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

March 19, 2008

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

Agenda Date: April 9, 2008
APN: 078-132-04, -05
Application: 07-0599
Item #: 30
Time: After 9 AM

Subject: A public hearing to consider a proposal to rezone a parcel from the Special Use (SU) zone district to the Timber Production (TP) zone district.

Members of the Commission:

On September 21, 2007, the County Planning Department accepted this application for a rezoning to Timber Production (TP). This is a proposal to rezone 19 acres from the Special Use (SU) zone district to the Timber Production (TP) zone district. The uses on the property consist of vacant rural acreage and a duplex, illegally converted from a single-family dwelling as well as another single-family dwelling illegally converted from a non-habitable accessory structure.

Background

This project does not qualify 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

[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 anniversary 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 determine 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.

order to rezone to TP.

The project fails to meet all of 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 **not** in compliance with the Timber Production Zone uses set forth in Section 13.10.372. A single-family dwelling and accessory structures are allowed in the TP zone district; however, multiple dwellings (duplexes) are not allowed. This property has been redtagged and there is a court judgment. Resolution of the violations would make the uses compatible with the TP zone district.

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

Because the property contains an incompatible use, all of the criteria have not been met for rezoning the parcel to the Timber Production zoning designation and the required findings cannot be made to approve this application.

Recommendation

Staff recommends that your Commission adopt the attached Resolution (Exhibit A), sending a recommendation to the Board of Supervisors for denial of Application No. 07-0599 based on the finding that the property contains an incompatible use.

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 #1829, dated December 15, 2007.

Maria Porcila Perez
Project Planner
Development Review

Reviewed By: Mark M. Deming
Mark Deming

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. 07-0599, involving property located on the west side of Old County Road (9671 OLD COUNTY ROAD) at the intersection with Highway 9, and the Planning Commission has considered the proposed rezoning, all testimony and evidence received at the public hearing, and the attached staff report, and

WHEREAS, the property contains uses that are not compatible with the uses listed in Section 13.10.372(b) the County Code and adopted as the County's compatible uses as required by Government Code Section 51111.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission recommends that the Board of Supervisors not adopt the attached ordinance amending the Zoning Ordinance by changing property from the Special Use (SU) zone district to the Timber Production (TP) 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 _____, 2008, 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 Old County Road (9671 OLD COUNTY ROAD) at the intersection with Highway 9; 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 III, 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
078-132-04, -05	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 _____ 2008, 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

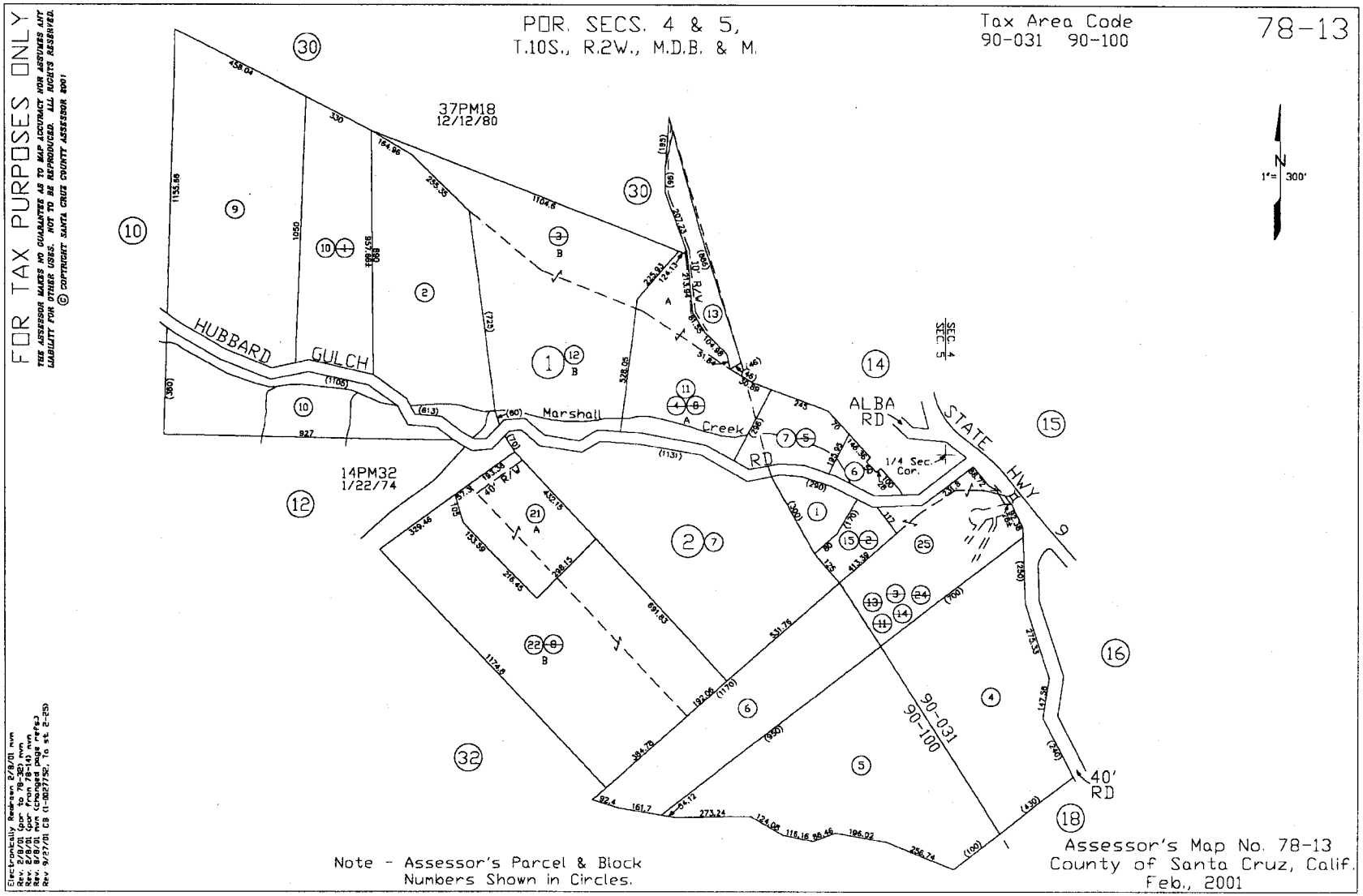
APPROVED AS TO FORM:

_____
Assistant County Counsel

Exhibit: Rezoning Map

DISTRIBUTION: County Counsel
Planning
Assessor
County
GIS

EXHIBIT A


FOR TAX PURPOSES ONLY
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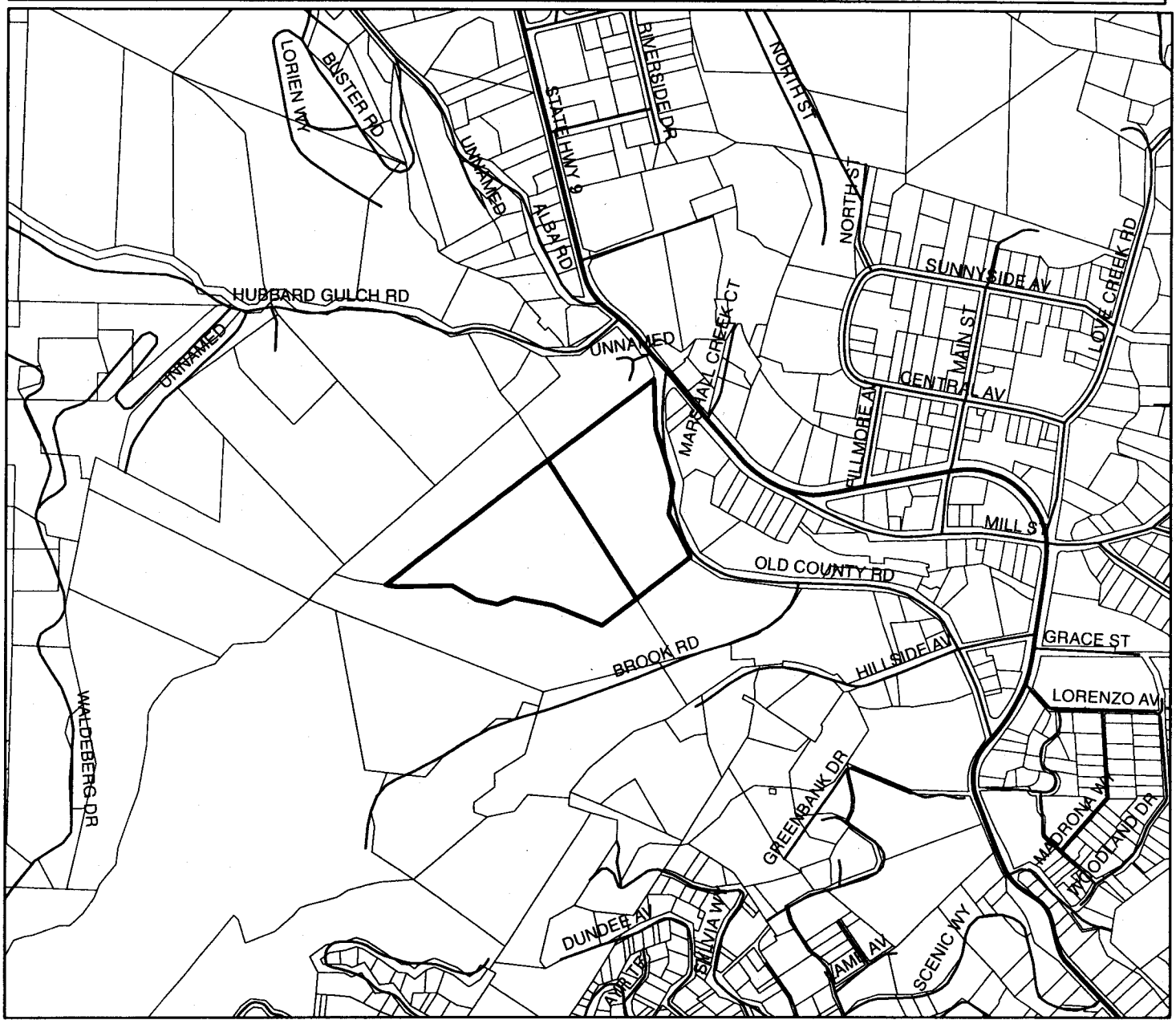
POR. SECS. 4 & 5,
T.10S., R.2W., M.D.B. & M.
Tax Area Code
90-031 90-100
78-13
37PM18
12/12/80
14PM32
1/22/74
HUBBARD GULCH
Marshall Creek
ALBA RD
STATE HWY 9
1/4 Sec. Cor.
SEC 5
SEC 4
40' RD
90-031
90-100
N
1"= 300'
Note - Assessor's Parcel & Block Numbers Shown in Circles.
Assessor's Map No. 78-13
County of Santa Cruz, Calif.
Feb., 2001

