COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET - 4TH FLOOR, SANTA CRUZ, CA 95060
(831)454-2580 FAX: (831)454-2131 TDD: (831)454-2123

TOM BURNS, PLANNING DIRECTOR

November 22,2006

Agenda Date: January 10,2007
APN: 089-021-20, -36
Application: 06-0514
Item #: 21

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Subject: A public hearing to consider a proposal to rezone *two* lots of record from the Special Use (SU) zone district to the Timber Production (TP) zone district.

Members of the Commission:

On September 13,2006, the County Planning Department accepted this application for a rezoning to Timber Production (TP). This is a proposal to rezone two parcels totaling about 50.25 acres from the Special Use **(SU)** zone districts to the Timber Production (TP) designation. The uses on the property consist of vacant rural acreage.

Background

This project qualifies for a rezoning under California Government Code Section 51113. This section allows a property owner to petition the County to rezone land to the TP zone. The requirements for this type of rezoning are listed in Government Code section 51113(c)1. The County may not place any additional requirements on this petition to rezone the property to TP. County Code Section 13.10.375(c) – "Zoning to the TP District" implements Government Code section 51113 and specifies the six criteria which must be met in order to rezone to TP.

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1 c) On or before March 1, 1977, the board or council by ordinance shall adopt a list of criteria required to be met by parcels being considered for zoning as timberland production under this section.
The criteria shall not impose any requirements in addition to those listed in this subdivision and in subdivision (d). The following shall be included in the criteria:
(1) A map shall be prepared showing the legal description or the assessor's parcel number of the property desired to be zoned.
(2) A plan for forest management shall be prepared or approved as to content. for the property by a registered professional forester.
The plan shall provide for the eventual harvest of timber within a reasonable period of time, as determined by the preparer of the plan.
(3)(A) The parcel shall currently meet the timber stocking standards as set forth in Section 4561 of the Public Resources Code and the forest practice rules adopted by the State Board of Forestry and Fire Protection for the district in which the parcel is located, or the owner shall sign an agreement with the board or council to meet those stocking standards and forest practice rules by the fifth annivnsary of the signing of the agreement. If the parcel is subsequently zoned as timberland production under subdivision (a), failure to meet the stocking standards and forest practice rules within this time period provides the board or council with a ground for rezoning of the parcel pursuant to Section 51121.
(B) Upon the fifth anniversary of the signing of an agreement, the board shall detennine whether the parcel meets the timber stocking standards in effect on the date that the agreement was signed.
Notwithstanding the provisions of Article 4 (commencing with Section
51130), if the parcel fails to meet the timber stocking standards, the board or council shall immediately rezone the parcel and specify a new zone for the parcel. which is in conformance with the county general plan and whose primary use is other than timberland.
(4) The parcel shall be timberland, as defined in subdivision (f) of Section 51104.
(5) The parcel shall be in compliance with the compatible use ordinance adopted by the board or council pursuant to Section 51111.
(d) The criteria required by subdivision (c) may also include any or all of the following:
(1) The land area concerned shall be in the ownership of one person. as defined in Section 38106 of the Revenue and Taxation Code, and shall be comprised of single or contiguous parcels of a certain number of acres, not to exceed 80 acres.
(2) The land shall be a certain site quality class or higher under
Section 434 of the Revenue and Taxation Code. except that the parcel shall not be required to be of the two highest site quality classes.

In accordance with County Code Section 13.10.375(c), the project meets the following six criteria for rezoning to Timber Production:

1. A map has been submitted with the legal description or assessor's parcel number of the property to be rezoned.

2. A Timber Management Plan, undated, prepared by a registered professional forester has been submitted for the property (Exhibit E).

3. The parcel currently meets the timber stocking standards as set forth in Section 4561 of the Public Resources Code and the Forest Practice Rules for the district in which the parcel is located (see Exhibit E).

4. The parcel is timberland, as the entire parcel is capable of producing a minimum of 15 cubic feet of timber per acre annually and is almost entirely located within a mapped Timber Resource area.

5. The uses on the parcel are in compliance with the Timber Production Zone uses set forth in Section 13.10.372.

6. The land area to be rezoned is in the ownership of one person, as defined in Section 38106 of the Revenue and Taxation Code, and is comprised of at least five acres in area.

This project qualifies for a statutory exemption (Exhibit D) in accordance with the California Environmental Quality Act and the County Environmental Review Guidelines (Article 17, Section 1703).

Conclusion

All of the criteria have been met for rezoning this parcel to the Timber Production zoning designation. All required findings can be made to approve this application and the rezoning is consistent with the General Plan policies and land use designations.

Recommendation

Staff recommends that your Commission adopt the attached Resolution (Exhibit A), sending a recommendation to the Board of Supervisors for approval of Application No. 06-05 14 based on the attached findings (Exhibit B).

EXHIBITS

A. Planning Commission Resolution, with Ordinance/ Findings
B. APN Map
C. Location, Current Zoning and General Plan Designation Maps
D. Notice of Exemption from CEQA
E. Timber Management Plan by Gary Paul, RPF, dated February 10,2001

Robin Bolster-Grant
Project Planner
Development Review

Reviewed By:
dak Deming
Assistant Planning Director

BEFORE THE PLANNING COMMISSION
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO._____

On the motion of Commissioner
duly seconded by Commissioner
the following Resolution is adopted:

PLANNING COMMISSION RESOLUTION
SENDING RECOMMENDATION TO THE BOARD OF SUPERVISORS
ON PROPOSED AMENDMENT TO THE ZONING ORDINANCE

WHEREAS, the Planning Commission has held a public hearing on Application No. 06-05**14,** involving property located on the west side of Palm Drive about .75 miles west of Deer Creek Road, and the Planning Commission has considered the proposed rezoning, all testimony and evidence received at the public hearing, and the attached staff report.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission recommends that the Board of Supervisors adopt the attached ordinance amending the Zoning Ordinance by changing property from the Special Use zone district to the Timber Production zone district.

BE IT FURTHER RESOLVED, that the Planning Commission makes findings on the proposed rezoning as contained in the Report to the Planning Commission.

PASSED AND ADOPTED by the Planning Commission of the County of Santa Cruz, State of California, this _____ day of _____, 2006, by the following vote:

AYES: COMMISSIONERS
NOES: COMMISSIONERS
ABSENT: COMMISSIONERS
ABSTAIN: COMMISSIONERS

_____
Chairperson

ATTEST: _____
MARK DEMING, Secretary

APPROVED AS TO FORM:

_____
COUNTY COUNSEL

EXHIBIT A

ORDINANCE NO. _____

**ORDINANCE AMENDING CHAPTER 13
OF THE SANTA CRUZ COUNTY CODE
CHANGING FROM ONE ZONE DISTRICT TO ANOTHER**

The Board of Supervisors of the County of Santa Cruz ordains as follows:

SECTION I

The Board of Supervisors finds that the public convenience, necessity and general welfare require the amendment of the County Zoning Regulations to implement the policies of the County General Plan and Local Coastal Program Land Use Plan regarding the timber resource property located on the west side of Palm Drive about .75 miles west of Deer Creek Road; finds that the zoning to be established herein is consistent with all elements of the Santa Cruz County General Plan and the Santa Cruz County Code, as modified by the ***Big Creek*** decision; and finds and certifies that the project is subject to a statutory exemption under the California Environmental Quality Act.

SECTION II

The Board of Supervisors hereby adopts the Zoning Plan Amendment as described in Section 111, and adopts the findings in support thereof without modification as set forth below:

1. The proposed zone district will allow a density of development and types of uses which are consistent with the objectives and land use designations of the adopted General Plan; and

1. The proposed zone district is appropriate for the level of utilities and community services available to the land; and

2. The character of development in the area where the land is located has changed or is changing to such a degree that the public interest will be better served by a different zone district; and

3. The property meets the requirements of Government Code section 51113 or 51113.5 and County Code Section 13.10.375(c).

EXHIBIT A

SECTION III

Chapter 13.10 - Zoning Regulations of the Santa Cruz County Code is hereby amended by amending Section 13.10.210 - Zoning Plan to change the following properties from the existing zone district to the new zone district as follows:

Assessor's Parcel Number	Existing Zone District	New Zone District
089-021-20	Special Use (SU)	TP
089-021-36	Special Use (SU)	TP

SECTION IV

This ordinance shall take effect on the 31st day after the date of final passage.

PASSED AND ADOPTED THIS _____ day of _____ 2006, by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES: SUPERVISORS
NOES: SUPERVISORS
ABSENT: SUPERVISORS
ABSTAIN: SUPERVISORS

_____
Chairman of the Board of Supervisors

ATTEST: _____
Clerk of the Board

APPROVED AS TO FORM:

