgt.
						S590	Fire Behavior Officer
						S620	Fire Command

Privacy Act Statement

All information requested on this form is voluntary and is solicited under the authority contained in Title 16 U.S.C. Section 551. It will be used to determine and certify the fire suppression positions for which the individual is qualified. It is available to the State and Federal Agencies responsible for fire suppression. Withholding information will jeopardize the possibility of fire-suppression position assignment. Social Security numbers will be used as identifying number only.

I certify that I have read the above statement.

3/12/80
Date

[Signature]
Signature

I 22
6

RE-JOB QUALIFICATIONS EXPERIENCE AND TRAINING RECORD

(See Privacy Act Statement on Back)

PAGE 1 OF 1 PAGES
 NAME TOM BATES
 DATE 3/12/79

REGION OR AGENCY (1-2)	<u>09</u>	UNIT OR AREA (3-4)	<u>HURON</u>	SUBUNIT OR DISTRICT (5-6)	<u>MIO 05</u>
SOCIAL SECURITY NO. (7-15)	<u>368265237</u>		STATUS CODE (CODE 2 AND CARD TYPE 1 WILL DELETE RECORD FROM THE MASTER FILE)		
INSTRUCTIONS: SUBMIT ONLY CARDS FOR WHICH YOU HAVE PERTINENT DATA			1 ORIGINAL 2 DELETION 3 ADDITION (16) <u>1</u>		

CARD NUMBER 1 - BASIC INFORMATION (17) 1

YEAR OF FIRE QUALIFICATION (18-19)	<u>79</u>	NAME (LAST, FIRST, MIDDLE INITIAL) (20-39)	<u>BATES TOM E</u>		
DATE OF BIRTH (MONTH AND YEAR) (40-43)	<u>0931</u>	TRANSFER TO	UNIT OR AREA (44-45)	SUBUNIT OR DISTRICT (46-47)	
PHYSICAL FITNESS RATING (48-49)	<u>42</u>	BEST FUNCTIONAL ASSIGNMENT			
	1ST (50-51)	2ND (52-53)	3RD (54-55)		

CARD NUMBER 2 - TRAINING (17) 2

TRAINING COURSES NEEDED		TRAINING COURSES COMPLETED		
COURSE CODE (18-21)		COURSE CODE (42-45)	YEAR COMPLETED (46-47)	
<u>52610</u>		<u>53710</u>	<u>(?)</u>	<u>70</u>
		<u>5330</u>		<u>65</u>
		<u>5331</u>		<u>62</u>
		<u>535R</u>		<u>68</u>

CARD NUMBER 3 - FIRE EXPERIENCE (17) 3

LAST CALENDAR YEAR'S FIRE EXPERIENCE OR, IF ORIGINAL INPUT, EXPERIENCE FOR LAST FIVE YEARS (ADDITIONAL CARDS CAN BE USED IF NEEDED)

JOB CODE (18-19)	YEAR (20-21)	NO. QUAL. FIRES (22-23)	NO. TRNG. FIRES (24)	MGMT. LEVEL (25)	RATING (26)
<u>211</u>	<u>78</u>		<u>P/B 2</u>	<u>4</u>	<u>2</u>
<u>217</u>	<u>78</u>		<u>P/B 1</u>	<u>4</u>	<u>2</u>

CARD NUMBER 4 - INTERAGENCY FIRE-JOB QUALIFICATION CARD DATA (17) 4

FIRE QUALIFICATIONS		ON-JOB TRAINING NEEDS	
TITLE	NUMBER (18-19)	TITLE	NUMBER (24-25)

CARD NUMBER 5 - PRIOR FIRE EXPERIENCE

(17) 5

JOB CODE	NO. OF FIRES	JOB CODE	NO. OF FIRES	JOB CODE	NO. OF FIRES
1 (18-19)	(20)	8 (39-40)	(41)	15 (60-61)	(62)
2 (21-22)	(23)	9 (42-43)	(44)	16 (63-64)	(85)
3 (24-25)	(26)	10 (45-46)	(47)	17 (66-67)	(88)
4 (27-28)	(29)	11 (48-49)	(50)	18 (69-70)	(71)
5 (30-31)	(32)	12 (51-52)	(53)	19 (72-73)	(74)
6 (33-34)	(35)	13 (54-55)	(56)	20 (75-76)	(77)
7 (36-37)	(38)	14 (57-58)	(59)	21 (78-79)	(80)

CODES			CODES			CODES	TRAINING COURSE
F	J		F	J			
C1	01	GHQ Fire Manager	S1	03	GHQ Service Coordinator	S110	Basic Fire Orientation
C1	04	Fire Boss I	S1	07	Service Chief I	S130	Basic Fire Fighter
C1	10	Fire Boss II	S1	13	Service Chief II	S190	Introduction to Fire Behavior
C1	17	Fire Boss III	S1	41	Camp Officer		
L1	05	Line Boss I	S1	42	Tool Manager	S211	Water/Pumps
L1	11	Line Boss II	S2	43	Equipment Officer	S212	Power Saws
L1	16	Division Boss	S3	44	Tractor Manager	S213	Tractors
L1	18	Sector Boss	S4	45	Tanker Manager	S214	Ground Tankers
L1	19	Crew Boss	S5	46	Truck Manager	S215	Firing Equipment
L1	20	Squad Boss	S6	47	Supply Officer	S230	Crew Boss
L1	21	Fire Fighter	S7	48	Air Service Officer	S260	Fire Bus. Mgt., Principles
L2	15	Air Attack Boss	S8	49	Air Service Mgr. Airport	S270	Basic Air Operations
L2	22	Air Traffic Boss	S8	52	Mixmaster	S320	Organizing Fire Suppression
L3	23	Air Tanker Boss	S9	50	Air Service Mgr. Heliport I	S330	Sector Boss
L4	24	Helicopter Boss	S9	51	Air Service Mgr. Heliport II	S331	Crew Liaison Officer
L5	25	Tractor Boss	S0	53	Communications Officer	S341	Maps-Records Officer
L6	26	Tanker Boss	S0	54	Radio Operator	S343	Infrared Imagery Interpr.
L7	27	Firing Boss	F1	08	Finance Chief I	S351	Air Service Mgt., Airport
L8	28	Felling Boss	F1	14	Finance Chief II	S352	Air Service Mgt., Heliport
L9	29	Line Locator	F1	55	Time Officer	S353	Mixmaster
L9	30	Line Scout	F1	56	Time Recorder	S354	Camp Officer
L0	31	Crew Liaison Officer	F1	57	Commissary Manager	S355	Equipment Officer
P1	02	GHQ Plans Coordinator	F2	58	Injury Compensation Officer	S356	Supply Officer
P1	06	Plans Chief I	F3	59	Obligations Officer	S370	Intermed. Air Operations
P1	12	Plans Chief II	F4	60	Claims Officer	S380	Safety Management
P1	32	Maps-Records Officer	A1	09	Safety Chief	S390	Fire Behavior
P2	33	Intelligence Officer	A1	40	Safety Officer	S420	Fire Org. and Management
P2	34	General Scout				S440	Plans Chief
P3	35	Infrared Imagery Interpr.				S450	Service Chief
P4	36	Fire Behavior Officer				S451	Air Service Officer
P5	37	Fire Information Officer				S460	Finance Chief
P6	38	Training Officer				S470	Air Attack Boss
P7	39	Liaison Officer Coordinator				S520	Fire Generalship
						S580	Adv. Fire Safety Mgt.
						S590	Fire Behavior Officer
						S620	Fire Command

Privacy Act Statement

All information requested on this form is voluntary and is solicited under the authority contained in Title 16 U.S.C. Section 551. It will be used to determine and certify the fire suppression positions for which the individual is qualified. It is available to the State and Federal Agencies responsible for fire suppression. Withholding information will jeopardize the possibility of fire-suppression position assignment. Social Security numbers will be used as identifying number only.

I certify that I have read the above statement.

4/23/79
Date

J. Donn Peter
Signature

TO: *Edward Reedy*
SC

FR: *Roger Moore*
11110 RD

3

5-8-79

I-2
3

SUBJECT

5130 Suppression

MESSAGE

Attached is Form Bates SF 227. Since he does not have his records from his previous Forest Service tenure, he is at a great disadvantage in filling out this form. However when he left the Forest Service, Region 3, in 1972, he had a red card for Division Boss and Service Chief I. He says he has worked mostly in class 1 line assignments including line boss.

PS I thought by starting to take the weather earlier this year, we would give the computer enough data to make reasonable predictions. This is not coming true. It predicted a very high in the G model and a H High in the G model see today. We actually have a moderate. Something needs to be done! The adjective rating ~~was~~ for the above readings was a 4 H + a 3 M respectively. We are still forecasting too high. What's a 3 moderate?

SIGNATURE

REPLY

SIGNATURE

DATE

OPF
Appendix
I 230

10-295 RECORD OF FORMALIZED TRAINING (see reverse side for instructions)		U. S. DEPARTMENT OF AGRICULTURE
1. NAME (MR., MISS, MRS., ONE GIVEN NAME, INITIAL (S), AND SURNAME) Thomas F. Bates		
2. AGENCY, UNIT, AND LOCATION Forest Service, USDA Prescott National Forest		
3. TITLE OF PROGRAM OR COURSE AND LOCATION USFS National Fire Training Center Nat. Advanced Fire Prevention Course—Marana Air Park—Marana, Arizona 85238		
4. DATE COMPLETED March 5, 1971		
5. TOTAL TIME OR COURSE, HOURS 76 Hours		
6. RATING Satisfactory completion		
7. DEGREE EARNED OR CERTIFICATE Course certificate		
8. GENERAL DESCRIPTION OF TRAINING OR EDUCATION Course consisted of classroom lectures, practical exercises and field trip to provide training in the Fire Prevention field at the Forest headquarters level.		
9. OBJECTIVES OF TRAINING AND REQUIREMENTS FOR SUCCESSFUL COMPLETION The trainee will recognize forest fire risks and hazards. He will effectively plan and take on-the-ground fire prevention action to reduce these potential fire causes. He will train other resource managers in fire prevention activities.		
10. REMARKS Based on his final exam score of 69 points (Class average 74), this man ranked 41 in a class of 40 men.		
11. APPROVING OFFICIAL Merle S. Lowden MERLE S. LOWDEN, Director of Fire Control		12. DATE Forest Service USDA March 5, 1971

FOREST SERVICE

Prescott National Forest

PRESCOTE, ARIZONA

MAY 18 1970

EFFICIENCY

10-299 - RECORD OF FORMALIZED TRAINING <small>(see reverse side for instructions)</small>		U.S. DEPARTMENT OF AGRICULTURE
1. NAME (MR., MISS, MRS., ONE GIVEN NAME, INITIAL(S), AND SURNAME) Mr. Tom Bates		
2. AGENCY, UNIT, AND LOCATION Prescott National Forest, U.S. Forest Service 544 South Cortez, Prescott, Arizona 86301		
3. TITLE OF PROGRAM OR COURSE AND LOCATION Region 3 Helitack Foreman Training, Marana, Arizona		
4. DATE COMPLETED May 1, 1970		
5. TOTAL TIME OF COURSE, HOURS 32 hours		
6. RATING Satisfactory Completion		
7. DEGREE EARNED None		
8. GENERAL DESCRIPTION OF TRAINING OR EDUCATION Training in the latest and most effective methods of Helicopter operation with emphasis on Fire Control work		
9. OBJECTIVES OF TRAINING AND REQUIREMENTS FOR SUCCESSFUL COMPLETION 1. Helicopter Safety associated with precautions on the ground and in the air. 2. Efficient use of helicopters for initial attack and large fire operation. 3. Economic use of Helicopters for fire suppression related to management, contracts, and timekeeping. Evidence of trainee understanding will be demonstrated by		
10. REMARKS participation in field training exercises and problem solving in various topics.		
10. REMARKS Based on his final exam score of _____ (Class Average _____) this man ranked _____ in a class of 17 men.		
11. APPROVING OFFICIAL  EDWARD G. HEILMAN, National Fire Training Center		12. DATE May 1, 1970

FOREST SERVICE
 RECEIVED
 APR 16 1970
 OVF

I 23
 (3)

10- THE RECORD OF FORMALIZED TRAINING
 (See reverse side for instructions) U.S. DEPARTMENT OF AGRICULTURE

1- NAME (MR., MISS, MRS., ONE GIVEN NAME, INITIALS, AND SURNAME)
 Mr. Bates

2- AGENCY, UNIT, AND LOCATION
 Prescott National Forest

3- TITLE OF PROGRAM OR COURSE AND LOCATION
 R-3 Fire Dispatcher's Workshop

4- DATE COMPLETED
 2/6/70

5- TOTAL TIME OF COURSE (HOURS)
 36

6- RATING OF COURSE
 Satisfactory

7- DEGREE EARNED
 Completion

8- GENERAL DESCRIPTION OF TRAINING OR EDUCATION
 A workshop consisting of lecture with questions, group discussions and committee work sessions of various facets of dispatching procedures, equipment, and problems common to all levels of dispatching in R-3.

9- OBJECTIVES OF TRAINING AND REQUIREMENTS FOR SUCCESSFUL COMPLETION
 As a result of this training, Region 3 fire dispatchers will have a more complete knowledge of the R3 Mobilization Plan and through proper teamwork provide their Region, Forests and Districts with high quality service. This will result in the initiation of standard Region wide dispatching procedure.

