HAM PASS
ADDENDUM

22. Two Geologic reports on the northwest 1/4 of section 4 are included in this addendum and are to be considered a part of this THP. The two reports are:

GEOLOGIC REVIEW OF A PORTION OF LAND PROPOSED FOR TIMBER HARVEST by Charles F. Armstrong, Department of Conservation, Division of Mines and Geology, Santa Rosa

Environmental Assessment for a Proposed Timber Sale by John Brooks, Geologist and Robert Faust, Hydrologist, U.S. Forest Service, Covelo Ranger District

Addendum item 22 2/23/83 Dietrich Hall

State of California — The Resources A

Memorandum

To : Robert J. Shiner, Chief Forester
State Lands Commission
1807 13th Street
Sacramento, CA 95814

Date : August 22, 1983

File 2317

From : Department of Conservation
Division of Mines and Geology
P.O. Box 670, Santa Rosa 95402

Subject: GEOLOGIC REVIEW OF A PORTION OF LAND PROPOSED FOR TIMBER HARVEST

Inspection Date: 7/27/83

Participants - Affiliation:

Time Spent on Review:
4 Field, 2 Office, 1 Travel

Doug Miller, SLC
Richard Dixon, DMG
Chuck Armstrong, DMG

County: Mendocino

Quadrangle: Covelo 15'

Watershed: Williams Creek

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RESOURCE MANAGEMENT

Logging System: Tractor

Silvicultural Method: Undetermined at this time.

Slopes: Steep (7% to 71%) slopes and nearly flat benches

T/R: B.M.	Township	Range	Section
	23 N	11 W	3

Geologic Concerns:
New Road Construction
Landings
Terracing

References:

[illegible], C., 1979, Covelo 15' quadrangle, California Department of Forestry Title II Geologic Data Compilation Project, Unpublished, Scale: 1:62,500

Geologic Materials

The area is underlain by undifferentiated rocks of the Central Belt Franciscan Complex (Bacham, 1979). Meta-sandstone, slate, serpentinite [illegible] observed in the field.

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Geologic Conditions (cont.)

Landslides: There are three landslides, each of different age, which were observ-

A. This is an ancient rotational slide/slump about 40 acres in size. At least two distinct episodes of movement are evident. The first, which may have been pre-Holocene, resulted in a large, thick, bench-like deposit of loose landslide debris which was subsequently deeply dissected by erosion. Efficient, V-shaped draws evolved which drained through the landslide area. A later episode of movement disrupted and terminated most of these draws by rotational movement and slumping. This last episode was clearly Holocene in age, as most of the draws are still disrupted or terminated. There are many deep, closed depressions, sag ponds, or draws ending in flats, where little or no surficial drainage occurs. Subsequent to the last episode of movement, a mature stand of timber containing Douglas-fir, sugar pine, and Incense Cedar has grown without any apparent signs of disturbance.

B. This smaller landslide/slump of 1-2 acres in size is within the larger slide "A." It has occurred subsequent to the softwood timber stand and has result in a grove of nearly all oak re-establishing the ground. There are no recen signs of ground movement.

C. This is a small (less than an acre) landslide/ slump which occurred this winter (1982-83). At least three tilted or fallen fir trees were observed. There are fissures, scarps, and broken ground.

RECOMMENDATIONS

Landslides A and B:

Roads and skid trails should be constructed with as little cut and fill as possible. Skid trails particularly should be laid-out where little or no bladework is necessary. Runoff should drain efficiently from all roads and skid trails by out-sloping, waterbars, and rolling dips. Inside ditches, inslopes and berms should be avoided on roads.

Landings should be built with as little excavation as possible - particularly cutting. Closed depressions may be filled if needed. Landings should be drained efficiently on completion.

Runoff from roads, trails and landings should not be directed into areas which do not drain, such as sag ponds or other closed depressions.

Furthermore, the stability of this area can be generally improved if sag ponds, closed depressions and flats are drained. A small bulldozer or backhoe could cut channels after the operation.

Recommendations (cont.)

Landslide C:

Down and leaning timber can be removed from this area without further excavation.

CONCLUSION:

A light cut of timber can probably be harvested from the area described without significant negative impact on slope stability. A heavy cutting (anything approaching a clear-cut) might have a negative affect on slope stability by increasing the soil moisture as a result of reduced transpiration. Slope stability could actually be increased if drainage to closed depressions, wet ponds and flats is improved.