EXHIBIT B

Location Map



0 650 1,300 2,600 3,900 5,200 Feet

LEGEND

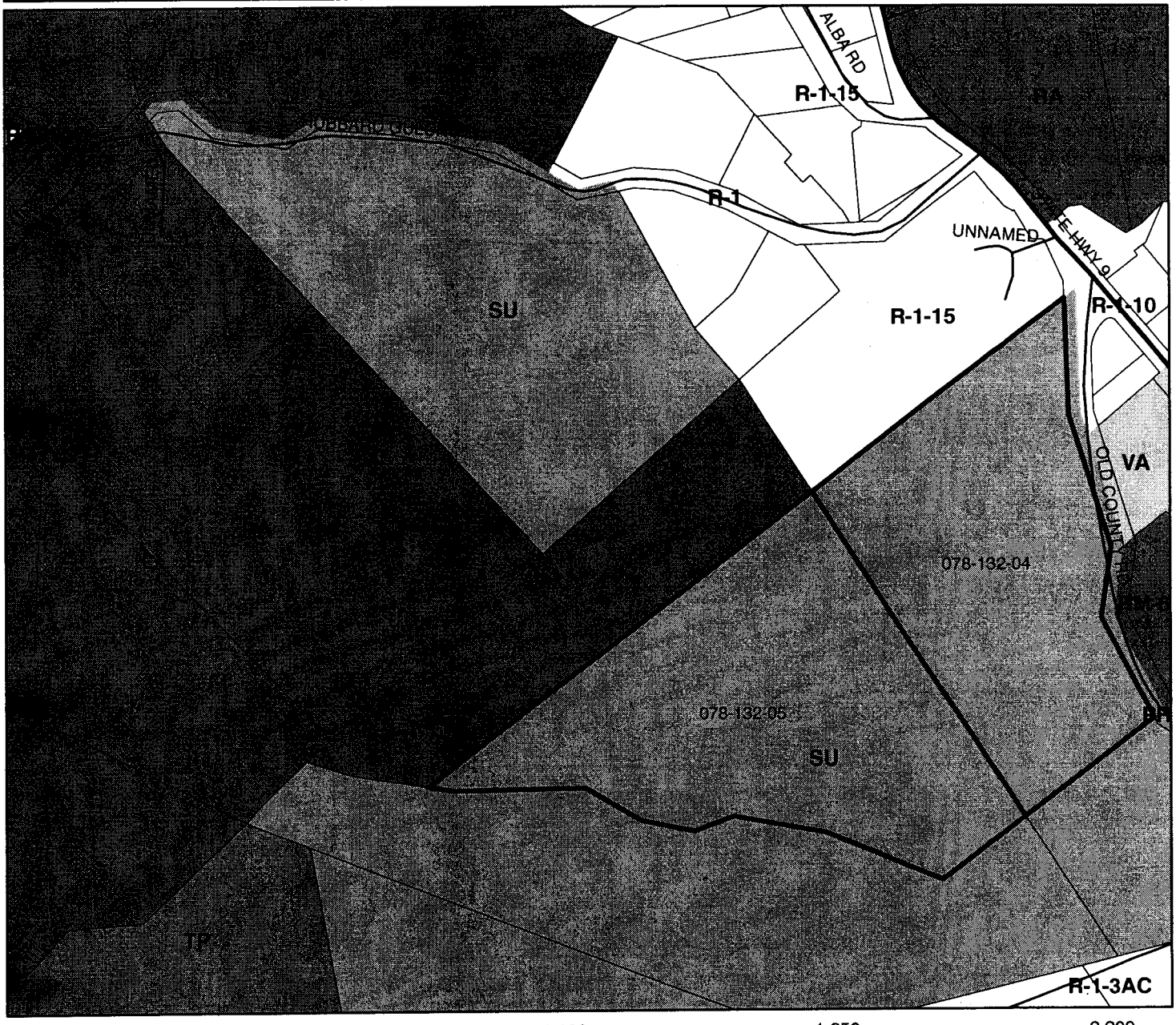
- APN: 078-132-05
- APN: 078-132-04
- Assessors Parcels
- Streets
- State Highways

N W E S

Map created by
County of Santa Cruz
Planning Department
December 2007

EXHIBIT C

Zoning Map



0 275 550 1,100 1,650 2,200 Feet

LEGEND

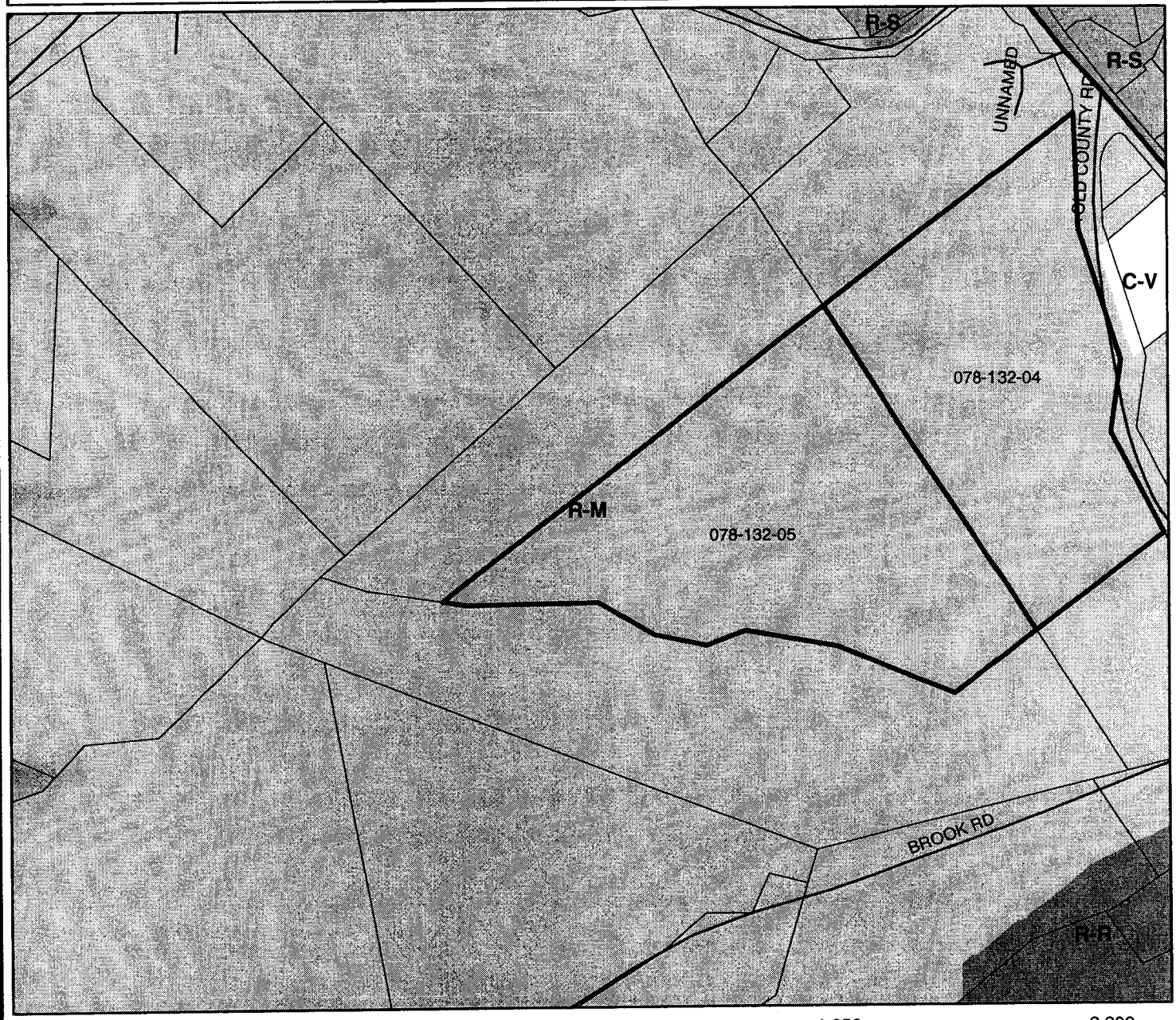
- APN: 078-132-05
- APN: 078-132-04
- Assessors Parcels
- Streets
- State Highways
- AGRICULTURE RESIDENTIAL
- TIMBER PRODUCTION
- SPECIAL USE
- RESIDENTIAL-SINGLE FAMILY
- RESIDENTIAL-MULTI FAMILY
- COMMERCIAL-VISITOR ACCOM.