_____
Assistant County Counsel

Exhibit: Rezoning Map

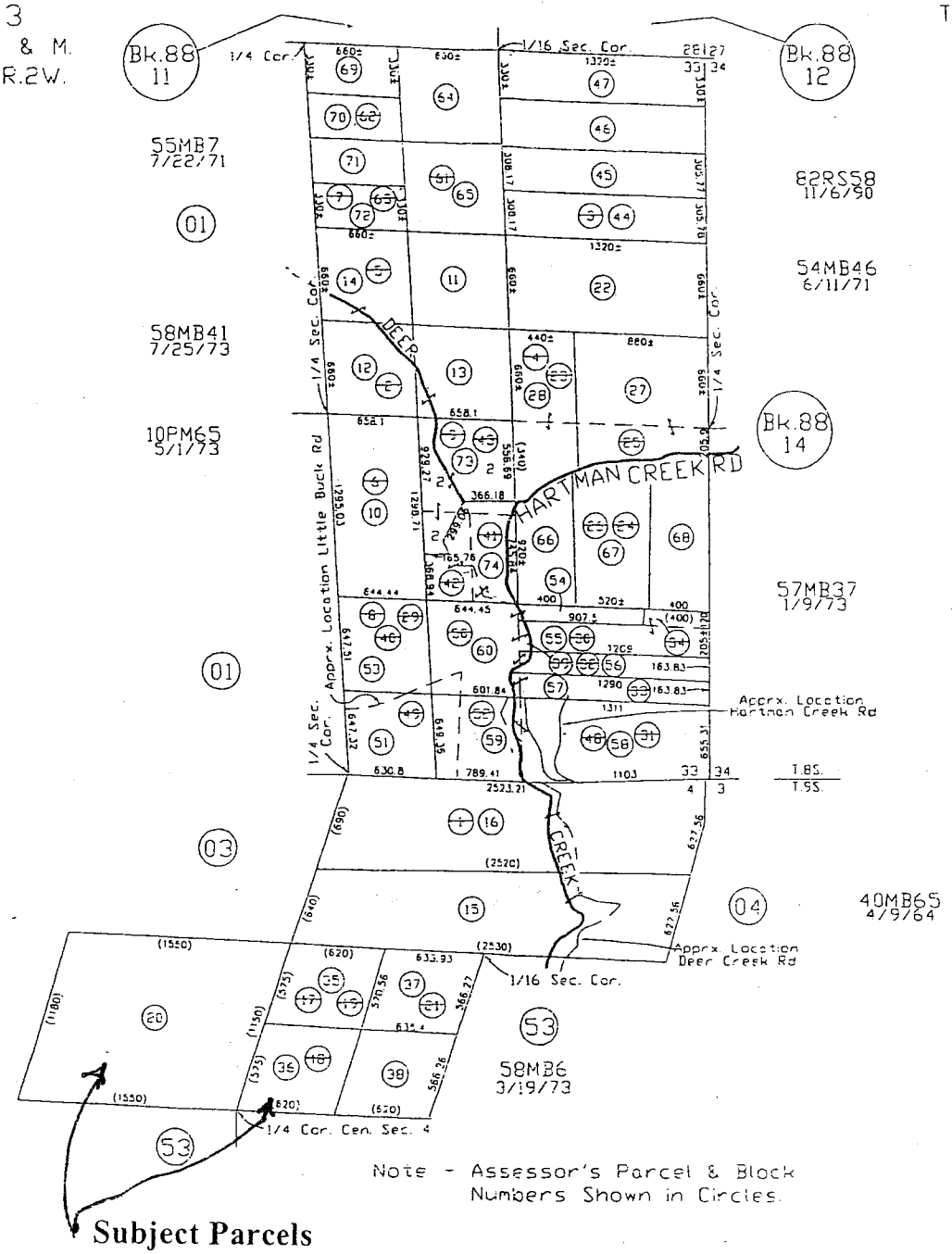
DISTRIBUTION: County Counsel
Planning
Assessor
County GIS

EXHIBIT A

33
D.B. & M.
S., R.2W.

Tax Area Code
90-018

89-02



1" = 800'

Note - Assessor's Parcel & Block Numbers Shown in Circles.

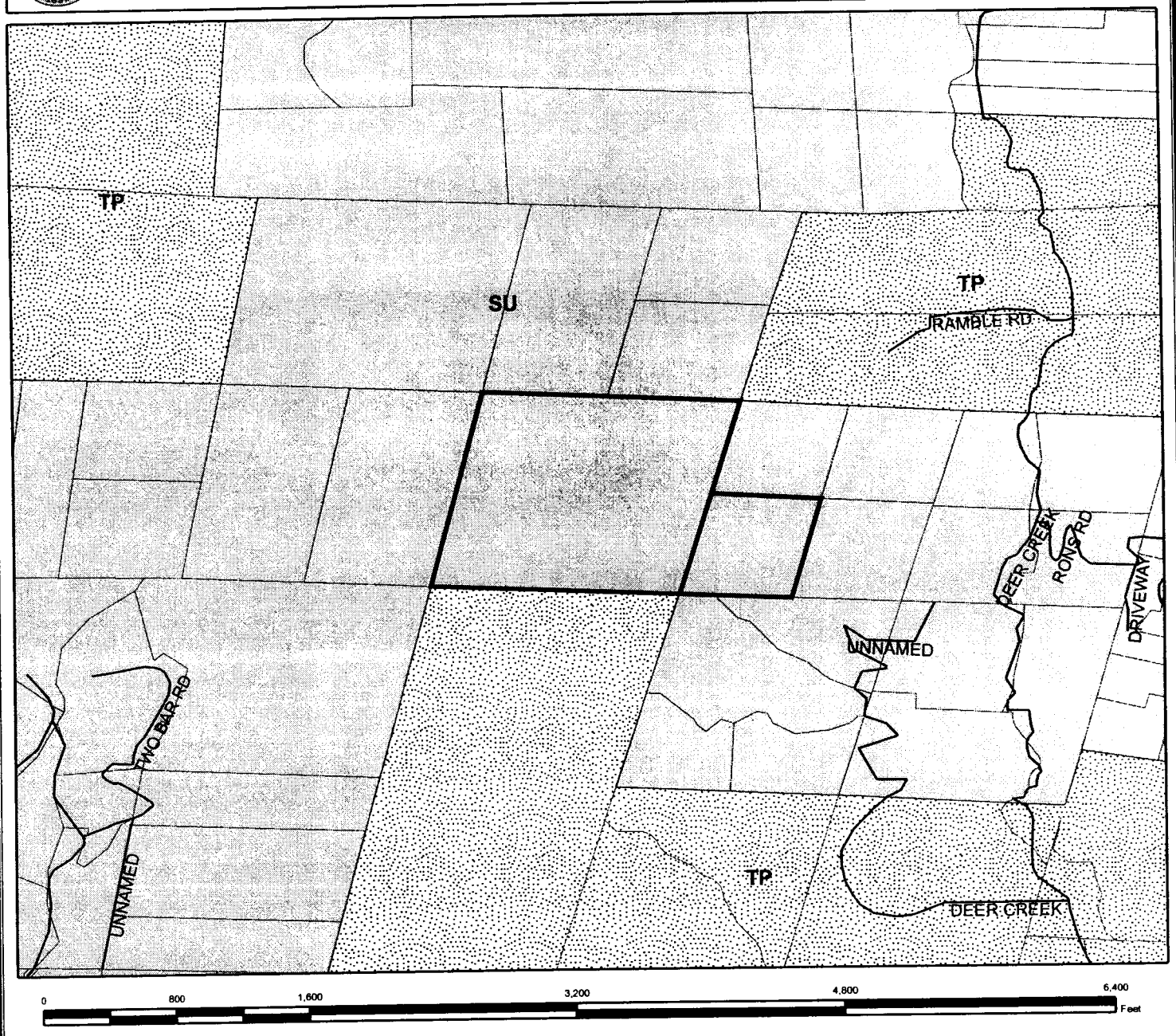
Assessor's Map No. 89-02
County of Santa Cruz, Cal
Dec., 1999

Subject Parcels

ASSESSOR'S PARCEL MAP

EXHIBIT B

Zoning Map



Legend

- 06-0514 Subject Parcels
- Assessors Parcels
- Streets
- SPECIAL USE (SU)
- TIMBER PRODUCTION (TP)

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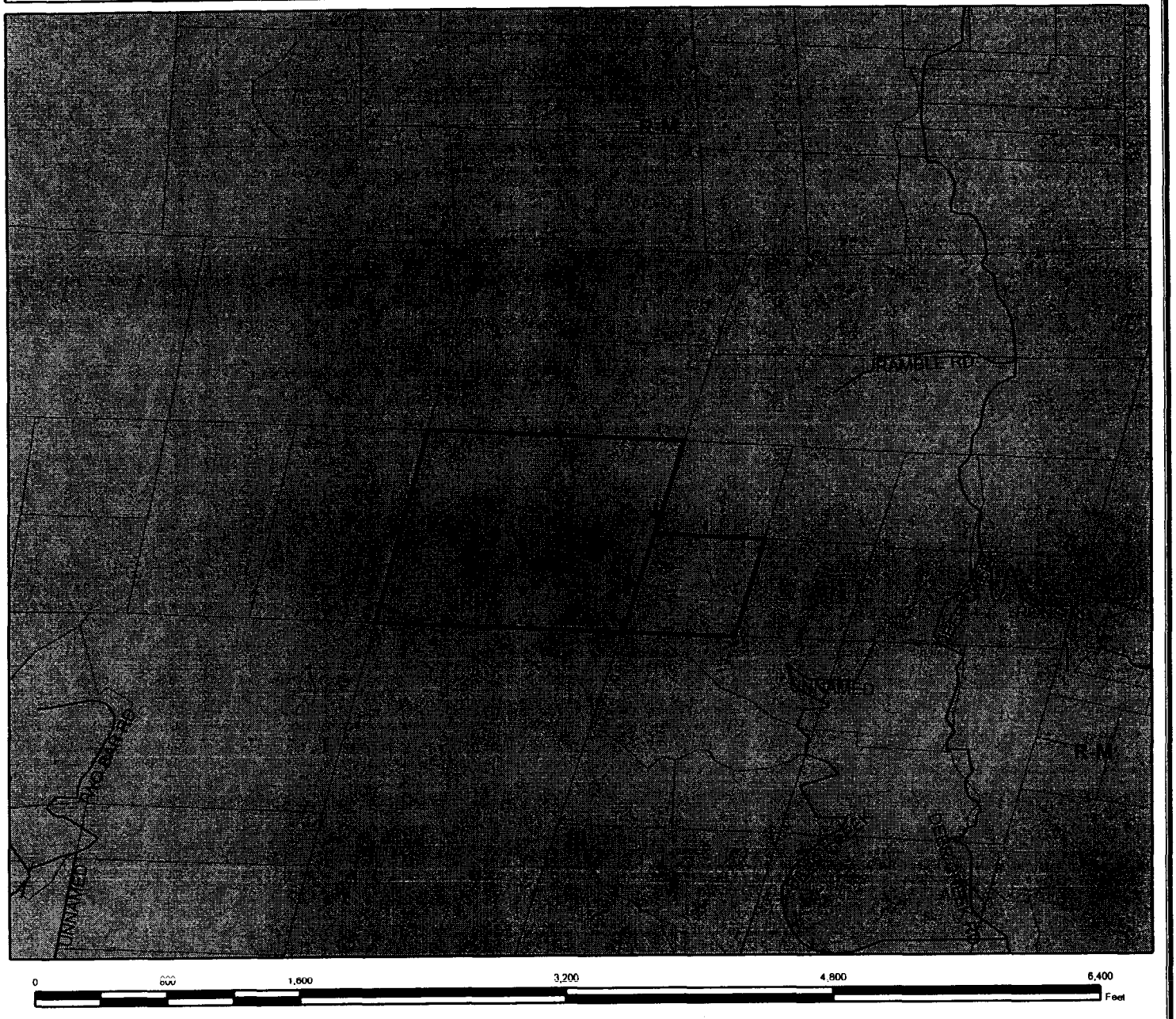
Map Created by
County of Santa Cruz
Planning Department
November 2006