10- REMARKS
 This participant attended the 1970 Fire Dispatcher's Workshop in the following capacities: () Instructor, () Workshop Chairman, () Committee Chairman, (X) Committeeman, () Advisor.
 CC - Person
 JPM
 EDE

11- APPROVING OFFICIAL
 [Signature]
 JOHN M. PIEROVICH, Assistant Regional Forester, Fire Control 3/11/70

12- DATE
 3/11/70

I 240

AD-281 (10-73) U.S. DEPARTMENT OF AGRICULTURE
REQUEST, AUTHORIZATION, AND RECORD OF TRAINING

4. NAME (LAST, FIRST, MIDDLE INITIAL)
 SEE ATTACHED 281B

5. TITLE PAY PLAN, SERIES, GRADE, AND STEP

6. OFFICE MAILING ADDRESS & TEL. NO.
 HOME ADDRESS (OPTIONAL)

7. COURSE TITLE & OBJECTIVE
BUSINESS MANAGEMENT PRINCIPLES TRAINING-S-260. To acquaint attendees with Manual policies and principles of Fire Business Management.-Instructor-James Price

8A. NAME OF AWARD, SCHOLARSHIP, OR GRANT

B. GRANTOR

C. AMOUNT

9. ACCOUNTING CODE
 See AD-281B

10. ASSIGNING INSTRUCTIONS
**Forest Supervisor
 Huron-Manistee NF
 421 South Mitchell Street
 Cadillac, Michigan 49601**
 12-11-0001

11. ADDRESS OF VENDOR OR TRAINING INSTITUTION
**USDA-Forest Service
 Huron-Manistee NF
 421 South Mitchell Street
 Cadillac, Michigan 49601**

12. I certify that this training is in the public interest and complies with restrictions on reverse of this form.
RECOMMENDED:
 A. SIGNATURE AND DATE
James A. Price
 B. TITLE
ADMINISTRATIVE OFFICER

13. AGENCY AUTHORIZATION
 A. SIGNATURE AND DATE
William J. Gordon 7/3/79
 B. TITLE
PERSONNEL OFFICER
 DEPARTMENT AUTHORIZATION
 A. SIGNATURE AND DATE
 B. TITLE

1. AGENCY NO. (OPTIONAL)

2. AGENCY CODE
 S ATTACHED 281B

3. SOCIAL SECURITY NUMBER

15. TRAINING COMPLETED
 TRAINING NOT COMPLETED

16. TRAINING ONLY
 TRAINING & MOHR

17. ESTIMATED COSTS

A. TUITION AND RELATED FEES	
B. BOOKS AND MATERIAL	
C. TRAVEL	
D. PER DIEM/HOUSEHOLD MOVEMENT*	
E. SUB-TOTAL	
F. COST OF SALARY WHILE IN TRAINING	
G. TOTAL	

* INCLUDES MEALS AND LODGING FOR NIGHTS

18. LENGTH OF TRAINING (HOURS)

ON DUTY	12
NON DUTY	
TOTAL	12

19. PERIODS OF TRAINING

TRAINING BEGINS			TRAINING ENDS		
7.9	0.6	0.5	7.9	0.6	0.6
YEAR	MONTH	DAY	YEAR	MONTH	DAY

20. SUBJECT MATTER (ENTER CODE)
 5731

21. COURSE CODE

22. SOURCE OF TRAINING (SELECT ONE)

01-INTERNAL-AGENCY	09-NON-GOVT.-UNIVERSITY OR COLLEGE
02-INTERNAL-CONTRACTOR	10-NON-GOVT.-INDUSTRY
03-INTERNAL-OTHER USDA AGENCY	11-NON-GOVT.-CONSULTANT
04-CSC	12-NON-GOVT.-PROFESSIONAL ASSOC.
05-MILITARY	13-NON-GOVT.-SECONDARY SCHOOL
06-USDA GRAD. SCHOOL	14-NON-GOVT.-DESIGNED FOR AGENCY
07-OTHER FEDERAL AGENCIES	
08-STATE/LOCAL GOVT.	

01

23. NAME AND LOCATION OF TRAINING INSTITUTION
 Cadillac, MI
 2.6 STATE 0700 CITY

24. TRAINING AT A COLLEGE (SELECT ONE)
 0. NOT APPLICABLE
 1. FULL TIME BASIS 2. PART-TIME BASIS
 0

25. AWARD, SCHOLARSHIP, OR GRANT (SELECT ONE)
 0-NO 1-YES
 0

26. METHOD OF INSTRUCTION (SELECT PREDOMINANT ONE)

00-COMPUTER ASSISTED	04-LECTURE/DEMO.	08-SIMULATION
01-CONFERENCE	05-PROGRAMMED	09-TELEVISION
02-CORRESPONDENCE	06-READING/STUDY	10-OTHER
03-LABORATORY	07-SEMINAR	

04

27. REASON FOR TRAINING

1. MISSION OR PROGRAM CHANGE
2. NEW TECHNOLOGY
3. NEW WORK ASSIGNMENTS
4. IMPROVE PRESENT PERFORMANCE
5. MEET FUTURE STAFFING NEEDS
6. DEVELOP UNAVAILABLE SKILLS
7. TRACE OR CRAFT APPRENTICESHIP
8. ORIENTATION
9. ADULT BASIC EDUCATION

4

28. SPECIAL INTEREST PROGRAMS (SELECT ONE)

0. NOT APPLICABLE
1. AGENCY EXECUTIVE DEVELOPMENT PROGRAM
2. DEPARTMENT EXECUTIVE DEVELOPMENT PROGRAM
3. USDA UPWARD MOBILITY PROGRAM
4. AGENCY UPWARD MOBILITY PROGRAM
5. SUPERVISION

0

ORIGINAL - VENDOR OR TRAINING INSTITUTION COPY

APP. I 24

REQUEST, AUTHORIZATION, AND RECORD OF TRAINING (Supplemental)

OPF

24
2

4. NAME (LAST, FIRST, MIDDLE INITIAL) BERNIER, JAMES R. 09-04-7112		1. AGENCY NO. (OPTIONAL)	2. AGENCY CODE 11	3. SOCIAL SECURITY NUMBER 2,7,2 5,0 2,8,5,3
5. TITLE, PAY PLAN, SERIES, GRADE, AND STEP Forester GS-460-7/1		15. TRAINING COMPLETED <input checked="" type="checkbox"/> TRAINING NOT COMPLETED <input type="checkbox"/>		16. TRAINING ONLY <input checked="" type="checkbox"/> TRAINING & MORE <input type="checkbox"/>
6. OFFICE ADDRESS & TEL. NO. Forest Service, Region 9 517-724-5431 Huron-Manistee NF Harrisville, Michigan 48740		17. ESTIMATED COSTS		
HOME ADDRESS (OPTIONAL)		A. TUITION AND RELATED FEES		
		B. BOOKS AND MATERIAL		
		C. TRAVEL		
		D. PER DIEM/HOUSEHOLD MOVEMENT* 49.50		
		E. SUB-TOTAL 82.08		
		F. COST OF SALARY WHILE IN TRAINING 131.58		
		G. TOTAL		
		*INCLUDES MEALS AND LODGING FOR NIGHTS		
4. NAME (LAST, FIRST, MIDDLE INITIAL) NAHGAHWON, ERNEST A. 09-04-7112		1. AGENCY NO. (OPTIONAL)	2. AGENCY CODE 11	3. SOCIAL SECURITY NUMBER 3,83 5,6 6,5,8,5
5. TITLE, PAY PLAN, SERIES, GRADE, AND STEP Forestry Technician GS-462-6/1		15. TRAINING COMPLETED <input checked="" type="checkbox"/> TRAINING NOT COMPLETED <input type="checkbox"/>		16. TRAINING ONLY <input checked="" type="checkbox"/> TRAINING & MORE <input type="checkbox"/>
6. OFFICE ADDRESS & TEL. NO. Forest Service, Region 9 517-724-5431 Huron-Manistee NF Harrisville, Michigan 48740		17. ESTIMATED COSTS		
HOME ADDRESS (OPTIONAL)		A. TUITION AND RELATED FEES		
		B. BOOKS AND MATERIAL		
		C. TRAVEL		
		D. PER DIEM/HOUSEHOLD MOVEMENT* 49.50		
		E. SUB-TOTAL 74.81		
		F. COST OF SALARY WHILE IN TRAINING 124.31		
		G. TOTAL		
		*INCLUDES MEALS AND LODGING FOR NIGHTS		
4. NAME (LAST, FIRST, MIDDLE INITIAL) MOORE, ROGER W. 09-04-5112		1. AGENCY NO. (OPTIONAL)	2. AGENCY CODE 11	3. SOCIAL SECURITY NUMBER 3,0,9 4,6 0,0,9,8
5. TITLE, PAY PLAN, SERIES, GRADE, AND STEP Forester GS-460-11/2		15. TRAINING COMPLETED <input checked="" type="checkbox"/> TRAINING NOT COMPLETED <input type="checkbox"/>		16. TRAINING ONLY <input type="checkbox"/> TRAINING & MORE <input checked="" type="checkbox"/>
6. OFFICE ADDRESS & TEL. NO. Forest Service, Region 9 517-826-3717 Huron-Manistee NF Mio, Michigan 48647		17. ESTIMATED COSTS		
HOME ADDRESS (OPTIONAL)		A. TUITION AND RELATED FEES		
		B. BOOKS AND MATERIAL		
		C. TRAVEL		
		D. PER DIEM/HOUSEHOLD MOVEMENT* 46.50		
		E. SUB-TOTAL 125.16		
		F. COST OF SALARY WHILE IN TRAINING 171.66		
		G. TOTAL		
		*INCLUDES MEALS AND LODGING FOR NIGHTS		
4. NAME (LAST, FIRST, MIDDLE INITIAL) BATES, THOMAS A. 09-04-5112		1. AGENCY NO. (OPTIONAL)	2. AGENCY CODE 11	3. SOCIAL SECURITY NUMBER 3,6,8 2,6 5,2,3,7
5. TITLE, PAY PLAN, SERIES, GRADE, AND STEP Forestry Technician GS-462-6/10		15. TRAINING COMPLETED <input checked="" type="checkbox"/> TRAINING NOT COMPLETED <input type="checkbox"/>		16. TRAINING ONLY <input checked="" type="checkbox"/> TRAINING & MORE <input type="checkbox"/>
6. OFFICE ADDRESS & TEL. NO. Forest Service, Region 9 517-826-3717 Huron-Manistee NF Mio, Michigan 48647		17. ESTIMATED COSTS		
HOME ADDRESS (OPTIONAL)		A. TUITION AND RELATED FEES		
		B. BOOKS AND MATERIAL		
		C. TRAVEL		
		D. PER DIEM/HOUSEHOLD MOVEMENT* 46.50		
		E. SUB-TOTAL 96.90		
		F. COST OF SALARY WHILE IN TRAINING 143.40		
		G. TOTAL		
		*INCLUDES MEALS AND LODGING FOR NIGHTS		

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Huron-Manistee NF

REPLY TO: 6140 Employee Development

February 20, 1979

SUBJECT: Orientation Session, 4X4 Wheeled Tractors

TO: Files



The following employees completed an Orientation Session on
4X4 Wheeled Tractors on January 16 and 23, 1979:

January 16 Session
At Baldwin

- T. Sapak
- H. Nixon
- J. Pullen
- J. Benz
- T. Richards
- J. Norton
- P. Griffin
- B. Johnson
- S. Cruber
- D. Ellison
- D. Heitzke

January 23 Session
At Harrisville

- D. Bowman
- G. Nowiski
- G. Putnam
- S. Hartsig
- J. Smith
- A. Marzolo
- G. Haase
- ✓ T. Eates
- G. Long
- C. Rickel
- E. Nahgahgwon
- R. Reames
- H. Edwards

William E. Gardner
WILLIAM E. GARDNER
Personnel Officer

cc: Employee
OPF

RESTRICTIONS		
Eyeglasses required while driving		
QUALIFIED TO OPERATE		
TYPE VEHICLE AND/OR EQUIPMENT	CAPACITY	ISSUING OFFICIAL
Seams		AWD SN
Vans	12 pass	SN
Pickups & Trucks	13,000 GVW	SN
Tractor	Crawler 25,000 GVW	SN
OTHER RECORDS (OPTIONAL)		3-24-2
VOID UNLESS ACCOMPANIED BY A VALID STATE DRIVER'S LICENSE.		

U.S. GOVERNMENT MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD						CARD NO. 95539
NAME OF OPERATOR					DATE ISSUED	10/11/76
Bates, Thomas F.					EXPIRES	10/1/81
SEX	BIRTH DATE	COLOR OF HAIR	COLOR OF EYES	HEIGHT	WEIGHT	
M	9/9/31	Blond	Blue	6'	165	
BIRTHPLACE				SOCIAL SECURITY NO.		
Lansing, Michigan				368-26-5237		
The holder of this card is qualified to operate U.S. Government vehicles and/or equipment specified, subject to the restrictions set forth on the reverse of this card.						
ISSUING OFFICIAL					TITLE	
WILLIAM E. GARDNER					Pers. Off.	
NAME AND LOCATION OF ISSUING UNIT						
Huron-Manistee NF, Cadillac, MI						
NOT TRANSFERABLE Card must be carried at all times when operating Government vehicles.				SIGNATURE OF OPERATOR (Valid until stated)		
				Thomas Bates		

PERSONAL QUALIFICATIONS STATEMENT

MA 1979 093055 Office of Management and Budget Approved 50-RO387

I 27 0

A. Kind of position (job) you are filing for (or type of announcement)

B. Announcement No.

C. Options for which you wish to be considered (if listed in announcement)

D. Primary place(s) you wish to be employed
MIO RANGER DIST 2. OTHER HURON - MANISTEE

2. Home phone (including Area Code) **517-275-5994** 3. Office phone (including Area Code)

4. Name (Last) (First) (Middle) (Maiden, if any) Mr. Miss Mrs. and Address (Number, Street, City, State and ZIP Code)
BATES, THOMAS FRANKLIN
701 GEORGE ST. BOX 297
ROSCOMMON, MICH. 48653

5. Legal or voting residence (State)
MICHIGAN

6. Height without shoes **6** Feet **165** Inches

7. Weight **165**

8. Birthplace (City and State, or foreign country)
LANSING, MICH

9. Birth date (Month, day, year) **9-9-31** 10. Social Security Account Number **368 26 5237**

11. If you have ever been employed by the Federal Government as a civilian, give your last classification series, grade, and job title:
GS-9 Fire Control Officer

Dates of service in that grade:
 From **Approx 12-69** To **6-72**

12. If you are currently on a list of eligibles for appointment to a Federal position, give the name of the announcement, the name of the office maintaining the list, the date on your notice of rating, and your rating.

DO NOT WRITE IN THIS BLOCK FOR USE OF EXAMINING OFFICE ONLY

ANNOUNCEMENT NO. STATEMENT NO.

Appor. Material Entered Register: Submitted Returned

Nonappor. Returned

Notations:

Form Reviewed:

Form Approved:

Option	Grade	Earned Rating	Preference	Aug. Rating
			<input type="checkbox"/> 5 points (10%)	
			<input type="checkbox"/> 10 Points Comp. Dis.	
			<input type="checkbox"/> 10 Points Other	
			<input type="checkbox"/> 17 1978	
			<input type="checkbox"/> Investigated	

Processed Under Section 10451

Initials and Date

THIS SPACE FOR USE OF APPOINTING OFFICER ONLY

Preference has been verified through proof that the separation was under honorable conditions, and other proof as required.

5-Pt. 10-Pt. Comp. Disab. 10-Pt. Other

Signature and Title

Agency Date

Refer for medical action

13. Lowest pay or grade you will accept

PAY	OR	GRADE
\$ per		GS-4

14. When will you be available?
Aug 28, 78

15. Will you accept temporary employment for:

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

(Acceptance or refusal of temporary employment will not affect your consideration for other appointments.)

16. Where will you accept a job?

YES	NO
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

— Washington, D.C.
 — Any place in the United States.
 — Outside of the United States.
 — Only in (specify): **HURON MANISTEE**

17. Will you accept less than full time work? (Less than 40 hours per week) Yes No

18. Are you willing to travel? (Check one)

NO	SOME	OFTEN
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

19. VETERAN PREFERENCE. Answer all parts. If a part does not apply to you, answer "No."

A. Have you ever served on active duty in the United States military service? (Exclude tours of active duty for training as a recruit or Guardsman.)

B. Have you ever been discharged from the armed services under other than honorable conditions? (You may omit any such discharge changed to honorable by a Discharge Review Board or similar authority.)

If "Yes," give details in Item 37.

C. Do you claim 5-point preference based on active duty in the armed forces? Yes No

If "Yes," you will be required to furnish records to support your claim at the time you are appointed.