CHARLES F. ARMSTRONG
Santa Rosa

REGISTERED GEOLOGIST
CHARLES F. ARMSTRONG
NO. EG 570
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Reviewed by:

Date — Trinda L. Bedrossian, CEG 1064
Senior Geologist and Program Manager

Approved by:

Date — Robert H. Sydnor, CEG 968
District Geologist

Map Attached

cc: (Unapproved) T. Bedrossian

CFA/dg

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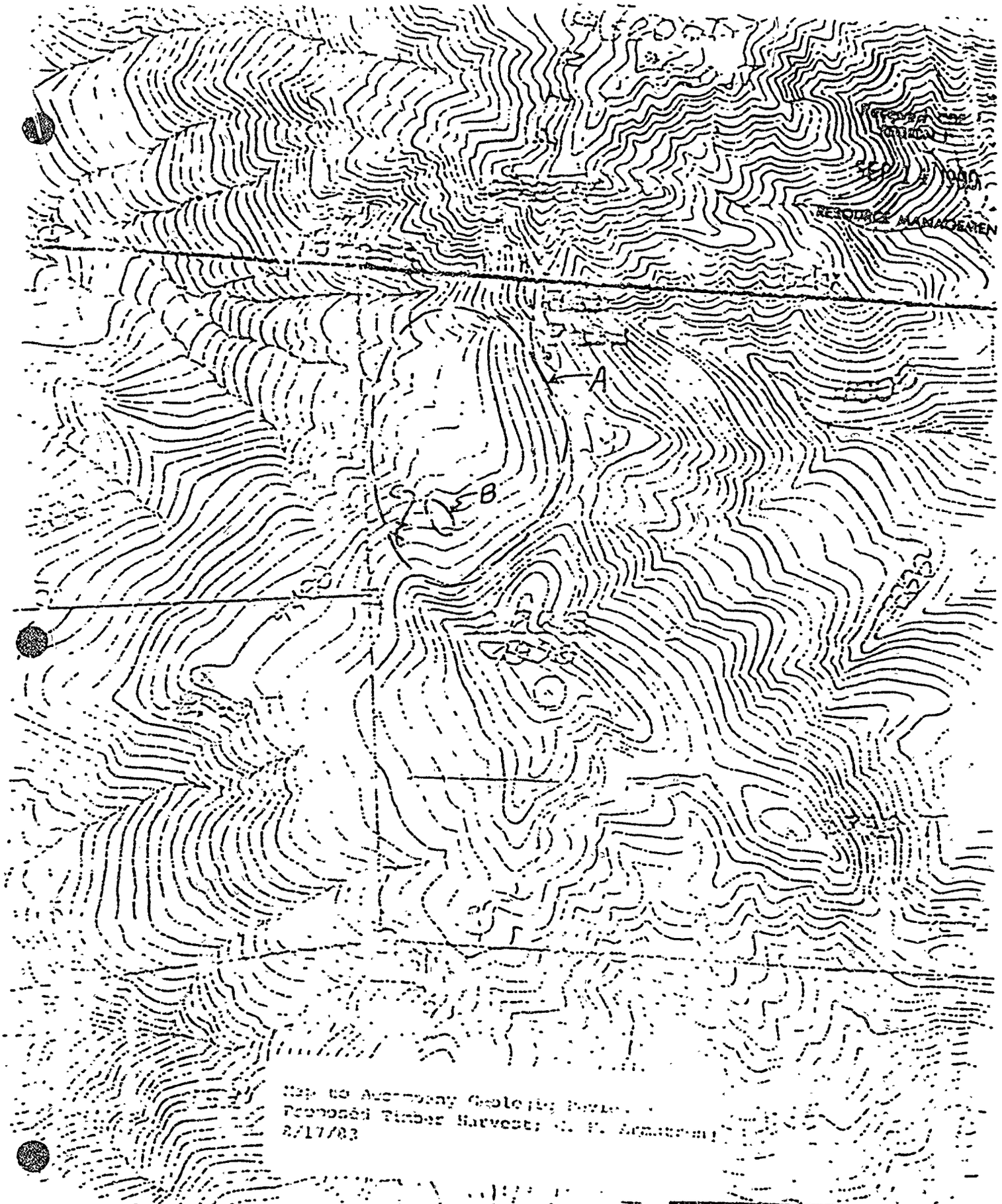
REGION I
SEP 14 1990
RESOURCE MANAGEMENT