EXHIBIT C

General Plan Designation Map



0 600 1,600 3,200 4,800 6,400 Feet

Legend

- 06-0514 Subject Parcels
- Assessors Parcels
- Streets
- Residential-Mountain (R-M)

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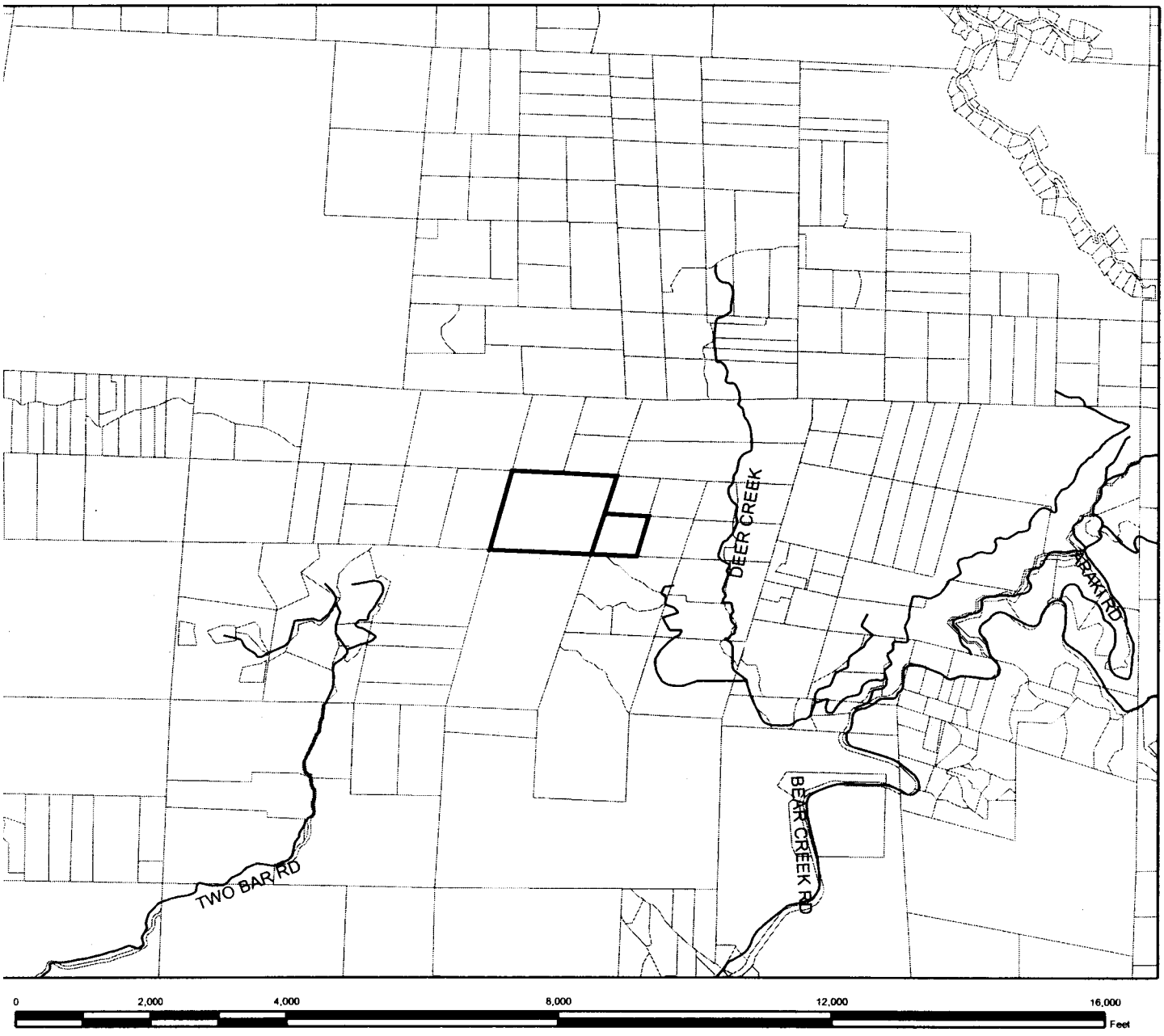
Map Created by
County of Santa Cruz
Planning Department
November 2006

EXHIBIT C

Location Map



Legend

- 06-0514 Subject Parcels
- Streets
- Assessors Parcels

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Map Created by
County of Santa Cruz
Planning Department
November 2006

EXHIBIT C

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 06-0514
Assessor Parcel Numbers: 089-021-20 and 089-021-36
Project Location: No **Situs** Address, west side of Palm Drive about .75 miles west of Deer Creek Road

Project Description: Rezone two parcels from the Special Use (SU) zone district to the Timber Production (TP) zone district.

Person or Agency Proposing Project: Tom Favorito

Contact Phone Number: (408) 378-8349

A. ____ The proposed activity is not a project under CEQA Guidelines Section 15378.
B. ____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).
C. ____ **Ministerial Proiect** involving only the use of fixed standards or objective measurements without personal judgment.
D. **X** **Statutorv Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285). [Section 1703]

In addition, none of the conditions described in Section 15300.2 apply to this project.

Robin Bolster-Grant, Project Planner

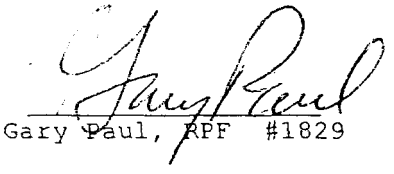
Date: 12-5-06

EXHIBIT D

LANDS OF Louise Favorito Trust
Santa Cruz County, California

TIMBER MANAGEMENT PLAN

Gary Paul
Forestry Consultant



Gary Paul, RPF #1829

February 10, 2001

EXHIBIT E

Table of Contents

EXHIBIT F

Landowner

Louise Favorito Trust
6759 Mason Way
San Jose, Ca. 95129

Property Location

Township 9S., R 2W.NW1/4 SEC4. MDM
APN #'s 089-021-20; 089-021-36

General Description

The property is located in the lower Deer Creek drainage. It drains directly to Deer Creek which is a major tributary of Bear Creek. Bear Creek drains to the San Lorenzo River approximately 4 miles from its confluence with Deer Creek. Access to the property is made from the Palm Drive which is a private road. Palm drive intersects Deer Creek road approximately ½ mile southeast of the property. There are no residences on the property however there are two mobile homes which have been used in the past. There are other residences in the area.

The total property is approximately 53 acres made up of **two** contiguous parcels. There is an estimated 15 acres of timberland. This acreage is vegetated with varying densities of older second growth coast redwood with intermixed hardwood species. The balance of the property is vegetated by mixed hardwood forest comprised of an overstory of tan oak, madrone, and coast live oak. Slopes range from 30 to 65 percent and aspect is primarily southeast. Elevation ranges from 1100 to 1600 feet.

History

The property is presumed to have been intensively harvested during the early 1900's. Evidence of earlier logging includes roads, skidtrails, and landings, that have remained relatively stable despite having been constructed prior to the current Forest Practice Act regulations.

The owners have used the property for occasional recreation. No additional harvesting has been done however a preliminary layout has been prepared prior to this plan.

Objectives

The owner's overall objective **is** to make management a self-sufficient enterprise from a cost standpoint, while preserving the outstanding natural values of the property. 0.11 future activities will recogniie the sensitive nature of the watershed and biotic diversity on the property. The current objective is to obtain Timber Production zoning which will allow management of

EXHIBIT E

the property consistent with these values. The parcel is presently SU (special use). Future management objectives will bring a primarily even aged timber stand into an un-even aged character promoting growth and regeneration of timberland species while preserving the natural character of the property. Maintenance of existing improvements (roads, trails, clearings) will be given a high priority both to preserve their beneficial use and reduce impacts from their use.

Resources

Soils

Soils are mapped as the Ben Lomond - Felton complex, 50-755, the Lompico-Felton complex 30 -50% slope, with a lesser amount of what is mapped as the Maymen-Rock outcrop complex 50-75% slopes **(USDA,** Soil Conservation Service,1979, see Soils Map).

The Ben Lomond- Felton complex covers approximately 50% of the property. The Ben Lomond soil is the predominate type in this complex and is described as deep and well drained. Weathered sandstone parent material is expected at a depth of 46 inches and rooting depth is typically 40-60 inches. Runoff is rapid and the erosion hazard is listed as very high. The Felton is described as being deep and well drained. The parent material is residuum from sandstone and shale. Weathered sandstone is expected at 63 inches and the effective rooting depth is 40 to 70 inches. Runoff is rapid and the erosion hazard is very high.

The Lompico-Felton complex makes up about 30% of the property. The Lompico soil is desribed as moderately deep and well drained. Weathered sandstone is encountered at a depth of 37 inches. The effective rooting depth is 20-40 inches. Runoff is rapid and erosion hazard ***is*** high.

The Maymen- Rock outcrop unit makes up about 258 of the property. This soil is described as being very shallow and somewhat excessively drained. Effective rooting depth is over 14 inches and the runoff is very rapid. The parent material is shale, sandstone, and granitic rock. The erosion hazard is given as very high. This unit roughly correlates with the mixed evergreen forest (hardwood) stands **on** the property.