D. Do you claim 10-point preference? Yes No

If "Yes," check type of preference claimed and complete and attach Standard Form 15, "Claim for 10-point Veteran Preference," together with the proof called for in that form

TYPE: Compensable disability Disability Wife Widow Mother

E. List Dates, Branch, and Serial or Service Number of All Active Service (Enter "N/A" if not applicable)

From	To	Branch of Service	Serial or Service Number

PLEASE BE SURE TO READ ATTACHED INSTRUCTIONS BEFORE COMPLETING ITEM 20

20. EXPERIENCE (Start with your PRESENT position and work back. Account for periods of unemployment in separate blocks in order.)

May inquiry be made of your present employer regarding your character, qualifications, and record of employment? Yes No
(A "No" will not affect your consideration for employment opportunities except for HEARING EXAMINER positions.)

1		Dates of employment (month, year) From <u>JUNE 1978</u> To <u>PRESENT TIME</u>		Exact title of position (crew leader) <u>Forestry Tech</u>		If Federal service, civilian or military grade <u>GS-4</u>	
Salary or earnings		Avg. hrs. per week		Place of employment		Number and kind of employees supervised	
Starting \$ per		40		City: <u>500</u> State: <u>Mich</u>		8 YCC	
Present \$ <u>4.28</u> per hr						Kind of business or organization (manufacturing, accounting, insurance, etc.) <u>USFS</u>	
Name of immediate supervisor <u>TOM KURTZ</u>				Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) <u>HIAWATHA NATIONAL FOREST ESCANABA, Mich</u>			
Area Code and phone No. if known							
Reason for wanting to leave <u>Need permanent appointment closer to home</u>							
Description of duties, responsibilities, and accomplishments <u>Supervise work of YCC enrollees engaged in T.S.I., trail construction, recreation area clean up, wildlife projects, etc</u>							
For agency use (skill codes, etc.)							

2		Dates of employment (month, year) From <u>AUGUST 76</u> To <u>MAY 78</u>		Exact title of position <u>MANAGER</u>		If Federal service, civilian or military grade <u>—</u>	
Salary or earnings		Avg. hrs. per week		Place of employment		Number and kind of employees supervised	
Starting \$ per		60		City: <u>Prescott</u> State: <u>ARIZ</u>		1 secretary 6 real estate salespersons	
Final \$ <u>2200</u> per month						Kind of business or organization (manufacturing, accounting, insurance, etc.) <u>REAL ESTATE</u>	
Name of immediate supervisor <u>AL GAZDY</u>				Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) <u>ED POST REALTY 323 W GURLEY Prescott, ARIZ 86301</u>			
Area Code and phone No. if known							
Reason for leaving <u>TO TAKE JOB WITH FOREST SERVICE</u>							
Description of duties, responsibilities, and accomplishments <u>responsible for recruitment, training + supervision of sales persons involved in listing + selling all types of real estate properties. Position required expertise in real estate law, ethics, contract writing, negotiations advertising, office management + appraising</u>							
For agency use (skill codes, etc.)							

3		Dates of employment (month, year) From <u>5/75</u> To <u>6/76</u>		Exact title of position <u>MANAGER</u>		If Federal service, civilian or military grade <u>—</u>	
Salary or earnings		Avg. hrs. per week		Place of employment		Number and kind of employees supervised	
Starting \$ <u>11,000</u> per yr		44		City: <u>ROSCOMMON</u> State: <u>Mich</u>		8 (Drivers + STATIONS)	
Final \$ per						Kind of business or organization (manufacturing, accounting, insurance, etc.) <u>wholesale, retail Petroleum</u>	
Name of immediate supervisor <u>FRITZ BERTI, owner</u>				Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) <u>ROSCOMMON GAS & OIL CO ROSCOMMON, Mich 48653</u>			
Area Code and phone No. if known							
Reason for leaving <u>by request of owner (fired)</u>							
Description of duties, responsibilities, and accomplishments <u>MAINTAINED proper inventory levels of all types of oils, greases, fuel oil + gasolines and related AUTO supplies for retail. Supervised operation of 2 company operated stations + 3 gas truck drivers. Responsible for accuracy of bookkeepers daily balances. Handled over the counter sales of tires, batteries, etc.</u>							
For agency use (skill codes, etc.)							

PLEASE BE SURE TO READ ATTACHED INSTRUCTIONS BEFORE COMPLETING ITEM 20

20. EXPERIENCE (Start with your PRESENT position & work back. Account for periods of unemployment in separate blocks in order.)

May inquiry be made of your present employer regarding your character, qualifications, and record of employment? Yes No
 'No' will not affect your consideration for employment opportunities except for HEARING EXAMINER positions.) CONTINUATION

Dates of employment (month, year) From 6/72 To 4/75 PRESENT TIME		Exact title of position SALES MAN + MANAGER		If Federal service, civilian or military grade	
Salary or earnings Starting \$ - per Final Present \$ 2500 per MONTH		Avg. hrs. per week 60	Place of employment City: Prescott State: ARIZ	Number and kind of employees supervised up to 12	Kind of business or organization (manufacturing, accounting, insurance, etc.) REAL ESTATE
Name of immediate supervisor Ahan Gazely			Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) ED POST REALTY 323 W Goodwin Prescott ARIZ 86301		
Area Code and phone No. if known					
Reason for wanting to leave TO TAKE Job IN MICHIGAN					
Description of duties, responsibilities, and accomplishments SAME AS IN NO 2 EXCEPT THAT I WAS A REAL ESTATE SALESMAN FOR ABOUT THE FIRST YEAR + THEN BECAME MANAGER					
For agency use (skill codes, etc.)					

Dates of employment (month, year) From Sept 60 To June 72		Exact title of position Fire Control Officer		If Federal service, civilian or military grade GS-9	
Salary or earnings Starting \$? per Final \$ 15,000 per yr		Avg. hrs. per week 40	Place of employment City: Prescott State: ARIZ	Number and kind of employees supervised up to 40	Kind of business or organization (manufacturing, accounting, insurance, etc.) USFS
Name of immediate supervisor John Antonich Code and phone No. if known			Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) Prescott NATIONAL Forest Prescott ARIZ 86301		
Reason for leaving WANTED change of occupation					
Description of duties, responsibilities, and accomplishments See Attached sheet					
For agency use (skill codes, etc.)					

Dates of employment (month, year) From 5-56 To 8/60		Exact title of position fire officer		If Federal service, civilian or military grade	
Salary or earnings Starting \$? per Final \$? per		Avg. hrs. per week 40	Place of employment City: Boyne City State: Mich	Number and kind of employees supervised 1 - fire hookout	Kind of business or organization (manufacturing, accounting, insurance, etc.) NATURAL Resources
Name of immediate supervisor Lou Dorman			Name of employer (firm, organization, etc.) and address (including ZIP Code, if known) Michigan Dept of Conservation (DNR) LANSING Mich		
Reason for leaving MOVED TO ARIZ for son's health.					
Description of duties, responsibilities, and accomplishments All phases of Fire prevention + suppression in assigned county. Worked with conservation officers on game law enforcement. Assisted other divisions with tree planting + wildlife discharging. Responsible for maintenance of field office, boats, tractors, trucks + related equipment					
For agency use (skill codes, etc.)					

IF YOU NEED ADDITIONAL EXPERIENCE BLOCKS USE STANDARD FORM 171-A OR BLANK SHEETS
SEE INSTRUCTION SHEET

NO 1 ATTACHMENT TO BLOCK 5

FROM 9/60 TO ABOUT 1966 I WAS RESPONSIBLE FOR ANALYSIS, PLANNING + EXECUTION OF ALL PHASES OF FIRE PREVENTION, PRE SUPPRESSION + SUPPRESSION ON THE PRESCOTT RANGER DISTRICT. I PROVIDED TRAINING + SUPERVISED PERFORMANCE OF DISTRICT FIRE PREVENTION PATROLMEN, HOOKOUTS, SMOKE CHASERS + PUMPER CREWS + SUBMITTED ALL NECESSARY REPORTS.

I WAS RESPONSIBLE FOR RECREATION ANALYSIS + PLANNING + FOR THE SUPERVISION OF SEASONAL PERSONNEL ENGAGED IN ADMINISTRATION, MAINTENANCE + CLEANUP OF EIGHT PICNIC + CAMPGROUNDS. I ORDERED ALL NECESSARY EQUIPMENT + SUPPLIES + SUBMITTED REQUIRED REPORTS.

I WAS RESPONSIBLE FOR ANALYSIS + PLANNING OF DISTRICT ENGINEERING FUNCTIONS INCLUDING SIGN PLAN, ROADS + TRAIL PLAN. I SUPERVISED PERSONNEL ENGAGED IN TRAIL MAINTENANCE + RECONSTRUCTION, SIGN MAINTENANCE + CONSTRUCTION.

I ASSISTED THE DISTRICT T.M.A. WITH TIMBER SALE PREPARATION, T.S.I. PROJECTS + SLASH DISPOSAL. THIS INCLUDED MARKING + TREE MEASUREMENT, SUPERVISION OF T.S.I. CREWS + SUPERVISION OF SLASH BURNING.

NO 2 ATTACHMENT TO BLOCK 5

I 27
5

From about 1966 until 1972 my position was split off from all recreation responsibilities due to district consolidation and increasing workload. New fire responsibilities included TRAINING & supervision of Forest heli track crew, TRAINING & supervision of Forest Inter-Region crew (25 MAN), Co-ordinator of Prescott City Fire Dept, YAVAPAI Central Fire Dept & Prescott NATIONAL Forest. Served as Division Boss on Region 3, Fire overhead TEAM.

ATTACH SUPPLEMENTAL SHEETS OR FORMS HERE
• ANSWER ALL QUESTIONS CORRECTLY AND FULLY

A. Special qualifications and skills (skills with machines; patents or inventions; your most important publications (do not submit copies unless requested); your public speaking and publications experience; membership in professional or scientific societies; etc.)
 Skilled in operation of CHAIN SAWS, Table + bench SAWS + other wood working MACHINERY.
 Skilled in CARPENTRY + plumbing
 Considerable AMOUNT of public SPEAKING in previous FOREST SERVICE CAREER + IN REAL ESTATE BUSINESS
 Developed physical FITNESS TRAINING PROGRAM THAT WAS ADOPTED by Region 3

B. Kind of License or Certificate (For example, pilot, registered nurse, lawyer, radio operator, C.P.A., etc.)	C. State or other licensing authority	D. Year of first license or certificate	E. Year of latest license or certificate	F. Approximate number of words per minute: Typing	Shorthand
—	—	—	—	20	—

22. A. Did you graduate from high school, or will you graduate within the next nine months?	B. Name and location (city and State) of last high school attended								
<table border="1"> <tr> <th>YES</th> <th>MONTH/YEAR</th> <th>NO</th> <th>HIGHEST GRADE COMPLETED</th> </tr> <tr> <td>X</td> <td>6/49</td> <td></td> <td></td> </tr> </table>	YES	MONTH/YEAR	NO	HIGHEST GRADE COMPLETED	X	6/49			J.W. Sexton High School HANSING, Mich
YES	MONTH/YEAR	NO	HIGHEST GRADE COMPLETED						
X	6/49								

C. Name and location (city, State, and ZIP Code if known) of college or university. (If you expect to graduate within 9 months, give MONTH and year you expect degree.)	Dates attended		Years Completed		No. of credits compl.		Type of degree (B.A., etc.)	Year of degree
	From	To	Day	Night	Semester hours	Quarter hours		
Trinidad State Jr College Trinidad, Colo	9/52	12/53						

D. Chief undergraduate college subjects	No. of credits compl.		E. Chief graduate college subjects	No. of credits compl.	
	Semester hours	Quarter hours		Semester hours	Quarter hours
HISTORY			GUNSMITHING		

F. Major field of study at highest level of college work
 GUNSMITHING

G. Other schools or training (for example, trade, vocational, armed forces, or business). Give for each the name and location (city, State, and ZIP Code if known) of school, dates attended, subjects studied, number of classroom hours of instruction per week, certificates, and any other pertinent data.

23. HONORS, AWARDS, AND FELLOWSHIPS RECEIVED	24. LANGUAGES OTHER THAN ENGLISH											
	List the languages and indicate your knowledge of each by placing "X" in proper columns											
	Reading			Speaking			Understanding			Writing		
	Excl	Good	Fair	Excl	Good	Fair	Excl	Good	Fair	Excl	Good	Fair

25. REFERENCES. List three persons who are NOT related to you and who have definite knowledge of your qualifications and fitness for the position for which you are applying. Do not repeat names of supervisors listed under Item 20, EXPERIENCE.

FULL NAME	PRESENT BUSINESS OR HOME ADDRESS (Number, Street, City, State and ZIP Code)	BUSINESS OR OCCUPATION
JIM KIMBALL	APACHE-SITGRAVES NATIONAL FOREST SPRINGVILLE, ARIZ	FOREST SUPERVISOR
Fritz Menninghaus	CALICOON, New York	Retired U.S.F.S.
Fred Lindquist	323 W. Goodwin Prescott, ARIZ 86301	REAL ESTATE

ANSWER ITEMS 26 THROUGH 36 BY PLACING AN "X" IN THE PROPER COLUMN		Yes	No
26. Are you a citizen of the United States? If "No," give country of which you are a citizen:		X	
<i>Before answering these questions read Items 27 and 28 in the attached instructions.</i>			
Are you now a member of the Communist Party, U.S.A., or any subdivision of the Communist Party, U.S.A.?			X
28. (a) Are you now, or within the last ten years have you been, a member of any organization or group of persons including but not limited to the Communist Party, U.S.A., or any subdivision of the Communist Party, U.S.A., which during the period of your membership you knew was advocating or teaching that the government of the United States or any political subdivision thereof should be overthrown or overturned by force, violence, or any unlawful means?			X
28. (b) If your answer to (a) is in the affirmative, did you, during the period of such membership have the specific intent to further the aims of such organization or group of persons to overthrow or overturn the government of the United States or any state or any political subdivision thereof by force, violence, or any unlawful means?		-	
29. If your answer to 27 or 28(a) above is in the affirmative state the names of such organizations and the dates of your membership in each in item 37.			
30. Within the last five years have you been fired from any job for any reason?		X	
31. Within the last five years have you quit a job after being notified that you would be fired? If your answer to 30 or 31 above is "Yes," give details in Item 37. Show the name and address (including ZIP Code) of employer, approximate date, and reasons in each case. This information should agree with your answers in Item 20, EXPERIENCE.			X
32. Have you ever been convicted of an offense against the law or forfeited collateral, or are you now under charges for any offense against the law? (You may omit: (1) traffic violations for which you paid a fine of \$30.00 or less; and (2) any offense committed before your 21st birthday which was finally adjudicated in a juvenile court or under a Youth Offender law.)			X
33. While in the military service were you ever convicted by general court-martial? If your answer to 32 or 33 is "Yes," give details in Item 37. Show for each offense: (1) date; (2) charge; (3) place; (4) court; and (5) action taken.			X
34. Does the United States Government employ in a civilian capacity or as a member of the Armed Forces any relative of yours (by blood or marriage)? (See Items 34 and 35 in the attached instruction sheet.)		X	
35. Do you live with, or within the past 12 months have you lived with, any of these relatives who are employed in a civilian capacity? If your answer to 34 is "Yes," give in Item 37 for such relatives: (1) full name; (2) present address (including ZIP Code); (3) relationship; (4) department, agency, or branch of the Armed Forces. If your answer to 35 is "Yes," also give the kind of appointment held by the relative(s) you live with or have lived with within the past 12 months.			X
36. Do you receive or do you have a pending application for retirement or retainer pay, pension, or other compensation based upon military, Federal civilian, or District of Columbia Government service? If your answer is "Yes," give details in Item 37.			X

* Statement cannot be processed until you have answered all questions, including Items 26 through 36 above. Be sure you have placed an "X" to the left of EVERY one (one) above, either in the "Yes" or the "No" column.