N W E S

Map created by
County of Santa Cruz
Planning Department
December 2007

EXHIBIT C

General Plan Designation Map



0 275 550 1,100 1,650 2,200 Feet

LEGEND

- APN: 078-132-05
- APN: 078-132-04
- Assessors Parcels
- Streets
- State Highways
- Residential-Mountain
- Residential-Suburban
- Residential-Rural
- Commercial-Visitor Accom.

N W E S

Map created by
County of Santa Cruz
Planning Department
December 2007

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: 07-0599
Assessor Parcel Number: 078-132-04, -05
Project Location: Property located west side of Old County Road (9671 Old County Road) at the intersection with Highway 9.

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

Person or Agency Proposing Project: TASBIHGOU SAEED & NILOUFAR

Contact Phone Number: n/a

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 Project** involving only the use of fixed standards or objective measurements without personal judgment.

D. __X__ **Statutory 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.

_____ Date: 3/26/08

Maria Porcila Perez, Project Planner

EXHIBIT D

WEBSTER & ASSOCIATES
2-2590 EAST CLIFF DRIVE
SANTA CRUZ, CA 95062
831-462-6237

December 13, 2007

County of Santa Cruz Planning Department
Attn.: Maria Perez
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

RE: APPLICATION NO.: 07-0599. TPZ Rezoning of Assessor's Parcel # 078-132-04 and 05.

Dear Ms. Perez,

This letter requests rezoning the Santa Cruz County Assessor's Parcel numbers listed above (18 acres) from their current designation Special Use (SU) to Timber Production Zone (TPZ). The parcels are owned by Saeed and Niloufar Tasbihgou and meet the following criteria:

1. The parcels 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 for the Southern Sub district of the Coast Forest District (see Forest Management Plan).

2. The parcels meet the definition of "Timberland" per Section 51104(f) of the Government Code (see FMP).

3. The parcels meet the permitted use requirements per County Code Section 13.10.372.

4. The parcels meet the minimum 5-acre size requirement (18 acres total).

EXHIBIT E

Attached in the TMP is an Assessor's Parcel Map.

Sincerely,

R. Webster

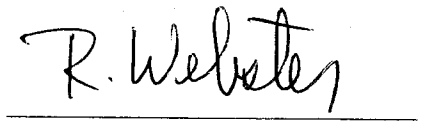
Roy Webster
RPF # 1765

EXHIBIT E

LANDS OF TASBIHGOU
Santa Cruz County, California

FOREST AND LAND MANAGEMENT PLAN

Webster and Associates
Forestry Consultants



Roy Webster, RPF #1765

DECEMBER 2007

EXHIBIT E

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Appendix:

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Inverse J Curve .....Exhibit B

Maps .....Exhibit C

Analysis of Legal Requirements for TP Rezoning .....Exhibit D

EXHIBIT E

Landowners

Saeed and Niloufar Tasbihgou
C/o Taban Karimian
16975 Cypress Way
Los Gatos, CA 95030
Phone: (408) 354-7407

Property Location

Portions of the South ½ of Section 4 and the South ½ of Section 5, Township10 South, Range 2 West, MDBM.

APN 078-132-04 and 05..

General Description

The property contains a total of 18 acres in two parcels. The Northerly corner of the ownership abuts the west side of Highway 9 and the eastern boundary is Old County Road. The southerly 1/3 of the property drains to an unnamed tributary which drains to the San Lorenzo River, the northerly 2/3 drains directly to the San Lorenzo River. Access to the property is by taking Highway 9 north from the City of Santa Cruz. The northerly boundary of the property is about 500 feet south of Alba Road. See the maps in the appendix for the location in relationship to Highway 9 and Old County Road. Elevations range from 1000 feet at the ridge top at the west corner of the property to 380 feet at the north boundary at Highway 9 and Old County Road. .

Slopes are variable but generally steep, ranging from 30 to 80%. The tract has an easterly aspect. The dominant vegetation is second growth Redwood (Sequoia sempervirens) and Douglas fir (Pseudotsuga menziesii). The stand is very dense with little growing in the under story because of shading and competition. There are moderate amounts of Madrone (Arbutus menziesii) and Tanoak (Lithocarpus densiflora). There is little conifer reproduction present. Much of the ground cover is comprised of shrub like Tanoak. Other tree species of minor extent are California Bay Laurel (Umbellularia californica) and Big Leaf Maple (Acer macrophyllum). Swordfern (Polystichum munitum) was observed in the under story.

There are a few old oxen or skid trails present, but they have eroded or slid and are no longer useable.

Land Use History

The property was clear cut of all merchantable timber in the late 1800's to early 1900's as would be typical of much of the Santa Cruz Mountains. Evidence of this is presence of the large, old stumps and annual ring counts on the second growth trees. A well-stocked second growth redwood and Douglas fir forest replaced the old growth clear-cut area. There has been no harvesting or management of the timber resource since that first logging.

The subject property contains one residence.

EXHIBIT E

Management Objectives

The goal of the owner's property management is to achieve an intermittent economic return from the timberland. The owners will take measures to maximize growth and overall health of the forest for long-term timber production, and for reduction of fire hazard. The owners seek to rezone the property to **Timber Production** in order to facilitate these 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. All future activities will recognize the sensitive nature of the watershed and biotic diversity on the property. Future management objectives will be to develop the timber stand into an un-even aged character promoting growth and regeneration of timberland species while preserving the natural character of the property.

Resources

Soils

According to the Soil Survey of Santa Cruz County, the property is underlain by soils #158, Nisene-Aptos complex.

The Nisene soil is deep and well drained. It formed in residuum derived from sandstone or shale. Typically, a 2-inch mat of partially decomposed leaves, needles, and twigs covers the surface. The surface layer is dark grayish brown, neutral loam about 10 inches thick. The subsoil is brown and yellowish brown, slightly acid clay loam and gravelly loam about 48 inches thick. Weathered fine-grained sandstone is at a depth of about 58 inches. Permeability of the Nisene soil is moderate. Effective rooting depth is 40 to 60 inches. Available water capacity is 5.5 to 10.5 inches. Runoff is rapid, and the hazard of erosion is high.

The Aptos soil is moderately deep and well drained. It formed in residuum derived from sandstone, siltstone, or shale. Typically, a 1-inch mat of partially decomposed twigs and leaves covers the surface. The surface layer is dark grayish brown and grayish brown, slightly acid and medium acid fine sandy loam about 23 inches thick. The subsoil is brown, very strongly acid clay loam about 6 inches thick. Weathered, fine-grained sandstone is at a depth of about 29 inches. Permeability of the Aptos soil is moderate. Effective rooting depth is about 20 to 40 inches. Available water capacity is 2.5 to 6.5 inches. Runoff is rapid, and the hazard of erosion is high.

The soils discussed above are used mainly for timber production, recreation, wildlife habitat, and watershed. They are also used for firewood production and as home sites.

Watershed

The parcels drain to the San Lorenzo River. The San Lorenzo River is a 138 square mile watershed located in northern Santa Cruz County. It is the largest watershed lying completely within Santa Cruz County. The watershed consists of a 25-mile long main stem and 9 principal tributaries. The San Lorenzo River is listed on the 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments for sediment, pathogens, and nutrients.