Map to Accompany Geologic Report
Proposed Timber Harvest: [illegible]
A/17703

Addendum item #22

MENDOCINO
NATIONAL
FOREST

UNITED STATES
DEPARTMENT OF AGRICULTURE
FOREST SERVICE

COVELO RANGER DISTRICT
78150 COVELO RD.
COVELO CA. 95428

REPLY TO: 3000

DATE: 07/19/85

RN 3 3/81

Mr. Stephen M. Jones
State Lands Commission
1807 13th Street
Sacramento, CA 95814

Dear Mr. Jones:

The input to your Environmental Assessment for a Proposed Timber Sale in the Ham's Pass area has been sent to me. This input is from Geologist John Brooks and Hydrologist Robert Faust.

I am forwarding the information to you and trust it will be useful in your assessment.

Sincerely,

CHARLES L. MCFADIN
DISTRICT RANGER

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RESOURCE MANAGEMENT

RECEIVED

JUL 24 1985

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REGION :
SEP [illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE — FOREST SERVICE — MENDOCINO N.F. — RESOURCE MANAGEMENT

REPLY TO: 3000 State and Private Forestry

DATE: June 28, 1985

SUBJECT: Ham's Pass Timber Harvesting

TO: District Ranger, Covelo

A portion of lands owned by the State Lands Commission in Section 4, T.23 N., R.11 W., in the vicinity of Unit 32 of the Ham's Pass Management Unit were examined for land stability. Prior to field examination, air photo mapping of the area was done to map active and dormant landslides. Photography for the years 1974, 1979 and 1984 were compared to determine if new landslides had occurred as a result of management activities or natural events.

Geology

Numerous dormant landslides were mapped (see enclosed map) in both the unlogged as well as the previously logged area in addition to active landslides in both of the areas. The 1984 aerial photographs showed several active landslides not visible on earlier photographs. However, these may have been observed partly because of the larger, 1:12,000 scale photography of the 1984 photographs. These landslides did not appear to be related to prior logging activity although some may have been due to road construction.

Several areas were then examined on the ground to verify the air photo mapping, and compare the logged versus the unlogged areas to determine if landsliding had initiated or been accelerated as a result of timber harvesting. The areas which were examined on the ground verified that the aerial photo mapping was correct, however, additional problems were noted on the ground which were not noticed on the aerial photographs.

One noticeable area of instability which is of great importance to timber management is the area along the western edge of Section 4. The road there crosses a large slide that extends both uphill and downhill from the road at approximately 4400 feet elevation. This slide, approximately 100 feet wide trends SE-NW 145 -325 degrees and extends outside the harvest boundary downhill and over 1000 feet uphill. North of this road the ground is hummocky with numerous closed depressions which store water in ponds during wet periods and recharge the groundwater. Large deep gullies occur within the area mapped from aerial photos as multiple nested landslides. Some of these gullies developed from a swale over a short distance and may be the result of stream flows over disrupted, easily erodible landslide material.

The area immediately to the south was also mapped as a dormant landslide on all photographs. This area which was logged previously to 1974 was compared to the unlogged area. The ground, even when undisturbed by logged or skid

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Addendum item #22

trail construction, appeared rockier over much of the area. Much of this rock was graywacke sandstone. Even though this area was previously logged, there was little evidence that logging accelerated or rejuvenated mass wasting.

North of the spur road in the area proposed to be harvested a large boulder strewn stream channel occurs at the area marked "B". The origin of the large boulders was not determined but could be the result of faulting or an unstable area uphill from the site.

Recommendations

The area noted as an active landslide in the SW1/4 NW1/4, Section 4, T.23 N. R.11 W., should not be harvested for a hundred feet on either side of the center line of the landslide. This width of non-harvesting will give root support to the margin of the slide as well as assisting in reducing ground water table by transpiration.

The timber has already been marked within the area and several trees that have been marked are providing bank support and stability in an easily erodible area. A hydrologist or geologist should be allowed to paint over the marked trees to preserve stability and maintain erosion at an acceptable level.

A proposed logging access road departs from the spur road at about 4440 feet elevation. About the marked location (A) the road will cut into a slide scarp. Any cutting into the hillside at this point will probably initiate renewed mass wasting. The road should either be filled at this point or the road should be relocated below this critical point.