37. Space for detailed answers. Indicate Item number to which answers apply.

Item No.	
30	ROSCOMMON GAS & OIL CO, ROSCOMMON, MICH 48653 Fired 6/76 OVER CONFLICT OF MANAGEMENT OF COMPANY WITH OWNER.
34	Joseph BATES, 400 DOWNER TRAIL PRESCOTT ARIZ Joe is my SON, He is employed by the Prescott NATIONAL FOREST ON A DEBILITACK TEAM.

If more space is required, use full sheets of paper approximately the same size as this page. Write on EACH sheet your name, birth date, and announcement or position title. Attach all sheets to this Statement at the top of Page 3.

ATTENTION — THIS STATEMENT MUST BE SIGNED

Read the following paragraph carefully before signing this Statement

A false answer to any question in this Statement may be grounds for not employing you, or for dismissing you after you begin work, and may be punishable by fine or imprisonment (U.S. Code, Title 18, Sec. 1001). All statements are subject to investigation, including a check of your fingerprints, police records, and former employers. All the information you give will be considered in reviewing your Statement and is subject to investigation. A false answer to Items 27 or 28 could deprive you of your right to an annuity when you reach retirement age in addition to the penalties described above.

CERTIFICATION I CERTIFY that all of the statements made in this Statement are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.	SIGNATURE (Sign in ink) Thomas Bates	DATE SIGNED 8/2/78
---	--	------------------------------

OPF
Bates

I 28 0

Prescott National Forest
P. O. Box 2549
Prescott, Arizona 86301

6140

December 2, 1969

Mr. Thomas F. Bates
Fire Control Officer
Thumb Butte Ranger District
Prescott National Forest
P. O. Box 2549
Prescott, Arizona 86301

Dear Tom:

Both you and Joe Miller are to be commended for your fast and intelligent action in controlling the Spruce and Homesite Fires this past fire season.

Your cash award, though it may not be a large sum, is given to you with just as much gratitude and meaning as if it were a thousand dollars.

Sincerely,

D. C. MACINTYRE

D. C. MacINTYRE
Forest Supervisor

OPF

STATEMENT OF ACCOMPLISHMENTS

Joseph X. Miller. Joe received the first report on the Spruce Fire. He immediately started his wife telephoning District personnel while he left for the fire. He assisted greatly in getting numerous local volunteers organized into effective firefighting crews and then assisted in establishing organization at the base of operations. Joe is extremely versatile and due to initial lack of overhead he accomplished a variety of jobs on the Spruce Fire. On the Homesite Fire he organized the attack on the fire and was acting fire boss until FCO Tom Bates arrived. Joe should further be commended for the speed in which he retrieved equipment from the Spruce Fire and had the fire hose, tools, and vehicles readied for another fire which happened to be the Homesite Fire immediately following the Spruce Fire. His recognition of the need of the District fire organization to be ready to go at all times is certainly outstanding.

Lloyd A. Fusselman. Lloyd assisted Line Boss Tom Bates in organizing and directing a ground attack on the Spruce Fire. He acted as Sector Boss. His unit ring efforts in organizing and directing firefighting on the line contributed greatly to holding this fire to the size it was. He displayed excellent judgment in maintaining a vigilant look-out for spot fires.

Thomas F. Bates. As line boss, Tom Bates directed the attack on the Spruce Fire. This fire had the potential of being a large fire, but through Tom's quick, effective ground work and strategic retardant drops, the fire was contained to the size it was. On the Homesite Fire, the same situation prevailed. This also had a good potential but quick effective action was taken by Tom on his arrival and the fire was contained again. Both fires indicated a well-trained and ready District firefighting crew which certainly deserves considerable credit. Tom should also be commended for his ingenuity and innovations in the District Prevention Signing and Road Block Program.

Harlow A. Yaeger and Ross M. Hills. Harlow Yaeger and Ross Hills did a superhuman job of mixing fire retardant, loading it into air tankers, and dispatching the tankers to the Spruce Fire, July 6, 1969. There was hardly a pause between planes during this fire and that is what "saved the day." These two men kept four bombers rolling constantly for over a 3-hour period besides dispatching men and supplies on the ground to the fire. They deserve in every way an Achievement Award of \$50 each.

Messrs. Miller, Fusselman, Bates, Yaeger, and Hills all meet the security check requirements prescribed in FSM 6145.120(2).



FIRE-JOB QUALIFICATIONS EXPERIENCE AND TRAINING RECORD

(See Privacy Act Statement on Back)

PAGE 1 OF 1 PAGES

NAME BOISMAN, VENDEL E.
DATE 3/17/80

REGION OR AGENCY NINE (1-2) | 09 | UNIT OR AREA Huron Peninsula (3-4) | 04 | SUBUNIT OR DISTRICT M10 (5-6) | 05

SOCIAL SECURITY NO 386429327 (7-15) | STATUS CODE (CODE 2 AND CARD TYPE 1 WILL DELETE RECORD FROM THE MASTER FILE)

INSTRUCTIONS SUBMIT ONLY CARDS FOR WHICH YOU HAVE PERTINENT DATA | 1 ORIGINAL | 2 DELETION | 3 ADDITION (16) 3

CARD NUMBER 1 - BASIC INFORMATION (17) 1

YEAR OF FIRE QUALIFICATION (18-19) 810 | NAME (LAST, FIRST, MIDDLE INITIAL) BOISMAN VENDEL E (20-39)

DATE OF BIRTH (MONTH AND YEAR) (40-43) 110411 | TRANSFER TO UNIT OR AREA (44-45) | SUBUNIT OR DISTRICT (46-47)

PHYSICAL FITNESS RATING (48-49) 3 | BEST FUNCTIONAL ASSIGNMENT 1ST (50-51) L1 | 2ND (52-53) | 3RD (54-55)

CARD NUMBER 2 - TRAINING (17) 2

TRAINING COURSES NEEDED		TRAINING COURSES COMPLETED		
COURSE CODE (18-21)		COURSE CODE (42-45)		YEAR COMPLETED (46-47)
1				
2				
3				
4				
5				
6				

CARD NUMBER 3 - FIRE EXPERIENCE (17) 3

LAST CALENDAR YEAR'S FIRE EXPERIENCE OR, IF ORIGINAL INPUT, EXPERIENCE FOR LAST FIVE YEARS (ADDITIONAL CARDS CAN BE USED IF NEEDED) 8/10/79 PRINTOUT DOES NOT SHOW FIRE EXP. FOR 77,78

JOB CODE (18-19)	YEAR (20-21)	NO QUAL FIRES (22-23)	NO TRNG FIRES (24)	MGMT. LEVEL (25)	RATING (26)
<u>40</u>	<u>719</u>		<u>4</u>	<u>4</u>	<u>2</u>
<u>2V</u>	<u>719</u>	<u>101</u>		<u>4</u>	<u>2</u>
<u>117</u>	<u>718</u>	<u>101</u>		<u>4</u>	<u>2</u>
<u>210</u>	<u>717</u>	<u>103</u>		<u>4</u>	<u>2</u>
<u>119</u>	<u>717</u>	<u>102</u>		<u>7</u>	<u>2</u>

CARD NUMBER 4 - INTERAGENCY FIRE-JOB QUALIFICATION CARD DATA (17) 4

FIRE QUALIFICATIONS		ON-JOB TRAINING NEEDS	
TITLE	NUMBER (18-19)	TITLE	NUMBER (24-25)

I300

U.S. GOVERNMENT MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD						CARD NO.
NAME OF OPERATOR					05949	
Michael W. Harnois					DATE EXPIRES	
					3/25/80	
SEX	BIRTH DATE	COLOR OF HAIR	COLOR OF EYES	HEIGHT	WEIGHT	
M	6/15/51		Hazel	6'0"	160	
BIRTHPLACE			SOCIAL SECURITY NO.			
			379-56-2398			
The holder of this card is qualified to operate U.S. Government vehicles and/or equipment specified, subject to the restrictions set forth on the reverse of this card.						
SIGNATURE OF ISSUING OFFICIAL				TITLE		
<i>William Stank</i>				Personnel Officer		
NAME AND LOCATION OF ISSUING UNIT						
Huron-Manistee NF's, Cadillac, Michigan						
NOT TRANSFERABLE Card must be carried at all times when operating Government vehicles.			SIGNATURE OF OPERATOR (Not valid until signed)			
			<i>Michael W. Harnois</i>			

App. I 30 (2)

I 30 (2)

RESTRICTIONS		
Corrective lenses required while driving		
QUALIFIED TO OPERATE		
TYPE VEHICLE AND/OR EQUIPMENT	CAPACITY	QUALIFYING OFFICIAL
T-4 Crawler		
Vans-12 passenger		
Pickups	25,000 GVW	
Sedans		
OTHER RECORDS (OPTIONAL)		
AWD-All		
Tiltbed Truck	43,000 GVW	

I 31 0

FIRE-JOB QUALIFICATIONS EXPERIENCE AND TRAINING RECORD

(See Privacy Act Statement on Back)

PAGE 1 OF 1 PAGES

NAME
HAHN, THOMAS C.

DATE
2/14/80

REGION OR AGENCY (1-2) 09	UNIT OR AREA Huron-Ministee (3-4) 04	SUBUNIT OR DISTRICT A10 (5-6) 05
SOCIAL SECURITY NO. (7-15) 003423378	STATUS CODE (CODE 2 AND CARD TYPE 1 WILL DELETE RECORD FROM THE MASTER FILE)	
INSTRUCTIONS: SUBMIT ONLY CARDS FOR WHICH YOU HAVE PERTINENT DATA	1 ORIGINAL 2 DELETION 3 ADDITION (16) 3	

CARD NUMBER 1 - BASIC INFORMATION (17) 1

YEAR OF FIRE QUALIFICATION (18-19) 80	NAME (LAST, FIRST, MIDDLE INITIAL) (20-39) HAHN THOMAS C	
DATE OF BIRTH (MONTH AND YEAR) (40-43) 11252	TRANSFER TO (44-45)	UNIT OR AREA (46-47)
PHYSICAL FITNESS RATING (48-49) 42	BEST FUNCTIONAL ASSIGNMENT 1ST (50-51) L1 2ND (52-53) 3RD (54-55)	

CARD NUMBER 2 - TRAINING (17) 2

TRAINING COURSES NEEDED		TRAINING COURSES COMPLETED	
COURSE CODE (18-21)	YEAR COMPLETED (46-47)	COURSE CODE (42-45)	YEAR COMPLETED (46-47)
5230	79	5260	79
5270			
5390			

CARD NUMBER 3 - FIRE EXPERIENCE (17) 3

LAST CALENDAR YEAR'S FIRE EXPERIENCE OR, IF ORIGINAL INPUT, EXPERIENCE FOR LAST FIVE YEARS (ADDITIONAL CARDS CAN BE USED IF NEEDED)

JOB CODE (18-19)	YEAR (20-21)	NO. QUAL. FIRES (22-23)	NO. TRNG. FIRES (24)	MGMT LEVEL (25)	RATING (26)
21	79	02		2	2
21	79		PB 1	4	2

CARD NUMBER 4 - INTERAGENCY FIRE-JOB QUALIFICATION CARD DATA (17) 4

FIRE QUALIFICATIONS		ON-JOB TRAINING NEEDS	
TITLE	NUMBER (18-19)	TITLE	NUMBER (24-25)
	(20-21)		(26-27)
	(22-23)		(28-29)

CARD NUMBER 5 - PRIOR FIRE EXPERIENCE

(17) 5

JOB CODE	NO. OF FIRES	JOB CODE	NO. OF FIRES	JOB CODE	NO. OF FIRES
1 (18-19)	(20)	8 (39-40)	(41)	15 (60-61)	(62)
2 (21-22)	(23)	9 (42-43)	(44)	16 (63-64)	(65)
3 (24-25)	(26)	10 (45-46)	(47)	17 (66-67)	(68)
4 (27-28)	(29)	11 (48-49)	(50)	18 (69-70)	(71)
5 (30-31)	(32)	12 (51-52)	(53)	19 (72-73)	(74)
6 (33-34)	(35)	13 (54-55)	(56)	20 (75-76)	(77)
7 (36-37)	(38)	14 (57-58)	(59)	21 (78-79)	(80)

CODES			CODES			CODES	TRAINING COURSE
F	J		F	J			
C1	01	GHQ Fire Manager	S1	03	GHQ Service Coordinator	S110	Basic Fire Orientation
C1	04	Fire Boss I	S1	07	Service Chief I	S130	Basic Fire Fighter
C1	10	Fire Boss II	S1	13	Service Chief II	S190	Introduction to Fire Behavior
C1	17	Fire Boss III	S1	41	Camp Officer	S211	Water/Pumps
L1	05	Line Boss I	S1	42	Tool Manager	S212	Power Saws
L1	11	Line Boss II	S2	43	Equipment Officer	S213	Tractors
L1	16	Division Boss	S3	44	Tractor Manager	S214	Ground Tankers
L1	18	Sector Boss	S4	45	Tanker Manager	S215	Firing Equipment
L1	19	Crew Boss	S5	46	Truck Manager	S216	Crew Boss
L1	20	Squad Boss	S6	47	Supply Officer	S220	Fire Bus. Mgt., Principles
L1	21	Fire Fighter	S7	48	Air Service Officer	S260	Basic Air Operations
L2	15	Air Attack Boss	S8	49	Air Service Mgr. Airport	S270	
L2	22	Air Traffic Boss	S8	52	Mixmaster	S320	Organizing Fire Suppression
L3	23	Air Tanker Boss	S9	50	Air Service Mgr. Heliport I	S330	Sector Boss
L4	24	Helicopter Boss	S9	51	Air Service Mgr. Heliport II	S331	Crew Liaison Officer
L5	25	Tractor Boss	S0	53	Communications Officer	S341	Maps-Records Officer
L6	26	Tanker Boss	S0	54	Radio Operator	S343	Infrared Imagery Interpr.
L7	27	Firing Boss	F1	08	Finance Chief I	S351	Air Service Mgt., Airport
L8	28	Felling Boss	F1	14	Finance Chief II	S352	Air Service Mgt., Heliport
L9	29	Line Locator	F1	55	Time Officer	S353	Mixmaster
L9	30	Line Scout	F1	56	Time Recorder	S354	Camp Officer
L0	31	Crew Liaison Officer	F1	57	Commissary Manager	S355	Equipment Officer
P1	02	GHQ Plans Coordinator	F2	58	Injury Compensation Officer	S356	Supply Officer
P1	06	Plans Chief I	F3	59	Obligations Officer	S370	Intermed. Air Operations
P1	12	Plans Chief II	F4	60	Claims Officer	S380	Safety Management
P1	32	Maps-Records Officer	A1	09	Safety Chief	S390	Fire Behavior
P2	33	Intelligence Officer	A1	40	Safety Officer	S420	Fire Org. and Management
P2	34	General Scout				S440	Plans Chief
P3	35	Infrared Imagery Interpr.				S450	Service Chief
P4	36	Fire Behavior Officer				S451	Air Service Officer
P5	37	Fire Information Officer				S460	Finance Chief
P6	38	Training Officer				S470	Air Attack Boss
P7	39	Liaison Officer Coordinator				S520	Fire Generalship
						S580	Adv. Fire Safety Mgt.
						S590	Fire Behavior Officer
						S620	Fire Command

Privacy Act Statement

All information requested on this form is voluntary and is solicited under the authority contained in Title 16 U.S.C. Section 551. It will be used to determine and certify the fire suppression positions for which the individual is qualified. It is available to the State and Federal Agencies responsible for fire suppression. Withholding information will jeopardize the possibility of fire-suppression position assignment. Social Security numbers will be used as identifying number only.