According to the Southwest Fisheries Science Center, National Oceanic and Atmospheric Administration, there have been documented historical occurrences of Coho Salmon in the San Lorenzo River. However, in three stream surveys done on the San Lorenzo River since 1991, no Coho Salmon were observed.

EXHIBIT E

The California Regional Water Quality Control Board lists the San Lorenzo River as having Coho Salmon Habitat. In 1989 the Board listed the San Lorenzo River as 20% impaired. Since 1998 it is considered 100% impaired.

Fish Net Guidelines 2004, notes the presence of steelhead migrating up through the main stem of the San Lorenzo River, heading for spawning grounds higher in the watershed. High flows prohibit spawning along most of the main stem until approximately Boulder Creek.

In planning any harvesting operation, great care must be taken to avoid erosion and siltation that might enter watercourses by treating bared soil, leaving undisturbed buffers adjacent to watercourses and minimizing construction and use of skid trails and roads. Any winter operations, if permitted, should be done during dry, rainless periods. The steep slopes make the tract susceptible to sliding, especially on constructed cuts and fills. Old County Road has been subject to bank and fill failure in the past. The lower side of the road adjacent to the parcel has been treated to prevent erosion. Plastic sheeting has been placed over past road failures to prevent erosion and siltation. This condition should continue to be monitored and treated.

Cultural

A field survey and records search will be conducted during the preparation of any future Timber Harvest Plan. It is unlikely that this site contains any evidence of past occupation or use due to the steep slopes. If any sites are discovered during any future management activity they should be preserved, applicable agencies notified and the proper records of their discovery should be filed.

Wildlife

Redwood habitats provide food, cover, or special habitat elements for 193 wildlife species. This total is comprised of 12 reptiles, 18 amphibians, 109 birds, and 54 mammals. Moreover, a variety of sensitive species are found in this habitat. Species such as the red-legged frog, ensatina, osprey, ringtail, fisher and marbled murrelet show a relatively high preference for various redwood habitat phases and stages. To a minor extent, sensitive species such as the peregrine falcon, pileated woodpecker, spotted owl, and northern flying squirrel can be found, but are usually vagrants in the habitat. The endangered bald eagle can also be found in the habitat, but is usually not a common visitor. Not all of these species are found in the southern range (including Santa Cruz County).

Animals typical of the Santa Cruz Mountains frequent the area including deer, bobcat, squirrels, and raccoon. The area would fit with the classification of 5D in the wildlife habitat relationship classification system. This type has moderate to large size trees with dense spacing. Forest management directed at opening the canopy will improve forage and variety for small and large mammals as well as increase raptor use.

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 where there is deemed to be minimal conflict with wildfire suppression.

During the timber cruise for this project, a moderate number of small to mid size hardwood and conifer snags was observed. There was presence also of some small to mid size woody debris from fallen trees, dropped branches, and broken tops that usually are created during high winds and storms. There were few large hardwood or conifer snags observed, or large woody debris. Although often seen as a useless part of the landscape and a fire hazard, snags provide important habitat for numerous wildlife species. The same is

EXHIBIT E

true for large downed logs. Future management schemes should seek to preserve several prominent snags per acre and large downed logs to promote diversity.

Ancient Trees

There is no universally accepted standard for the classification of ancient or old-growth trees. Factors often considered are age, size, bark characteristics, top and crown conformation, and growth ring width. While the parcels were logged about 100 years ago, some of the Douglas fir may have existed before the logging. They have the size and possibly age characteristics to be considered "Ancient" or "Old Growth" under some systems. See Appendix A for an inventory of these trees.

Recreation

These parcels are privately owned and public use of the property is not allowed. 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. This will provide high quality recreation for the landowners and their invited guests.

Timber Inventory

Results

The property was first harvested around 100 years ago. This harvest was typical for the period, with evidence of clear cutting and burning remaining today. Stumps that survived the early harvest show the potential for growth of large diameter trees on much of the property. There is little regeneration present due to the dense stocking and shading of the dominant trees. There were a moderate number of dead and dieing Tanoak and a few younger redwoods.

In December 2007, a cruise consisting of nine 0.1-acre circular plots was conducted to better assess stand conditions and growth. This comprises a 5% sample of the timber stand. While this is a reliable sample for planning purposes, it is not sufficient for valuation purposes. Selected trees were cored to measure growth. A summary of the cruise is found in Appendix A. However, the trends will be discussed below.

Measured heights of typical dominant second growth redwood trees varied from 150 to 160 feet, which indicates a stand on the borderline between site 2 and 3. This is above average site productivity compared to other Redwood stands along the Coast.

Estimated conifer volumes from these plots would predict an average standing volume of 114,933 board feet per acre. This is broken down into 49,522 board feet per acre of Redwood and 65,411 board feet per acre of Douglas fir. Hardwood volume is estimated at 603 cubic feet per acre, or, 5 cords per acre. This is broken out to 370 cubic feet per acre of Tanoak and 233 cubic feet per acre of Madrone. Average DBH (diameter at breast height) for commercial conifers is 25 inches for redwood and 48 inches for Douglas fir. Total standing volume of conifers on the 18 acres of timberland is estimated at 2,068,784 board feet. Total basal area of conifers is 436 square feet per acre. Total standing volume of hardwoods is 10,855 cubic feet or, 85 cords of fuel wood. Average diameter of hardwoods was 13 inches for Tanoak and 23.5 for Madrone. Total basal area of hardwoods is 37 square feet per acre. There are a total of 31 hardwoods and 85 conifers per acre.

By use of increment boring and a stand table projection, stand growth is estimated to be roughly 0.75% per year for redwood and 0.1% for Douglas fir. This equates to 7,848 board feet per year growth for redwood

EXHIBIT E 4

and Douglas fir on the ownership. On a per acre basis the total stand is averaging 436 board feet per acre per year of conifers, or 36 cubic feet per acre per year.

Growth of hardwoods (Tanoak and Madrone) is estimated to be 0.5% per year. This equates to 54 cubic feet of hardwoods per year on the parcels, or 3 cubic feet per acre per year.

For all tree species the stand is growing 39 cubic feet per acre per year, about 2.5 times the state standards for rezoning.

Management Practices

Timber management

The stand, in general, has one age class, the trees that naturally regenerated or sprouted after the first clear cut logging in the late 1800's or early 1900's. These trees form the bulk of the commercial timber stand. There are other age and size classes that have naturally seeded since that time, but they are mostly suppressed and/or stunted from the excessive shade and competition provided by the older trees. A selective thinning will open up the stand and release many of the trees for more rapid growth. Hardwood stocking is relatively low for such stands due to the prolific sprouting after the original logging.

Future selective harvesting of conifers to promote an uneven-aged pattern of stocking and growth is expected to occur on a roughly fifteen-year cycle. A goal of these harvests will be to balance tree size classes throughout the stand and, over time, create the classic **Inverse J curve** (see Exhibit B). Currently the stand has little regeneration, so the first harvest should be a relatively heavy selective harvest (50 to 60% of the trees over 18 inch DBH) to reduce the over story shading and allow light into the under story for regeneration. When the fully regulated forest is achieved a graph of number of trees per acre by size class should show number of trees declining as size increases. This will be achieved by using the following marking criteria: Maximize spacing between residual trees and remove slower growing and defective trees. While the goal is to achieve a balance of all age and size classes, marking should also focus on removing the larger, over story trees which will allow more sunlight into the mid and under story and increase growth of residuals. Based on this analysis future harvests should be directed at trees in the 26 inch and above size class to achieve the optimal uneven-aged size class distribution. Thinning of trees 20 inches and under should only be done in areas where spacing is overly crowded or where defect or poor structure is observed. Where beneficial, group selection will be used as a cutting practice to allow increased light into a suppressed under story, or to create large enough openings to facilitate tree planting. The stand table shows a lack of smaller tree diameters in the stand. Group selection and harvesting dominant slow growing trees will help to alleviate this condition.

Current stand conditions call for a volume removal of about ½ the total volume in the stand, after that growth should be re-evaluated to determine future harvesting levels to put management on a sustained yield basis.

Timber Stand Improvement

Intermediate treatments to foster the health and growth of the stand will include sprout thinning and selected hardwood removal. Multiple sprouts resulting from harvesting will be thinned to an average of 2 to 4 healthy sprouts per stump. This practice will be conducted immediately after harvest. This removal of competition will produce healthier and more vigorous young trees in the under story. During this thinning, dead and unhealthy small trees and sprouts will also be removed to reduce fire hazard and competition. This should be done to further improve spacing and promote the health of remaining trees. All thinnings will be chipped or removed, or lopped to within 30" of the ground.

EXHIBIT E

Additional release can be achieved by hardwood removal where needed and practical. Hardwood removal will be non-commercial or at best marginally economic, however, it could be combined with a timber harvest to allow for reduced cost. Sometimes the hardwood removal can be economically accomplished with the timber harvest by trading the fuel wood for the increased clean up cost of slash and debris disposal. Removal of hardwoods would be beneficial to remove competition from regrowing conifers. Resulting hardwood stump sprouts will provide important deer browse. Where conducting hardwood removal for stand improvement, emphasis should be on removal of hardwoods closest to and competing with the conifers.