The Ben Lomond, Felton, and Lompico soils are noted as being well-suited to the production of timber. The Maymen series is not recognized as a timber producing soil with the exception of some production of firewood.

Geology

The property is shown as being an equal mix of the San Lorenzo mudstone and Two Bar shale mapping units (see attached map). These are marine deposits with various inclusions of diatomite, and siltstone. The mudstone is olive gray to reddish-brown and up to 1000 feet thick. The shale is laminated and up to 800 feet thick. The Cooper-Clark landslide maps show a possible ancient landslide trending south from the upper reaches of Starr creek on the western prcperty boundary.

EXHIBIT E

Examination of the property shows some signs of soil movement which might be typical of "inner gorge" topography. The remnant skidtrails on the property appear stable however with the exception of disturbed areas on excessively steep slopes. Undisturbed slopes do not show soil movement.

Watershed

The property lies in the lower Deer Creek watershed which covers roughly 4000 acres. The upper reaches of Starr creek commence from the western side of the property. Starr Creek is Class III watercourse in this area. An un-named watercourse mapped on the eastern side of the property has a well defined channel but does not appear to provide habitat to invertebrate species. It is considered a Class III watercourse also. This watercourse flows southeast about ½ mile to Deer Creek. Starr creek intersects Bear Creek about 2 miles south of the property. Deer Creek is shows evidence of being aggraded and gravel embedded. Large woody and other organic debris is present in moderate amounts. Bank cutting and downcutting were observed. The stream is of moderate to steep gradient and there are afew pools. Streamside vegetation is primarily conifers and hardwoods. Deer Creek road is adjacent to the streamcourse which appears to have caused major impact in terms of ongoing erosion.

The Bear Creek watershed below this point has been heavily impacted by development. There are numerous sources of excessive erosion and disturbances to the watercourse.

Bear Creek is a Class I watercourse and restoration of the fishery and important salmonid habitat is an ongoing concern. The primary threat to this beneficial use is from sedimentation of spawning beds. The roads and trails on the subject prcperty have been established for prior msnagement purposes and were observed to be largely stable. There are no known water uptakes or public uses **of** water directly downstream from the property.

Cultural

No cultural or archaeological resources were discovered during the timber survey for this plan. No previous survey has been conducted. A check of the Historical Resource Information System **also** showed no record. Due to the diverse nature of historic and pre-historic sites it can be presumed that some discoveries of historic artifacts might be made in the future. **If** these are found during any future management activity they should be preserved and the proper records **of** their discovery should be filed.

Wildlife

Relatively high residential density and impact make this area less attractive as permanent habitat for many species however the presence of abundant water contributes to frequent use during **some** seasons of the year. Animals typical of the Santa Cruz Mountains frequent the area including deer, bobcat, squirrels, raccoon, and feral pig. The area would fit with the classification of 4D in the wildlife habitat relationship classification system. This type has a high cover percentage and smaller tree sizes. Forest management directed at opening the canopy will improve forage and variety for small and large mammals as well as increase raptor use.

EXHIBIT E

Large raptors may use the property for roosting and nesting with tall, dead topped conifers being particularly attractive. These will be preserved wherever feasible to promote this use.

Fish species do not occur on the property nor do the streams on the property appear to provide habitat or forage for other amphibious species.

Rare, Threatened and Endangered Species

The area has been reviewed for the presence of rare or endangered species by examining the Natural Diversity Database maps and biotic resource maps as well as reviewing the County General Plan for species of special concern. No source consulted indicated any plant species of concern found in the project area.

Coho salmon is considered a recovery species for the San Lorenzo River and Bear Creek. Steelhead trout are found in both these streams. No fish are found in Deer Creek. A cursory examination of Deer creek indicates that potential spawning beds are excessively embedded, shelter rating for pools is low, and the number of pools is low.

The property is within the range of the red-legged frog. There have been no sightings in or around the property however there may be seasonal habitat. The frogs prefer deep, slow moving, pools for breeding. While pools exist on Deer creek the stream flow was fairly rapid during the recent field inventory and frogs were not observed.

There is no known marbled murrelet use of the area and no on-site or nearby suitable habitat has been observed. The age and form class cf the existing timber stand does not present suitable nesting habitat as described for this species.

Ancient Trees

No remnant old growth redwood or Douglas firs appear to remain from the turn of the century logging.

Recreation

Management activities will be designed to provide and maintain habitat diversity. Selective harvesting will be employed to preserve the aesthetics of the existing timber stand.

Management to provide views and overlooks will be employed where possible by improving walking trails and managing vegetation. Vehicle trespass will be prevented by maintaining gates on the major access roads.

EXHIBIT E

Timber

The existing timber stand on the property is dominated by coast redwood. The steeper slopes and shallow soil areas are dominated by tan oak, coast live oak, and madrone. The distribution *of* conifers and hardwoods on the property is predicated primarily by soil type and slope. The coast redwood occurs in the areas where the soils have developed some depth, and the slopes are less steep.

The property was first harvested roughly 100 years ago. This harvest was typical for the period, with evidence of clearcutting and burning remaining today. Stumps that survived the early harvest show the potential for growth *of* large diameter trees within the interior drainage of the property. Post harvest management probably included livestock grazing until the area eventually revegetated with brush and trees. The resulting timber stand has a somewhat even-aged character, despite a large variation in diameter, and reflects a long period *of* suppressed growth. Some of the drier areas have regrown with a predominance *of* hardwoods.

In January of 2001 a **15%** cruise of the timberland area consisting of 1/5 acre plots was conducted to better assess stand conditions and growth. Due *to* the nature of the vegetation on the property, the survey was stratified, and plots were placed only in the coast redwood area which would be considered timberland. Plot centers were located in a regular grid pattern throughout the timbered area. This should be considered a cursory survey for tree diameter and density and not a complete inventcry. Results shculd therefore be taken only as an estimate of potential yield. The specific plot measurements and tabled results are presented in the Appendix, however the trends will be discussed below.

Measured heights of typical second grcwth trees varied from 130' tc 145', with average estimated site class of Site III . Estimated conifer volumes from these plots would predict an average standing board foot volume *of* 23,351 per acre. By use of limited increment boring and a stand table projection stand growth is estimated to be roughly 1.5% or 320 board feet per acre per year. Increased growth potential due to the reduction *of* competition from selective harvest· and management could he expected to be 3.0% per year. This is a reasonable expectation for Site III timberland.

The coast redwcod stand on this property is characterized by many dense clumps which regrew from the prior harvest. The current stand is somewhat balanced as to size class distribution as can be seen in the following table.

EXHIBIT 6

Timber Stand Summary
(Coast Redwood)

Trees Per Acre by Diameter Class

Total	<12 "	12-16"	18-24"	26-34"	36+"
79.8	20.2	20.2	20.2	15.1	4.1

Board Foot Volume Per Acre by Diameter Class

Total	<12"	12-16"	18-24"	26-34"	36+"
23351	168	1115	4671	11093	6296

EXHIBIT E

Management Practices

Roads and trails

The existing road system of roads and skid trails on the property is mostly stable. The primary access road that enters the prcperty from the south is Palm Drive. The road is suitable for log hauling in its current condition with the possible exception of the last. ¼ mile as it approaches the subject. property. This area will need to be rocked if used during wet periods and may require minor re-alignment to allow large truck access to the upper end of the property.

Deer Creek Road is a county road and is suit-able for hauling. Its access to Bear Creek Road has adequate sight distance and should not require a flag person for log truck access.

Existing skid trails are stable. These would be re-used for any planned future harvest. At least two temporary crossings of the Class III watercourse would have to be installed to make timber harvesting feasible. There are several lccations that would be practical for this purpose and impact to the watercourse would be minimal. The existing skid trails follow the streamcourse alignment and should be mulched after use with either straw or slash packing.

Erosion Hazards and management

Soil erosion hazards on the property vary from high to very high based on slope as mentioned above in the soils description. The roads installed for access to the property and skid trail system installed for the historic timber harvest have remained largely stable. Roads are qenerally outsloped and excessive ongcing erosion within the property was not cbserved. There is evidence of minor slope failure within a side draw adjacent to the Class III watercourse (Point. A on the Soils map). This is associated with a large redwood windfall and it is difficult to determine whether the causal factor was slope failure *or* the windfall itself. If this area is accessed for the future tiiiiber harvest drainage should be directed away from it. No other obvious sources of erosion are noted for the property.

Fire Protection

The property has southerly aspect and is heavily shaded. No major accumulations of flashy fuels are evident. There is some brush and herbaceous development in the understory, however the canopy closure is close to 90% over most of the property. There is very little dead and downed woody fuel due to the relatively ycung age of the stand.

The major threat to the property from a fire protection standpoint appears to be the possibility of fire spreading to this area from adjacent residential properties or from trespass. The trespass issue can be handled by limiting access. There is an existing gate on the primary access road (Palm Drive) and this appears to be kept locked. Future management activities directed at improving this road will provide better access for firefighting equipment. which should enhance fire protection. Overhanqinq vegetation should be cleared periodically to make access for this equipment easier. If future residential development is considered it will be extremely impcrtant to follow the Fire

Marshall's recommendations regarding adequate water storage and ccnnecticns for fire hose. A minimum 30' clearing should be maintained around any structures to provide protection from wildfires.

Strict adherence to Forest Practice Rules regarding slash lopping and fire hazard reduction shnuld mitigate the fire risk of future harvesting activities to acceptable levels.

Recreation and aesthetics

No major recreational enhancements of the property are planned other than walking trails. The visual aesthetics of the property will be preserved through careful timber stand management. Occasional use of existing road and trail system is anticipated for hiking. No significant impact to the management of the property is foreseen for this use.

Wildlife

Management practices on the property should be directed at maintaining and enhancing wildlife diversity, while minimizing its impact on other uses. Existing roost trees will be preserved and nest trees will be protected when found. Reliance on natural predators will increase the presence of large mammals and raptors on the property in the short term. An uneven aged timber stand will likewise provide habitat for a wider range of species. Control of browsers and rodents may become necessary if they are found to impact stand regeneratinn, however this conflict is not enticipeted.