I certify that I have read the above statement.

3/14/80

Date

James C. Kuhn

Signature

proceeding in a easterly direction from
 m 33 into mountain top approx 1 3/4 mile
 where a marker was laying. at that
 point officer Charles North and this
 officer, with a stretcher and some
 medical equip. proceeded into the
 woods approx 500 yards to where the
 injured party was.

Checking, it was found that
 the party was W.O.A. The party was
 ID from friends also his wallet as a
 Mr. James Lee Swiderski. DOB. 11-8-50
 Mr. Swiderski was loaded onto a stretcher
 and removed from the woods to the waiting
 ambulance. The Cascade medical exam.
 was notified and after a short time
 came to our location. Dr. Warren Bontrager
 who pronounced Mr. Swiderski dead
~~to~~ at the scene.

The medical exam. along with
 this officer went to the location where
 Mr. Swiderski was found and exam-
 ined the scene.

SUPPLEMENT COPY

OSCODA COUNTY SHERIFF DEPARTMENT ADDITIONAL COMPLAINT PAGE NO. _____	Original Date	Complaint No.
	Date of Supplementary Report	File Class

trying to reconstruct as best as possible what had happened.

It was found that Mr. Swiderski was working a tractor plow, fighting the fire and in the process the fire overran his location, Mr. Swiderski got off the tractor and tried to get to safety on foot but did not make it. Mr. Swiderski was found approx 150 ft from his equis. Lying face down. Mr. Swiderski was taken by ambulance to the Gordon Funeral Home in mid, This officer by phone contacted the US Forest service about Mr. Swiderski, and they in turn were going to contact the family.

Wisp.

Reporting Officer Wisp.	15	Reviewer
----------------------------	----	----------

APP. K10

K10

JAMES LEE Swiderst

607 S. MORENCI

MID, MICHIGAN 48647

DOB. 11-8-50

SS # 379-56-7626

LOCATION OF BODY.

T26-R3E.55

EYES - BRN

HAIR BRN

HEIGHT 5'8

WEIGHT approx 150 lbs

K16

FILE NO. # _____

OSCODA COUNTY AMBULANCE SERVICE
PHONE: 826-3214
JAMES J. NEFF, SHERIFF

^{LEE} SWIDERSKI

NAME JAMES ~~SWIDERSKI~~

MEDICARE NO. _____

STREET 607 S MORENO

MEDICAID NO. _____

CITY Mio. STATE Mich.

BLUE CROSS
BLUE SHIELD

PHONE 826-5506 ZIP CODE _____

GROUP NO. _____

DATE OF BIRTH 11~~9~~ 18150 AGE 29 yrs

SERVICE CODE _____

IF MINOR, PARENTS NAME _____

CONTRACT NO. _____

SS 379 56 7626

OTHER INSURANCE _____

DATE 5 15 80 TIME 4:28 ^{PM}
(AM)

REQUESTED BY _____

PICK UP T26 R3E 55

DESTINATION _____

INJURY OR ILLNESS _____

DOCTOR _____

Eyes green - Hair brown - 5' 8" - 150

REMARKS:

taken to Gordon's Family home.
US Forest Service Service notified, they will
TX Family and then Gordon's.

MILEAGE _____ GALS _____ OIL _____ LOADED MILES _____

Willits
DRIVER

North
ATTENDANT

SUPPLEMENT COPY

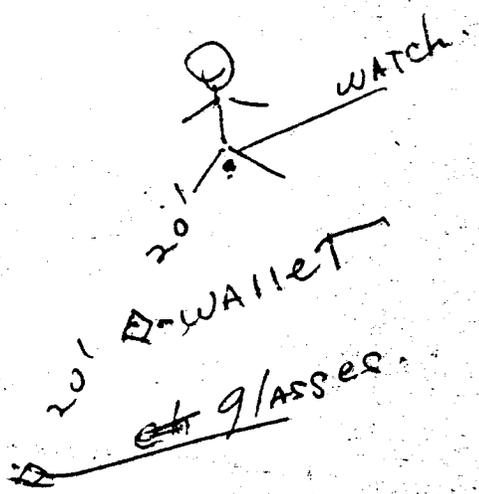
OSCODA COUNTY SHERIFF DEPARTMENT
ADDITIONAL COMPLAINT PAGE NO. _____

Original Date _____

Complaint No. _____

Date of Supplementary Report _____

File Class. _____



APPROX

201
HARD HAT

HARD HAT

Reporting Officer _____

Reviewer _____

C. FIRE BEHAVIOR ANALYSIS

1. Fire History

The distribution of wild fire sizes for a 17-year period, 1960 to 1977, on the Huron National Forest is listed in Table 4.

Table 4.--Fire Size Class Distribution for the Huron-Manistee National Forests

<u>Class</u>	<u>Size</u> (Acres)	<u>Number</u>	<u>Percent</u>
A	0 - 3/4	261	37.7
B	1 - 9	350	50.6
C	10-99	72	10.4
D	100-999	5	0.7
E	1,000-5,000	4	0.6
	TOTAL	692	100.0

The distribution listed on Table 4 is typical of eastern forests. The vast majority of fires are small and easily controllable. While problem fires do occur with some regularity, major fires several thousand acres in size are rare events, occurring perhaps once every 10 to 50 years (Table 5). There is no reason to believe, however, that they will not continue to occur.

If we assume that fires under 100 acres in size are not a major concern, we are left with nine wild fires of consequence in 17 years, or one every two years. The relative infrequency of large fires coupled with a rapid turnover of District personnel (complete turnover in about 3 years) does preclude the opportunity to gain experience with large wild fires on the Forest.

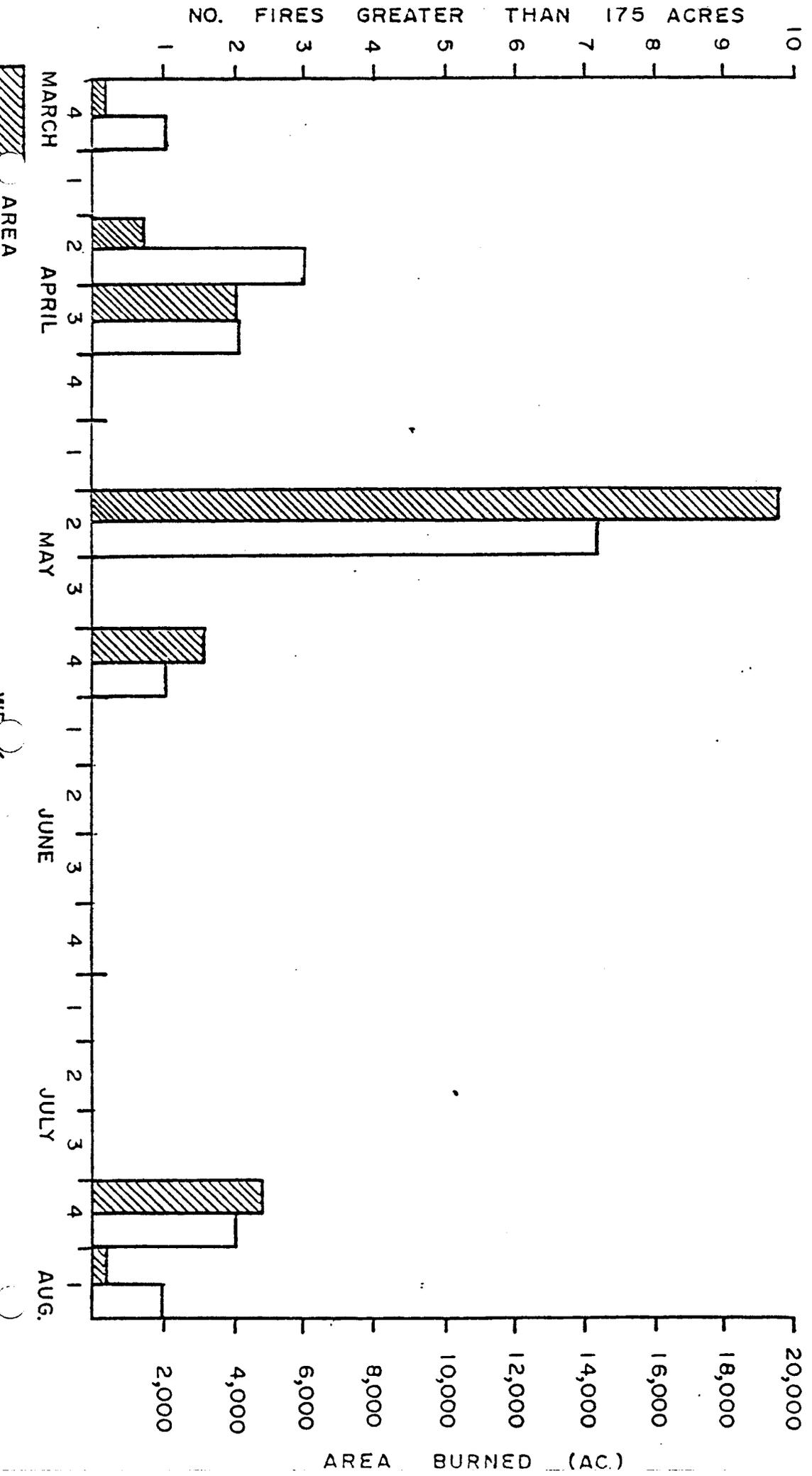
In April 1946, 16,400 acres of jack pine burned in the Mack Lake area. Records from that fire are not readily accessible. Some 4- to 5-inch diameter jack pine which had originated in 1915 were scarred by the 1946 fire but survived. A sampled tree was 9 inches in diameter at the time of the Mack Lake fire.

The record for the State of Michigan, Department of Natural Resources contrasts markedly with that of the Huron-Manistee National Forests. During the 16-year period from 1964 to 1979, there were a total of 17 crown fires in jack pine that burned in excess of 175 acres each. These fires were in the four-county jack pine area (Crawford, Oscoda, Roscommon, and Ogemaw) immediately surrounding the Mio Ranger District. There were eight fires in the 175- to 999-acre class (average size + 536 acres) and nine fires in the 1,000- to 5,000-acre category (average size = 3,195 acres). Clearly, the State has had considerable experience with crown fires in jack pine.

The seasonal distribution of the occurrence of jack pine crown fires (Figure 2) discloses a very pronounced peak during the second week in May and lesser peaks during mid-April and the end of July. Whatever the critical conditions are that control jack pine crowning, they clearly prevail with some regularity during the second week in May. Historically, 41 percent of the sample of crown fires occurred during that week and they burned 58 percent of the total area.

K2 (3)

JACK PINE CROWN FIRES OVER 175 ACRES BY WEEK (MICH. D.N.R. - 4 COUNTY AREA)



K 2 ③

0.29 inches (4.2 percent) above normal. These values indicate that near normal soil moisture conditions existed at the time of the fire. Almost no rain (0.01 inches) fell in September 1979. This deficit (-3.16 inches) roughly coincided with the onset of dormancy. Whether this deficit had any effect on the winter foliar moisture is not known.

In general, there is no indication of a drought situation existing at the time of the fire. In fact, outward signs (later confirmed by the behavior of the fire) were that deeper and larger fuels were relatively moist. The Palmer (dought) index was near normal, indicating neither surplus or deficit of ground moisture.

Although total precipitation was nearly normal, winter snowfall was only 65 percent of normal (54.2 inches observed vs. 84.0 inches normal). Although a deficit was recorded during most months, the major shortfalls were early in the winter: November (42 percent), December (38 percent), and January (72 percent). This resulted in a deeper than normal frost layer which might have had two effects: decreased absorption of subsequent precipitation due to runoff from the frozen soil and decreased foliar moisture due to an inability to absorb moisture from the frozen soil. Whether either of these effects, in fact, occurred is not known.

b. Antecedent Weather

During the week preceding the fire, 0.68 inches of rain fell (on April 29 and 30) at the Mio Forest Service Station. No precipitation was recorded on May 1-4. Temperatures during the week of April 29 - May 4 averaged 80F. above normal. The observed daily maximums on May 2 - 4 were: 75, 78, and 80°F. Of possible significance, relative humidities on those same three days were 28 percent, 22 percent, and 19 percent. Note that on the last two days (May 3 and 4 - Saturday and Sunday) the fine fuels would have dried markedly relative to their state on Friday, May 1.

Further information concerning the antecedent weather can be obtained by examining the behavior of the Burning Index (BI) and Fire Load Index (FLI) during the month preceding the fire. A graph of the two indices is presented for National Fire Danger Rating System (NFDRS) fuel model C (Figure 3) and Q (Figure 4).

There is, in fact, such strong correlation between both indices and both fuel models in this sample that to know any of the four is to know virtually all of the information contained in all of them. Given the possible confusion associated in keeping tract of four numbers, there seems to be merit in suggesting that only one index be used for as wide a variety of decision making as possible, should this similiarity be generally prevelant.