Tree Planting

Tree planting after harvest is not recommended due to the full stocking of the stand. If there are openings created, if desired, limited planting can occur. The redwood and/or Douglas fir should be 2-0 stock (or 1-0 inoculated with mycorhizae). Seed sources should be selected to match the seed zone as 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. Trees should be planted on an approximate 8' spacing (430 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.

Fire Protection

The major threat to the property from a fire protection standpoint appears to be the possibility of fire spreading into the property from Highway 9, Old County Road, or Brooks Road which is immediately south of the ownership. There is also the possibility of ignitions due to trespass. The trespass issue is being handled as best as possible for absentee owners by limiting access. Gates on both ends of Old County Road block vehicle access to the lower portion of the ownership, but, pedestrian access is always possible. This is minimized by the steep slopes which make access less desirable. The biggest potential problem from a fire standpoint is the large number of small hardwoods present that would provide fuel if fire started on the property. These potential fuels can be lopped and scattered or chipped as part of stand improvement measures. There is poor access to the parcels due to lack of roads. Overhanging vegetation should be cleared periodically on Old County Road to make access for equipment easier on the primary access road to the parcel.

When harvesting occurs, to reduce fire hazards slash and debris should be loped and scattered to within 30 inches of the ground. To provide more efficient fuel breaks the areas within 50 feet of Old County Road and Highway 9 should be kept free of slash greater than 1 inch in diameter. Slash between 50 and 100 feet of these roads should be treated by piling and burning, chipping, burying, removal or lopping to within 12 inches above the ground not later than April 1 of the year following its creation.

References

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

California Wildlife Habitat Relationships System, California Department of Fish and Game.

California Natural Diversity Data Base (Maps and listings).

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

EXHIBIT E

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

Santa Cruz County Biotic Resource Maps.

Crustali 4.0, Resource Consulting International (A timber inventory program).

Log Scaling and Timber Cruising, Bell and Dillworth, 1997 revised edition.

Forest Mensuration, Husch, Miller and Beers, the Ronald Press Company, 1972.

San Lorenzo Urban River Plan, City of Santa Cruz and the San Lorenzo Urban River Plan Task Force, Adopted June 24, 2003

Resource Inventory, "Aquatic Life", Big Basin Redwoods State Park, June 2000, by Douglas Rischbieter.

NOAA Technical Memorandum NMFS, "Historical Occurrence of Coho Salmon..." Southwest Fisheries Science Center, October 2005.

EXHIBIT E

EXHIBIT A

TASBIHGOU — Plot Cruise Volume Summary — 12/11/2007

	Per Acre			18 - Acres		Ave Tree		Cruise		
Product	Volume	Trees	BA	Volume	Trees	Volume	DBH	Plts	Size	%Cr
LUMBER	BOARD									
REDWOOD	49521.69	70.3	246.4	891390	1265	704.43	25.4	9	0.10	5.0
LUMBER	**49521.69**	**70.3**	**246.4**	**891390**	**1265**	**704.43**	**25.4**	**9**	**0.10**	**5.0**
LUMBER	BOARD									
DOUGLAS FIR	65410.76	15.4	190.3	1177394	277	4247.45	47.6	9	0.10	5.0
LUMBER	**65410.76**	**15.4**	**190.3**	**1177394**	**277**	**4247.45**	**47.6**	**9**	**0.10**	**5.0**
HARDWOOD	CU.FT.									
TANOAK	370.22	26.6	24.1	6664	479	13.92	12.9	9	0.10	5.0
HARDWOOD	**370.22**	**26.6**	**24.1**	**6664**	**479**	**13.92**	**12.9**	**9**	**0.10**	**5.0**
HARDWOOD	CU.FT.									
MADRONE	232.82	4.4	13.2	4191	79	52.91	23.5	9	0.10	5.0
HARDWOOD	**232.82**	**4.4**	**13.2**	**4191**	**79**	**52.91**	**23.5**	**9**	**0.10**	**5.0**
STAND		116.7	474.0		2100		27.3	9	0.10	5.0

EXHIBIT E *

EXHIBIT A

TASBIHGOU **Plot Cruise Volume Statistics-95%** **12/11/2007**

Product	Plots	Size	Cruise%	Samp Err%	CoeffVar%	StdError
LUMBER						
REDWOOD	9	0.10	5.0	42.4	55.2	9109.87
LUMBER	**9**	**0.10**	**5.0**	**42.4**	**55.2**	**9109.87**
LUMBER						
DOUGLAS FIR	9	0.10	5.0	71.4	92.9	20247.47
LUMBER	**9**	**0.10**	**5.0**	**71.4**	**92.9**	**20247.47**
HARDWOOD						
TANOAK	9	0.10	5.0	77.3	100.5	124.08
HARDWOOD	**9**	**0.10**	**5.0**	**77.3**	**100.5**	**124.08**
HARDWOOD						
MADRONE	9	0.10	5.0	114.2	148.5	115.28
HARDWOOD	**9**	**0.10**	**5.0**	**114.2**	**148.5**	**115.28**

Stand Level Statistics are computed using Minor Form Class 77 (Cu. Ft.) volumes of all species

STAND	**9**	**0.10**	**5.0**	**41.6**	**54.1**	**3868.38**

EXHIBIT E

EXHIBIT A

PLOT INFORMATION

Dataset Name: TASBIHGOU 12/11/2007

Tract: TASBIHGOU	**Cruise:** Plot Cruise			
Plot Size: 0.1	**No.Points:** 9		**Acres:** 18	
Products :	LUMBER	LUMBER	HARDWOOD	HARDWOOD
Measure :	BOARD FEET	BOARD FEET	CORDS	CORDS
Species :	1	1	1	1

TASBIHGOU: LUMBER-REDWOOD

DBH: 2 - 38 by 2	**Height Measure:** LOGS/BOLTS		1 - 8 by 1 - 16 Logs
Vol Eq: M & G Form Class Bd.Ft.-V" top	**Form Class:** 67	**Log Rule:** Scribner	

TASBIHGOU: LUMBER-DOUGLAS FIR

DBH: 2 - 78 by 2	**Height Measure:** LOGS/BOLTS		1 - 9 by 1 - 16 Logs
Vol Eq: M & G Form Class Bd.Ft.-V" top	**Form Class:** 70	**Log Rule:** Scribner	

TASBIHGOU: HARDWOOD-TANOAK

DBH: 6 - 20 by 2	**Height Measure:** TOTAL FEET		20 - 70 by 5
Vol Eq: Minor Form Class Cu.Ft.-3" top	**Form Class:** 67	**Log Rule:** Cubic Feet	

TASBIHGOU: HARDWOOD-MADRONE

DBH: 18 - 28 by 2	**Height Measure:** TOTAL FEET		20 - 70 by 5
Vol Eq: Minor Form Class Cu.Ft.-3" top	**Form Class:** 67	**Log Rule:** Cubic Feet	

EXHIBIT E

EXHIBIT A

Product: LUMBER **Species: REDWOOD** **12/11/2007**

.1 Acre PLOT CRUISE M & G Form Class Bd.Ft.-V" top

	Per Acre			18 Acres	
DBH	**Trees**	**Basal Area**	**BOARD**	**Trees**	**BOARD FEET**
12	6.7	5.2	206.58	120	3718.42
14	5.6	5.9	259.71	100	4674.77
16	3.3	4.7	353.12	60	6356.22
18	6.7	11.8	1223.59	120	22024.71
20	6.7	14.5	1868.30	120	33629.40
22	5.6	14.7	2043.81	100	36788.59
24	6.7	20.9	3348.00	120	60264.03
28	6.7	28.5	5789.47	120	104210.50
30	3.3	16.4	3529.11	60	63524.02
32	5.6	31.0	7315.43	100	131677.80
34	7.8	49.0	12242.93	140	220372.70
38	5.6	43.8	11341.64	100	204149.50
	70.3	246.4	49521.69	1260	891390.80

1

EXHIBIT E

EXHIBIT A

Product: LUMBER **Species: DOUGLAS FIR** **12/11/2007**

.1 Acre PLOT CRUISE M & G Form Class Bd.Ft.-V" top

	Per Acre			18 Acres	
DBH	**Trees**	**Basal Area**	**BOARD**	**Trees**	**BOARD FEET**
20	1.1	2.4	390.69	20	7032.39
22	1.1	2.9	503.15	20	9056.68
30	1.1	5.5	1463.00	20	26333.96
32	1.1	6.2	1697.19	20	30549.45
38	1.1	8.8	2537.93	20	45682.81
40	1.1	9.7	2864.23	20	51556.21
44	1.1	11.7	3878.75	20	69817.55
46	1.1	12.8	4295.40	20	77317.18
48	1.1	14.0	4737.87	20	85281.63
50	1.1	15.1	5206.16	20	93710.95
54	1.1	17.7	6220.23	20	111964.10
60	1.1	21.8	7935.00	20	142830.10
64	1.1	24.8	9207.31	20	165731.60
78	1.1	36.9	14473.85	20	260529.40
	15.4	190.3	65410.76	280	1177394.00