Snags and **Downed wood**

There were a minimal number of snags observed during the timber inventory. Although often seen as a useless part of the landscape and a fire hazard, snags provide important habitat for numerous wild species. Future management schemes should seek to preserve several prominent snags per acre to promote diversity. As mentioned previously the Forest Practice rules require special attention to slash lopping and treatment to reduce fire hazard. There are several large trees on the ground within the Class III watercourse which will be left to provide future recruitment of large woody debris within the stream.

EXHIBIT E

Timber management

Harvest

The timber stand on this property has successfully regrown from the clearcut logging at the turn of the century. The resulting stand has a generally even aged character. An even-aged upper canopy is too dense to permit healthy growth of trees of all sizes. The increased light and growing space that is provided by removal of harvested trees will increase the growth of residual trees and initiate sprouting of a new generation of trees. Annual growth increases from 1.5 tc 3.5% are expected. Past harvests have relied completely upon tractcr yarding, and as the roads and trails are laid out and stable, it is anticipated that this will he the preferred harvest method for the property in the future. There are no records for timber harvests on the property. A preliminary plan was laid out for the property in 1998 which anticipated using the existing access as well as a landing on the parcel directly to the south. Flagging for this plan still exists on the site and is generally feasible, however a plan was never submitted due to the zoning restriction.

Future selective harvesting to promote an uneven-aged pattern of stocking and growth is expected to occur on a roughly fifteen year cycle. These harvests will be timed to take advantage of market conditions and will be designed to promote a balance of tree size classes throughout the stand. Charts are provided in the Appendix which compare prcjected stand curves to normalized stand diameter distributions (Q-Factor 1.2 curves for leave stand BA of 75). It is apparent from these charts that a harvest directed at the trees in the 20-34" size class would leave a stand more closely approaching the distribution of an un-even aged forest. An additional benefit is to greatly increase the light and growing space available to the stand which will increase the health and growth of existing trees while providing for recruitment of trees in the smaller size classes. Future harvests should be marked to distribute harvesting across all size classes sc that both age and size class distributions become more naturally distributed.

Timber Stand Improvement

Intermediate treatments to foster the health and growth of the stand will include cprcut thinning and selected hardwood removal. Multiple sprouts resulting from harvesting will be thinned to an average of 2 to 3 healthy sprouts per stump. This practice will be conducted within 3 to 5 years after harvest. This removal of competition will produce healthier and more vigorous young trees in the understory. During this thinning, dead and unhealthy small trees and sprouts will also be removed to reduce fire hazard and competition. This should he done to further improve spacing and promote the health of remaining trees. The objective will be to achieve a fully stocked stand with an average spacing of 10 to 14 feet between trees. All thinnings will be removed or lopped to within 20" of the ground.

Additional release can be achieved by hardwood removal where needed and practical. This is particularly important for this property due to current abundant oak die-back on the property. During the survey numerous tanoaks were observed that are experiencing the dieback which is prevalent in the area and throughout Santa Cruz County at this time. These trees should be removed as soon as possible for they are clearly harboring other insects which will continue to affect the hardwood stand. This activity will he non-commercial

EXHIBIT E

however it could be combined with a timber harvest if such a plan is initiated in the near future. Removal of the affected tanoaks would be beneficial both to reduce the ongoing infestation and to allow light into the understory and remove competition from regrowing conifers. Resulting hardwood stump sprouts will provide important deer browse.

Where soils appear favorable for conifer growth, areas dominated by hardwoods should be harvested using the group selection method. Hardwoods should be removed and slash treated on site to allow for replanting of conifer species

Tree planting

Post harvest management calls for planting of conifer seedlings within one year. This should be a mix of coast redwood and Douglas fir. The redwood should be 2-0 stock (or 1-0 redwood inoculated with mycorhizae) and Douglas fir should be either 1-0 or 2-0. Seed sources should be selected to match the seed zone a closely as possible. Plantings should be limited to those areas that have been opened sufficiently to allow for a reasonable chance of establishment and growth. Coast redwood should be planted in only the most moist sites while the plantings closer to the ridges should lean to Douglas fir to take advantage of its higher grcwth rate on the drier areas. Trees will be planted cn an approximate 12' spacing (304 per acre). Browse protection may be necessary due to the large deer population and, although it will increase the cost of the practice, it is likely to increase the chances of seedling survival. This need should be evaluated prior to planting. A "clean and release" around established seedlings should be conducted by hand within the first three years after planting.

References

U.S.D.A. Soil Conservaticn Service, Soil Survey
Santa Cruz County, 1979.

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Arvola,T.F. 1978. California Forestry Handbook. State of California, Dept. of Fcrestry. 232. pp.

Cooper, Clark, and Associates. Preliminary Map of Landslide Deposits in Santa Cruz County.

California Dept.of Forestry. 1985. Preliminary Geologic Maps of Region 5. Castle Rock quadrangle.

Santa Cruz County Biotic Resource Maps.