Examination of the harvested area indicated a poor restocking. The area proposed for harvesting at this time should be restocked immediately after harvesting to allow the roots to provide maximum support to the unstable soils which appear more erodible than the area immediately to the south which has rockier soils.

Hydrology

The proposed timber sale is in a subwatershed of Williams Creek, which is tributary to Middle Fork Eel River. The channel below proposed Unit 32 is extremely unstable and flows through highly erosive landslide material.

The channels within the proposed unit are intermittent and vary from a few feet to 30 feet deep. Stream bank slope is in the range 70% to 90% with some bank cutting. The channels and slides are fragile areas especially at the lower end of the unit near the property line.

In the proposed unit, trees are marked with blue paint. It was assumed that these were the trees to be harvested since they were the over mature trees. A younger stand of poles and sawtimber exists under the overstory.

With the existing light tree mark, damage to the channels is probable. However, by not harvesting the marked trees along the channels, plus one more area above the property boundary, plus good skid trail layout, damage to the channels would be small.

The proposed access route into the unit was walked. The route is satisfactory once it gets part way into the unit as it stays on flats and has reasonable stream crossings. Where the road begins in the white oak patch and continues into the conifers, the slopes are not stable and there is a crossing on an unstable small stream. It is expected that the initial part of the road would fail within a few years.

Recommendations

1. Find a new road route into the unit that would miss unstable areas.

2. Delete the trees for cutting that are along the streams plus the steep area above the property line.

3. Allow for extra en lining to keep ground disturbance to a minimum.

4. Control falling to keep residual stand.

5. Remove culverts after logging to prevent in case of a slide occurring in the channel upstream of the crossing.

JOHN BROOKS
Geologist

ROBERT FAUST
Hydrologist

Addendum Item #22

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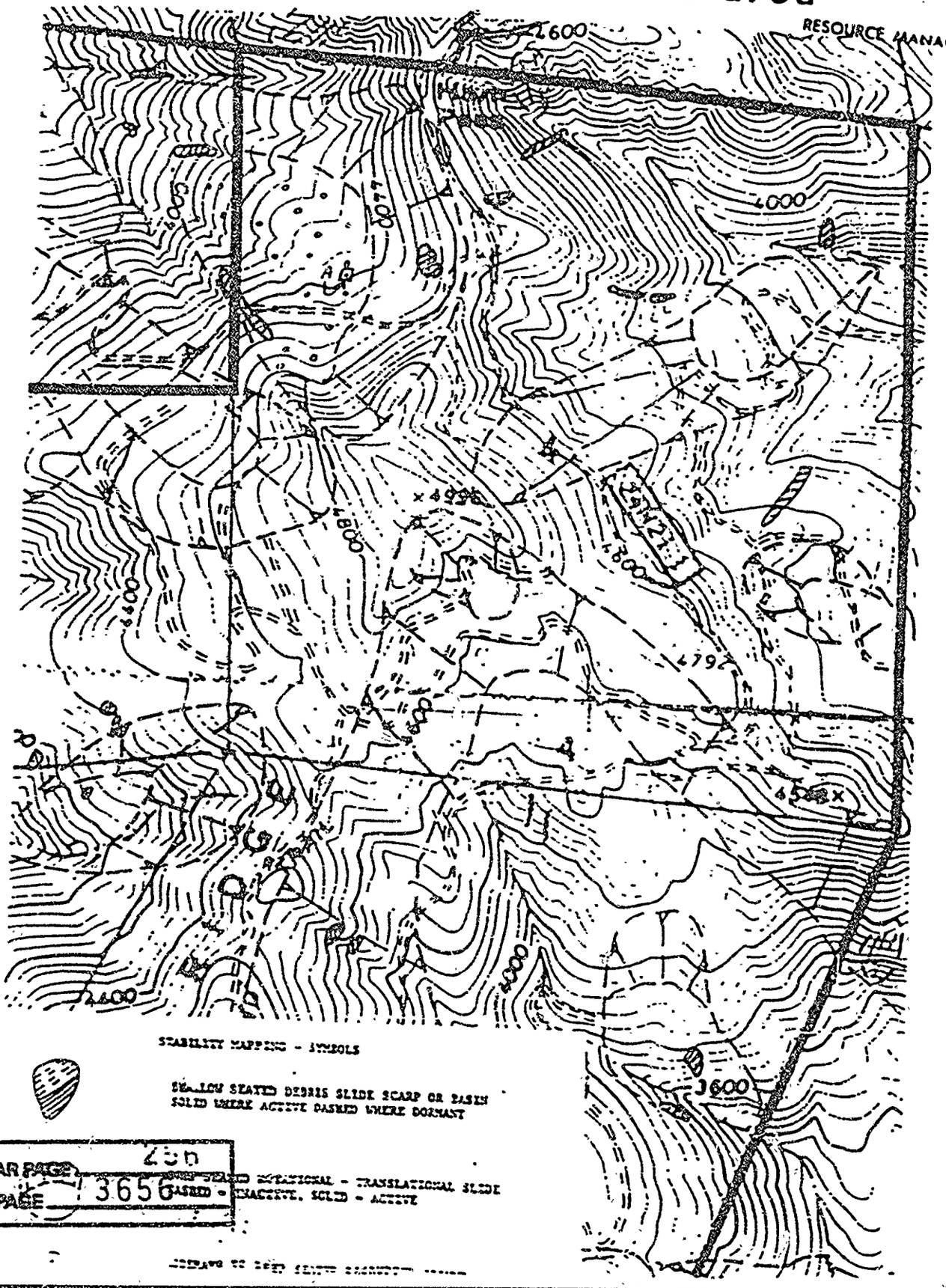
SEP 14 1988