Tracing the BI for model Q through April, we see that the month started in the high range, dropped to nil for one day, recovered to moderate, and fell to nil for several days. On the 16th, the

APP K20

46 0780

10 X 10 TO THE INCH 7 X 10 INCHES KEUFFEL & ESSER CO. MADE IN U.S.A.

Fig. 3

FUEL MODEL C (FAVORABLES)
Δ - BURNING INDEX
○ - FIRE LOAD INDEX

100

80

60

40

20

0

INDEX

4/1

4/5

4/11

4/15

4/20

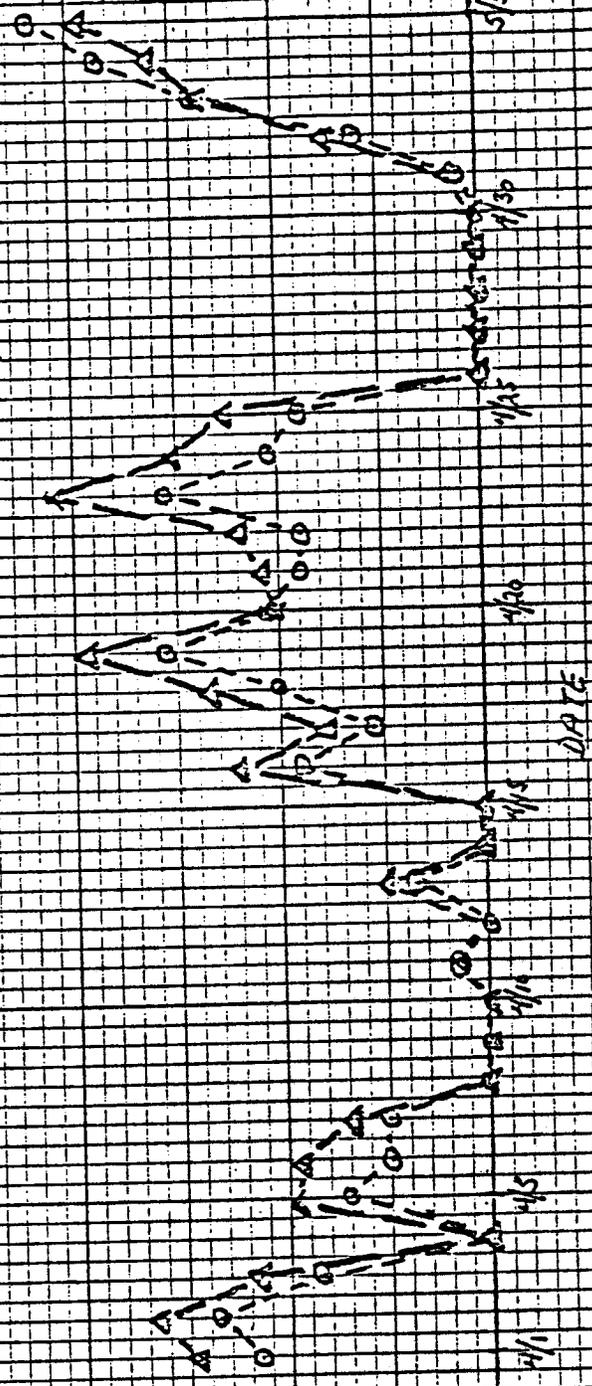
4/25

4/30

5/5

DATE

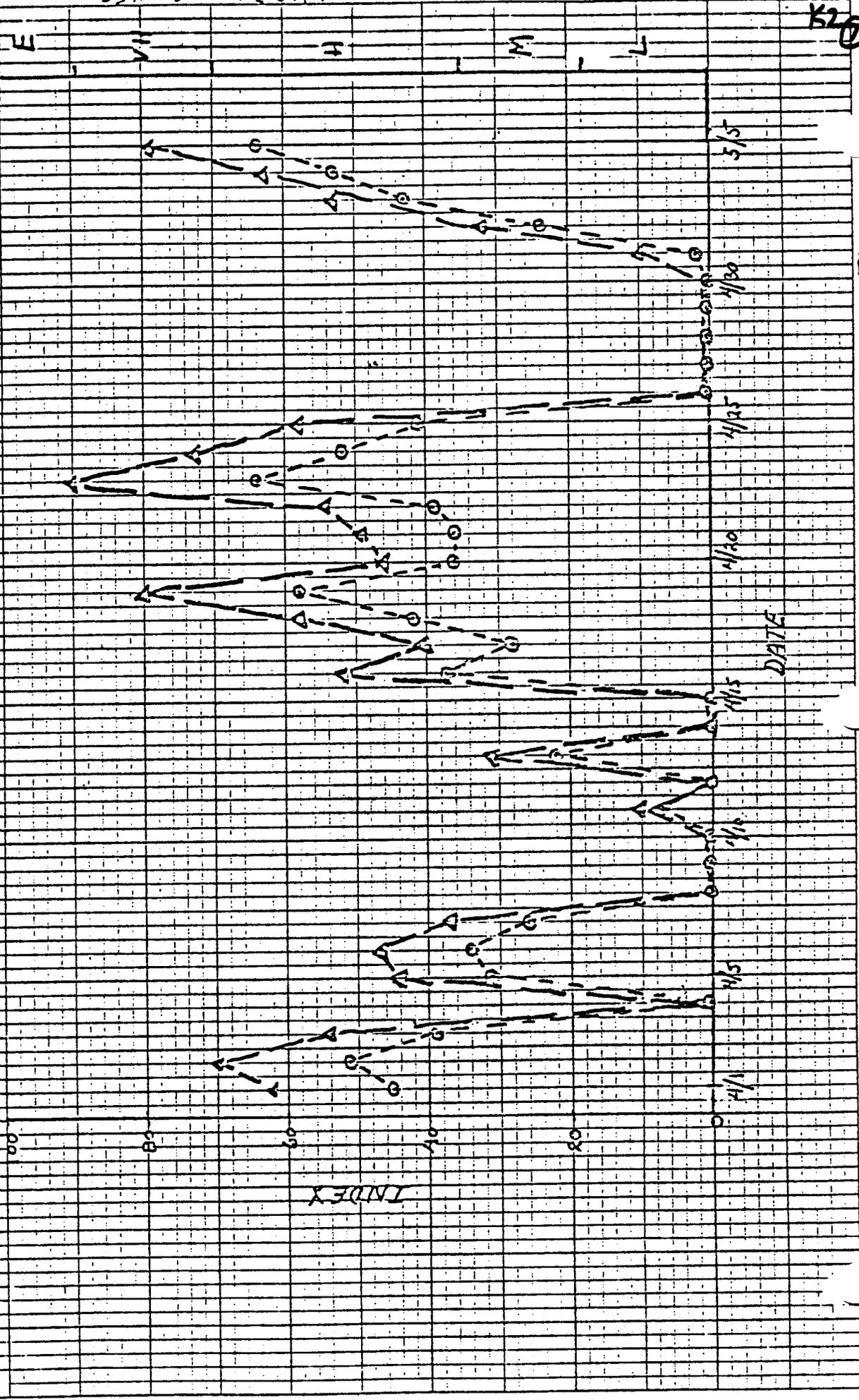
E M L K20



INDEX

K20

FUEL MODEL Q (1978 NEARS)
△ - BURUNDI INDEX
○ - FINE LOND INDEX



Figure

DATE

INDEX

1004

BI jumped from nil to the low end of high in one day. The BI remained in the high range for 10 days, after which it again fell to nil in one day due to rain. After 4 days, the index again rose dramatically to the upper end of the high range over a span of 4 days. This is the point at which the Mack Lake fire occurred. The pronounced characteristic of the BI for April and early May is a strong bimodal distribution. That is, 43 percent of the days were high, 40 percent nil or very low, and only 17 percent moderate. One can assume significant practical management problems associated with pronounced daily changes of a planning index.

c. Forecast for May 5

Two forms of weather forecast information were available at the Mio District headquarters: (1) computer output through the AFFIRMS System (Table 6) and (2) a special fire weather forecast issued by the Ann Arbor Fire Weather Forecast Office (Table 7). A discussion of forecast quality is given in Appendix C.

Table 6.--AFFIRMS Forecast for May 5, 1980

Temp.	RH	Wind Speed	Wind Dir.	1-Hr.	10-hr.	SC	ERC	BI	IC
71	40	16	NW	7	12	20/33	9/27	33/69	34/32 (C/Q)

Table 7.--Fire Weather Forecast for Mio (Issued at 8:45 am to the Supervisor's Office in Cadillac from Ann Arbor)

Time	Temp	RH(%)	Conditions		Clouds	Prec
			Wind Speed (MPH)	Wind Dir.		
1000	64	35	6-10	SW-W	20% Cu	
12-1400	72-76	23	10-15/20 G	SW-W	30-40%	
15-1700			10-15/20 G	W-NW (shift)	Front	30% chance of showers
max/min	82	18-23		W		
1,000 ft.+			15-25			

The AFFIRMS forecast, made on Sunday, the 4th, by Ann Arbor for May 5 at Mio, predicted 40 percent relative humidity. This value was apparently taken from the National Weather Service (NWS) guidance forecast by one of the forecasters on the Sunday shift. According to the fire weather forecaster, the NWS relative humidity guidance is generally too high for fire weather stations. It corresponds to values recorded at first order stations such as Houghton Lake, Flint, and Alpena. This is substantiated by a recorded minimum relative humidity of 35 percent at Houghton Lake on May 5.

220

d. Observations on May 5

Three forms of observational data were available at the Mio Ranger District office on May 5: (1) 0945, measurements at the burn site (Table 8); (2) a hygrothermograph at District headquarters (Table 9); and (3) 1400 Forest Service observations (Table 10).

Table 8.-- Observations at the Burn Site - May 5, 1980

<u>Time</u>	<u>Dry Bulb</u>	<u>Wet Bulb</u>	<u>RH</u>	<u>Wind Speed</u>	<u>Wind Direction</u>
0945	74		37%	10	W
1045(Approx)	82	63	34%	Not recorded	

Table 9.--Hygrothermograph Trace - Mio District Office - Forest Service - May 5, 1980

	<u>T i m e</u>															
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Temp. F.	57	65	75	80	82	83	82	81	77	71	65	60	57	53	52	50
RH %	0	80	28	23	21	22	22	26	37	46	55	56	50	51	54	56

Table 10.--1400 Observations at Mio - May 5, 1980

	<u>Temp. F.</u>	<u>RH %</u>	<u>Wind mph</u>	<u>1-hr.</u>	<u>10-hr.</u>
Forest Service	80	24	18	5	11
Michigan DNR	84	22	15	3	8

Further evidence of the state of the weather is given by 1400 observations at the Michigan Department of Natural Resources Mio office (Table 10) and wind data from the Houghton Lake National Weather Service office (Table 11). Note that these data are not directly available at the Mio District (Forest Service) office.

Table 11.--Wind Data from Houghton Lake - May 5, 1980

	<u>T i m e</u>										
	8	9	10	11	12	13	14	15	16	17	18
Speed mph	05	08	07	12	08	10	15	18	15	17	17
Gusts mph							25	28	25	30	28
Direction	SW	SW	W	SW	W-	W-	W-	W	W-	NW	NW
					SW	NW	NW		NW		

The slightly lower RH at the MDNR office was reported to be typical suggesting that the Forest Service office values could be slightly high because of the station location.

At Lansing, Michigan, between 1300 and 1400, 1 percent of the observations show relative humidity values under 20 percent. Between the hours of 1200 and 1700, 3 to 8 percent of the observations show relative humidity values under 30 percent dependent upon the specific hour.

The Mio fire weather station had been inspected on April 1 and was found to be in good working order (Appendix D). Thus, readings can be considered reasonably accurate. ^{1/} The Mio Forest Service observation has a lower RH and higher temperature than that predicted through AFFIRMS. Note, however, that the predicted and observed BI does not differ markedly. The observed data (site, hygrothermograph, and Mio Forest Service observation) all agree quite well with the special fire weather forecast. One noteworthy feature is the extremely rapid drop of RH between 9 and 10 am (Table 9). This was the time of the first on-site observation. The burning crew noted that the wind "picked up" around noon. This agrees with the special forecast.

Documentation shows that gusts recorded at the Houghton Lake station began reaching 25 mph about 1400 DST, with gusts above 23 mph until about 2100. The high gust for the period was 32 mph. It blew from the northwest, occurring at 1728 DST.

The frontal system passed through as forecast. The 1300 DST synoptic map shows the weak cold front just north of Alpena, well north of Houghton Lake. (Appendix E-1). By 1600 DST the front was just north of Houghton Lake and passed over that station at 1635. This was about the same time that it passed over the Mio area.

The air ahead of the front was very unstable. The 0700 DST upper wind observation taken on May 5 at Flint, Michigan, shows west winds of 15-25 mph at 1,000 to 4,000 feet. These types of winds can usually be expected to move downward during the course of the day.

3. Fuels

a. Prescribed Fire Area

The prescribed fire area was a mature jack pine stand that had been logged in 1978. Fuels consisted of scattered immature jack pine and piles of logging slash that had been dispersed over the site. Most of the area was free of slash. Slash quantities were not measured prior to the burn. Based on information published by Brown (1965) an estimated 20 to 25 tons per acre were likely contained in the piles. Surface fuels between the piles were not measured, but appeared to be light (3 to 7 tons/acre). Surface fuels consisted predominately of grass (carex), lichen, bracken fern, sweet fern, blueberry, and 1" to 1½" of jack pine litter and duff. Soils were grayling sand which is subject to rapid drying.

^{1/} The hygrothermograph, RH \pm 5% (RH time was recording about 15 minutes later than actual).

K2 (11)

b. Escaped Fire Area

West of Highway 33, cutover areas were interspersed with irregular stands of mature jack pine which were left for aesthetic purposes. Overstory trees were 8" - 10" dbh. The stand also contained mixtures of red and white pine, red oak, and aspen. There was some hardwood brush 1 to 3 feet high (not leafed out). Surface fuels were heavier than in the burn area, due to considerable standing dry bracken fern, in addition to the grass, oak leaves, jack pine litter, and woody material. There was 12.8 tons of measured surface material, and an estimated 5 to 7 tons of class II, III, and IV woody material (1" and larger). Grass was in a transitional state, the aspen had begun to leaf out, and jack pine buds had just burst.

c. East of Highway 33

The fire made its major runs in standing jack pine. There is considerable variance in stand age and density. In the area of the spot fire which escaped, tree heights ranged from 10 to 20 feet with reasonably continuous fuels from the ground. Diameters range from 1 to 4 inches and stand density varied from open areas to 2,500 stems per acre. There were also scattered areas of mature jack pine in the area (40 to 60 feet high). Ground fuels were noticeably light (3 to 5 tons/acre). There was no noticeable cured needle drape in the vicinity of the fire. Grass, lichen, and jack pine litter predominated.

d. Fatality Area

The predominant cover type was sapling sized jack pine 15 to 30 feet tall with diameters from 2 to 6 inches, and stand densities on the order of 1,000 to 2,000 stems per acre. There were scattered open areas and some scattered red oak. Measured surface fuels ranged from 4.9 to 19.6 tons per acre. An additional 3 to 7 tons per acre of 1 inch and larger woody material was also present.

e. The Main Fire Area

Much of the fire area had previously burned in 1946. There were some plantations, but most of the jack pine was naturally regenerated. Reproduction ranged from 2 to 10 feet tall, 1 to 3 inches dbh, and from less than 100 to 3,000 stems per acre. (Stems per acre by ocular estimate). Sapling sized jack pine ranged from 15 to 30 feet tall, 3 to 6 inches dbh and 100 to 2,500 stems per acre. The eastern and southern portions of the fire burned on the ground in predominantly hardwood types. Principal species were aspen, birch, maple, and oak, with scattered white and red pine. Hardwood stands ranged from saplings to mature with generally full stocking. The aspen had begun to leaf out and the maple buds had burst.

f. Fuel Weights

Table 12 summarizes the measured and estimated fuel weights. Measurements were taken in the vicinity of spot #4 and along the 1/2 mile of plow line which initially attempted to contain spot E-2 (Figure 7). Crown foliage weight estimates are based on data published by Brown (1965) and Walker and Stocks (1975).