EXHIBIT E

EXHIBIT A

Product: HARDWOOD **Species: TANOAK** **12/11/2007**

.1 Acre PLOT CRUISE Minor Form Class Cu.Ft.-3" top

	Per Acre			18 Acres	
DBH	**Trees**	**Basal Area**	**CU.FT.**	**Trees**	**CU.FT.**
10	4.4	2.4	34.75	80	625.52
12	8.9	7.0	90.97	160	1637.47
14	7.8	8.3	135.22	140	2434.01
16	1.1	1.6	24.88	20	447.92
18	1.1	2.0	35.79	20	644.27
20	1.1	2.4	43.73	20	787.22
6	2.2	0.4	4.88	40	87.91
	26.6	24.1	370.22	480	6664.32

EXHIBIT E

EXHIBIT A

Product: HARDWOOD **Species: MADRONE** **12/11/2007**

.1 Acre PLOT CRUISE Minor Form Class Cu.Ft.-3" top

	Per Acre			18 Acres	
DBH	**Trees**	**Basal Area**	**CU.FT.**	**Trees**	**CU.FT.**
18	1.1	2.0	35.79	20	644.27
22	1.1	2.9	52.41	20	943.32
24	1.1	3.5	61.81	20	1112.58
28	1.1	4.8	82.81	20	1490.55
	4.4	13.2	232.82	80	4190.72

EXHIBIT E

EXHIBIT B

In an uneven-aged forest, the trees in the crown canopy are of many heights, resulting in an irregular stand profile as viewed from a vertical cross-section. The more shade-tolerant species tend to form uneven-aged stands. Cutting methods which remove only scattered trees at short intervals maintain forest conditions favorable to shade-tolerant species and an uneven-aged stand.

The typical diameter distribution for an uneven-aged stand is a large number of small trees with decreasing frequency as the diameter increases, as shown in Fig. 17–2. The diameter distribution for small areas

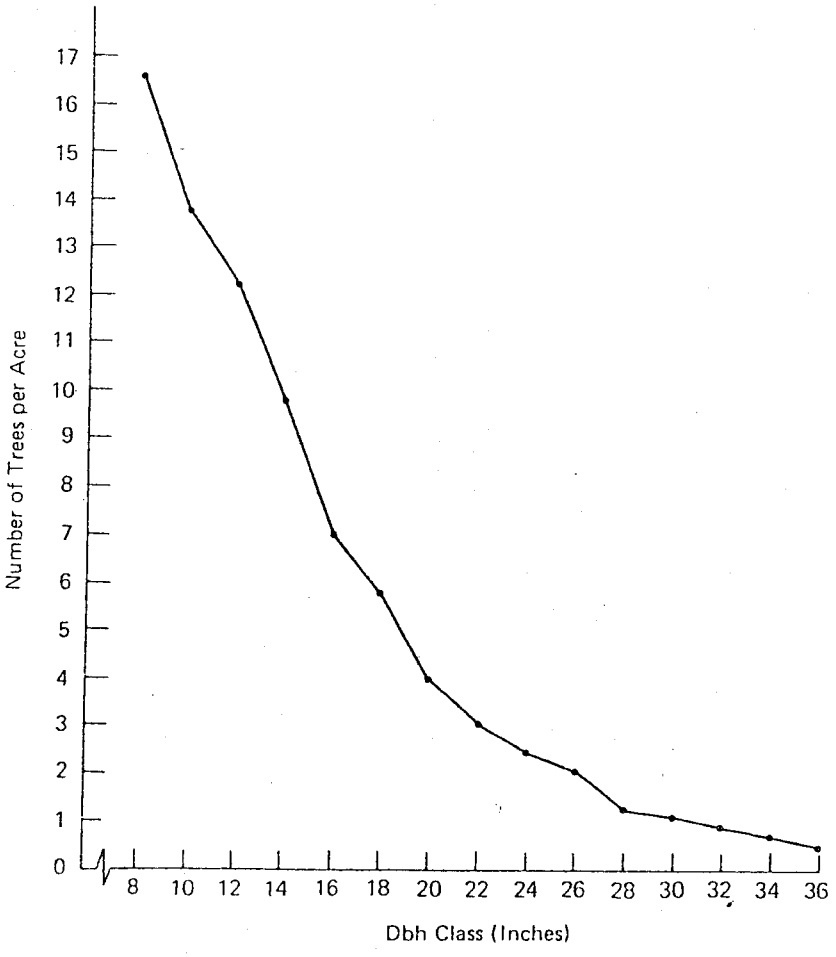
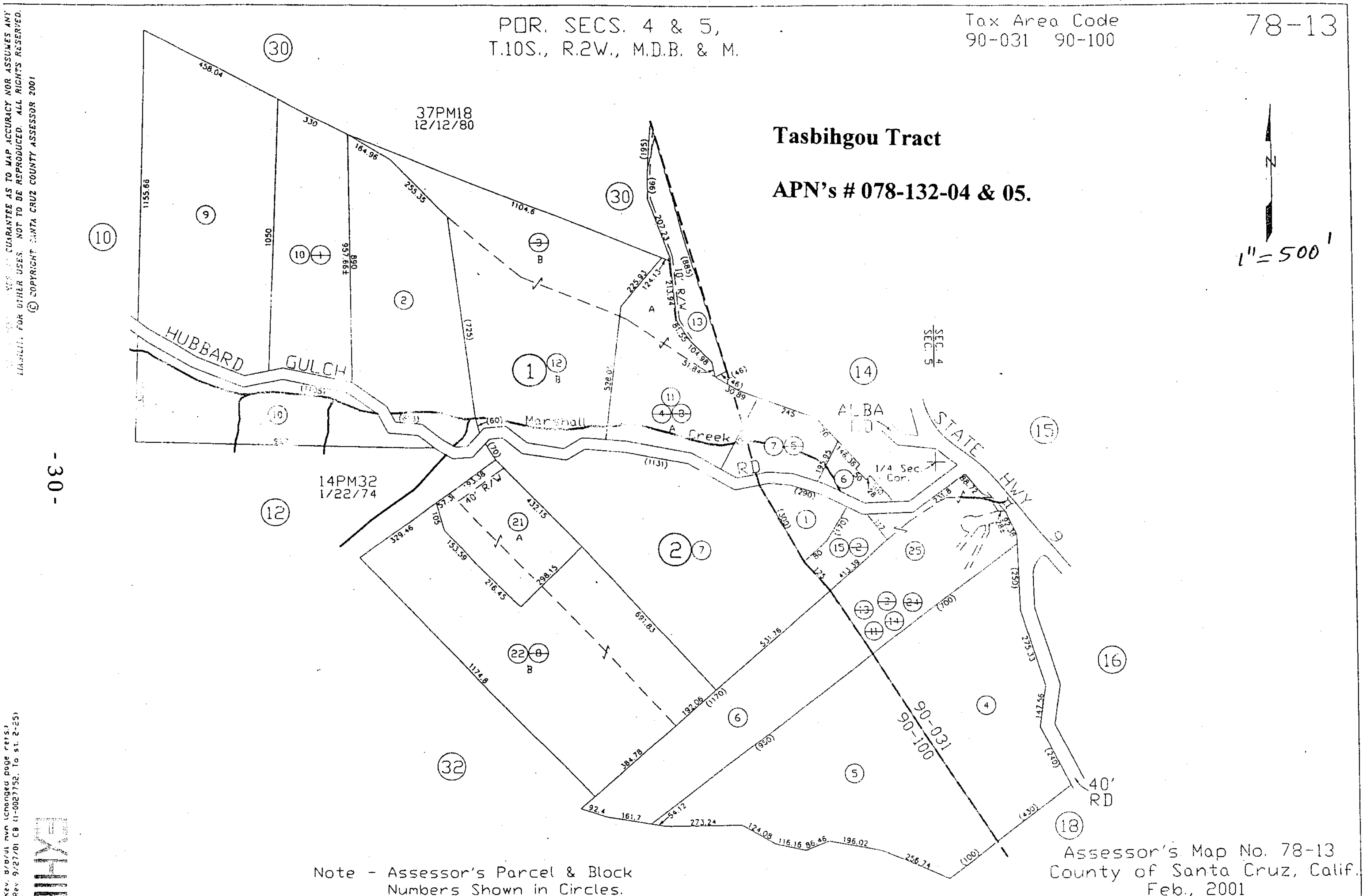


Fig. 17–2. Diameter distribution per acre for an uneven-aged virgin stand of beech–birch–maple–hemlock (adapted from Meyer and Stevenson, 1943).