EXHIBIT E

Appendix

MAPS

Plot. Data

Stand Table

Stand Table Projection

Stand Comparator Table

EXHIBIT E

FAVORITO MANAGEMENT PLAN

* - Property Location

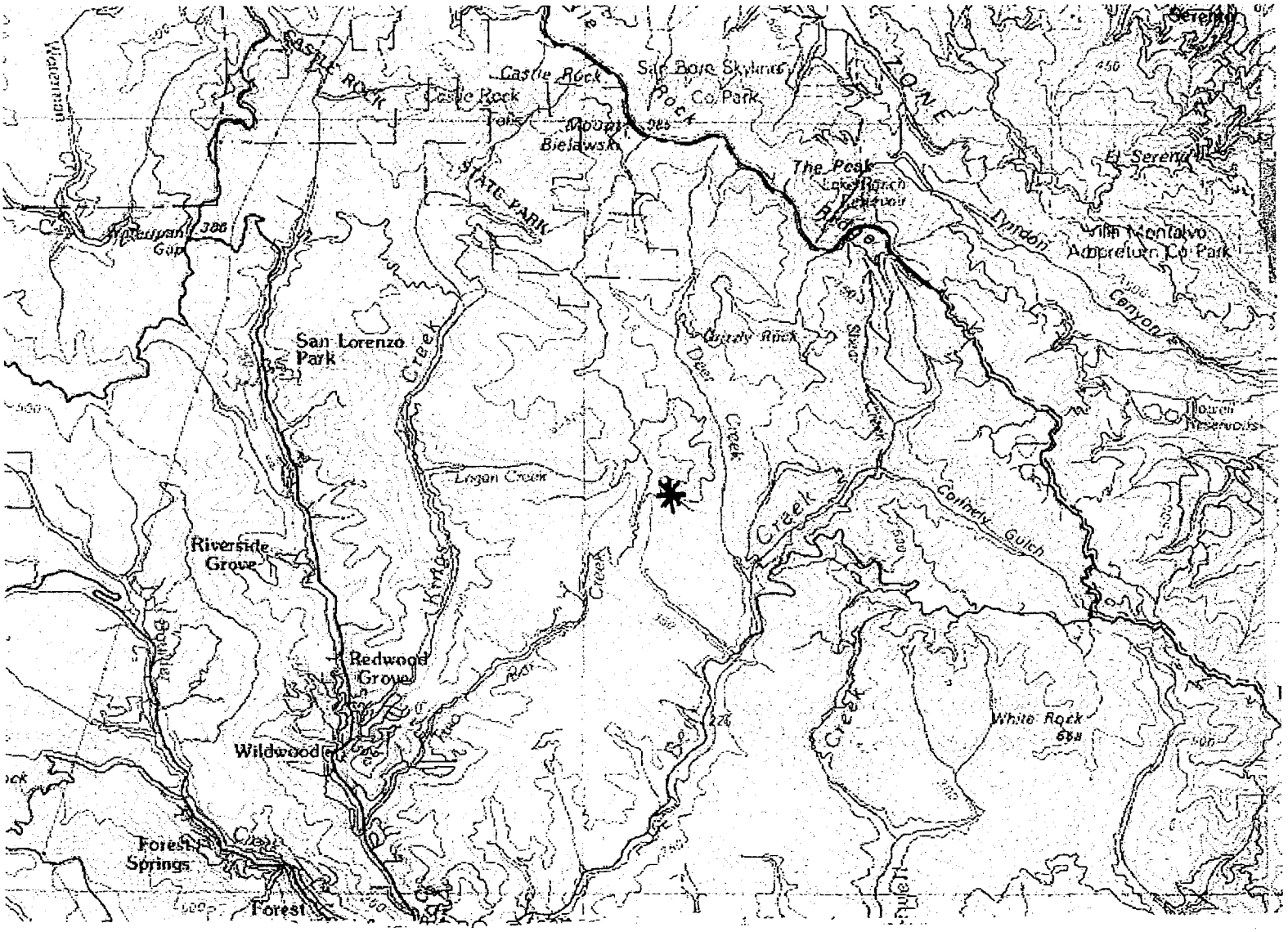


EXHIBIT E

FAVORITO MANAGEMENT PLAN
TIMBER MANAGEMENT MAP

Harvest boundary

Landing

Existing skidtrail

Class III watercourse

Watercourse crossing

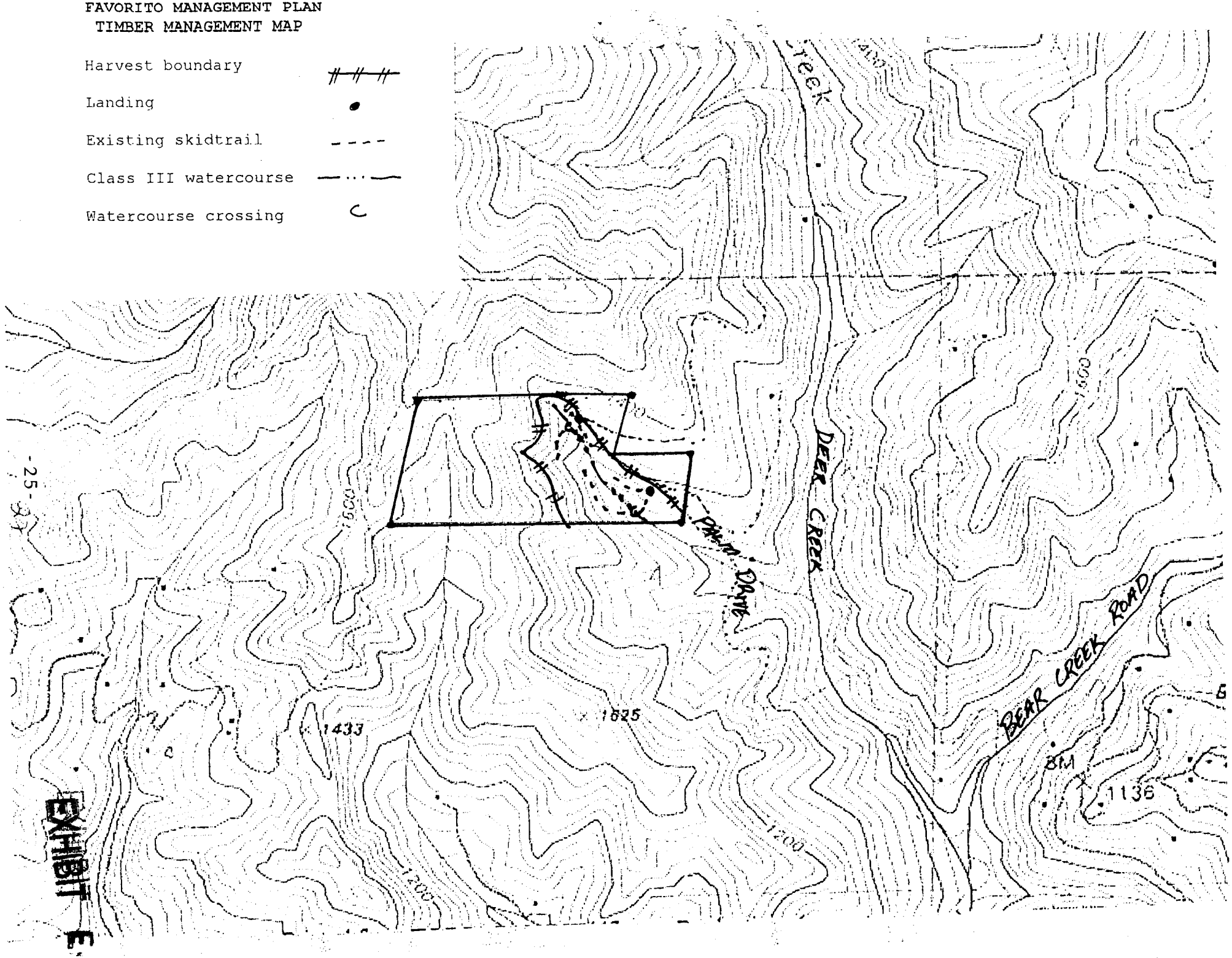
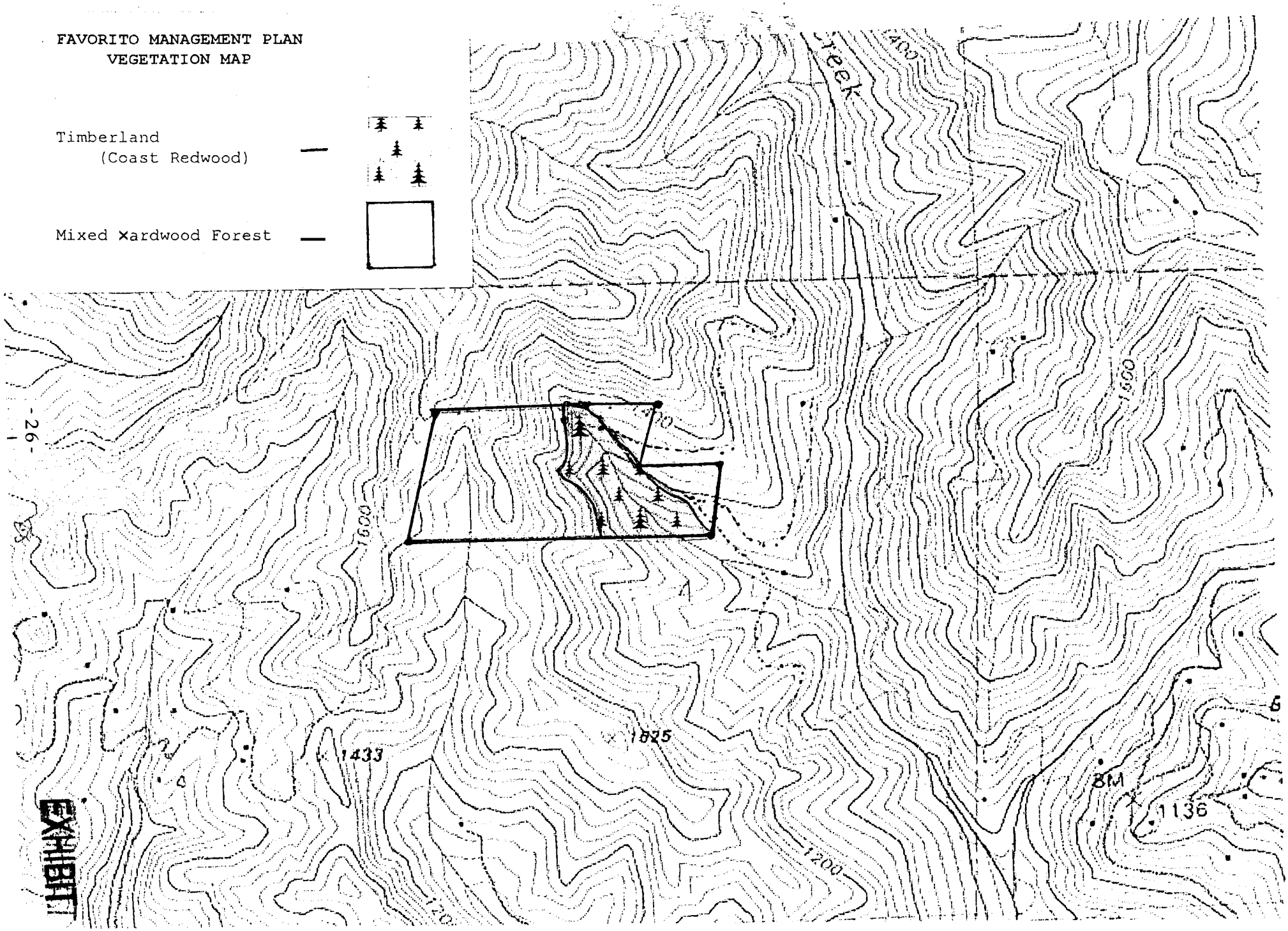


EXHIBIT E

FAVORITO MANAGEMENT PLAN
VEGETATION MAP

Timberland
(Coast Redwood)

Mixed Hardwood Forest



EXHIBIT

FAVORITO MANAGEMENT PLAN
GEOLOGY MAP

TsR - San Lorenzo Mudstone

TsT - Two Bar Shale

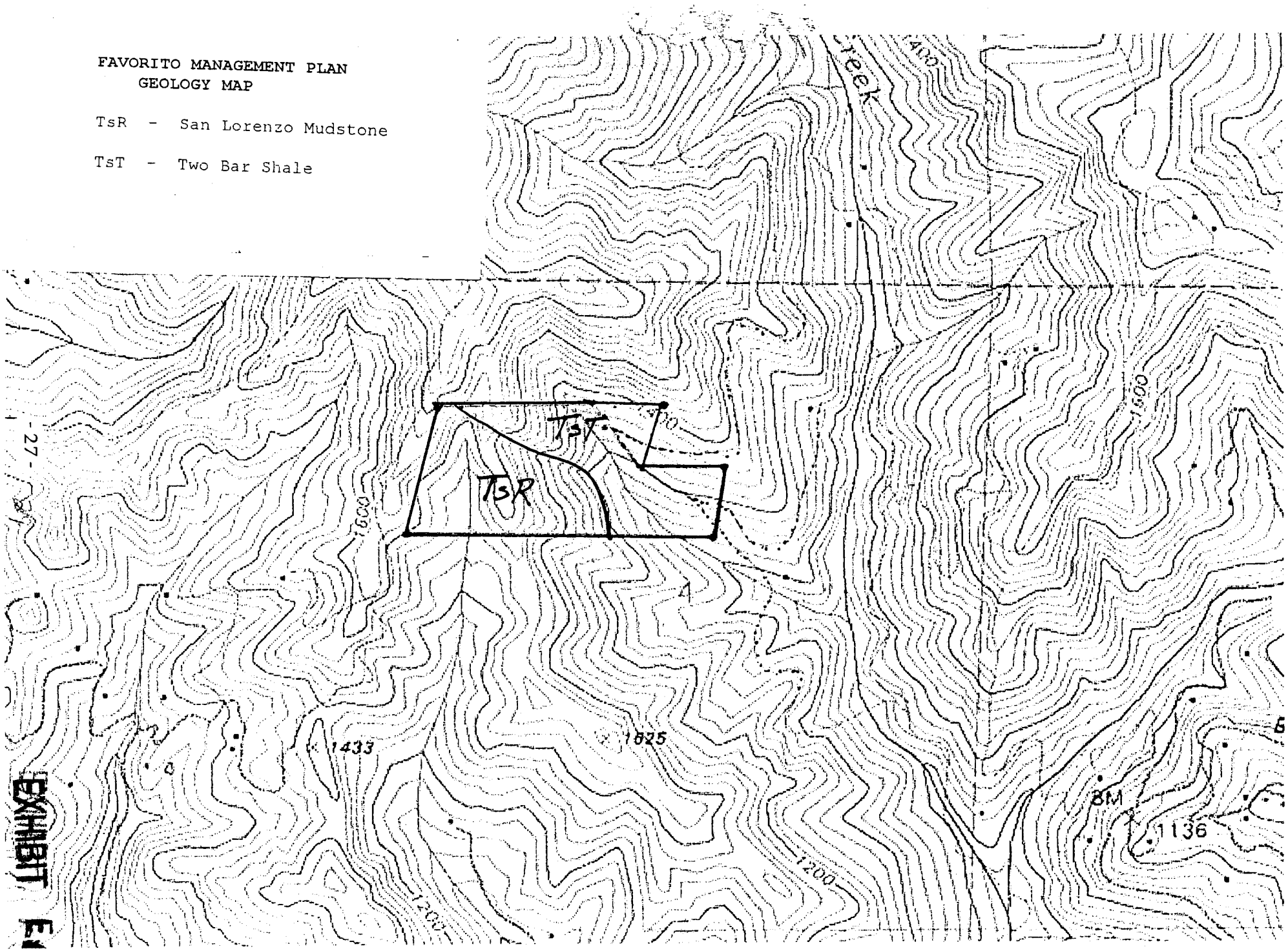


EXHIBIT E

FAVORITO MANAGEMENT PLAN
SOILS MAP

115 - Bno Lomond - Felton
(50-75% slope)