UNITED STATES

Table 12a.--Average Fuel Weights (Tons/Acre)

	<u>Before</u>	<u>After</u>	<u>Consumed</u>
Duff	8.5	6.0	2.5
Grass, shrubs, leaves	1.5	0.2	1.3
Class I Surface (woody)	0.5	---	0.5
Unmeasured Woody *	5.0	3.0	2.0
Foliage *	<u>5.0</u>	<u>---</u>	<u>5.0</u>
TOTAL	20.5	9.2	11.3
* Estimated			

Table 12b.--Range of Fuel Weights (Tons/Acre) (5 Samples)

	<u>Prior to Burn</u>	<u>After Burn</u>
Duff	2.3 - 18.0)	0.6 - 11.7
Grass, shrubs, leaves	0.2 - 2.7)	0.1 - 0.4
Class I Surface (Woody)	0.1 - 1.4)	-----
Unmeasured Woody *	2.0 - 8.0**	1.0 - 6.0
Foliage *	<u>1.0 - 10.0***</u>	<u>-----</u>
TOTAL	5.6 - 40.1	1.7 - 18.1

* Estimated

** Some areas of up to 25 tons/acre of woody material were estimated.

*** The absolute range is 0.5 to 20 tons/acre. Table 12b values are more typical.

g. Fuel Moisture

(1) Jack Pine Foliage

Van Wagner (1967) and Grieve and Such (1977) present data which indicate that jack pine foliar moisture is at a minimum in early spring. The average jack pine twig and foliage moisture measured 2 to 5 days after the fire was 120 percent with a range of 100 percent to 135 percent (10 samples). This was significantly higher than Van Wagner's spring values (104 percent) and those of Grieve and Such (95 percent). Note that the Mack Lake data were obtained after showers had passed through the area, one day after the main run of the fire. The measurements were, however, significantly lower than published mid-to-late summer measurements (136 percent to 145 percent).

Stashko and McQueen (1974) indicate that 1 to 2 days of high wind and low relative humidities can reduce foliar moisture contents

by as much as 20 percent. Grieves and Such (1977) measured short-term foliar moisture content variations on the order of 10 percent to 40 percent which they attribute to sampling error. It is possible, however, that on porous soils such as grayling sand, foliar moisture losses can be induced on dry, windy days. It is not unreasonable to hypothesize that on the day of the fire, the foliar moisture could have been 5 percent to 15 percent lower than measured subsequently.

Van Wagner states that the difference between spring and summer foliar moisture values can make a 20 percent difference in the energy output of crown fires. Grieves and Such measured jack pine foliar moisture at the time of five wild and prescribed fires in jack pine. Their results suggest that jack pine crown fires are likely at moisture contents of 135 percent or less. They conclude, however, that jack pine foliar moisture is only of secondary importance in crowning. Other conditions such as the state of the surface fuels and wind play a dominant role. High jack pine foliar moisture coincides with the existence of green vegetation during mid-summer. Low foliar moisture coincides with cured surface vegetation in the spring and late summer.

(2) Spot Samples

A number of additional fuel moisture samples were obtained one day after the fire, 2 hours after a trace of rain fell.

- Blueberry 67 percent
- Lichen 20 percent
- Bracken Fern 19 percent
- Red Pine Needles 91 percent
- 6" punky log 421 percent
- Jack Pine in burned area 90 percent (probably desiccated although still green)

These measurements suggest that on the day of the fire, the flash fuels (grass, lichen, fern) would have been very dry, and the heavy fuels were far too wet to burn.

4. Topography

a. Prescribed Fire Area

The prescribed fire area is rolling with numerous ridges, valleys, and spurs oriented somewhat randomly (Figure 5). A cross section profile along the line of the primary spot across M-33 is shown in Figure 6 (See also Figure 1). Typical slopes are on the order of 25 percent. Elevational differences between the rounded ridges and valley bottoms are about 80 feet. The general elevation for this area is 1,200 feet. There was a predominant east-west valley running along the southern edge of the prescribed fire area. Clearly, highly variable and turbulent winds could be expected in this area. The eastern edge of the prescribed fire was 5 to 15 feet below the ridge top on which standing timber had been left.

K2 (15)

b. East of Highway 33

The terrain contrasts with that west of the highway. It is slightly rolling (10- to 50-foot typical elevation), to gentle, to nearly flat. Slopes are on the order of 5 - 20 percent. There are virtually no terrain barriers to fire spread east of Highway 33 other than roads.

5. Fire Behavior

a. The Escape Area

At 1206 (in log), the prescribed fire spotted into standing timber adjacent to and up-slope of the prescribed area (Figure 1, Spot 7, Figure 6). At this time, the prescription was abandoned and wildfire suppression began. Scorch heights in this area were 2 - 6 feet and the fire was moving generally eastward. A plow line attempted to contain the fire between the prescribed burn and Highway 33. About 1215, the fire torched on the western edge of Highway 33 and spotted across. The first spot (100 feet away) burned about 3/4 of an acre with 2 - 4 feet scorch heights, but it was contained. The second spot (E-2, -Figure 4, 225 feet away) was noted at 10-15 feet in diameter. The fire was described as "very aggressive" by the fire boss. At this time, a great deal of smoke was reported across Highway 33. The tanker experienced considerable visibility problems. The second spot torched within 25 feet of the ignition point, and crowned within 100 feet. At this point, the fire was essentially lost. What may have been a secondary fire front burned 600 feet in approximately 6 minutes. A possible third spot was reported by the Fire Boss between the two main ones, but further back from Highway 33.

b. The Fatality Area

The tractor/plow unit was reported to have reached the second spot within 3 minutes of being called. It began plowing line and apparently attempted to circle the fire to the south (Figure 7). The fire likely jumped the plowed line and the tractor turned back north and tied in to the power line. The tanker which followed attempted to tie off the spot. The tractor resumed plowing just north of the power line, suggesting that the fire had just crossed the line. An estimated 6 minutes had elapsed between the start of the plow line and this point. The lineal distance from the highway was 600 feet, suggesting a spread rate of 100 feet/minute. It is hypothesized, however, that the main fire had already moved east some distance and that this particular involvement was with a secondary front/flank.

The tanker followed the tractor, working on the active northern flank. The fire was reported to be on the ground in the vicinity of the plowed line, but torching and crowning could be seen 100 to 200 feet inside the line. "Heavy, roiling black smoke" was described. The fire was then described as a turbulent ground fire with 6-inch to 2-foot flame heights. It shifted direction a number of times and there was fingering in a northern direction. The fire was reported

cont. p. 11

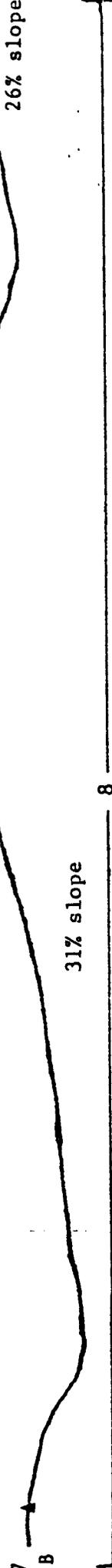
MACK LAKE FIRE
Origin Profile
Scale 1/2" = 40'



PROFILE AS SEEN FROM SOUTH

▲ Profile Line Terminals

Overall Line Length 1524.80'



- 1' - Crown Fire
- 2 - Torching
- 3 - Spot Ignition
- 4 - Torching
- 5 - Standing Timber
- 6 - Planned Edge of Prescribed Fire
- 7 - Dirt Road
- 8 - Prescribed Fire Area

J. Pullen D. Reff
5-10-80

K2 (17)

to be 'very sensitive to wind.' A slight change in the wind direction and a hot flank immediately turned into a crowning head." The changes were described as "instant." Fuels were variable-heavy to light. The tanker crew reported that despite traveling at 4-6 mph as they sprayed water, they could not catch the fire.

The tractor entered a dense stand of jack pine and small poles, 15 - 25 feet tall, 2"-6" dbh, and 500-2,000 stems per acre. It remained in this type throughout its efforts. The impact of the following tanker can be seen in an unburned strip of ground fuels 1-4 feet wide where the core of the spray landed. Also, there is a strip of uncrowned jack pine 25-50 feet wide on both sides of the plow/spray line. The tanker clearly wet the fuels sufficiently to knock down the crown fire. At no point, however, did the line hold. It can be noted that the fires spread 50-75 feet on the ground, north of the line, before it crowned again. Some torching on the north edge of the line was also noted.

Shortly after tractor and tanker left the power line, the tanker took the lead and the line was shifted 50 feet to the north. The plow overlapped the previous line, but did not tie the two together. Somewhat further along, the plow circled around a spot, indicating control difficulty immediately behind the tractor. It is reasonable to assume that by this time the fire had crossed the line behind both units (likely fairly extensively). A second plow line started from the power line about 200 feet west of the tractor #1. Clearly, by the time the second plow unit had arrived, the first line had been lost. At the point of the circle, Figure 7, (Tractor Controlled Spot), the fire is burning southeast to south on the south side of the line, indicating possible drawing in by the main fire. Just north of the line, the fire is spreading northeast to north, indicating that it was no longer under the influence of the main fire.

Somewhat further along, the tanker continued straight while the plow again shifted 75 feet north leaving a segment of unconstructed line behind him. Presumably, at this time the fire was north of the tanker line. We can hypothesize a separation between the units on the order of 5 minutes at this time. The tractor continued plowing eastward for a short distance (100 to 200 feet). It appears that the fire crowned to the north, across the path of the tractor. He turned north and lifted his plow. After about 100 feet he abandoned the tractor and ran eastward. By this time, however, the fire which had crossed the line behind the tractor had reached a large logged over open area with a good wind fetch. It crowned, spreading eastward, trapping the operator. The tractor's elapsed time from M-33 to this point was 20 to 25 minutes.

Meanwhile, the tanker, which had also abandoned its control effort turned north and then west, escaping ahead of the second crown fire. The two units were separated by approximately 100-200 yards. Finally, sometime afterwards the second plow line crossed the tanker's path and continued eastward. In the final analysis, not one of the control lines constructed during this period held the fire. The tanker operators reported that even traveling at 4-6 mph they never saw the head of the fire.

TANKER ESCAPES

MAIN CROWN FIRE SPREADS EAST

CROWN FIRE SHIFTS NORTH

PLOW LIFTED

SECOND CROWN FIRE SPREADS EAST

TANKER CONTINUES STRAIGHT

FIRE DIRECTION

OPEN AREA (LOGGED)

TRACTOR CONTROLLED SPOT

POWER LINE/ROAD

TANKER TAKES LEAD

2ND TRACTOR LINE

EDGE OF DENSE JACK PINE SAPLINGS/POLES

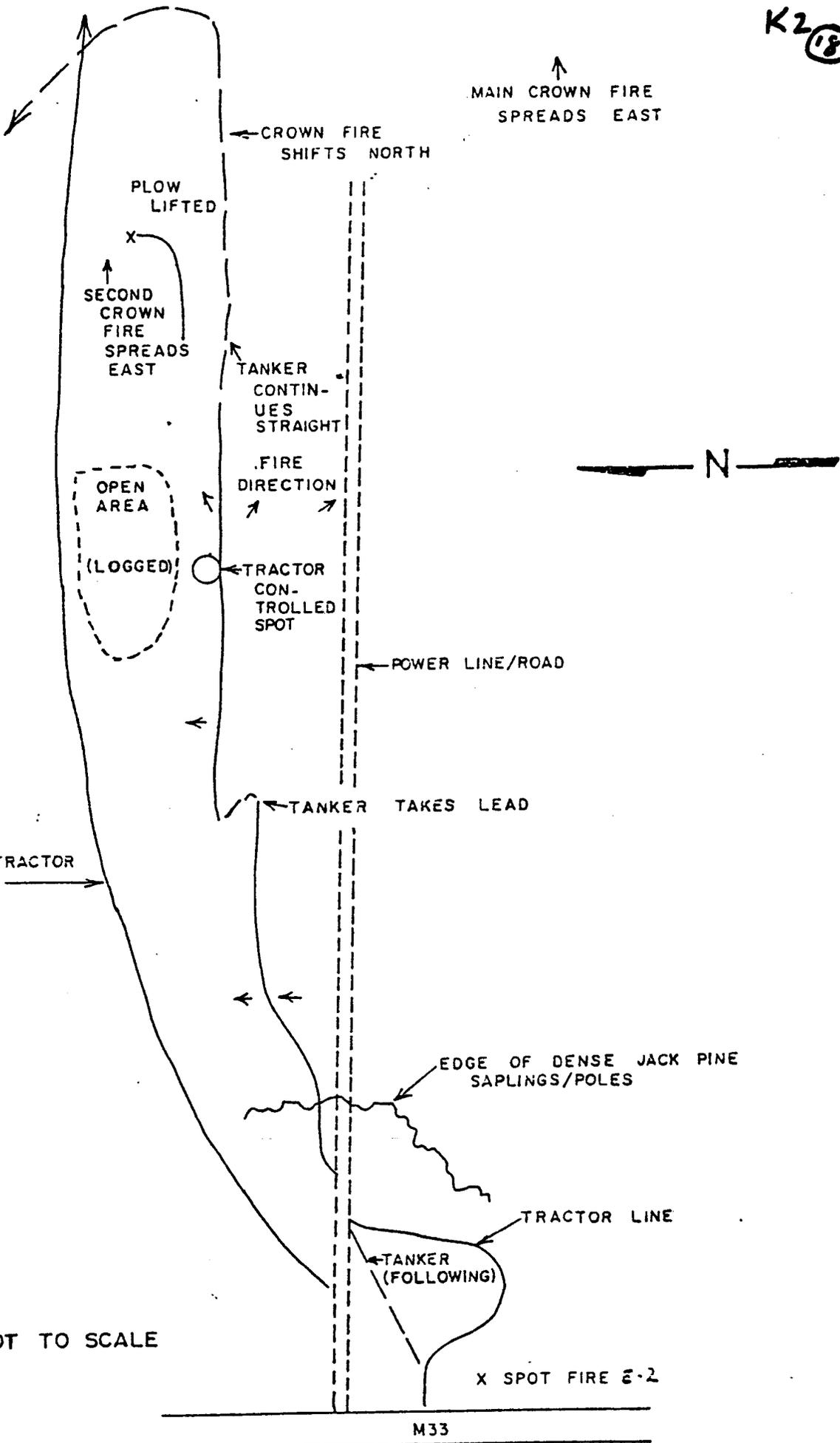
TRACTOR LINE

TANKER (FOLLOWING)

NOT TO SCALE

X SPOT FIRE E-2

M33



c. Ignition (NFDRS* IC = 49/45; C/Q) (See Appendix F for a definition of all NFDRS indices).

It is clear that virtually any spark could ignite a fire. There are no significant unburned islands. The fire burned completely up to all plowed and sprayed control lines and roads on May 5. Even in areas where 1' to 2' jack pine reproduction was barely scorched, the fire burned evenly on the ground. One almost got the impression that the entire area had simply been painted black. The fire also burned through areas of grass despite visually apparent high percentages of green material. During the afternoon of May 5, no amount of line or width of road seemed capable of holding the fire, even on the flank, let alone at the head.

d. Spread (NFDRS SC = 25/40; C/Q)

The fire spread at extreme rates. It crossed Highway 33 at 1228 (Michigan DNR Pilot report - logged). A second estimate (Oscoda County Deputy Sheriff) indicated that the fire crossed the highway at around 1215. The fire reached Mack Lake at 1315 (Michigan DNR tractor operator report). The intervening distance is 2 miles. The derived spread rate is 2 mph or 176 feet per minute.