RESOURCE MANAGEMENT

Landslide Map Ham Pass area



STABILITY MAPPING - SYMBOLS

SHALLOW SEATED DEBRIS SLIDE SCARP OR BASIN
SOLID WHERE ACTIVE DASHED WHERE DORMANT

ROTATIONAL - TRANSLATIONAL SLIDE
DASHED - INACTIVE, SOLID - ACTIVE

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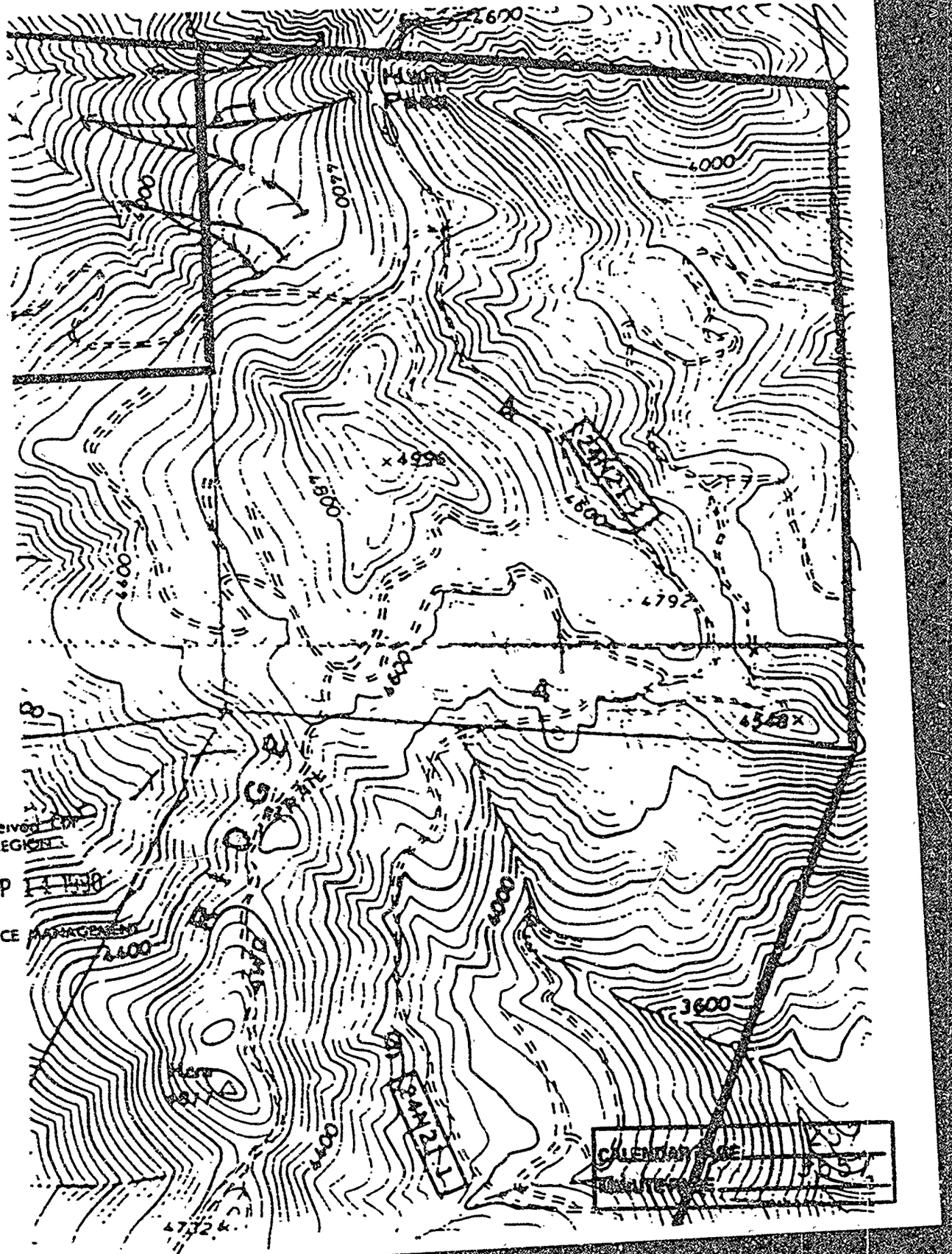
MINUTE PAGE 3656