143 - Lompico - Felton
(30-50% slope)

153 - Maymen - Rock outcrop
(50 - 75% slope)

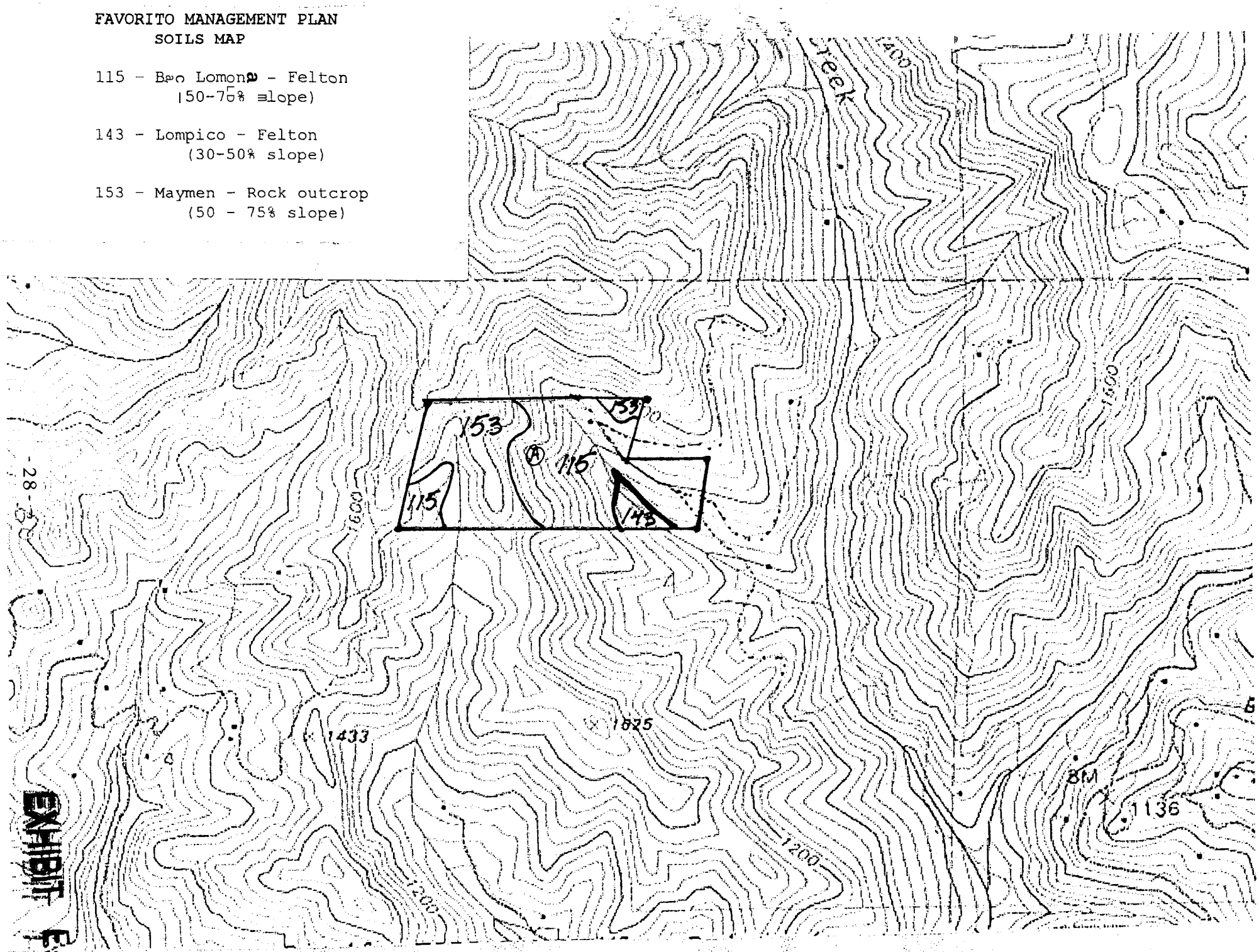


EXHIBIT E

LANDS OF FAVORITO
CRUISE DATA 1/5 AC PLOTS

DBH CLASS SUMMARY
TOTAL PLOTS 15, 1/5 AC PLTS
TOTAL ACRES SAMPLED = 3

Plot Data

DBH BY SPECIES

Plot #	RW	DF	TO	MAD	DBH
	1	10			
		16			
		14			
		20			
		10			
		23			
		27			
		28			
		26			
		6			
		15			
		12			
		9			
		18			
		16			
		25			
		17			
		16			
		21			
		13			
		33			
plot2		26			18
		6			12
		32			
		6			
		31			
		11			
		36			
		10			
		16			
		20			
		28			
plot3		16		10	
		23			
		11			
		7			
		30			
		31			
		21			
		28			
plot4					
		17			

RW	DF	TO	
8	47	0	5
10	16	0	6
12	26	0	1
14	15	0	2
16	20	0	1
18	11	0	2
20	18	0	2
22	14	0	0
24	18	0	0
26	12	0	0
28	11	0	0
30	10	0	1
32	11	0	0
34	8	0	0
36	5	0	0
38	5	0	0
40	2	0	0
42	1	0	0
44	0	0	0
46	0	0	0
48	0	0	0
50		0	0
52		0	0
54		0	0
56	0	0	0
58	0	0	0
60	0	0	0
	250	0	20

EXHIBIT E

PLOT DATA

	12			
plot6	11			
	36			
	12			
	25			
	30			
	32			
	12			
	12			
	6			
	6			
	12			
	16			
	18			
	16			
	12			
	23			
	15			
	11			
	25			
	23			
	28			
plot7	27	14	12	8
	6		12	
	8		10	
	12			
	10			
	20			
	24			
	6			
	25			
plot8	24			
	12			
	6			
	36			
	22			
	34			
	6			
	32			
	26			
	22			
	14			
plot9	a			
	34			
	40			
	a			
	34			
	12			
plot10	15			12
	15			10
	32			14

EXHIBIT E

	22	8
	28	6
	8	16
	24	20
plot11	38	
	12	
	38	
	14	
	8	
	18	
	20	
	14	
	24	
	32	
	12	
	34	
	38	
	36	
plot12	40	16
	42	20
	6	22
	6	20
	6	24
	6	10
	6	10
	6	10
	34	10
plot13	6	
	30	
	32	
	20	
	18	
	24	
	38	
plot14	12	
	6	
	14	
	14	
	6	
	8	
	14	
	20	
	22	
	6	
	12	
	14	
	10	
	20	
	12	
	20	
	20	

EXHIBIT E

10
18
12
10
22
14
12
10
22
24
24
30
26
38
34
16
16
8
22
22
14
24
16
10
28
16
10
22
18
32
10
30
6
12
32
20
plot15 26
14
16
24
24
8
8
14
24
36
8
16
20
28
a