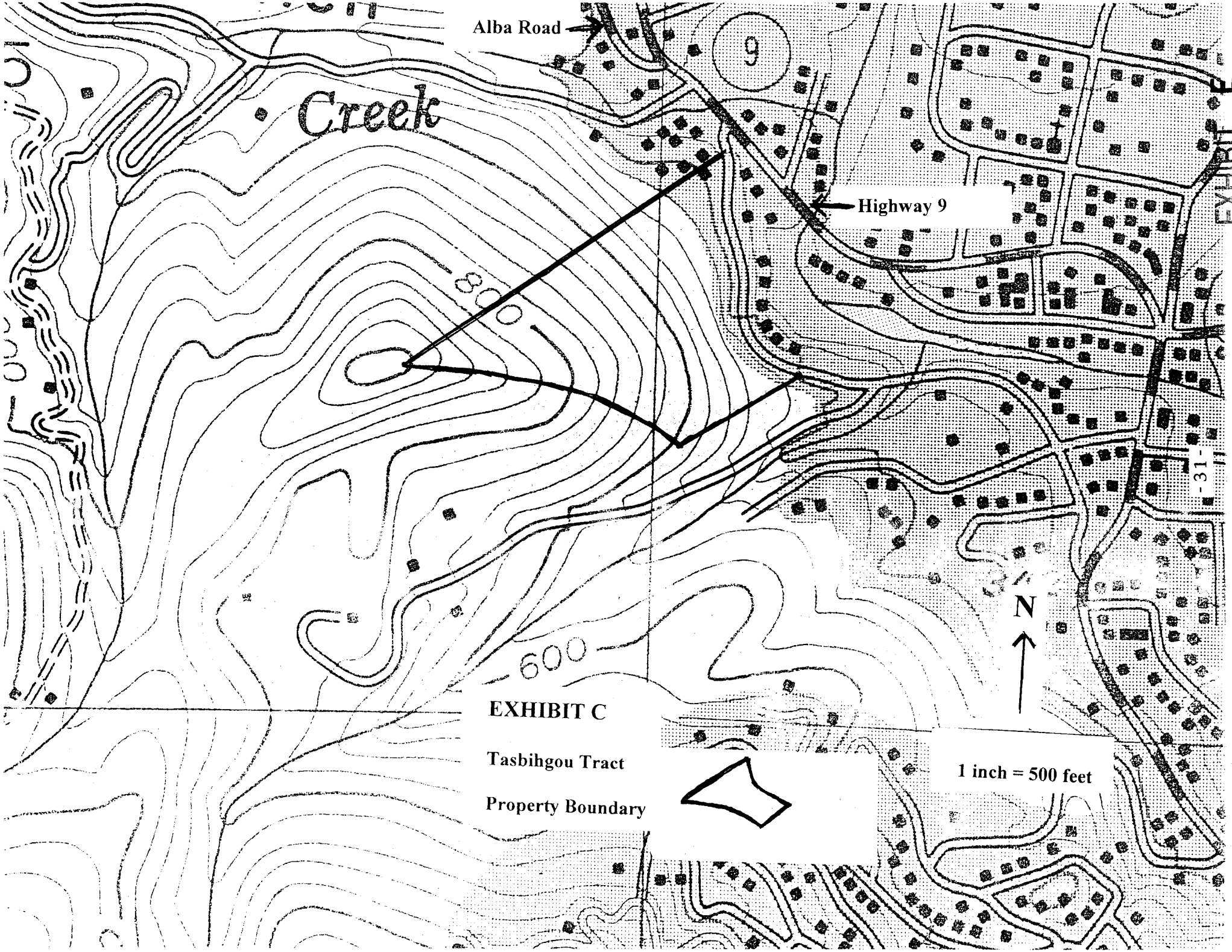
EXHIBIT E

EXHIBIT C



Rev. 8/8/01 Rvn (changed page refs.)
Rev. 9/27/01 CB (1-0027752, To st. 2-25)

EXHIBIT E


Alba Road
Creek
9
Highway 9
800
600
N
EXHIBIT C
Tasbihgou Tract
Property Boundary
1 inch = 500 feet
EXHIBIT E
- 31 -