Addendum Item #22

6/26/85

HAM'S PASS

→ stream ch



HAM PASS
ADDENDUM

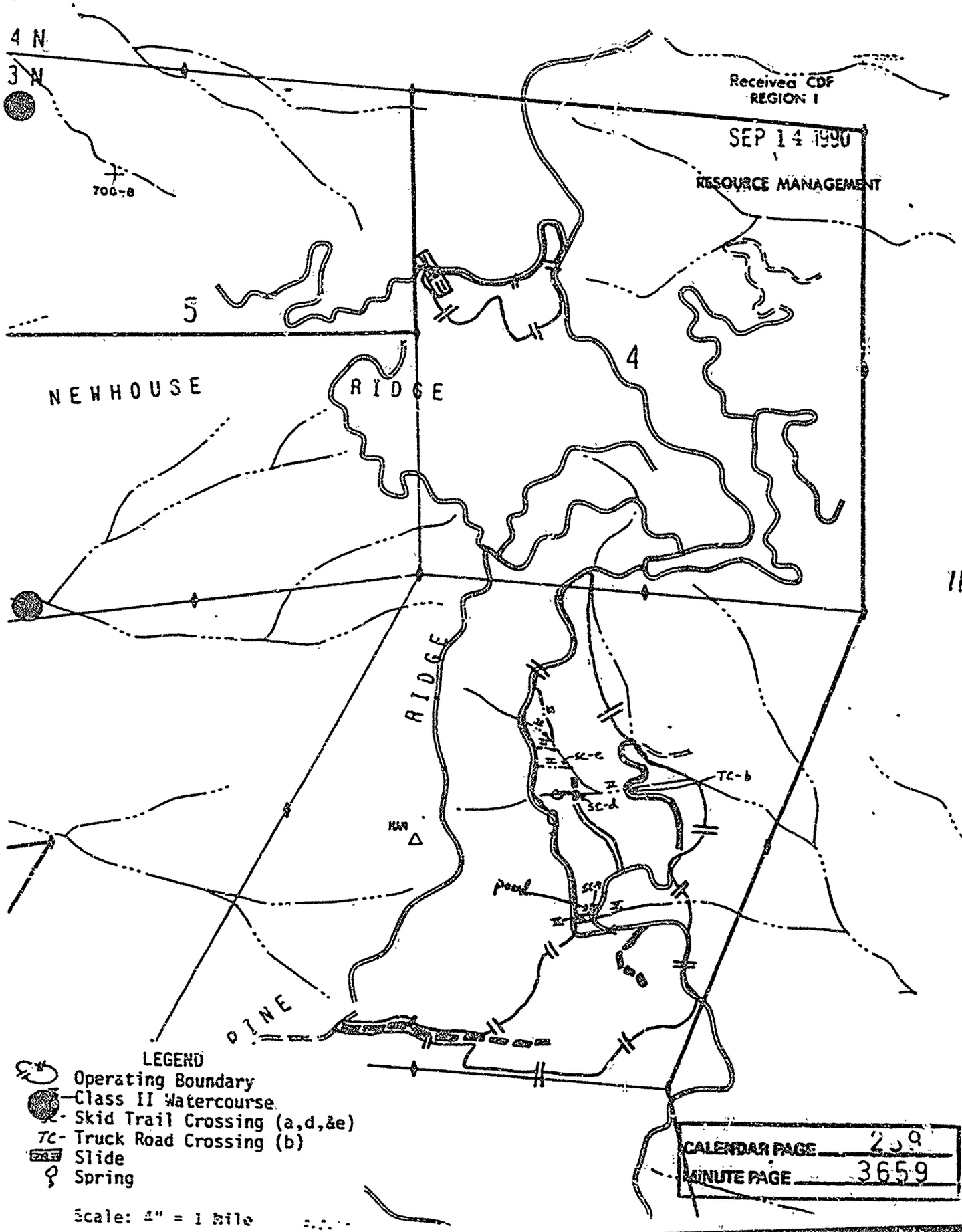
29. Timber Operations, Winter Period will comply with 14 California Code of Regulations 934.7(c):
    1) Tractor yarding or the use of tractors of constructing layouts, firebreaks or other tractor roads shall be done only during dry, rainless periods where soils are not saturated.
    2) Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30 percent or more) of rain before the next day, and prior to weekend or other shutdown periods.