EXHIBIT B

	24			
	12			
	25			
	13			
	22			
Total tree	**250**	1	**4**	19

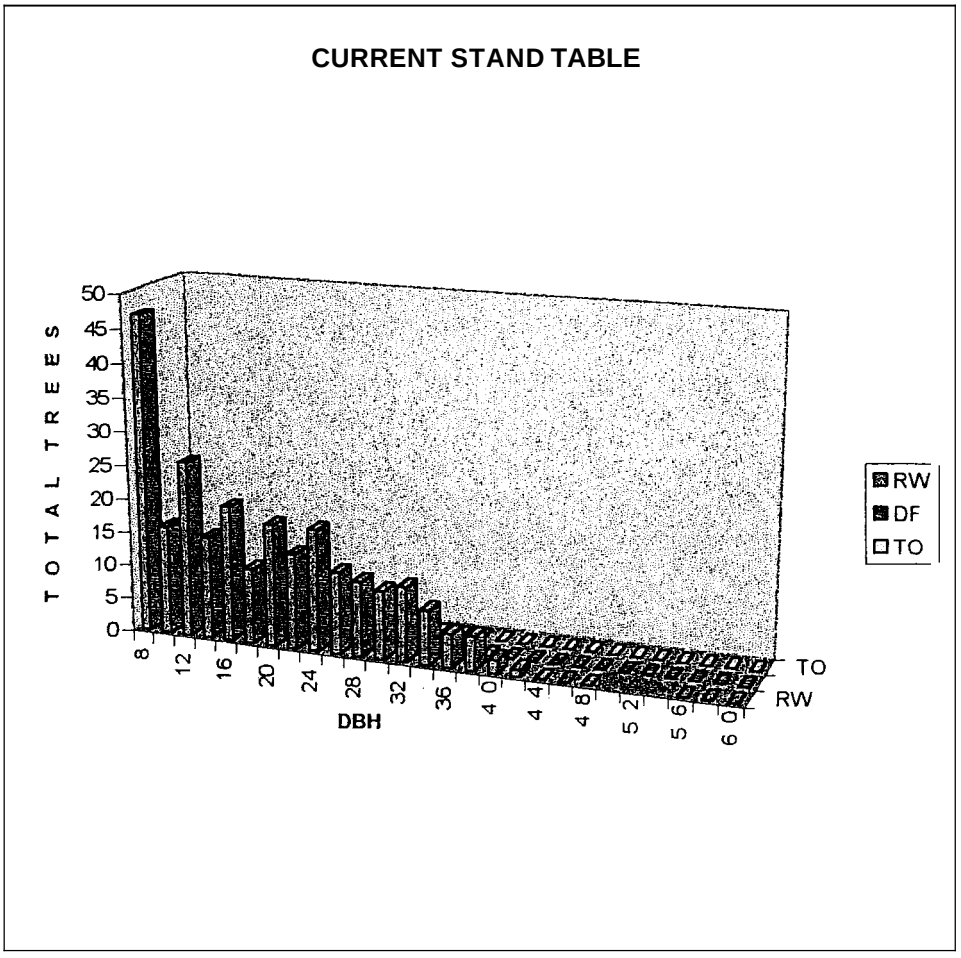


EXHIBIT E

[redacted] VOLUME AND BASAL AREA CALCULATIONS

STAND TABLE L CONIFERS		BASAL AREA (sq.		VOLUME (SCRIB BF)	
2" Dia. Class (in.) (1)	Number of trees (2)	Per tree* (3)	Per class (2) x (3) (4)	Per tree (5)	Per class (2) x (5) (6)
2	0	0.0218	0	0.081	0
4	0	0.0873	0	0.821	0
6	9.6	0.1963	1.885	3.195	30.669
8	5.3	0.3491	1.85	8.375	44.387
10	5.3	0.5454	2.891	17.69	93.735
12	8.6	0.7854	6.754	32.57	280.14
14	5	1.069	5.345	54.6	272.98
16	6.6	1.3962	9.215	85.39	563.6
18	3.6	1.7671	6.362	126.7	456.13
20	6	2.1816	13.09	180.3	1082
22	4.6	2.6397	12.14	248.2	1141.6
24	6	3.1415	18.85	332.2	1992.9
26	2	3.6869	7.374	434.3	868.6
28	3.6'	4.2759	15.39	556.7	2004.1
30	3.3	4.9086	16.2	701.4	2314.7
32	3.6	5.5849	20.11	870.7	3134.6
34	2.6	6.3048	16.39	1067	2773.7
36	1.6	7.0684	11.31	1292	2067.1
38	1.6	7.8756	12.6	1548	2477.5
40	0.6	8.7264	5.236	1839	1103.3
42	0.3	9.6209	2.886	2165	649.58
44	0	10.559	0	2530	0
46	0	11.541	0	2937	0
48	0	12.566	0	3387	0
50	0	13.635	0	3883	0
52	0	14.748	0	4428	0
54	0	15.904	0	5025	0
TOTAL PER ACRE	79.8		185.9		23351

* Basal area per tree = 0.005454 x DBH^2

** Volume per tree = 0.0079 DBH^3.35 (1990, SLO)

*** Crown width = 4.344 + DBH"1.029

EXHIBIT E-4

STAND TABLE PROJECTION

Local vol. = 0.0079 D^3.35

DBH Class (in.)	10 yr Radial Increment (in.)	Ratio (m)	Current Trees per acre	Volume per Tree BDFT	0	1	2	Sum	Future Trees per acre	Current Stock Table (BDft./ac)	Future Stock Table (BDft./ac)	Volume Growth (BDft.)
6	**1.3**	0.65	**9.60**	3.19	3.36	6.24	0.00	9.60	3.36	30.67	10.73	-19.94
8	**1.3**	0.65	**5.30**	8.37	1.86	3.45	0.00	5.30	8.10	44.39	67.79	23.41
10	**1.3**	0.65	**5.30**	17.69	1.86	3.45	0.00	5.30	5.30	93.74	93.74	0.00
12	**1.3**	0.65	**8.60**	32.57	3.01	5.59	0.00	8.60	6.46	280.14	210.27	-69.87
14	**1.3**	0.65	**5.00**	54.60	1.75	3.25	0.00	5.00	7.34	272.98	400.73	127.75
16	**1.0**	0.50	**6.60**	85.39	3.30	3.30	0.00	6.60	6.55	563.60	559.33	-4.27
18	**1.0**	0.50	**3.60**	126.70	1.80	1.80	0.00	3.60	5.10	456.13	646.19	190.06
20	**1.0**	0.50	**6.00**	180.33	3.00	3.00	0.00	6.00	4.80	1082.00	865.60	-216.40
22	**1.0**	0.50	**4.60**	248.17	2.30	2.30	0.00	4.60	5.30	1141.57	1315.28	173.72
24	**1.0**	0.50	**6.00**	332.15	3.00	3.00	0.00	6.00	5.30	1992.90	1760.40	-232.51
26	**0.8**	0.40	**2.00**	434.30	1.20	0.80	0.00	2.00	4.20	868.60	1824.05	955.46
28	**0.8**	0.40	**3.60**	556.68	2.16	1.44	0.00	3.60	2.96	2004.05	1647.78	-356.28
30	**0.8**	0.40	**3.30**	701.43	1.98	1.32	0.00	3.30	3.42	2314.71	2398.88	84.17
32	**0.8**	0.40	**3.60**	870.72	2.16	1.44	0.00	3.60	3.48	3134.60	3030.11	-104.49
34	**1.2**	0.60	**2.60**	1066.80	1.04	1.56	0.00	2.60	2.48	2773.67	2645.65	-128.02
36	**1.2**	0.60	**1.60**	1291.93	0.64	0.96	0.00	1.60	2.20	2067.10	2842.26	775.16
38	**1.2**	0.60	**1.60**	1548.47	0.64	0.96	0.00	1.60	1.60	2477.55	2477.55	0.00
40	**1.3**	0.65	**0.60**	1838.77	0.21	0.39	0.00	0.60	1.17	1103.26	2151.36	1048.10
42	**1.3**	0.65	**0.30**	2165.27	0.11	0.20	0.00	0.30	0.50	649.58	1071.81	422.23
44	**1.3**	0.65	**0.00**	2530.43	0.00	0.00	0.00	0.00	0.20	0.00	493.43	493.43
46	**1.3**	0.65	**0.00**	2936.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	**1.5**	0.75	**0.00**	3386.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	**1.5**	0.75	**0.00**	3883.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	**1.5**	0.75	**0.00**	4428.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	**1.5**	0.75	**0.00**	5025.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	**1.5**	0.75	**0.00**	5676.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total			**79.8**					**79.8**	0.20	23351.24	26512.96	**3161.72** = Volume
									80.0			**Production**

EXHIBIT E

	A	B	C	D	E	F	G	H	I
1		**Uneven-Age Stand Comparator**							
2	Target Residual BA=		**75**		Min. Hrvst Vol=	8000bf			
3	Maximum DBH=		32		Min. Merch. DBH=	18"			
4		q-factor=	**1.2**						
5									
6									
7	**DBH**	**"--- Current-TPA ---"**				**Harvest TPA**			
8	**Class**	**Redwood**	**Douglas-fir**	**Total**	**Target-TPA**	**RW**	**DF**	**Current-BF**	**Harvest-BF**
9	6	**9.60**		9.6	13.81522			30.67	0.00
10	8	**5.30**	0	5.3	11.51268			44.39	0.00
11	10	**5.30**	0	5.3	9.5939			93.74	0.00
12	12	**8.60**		8.6	7.994917			280.14	0.00
13	14	**5.00**	0	5	6.662431			272.98	0.00
14	16	**6.60**		6.6	5.552025	1.048		563.60	169.02
15	18	**3.60**		3.6	4.626688	0		456.13	0.00
16	20	**6.00**		6	3.855573	2.144		1082.00	629.33
17	22	**4.60**		4.6	3.212978	1.387		1141.57	525.65
18	24	**6.00**		6	2.677481	3.323		1992.90	1590.23
19	26	**2.00**		2	2.231235	0		868.60	0.00
20	28	**3.60**		3.6	1.859362	1.741		2004.05	1259.80
21	30	**3.30**		3.3	1.549468	1.751		2314.71	1524.57
22	32	**3.60**		3.6	1.291224	2.309		3134.60	2390.86
23	34	**2.60**		2.6	1.07602	1.524		2773.67	1856.89
24	36	**1.60**		1.6	0.896683	0.703		2067.10	998.97
25	38	**1.60**		1.6				2477.55	0.00
26	40	**0.60**		0.6				1103.26	0.00
27	42	**0.30**		0.3	0.896683			649.58	0.00
28	44	**0.00**	0	0				0.00	
29								**Yield=**	**10945**

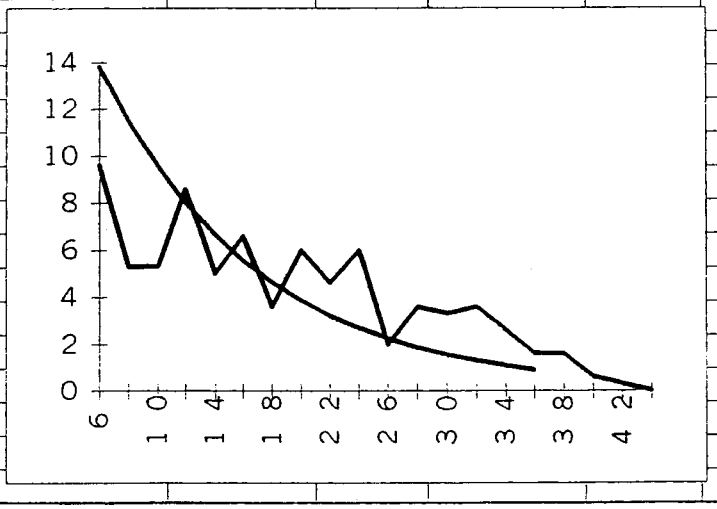


EXHIBIT E