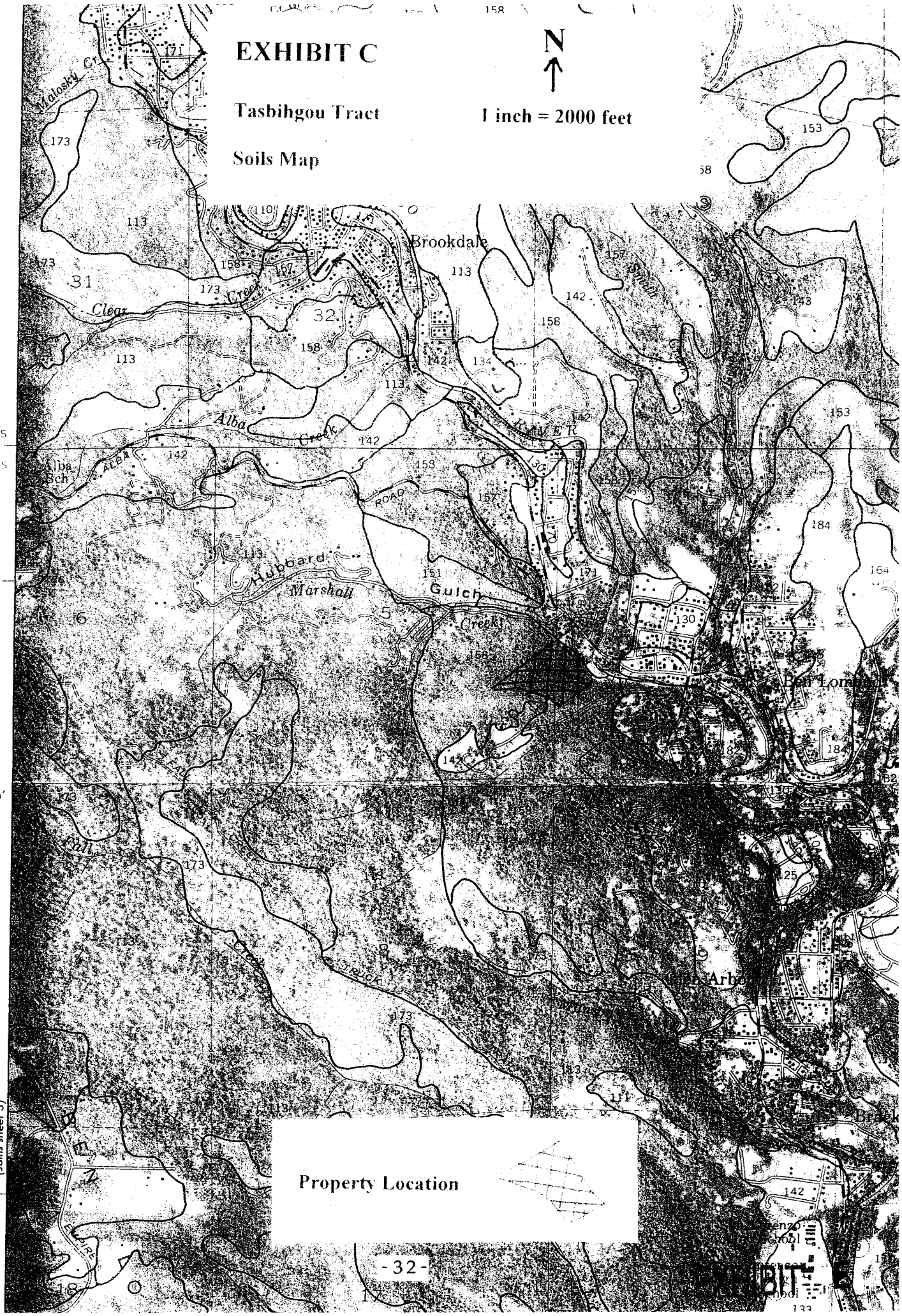


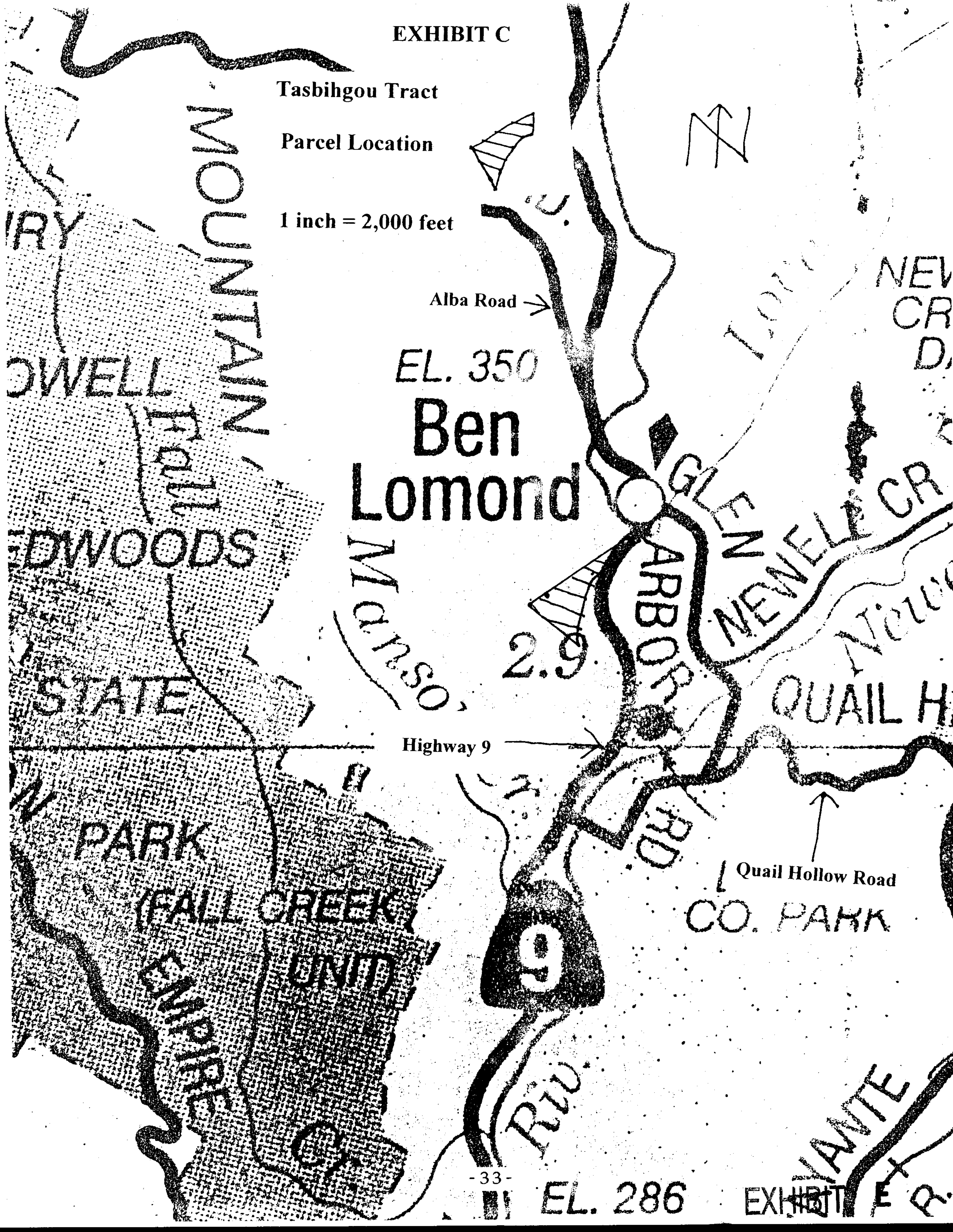
EXHIBIT C
Tasbihgou Tract
Soils Map
N
1 inch = 2000 feet
Brookdale
Clear Creek
Alba Creek
Hubbard Marshall Gulch Creek
Property Location
- 32 -

EXHIBIT C

Tasbihgou Tract

Parcel Location

1 inch = 2,000 feet



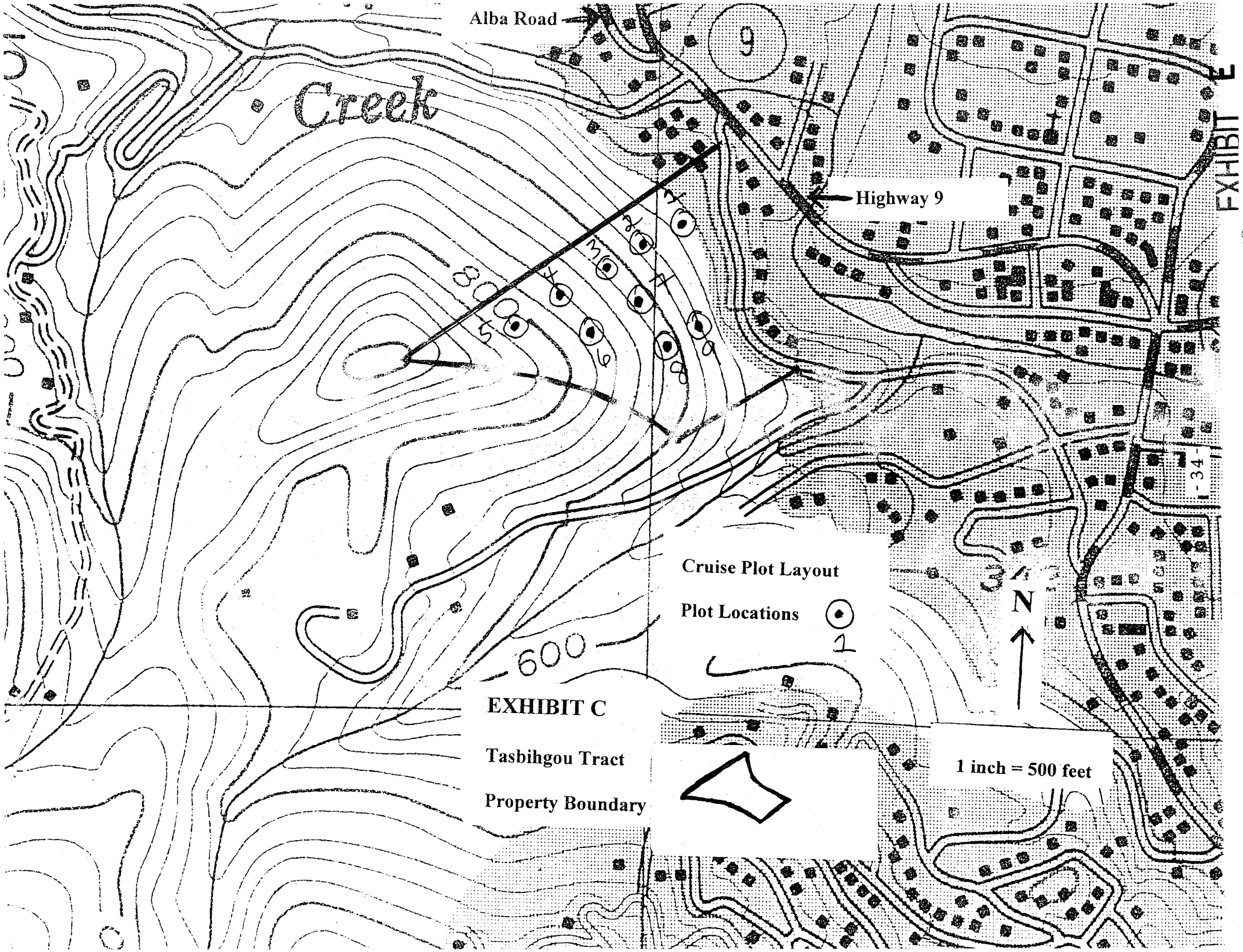

Alba Road
Creek
Highway 9
9
800
600
Cruise Plot Layout
Plot Locations
1
N
EXHIBIT C
Tasbihgou Tract
Property Boundary
1 inch = 500 feet
EXHIBIT E
-34-

EXHIBIT D

STOCKING ANALYSIS

Background: Government Code Section 51113(c)(3)(A) requires that parcels meet the timber stocking standards set forth in Section 4561 of the Public Resources Code and Section 913.8(a)(1) of the California Code of Regulations (CCR). The timber stocking standards pertaining to CCR Section 913.8(a) are met if the timberland contains an average, minimum post-harvest basal area of at least 75 square feet/acre for Site III land. The requirements of PR C 4561 are less stringent.

Analysis: Current stocking is 436 square feet of basal area per acre of conifers, well above the required standards. There will be no problem in leaving 75 square feet of basal area per acre after each selective harvest.

WOOD FIBER ANALYSIS

Background: Government Code Section 51113(c)(4) requires that parcels zoned timber production must meet the definition of "Timberland" which is defined in Government Code Section 511 04(f) as: "Privately owned land, or land acquired for state purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre".

Analysis: Field review of the property suggests that the parcel is capable of producing wood fiber in excess of 15 cubic feet/acre/year. The timberland is currently growing 436 board feet per acre per year of conifers. One cubic foot equals 12 board feet. Therefore the timberland is growing 36 cubic feet per acre per year of conifers. Growth of hardwoods is 3 cubic feet per acre per year. For all tree species the stand is growing 39 cubic feet per acre per year, about 2.5 times the state standards for rezoning to TPZ.

COMPATIBLE USE ANALYSIS

The primary land use on the parcel has been commercial timber production. There is also one residence on the tract. There is no conflict between the residence and future timber harvesting activities.

EXHIBIT E