32. There are existing helicopter landings of up to three acres in size scattered over the timber sale, these landings will be used again on this sale. At the completion of operations the over sized landings will be ripped and then planted with conifer seedlings. All new landings constructed under this THP will be no larger than 1/2 acre. (see site preparation addendum map for locations of over sized landings)

33. An existing logging road in the NW1/4 of Section 4 that was built across an unstable area will be used for harvesting operations. No reconstruction is planned on this road, it will be bladed in order to make it usable for harvesting and hauling operations. It is currently being used by the adjacent landowner in conjunction with THP 1-88-470 MEN.

46. Heavy equipment will be in the WLPZ at the 5 stream crossings. At stream crossing SC-e there is an existing skid trail within the WLPZ. This skid trail will be used again. Not using this existing skid trail would necessitate construction of a new skid trail, which would displace a greater amount of soil and debris causing unnecessary soil loss, and cause increased siltation to the watercourse thus reducing water quality. Using this existing skid trail will result in less adverse impact to water quality when compared to building a new skid trail. (See attached "stream crossings" map)

STREAM CROSSINGS



HAM PASS

Addendum item #47

HAM PASS ADDENDUM
Addendum item #47

47. Along the WLPZ at the stream crossing marked B the decadent overmature timber in the over story will be removed. DFG Biologist Wooster said this timber made up only 5 percent of the canopy protecting the stream and could be removed. (see attached memo)

Addendum item #47

May 22, 1990
file: W23181

Memo to the file: Ham Pass 1990 Timber Sale

I accompanied Fish & Games Wildlife Biologist Ted Wooster to hoot for Spotted Owls on SLC's ownership in Sections 8 & 9 on May 17, 1990. In the [redacted] a pair of Owls were located. We searched, to no avail, the area around where the female owl was roosting for a nest. At the end of this month Wooster and I are going to return to the location where we spotted the owls and again try and locate the nest. The mitigation he will probably recommend will be up to a 100 yard buffer around the nesting tree.

I also talked to him about the stream crossings in Section 9. He concurred with the Humbolt crossing above the water hole, (Marked A on attached Map). He said to put plastic over the logs before covering them with dirt. On the second stream crossing, (marked B), he had no problem with a backhoe digging out in front of the existing culvert, if it meets 50 years flood requirements, to redirect the water back into said culvert and dropping the road bed in order to cover the culvert. On the 3rd crossing, (Marked C), he has no problem with either a Humbolt Crossing or moving the existing culvert in the stream channel and lowering the road. The 4th crossing, marked D, he had no problem with a Humbolt crossing with plastic covering the logs before the application of soil.

I asked him his opinion on the need to preserve the over mature timber in the SLPZ up and down stream from the crossing marked B. He said these tree made up only 5% of the canopy protecting the stream and he had no problem with their being harvested. He did ask that those trees obviously cull be left along with the snags.