A second reliable report placed the fire just east of the intersection of Forest Service Road 4461 and County Road 469 at 1530. The distance from Highway 33 is 6 miles. Thus a 176-ft./minute rate of spread (2 mph) was sustained for at least 3 hours. There are reports of the fire keeping pace with vehicles on parallel roads. No doubt occasionally extreme rates of speed must have occurred to sustain an average rate of 176 feet/second for 3 hours.

Between 1530 and 1800 (2½ hours) the fire spread an additional 3 miles. While the average rate during this period is 1.2 mph (100 ft/min), it is more reasonable to assume a gradually decreasing rate in response to rising humidity. Between 1800 and 2400, the fire spread an additional ½ mile, mostly on the ground, through hardwoods. The average spread rate is 7.3 ft/min. But again, a gradually decreasing rate during the period would be expected. On the second day (May 6), the fire did not materially increase its perimeter.

The extreme spread rate was dependent by these factors: relative humidity below 25 percent, 15 mph winds, gusting to 25 mph, and dense sapling to pole sized jack pine. In the late afternoon, RH rose from 37 percent to 55 percent between 1600 and 1800. Average wind speeds and gusts were unchanged to slightly higher during this period. At this time, the rate of spread was decreasing significantly. The fact that the fire was burning through hardwood stands at this time also contributed to the reduced rate of spread.

The observed rate of spread is 4 times greater than that predicted by the SC value for the Q fuel model and 6.4 times greater than that for the C model. Note that the SC does not predict crown spread rates.

* National Fire Danger Rating System

e. Flame Length (NFDRS BI = 39/79 C/Q)

Flame lengths in the prescribed fire area were reported by several persons to be on the order of 6 inches to 1 foot. In much of the mature jack pine between the prescribed fire and Highway 33, scorch heights varied from 2 to 6 feet, indicating a moderate surface fire. Scorch heights on the order of 15 - 20 feet were also observed in this area. Spread appeared turbulent and variable in the standing timber, going in opposite directions, or at 90 angles at locations only 50 feet apart. Some torching and small crown runs were noted. Along Highway 33, backing flame lengths were 6 inches to 18 inches (video tape of the fire). Flame lengths in 2 feet to 2½ feet deep, fresh slash were 5 feet to 10 feet high.

The crown fires, however, were a different story. Three polaroid pictures taken in the vicinity of Mack Lake indicate flame heights of two to three times the height of the jack pine saplings. A "wall of fire" was reported by the fire boss in the vicinity of Mack Lake. He was "impressed with the consistency." He reported flame heights of 20 - 30 feet above the trees. Thus, using an estimated 20-foot tree height, flame heights were 40 to 50 or 60 feet. That is an average of 6 times greater than predicted by model Q and 12 times greater than predicted by model C.

f. Energy Release (NFDRS ERC = 11/30 C/Q)

Byram (1959) gives a relationship for the flame length as a function of fire intensity:

$$(1) \quad L = 0.45 (I)^{0.46}$$

Converting to intensity as a function of flame length:

$$(2) \quad I = \left(\frac{L}{0.45} \right)^{2.17}$$

Thus, for 1 foot flame heights in the prescribed fire area, intensities would have been only 5 BTU/ft.²/sec. - clearly an insignificant amount. For the 2- to 4-foot flame heights, intensities would be on the order of 25 - 100 BTU/ft.²/sec. For the tallest surface by flame lengths (10 feet) the intensity would be 850 BTU/ft.²/sec.

Table 13.--Fire Intensity vs. Flame Height

<u>Flame Height</u> (Crown Height=20 Ft.)	<u>Energy Release Rate</u> (BTU/Ft. ² /sec.)
30	3,750
40	9,100
50	17,000
60	27,500

Thus, at the time of the major run, the fire was reaching peak energy release rates as high as 27,500 BTU/Ft.²/sec., with sustained average rates on the order of 9,000 BTU/Ft.²/sec.

Total energy released was determined by making a number of assumptions:

- (1) an average of 6 tons per acre of surface material and 5 tons per acre of foliage were consumed by the fire; (2) the energy content of surface material was 6,300 BTU/lb. and that of the foliage was 4,300 BTU/lb. This incorporates the heat required to raise the material to the ignition temperature. It also assumes incomplete combustion as is normally the case in larger fires (Byram 1959);
- (3) approximately 75 percent of the total fire area was jack pine and approximately 75 percent of that area crowned.

Thus, for surface material:

$$\begin{array}{rcccccc}
 6 & \times & 2,000 & \times & 6,300 & \times & 24,000 - 1.814 \times 12 \text{ BTU} \\
 \text{(Ton/Acre)} & & \text{(Lbs./Tons)} & & \text{(BTU/Lbs.)} & & \text{(Acres)} \\
 \\
 5 & \times & 2,000 & \times & 4,300 & \times & 13,500 = 5.805 \times 1011
 \end{array}$$

$$\text{TOTAL Energy Released from the fire} \qquad 2.39 \times 1012 \text{ BTU}$$

Energy release rates for the fire can also be determined with the equation:

(3) $I = HWR$

- Where H = Heat of combustion
- W = Weight of fuel per unit area
- R = Forward rate of spread

Using 5,400 BTU/lb. as an average value for surface material and foliage and 0.51 lbs/ft² of material, the following is determined:

- (1) At a 2 mph (2.93 ft/second) spread rate (first 3 hours), the average energy release rate is 8,080 BTU/ft.²/second;
- (2) At a 1.2 mph (1.76 ft/second) spread rate (second 2½ hours), the average energy release rate is 4,850 BTU/ft.²/second.

Note that rate (1) is consistent with the average obtained with the modified version of example 2. If we further assume a fire front width of 3 miles at the end of period 1 and 6 miles at the end of period 2, we can determine the total energy released during the first afternoon. During the first period, the average width (start at 0, end at 3) would have been 2 miles or 10,560 feet. During the second period, the average width would have been 4.5 miles.

Thus:

$$\begin{array}{rcccccc}
 (1) & 10,000 & \times & 10,560 & \times & 8,080 & = & 9.215 \times 1011 \\
 & \text{(second)} & & \text{(feet)} & & \text{(BTU/Ft./Sec)} & & \\
 (2) & 9,000 & \times & 23,760 & \times & 4,800 & = & \underline{1,037 \times 1012}
 \end{array}$$

$$\text{Total energy released during the first afternoon} = 1.96 \times 1012$$

Thus: 82 percent of the total energy output was released during the first afternoon.

To put things in perspective, the total energy released by the fire is equivalent to 412,000 barrels of oil, and that during the first afternoon 338,000 barrels of oil. Examined from another perspective, approximately 70 times the energy content of a typical thunderstorm, or 7 times the energy contained in the bomb dropped on Hiroshima was released by the fire.

The ERC predicts energy release rates of 275 BTU/ft.²/sec. for fuel model C and 750 BTU/ft.²/sec. for fuel model Q. These rates are difficult to compare with what was observed. The ERC warns of crown fire potential but does not include crown fire energy release rates. Six- to nine-foot flame heights would have been consistent with predicted values of the ERC.

g. Spotting

A Michigan DNR patrol aircraft reported that the fire was spotting repeatedly 200 feet in advance of the front. On the afternoon of the major run, ground and crown fires spotted readily across every road in the area (20- to 100-foot barriers). This is true even for surface fires in hardwoods. In the Mack Lake area, spotting on the order of $\frac{1}{4}$ mile was reported.

h. The Convection Column

A video tape of the convection column indicated that the smoke column rose at a shallow angle ranging from 10° to 45°. During the peak of the fire, a black column was observed rising at 45° to 3,000 - 5,000 feet. This was topped by a white cumulonimbus cloud (in appearance) which reportedly topped out in excess of 10,000 feet. (Houghton Lake Meteorologist-in-Charge). Considerable turbulence was observed in the smoke column. Although occasional fire whirls and dust devils were noted by various observers, they were considered inconsequential.

STATE OF MICHIGAN



Complaint : 4-00-0383-80
 File Class : 9500-1

WILLIAM G. MILLIKEN, GOVERNOR
DEPARTMENT OF STATE POLICE
 714 S. HARRISON RD., EAST LANSING, MICHIGAN 48823
 COL. GERALD L. HOUGH, DIRECTOR

FORENSIC SCIENCE DIVISION
 EAST LANSING LABORATORY
 TELEPHONE (517) 332-2521

LABORATORY REPORT

Laboratory No. : 859-80
 Received By : Charles Thomas
 Delivered By : Lieut. Frank Good
 Complainant : Hqtrs Fire Marshal

Date Received : 5-19-80
 Time Received : 4:20 pm
 Nature of Exam : Micro
 Date Reported : 5-20-80

Evidence received:

- 1 - cardboard box holding:
 - 1 - sealed metal container holding "...material collected from tractor operated by victim".
 - 1 - metallic "fire shelter".

Reference: Fatal forest fire - Huron National Forest.

Suspect: None given. Victim: James Swiderski.

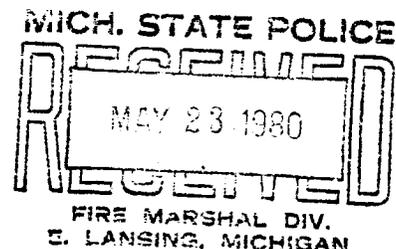
Results of examination:

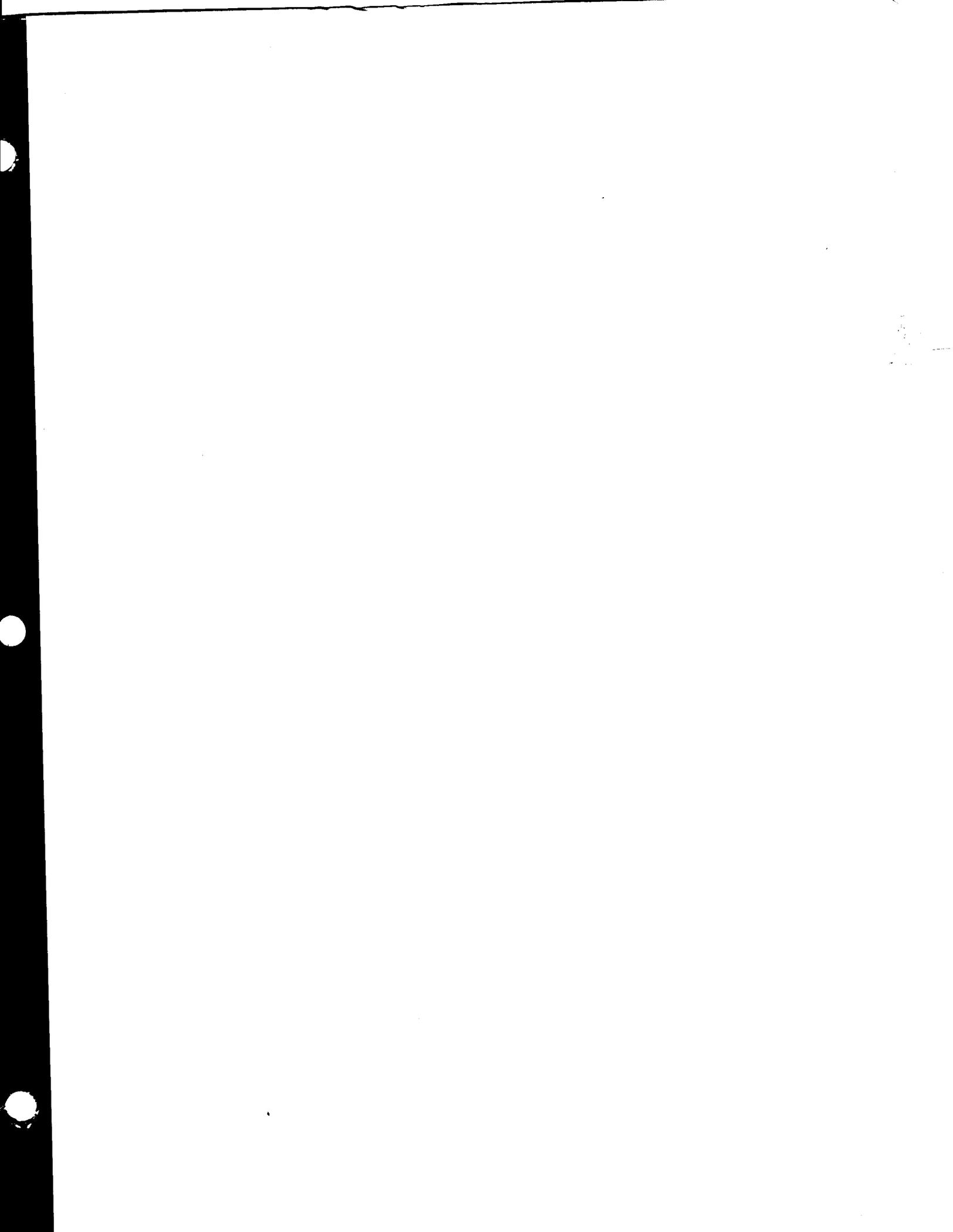
Physical examination of the metal from "victim" revealed a different texture when compared to the "fire shelter".

The metal from both items consists mainly of aluminum. A larger level of zinc was found in the "victim" metal which was not found in the "fire shelter".

Charles L. Thomas
 Laboratory Scientist

lds
 5-20/21





UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R9-PM

APPENDIX L

RECEIVED

MAY 28 1980

MAIL ROOM

REPLY TO: 6730 - Safety Management Information System

May 27, 1980

SUBJECT: Fatality, James L. Swiderski, May 5, 1980,
Huron-Manistee N.F., Mack Lake Fire

TO: Director, Fire and Aviation Management



This is to confirm that on May 5, 1980 you were appointed leader of the Regional team designated to investigate the circumstances surrounding the death of James L. Swiderski. Other team members are William C. Erickson, Deputy Forest Supervisor, Huron-Manistee N.F.; Horace H. LaBumbard, Timber and Wildlife Staff, Huron-Manistee N.F.; and Richard N. Smith, Regional Safety Manager.

for Steve H. Yurich
STEVE YURICH
Regional Forester

INF.	ROUTE	ACK
<input checked="" type="checkbox"/>	GIBSON	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SEABERG	<input type="checkbox"/>
<input type="checkbox"/>	KAUSHAGEN	<input type="checkbox"/>
<input type="checkbox"/>	GODCEN	<input type="checkbox"/>
<input type="checkbox"/>	KELLEY	<input type="checkbox"/>
<input type="checkbox"/>	SCOTT	<input type="checkbox"/>
<input type="checkbox"/>	SPRINCE	<input type="checkbox"/>
<input type="checkbox"/>	POKRIEFKE	<input type="checkbox"/>
<input type="checkbox"/>	GRAPE	<input type="checkbox"/>
<input type="checkbox"/>	FOSTER	<input type="checkbox"/>
<input type="checkbox"/>	FILE	<input type="checkbox"/>
<input type="checkbox"/>	LIBRARY	<input type="checkbox"/>