Wade McDonald
Forester I

Received CDF
REGION I

SEP 14 1990

RESOURCE MANAGEMENT

cc: Ted Wooster

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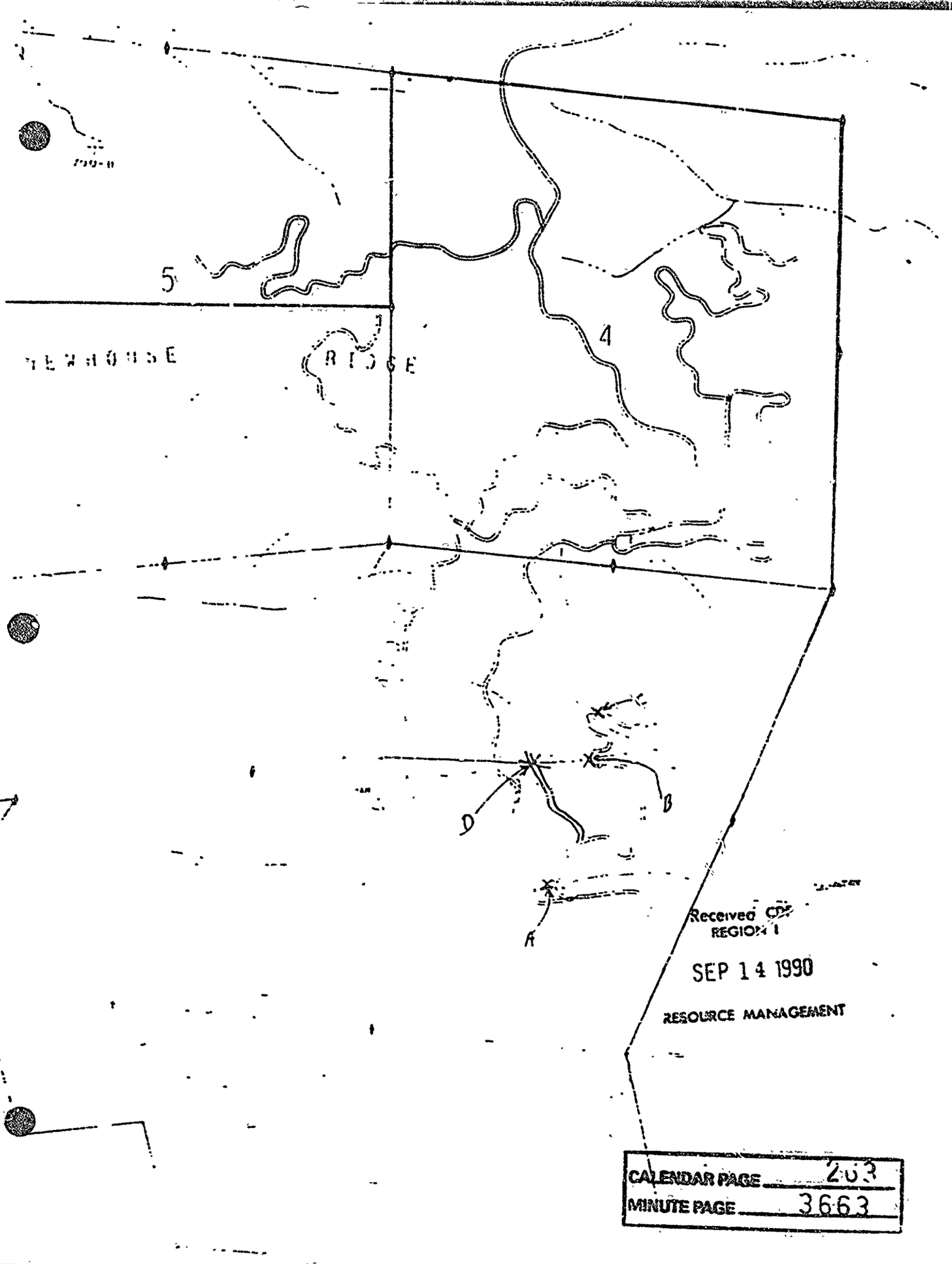

HAM PASS ADDENDUM
Addemdum item #50

50. All Class II watercourses within the plan area will meet the following minimum requirements, which are spelled out in 14 CCR 936.5.:

a) Watercourse and Lake protection zones are clearly marked on the ground with BLUE flagging.
b) All trees to be harvested within the WLPZ's are marked with blue paint.
c) At least 50% of the overstory canopy shading the watercourse and/or 50% of the understory vegetation present before timber operations, will be left standing and well distributed within the watercourse and stream protection zone.
d) On slopes of 30% or less the minimum width of protection will be 50 feet.
e) On slopes of 30-50% the minimum width of the protection zone will be 50 feet.
f) On slopes of 50-70% the minimum width of the protection zone will be 100 feet.
g) On slopes greater than 70% the minimum width of the protection zone will be 150 feet.