

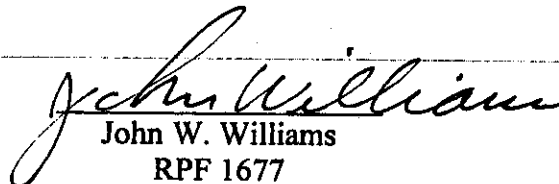
**TIMBER INVENTORY
DILLONWOOD TRACT**

Tulare County, California

**Prepared for
The Herzog Group, Inc.**

July 31, 2001

**Prepared by
HJW GeoSpatial, Inc.
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**John W. Williams
RPF 1677**



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Certificate of Consulting Service

I hereby certify that upon request for consulting service by:

*The Herzog Group Inc.
2125 Wylie Drive, Suite 1
Modesto, CA 95355*

HJW GeoSpatial, Inc. (HJW) has inventoried and analyzed the timber resource present on the following described property:

*Dillonwood Tract
Tulare County, California*

Our conclusions are presented in the attached report.

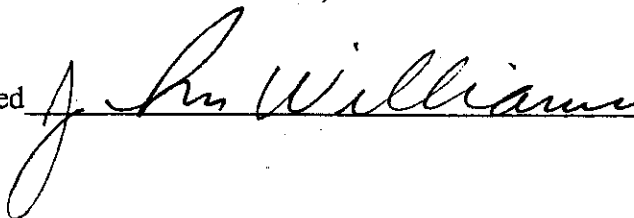
I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are our unbiased professional analyses, opinions, conclusions, and recommendations,
3. Neither I nor HJW have any present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.
4. Neither I nor HJW have any bias with respect to the property that is the subject of this report or to the parties involved with the assignment.
5. our engagement in this assignment was not contingent upon developing or reporting predetermined results.
6. our compensation for completing this assignment is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.
7. The professional forestry staff of HJW has made a personal inspection of the property that is the subject of this report.
8. No one provided significant professional assistance to the person signing this review report other than Bonnie Burchill, Mitch Haydon, Arthur Peterson, and John Woolsey (HJW employees), who contributed with the analysis.
9. I certify that my knowledge and experience is sufficient to allow me to competently provide this consulting service.

Name: John W. Williams, RPF 1677

Date: July 31, 2001

Signed



Part 1 - SUMMARY

Location:

The Dillonwood Tract for which this timber volume estimate has been prepared is located approximately 14 air miles northeast of the community of Springville in Tulare County, California. The Tract is more particularly described as follows:

Portions of Sections 2, 3, 4, 9, 10 & 11, Township 19 South, Range 30 East, Mount Diablo Base & Meridian.

A precise legal description of the subject property was not available as of the date of this report. The property is depicted on the maps attached as a part of this inventory report and is identified as the Dillonwood Tract. The subject property is additionally identified as Book 144, Page 5, parcels, 2, 3 & 4 of The Tulare County Assessor's Maps

Property Description:

Elevations on the tract range from 5,160 feet where Dillon Canyon intersects the southern boundary to 7,760 feet on a ridge along the northern boundary adjacent to Sequoia National Park. The topography ranges from flat to over 100 percent slope and granite cliffs at the extremes, with 20 to 50 percent slopes being typical.

The area of the tract as described in the Tulare County assessor's maps is 1,540 acres. Reliable survey information describing the location of the property lines was not available at the time this report was prepared. Substantial discrepancies in the location of property lines and corresponding mapped acres exist among the various maps that were provided to HJW for this project. Area of the tract according to the representation of the property lines accepted by HJW for this timber inventory is 1,328 acres. Any change in these mapped boundary locations may result in changes in the total acreage, in the distribution of acreage among the various timber strata, and in the corresponding volume reported. Aside from small outcrops of granite sporadically distributed throughout the property and one small meadow along the upper end of the North Fork of the Tule River, the tract either contains standing timber or is capable of growing commercial timber.

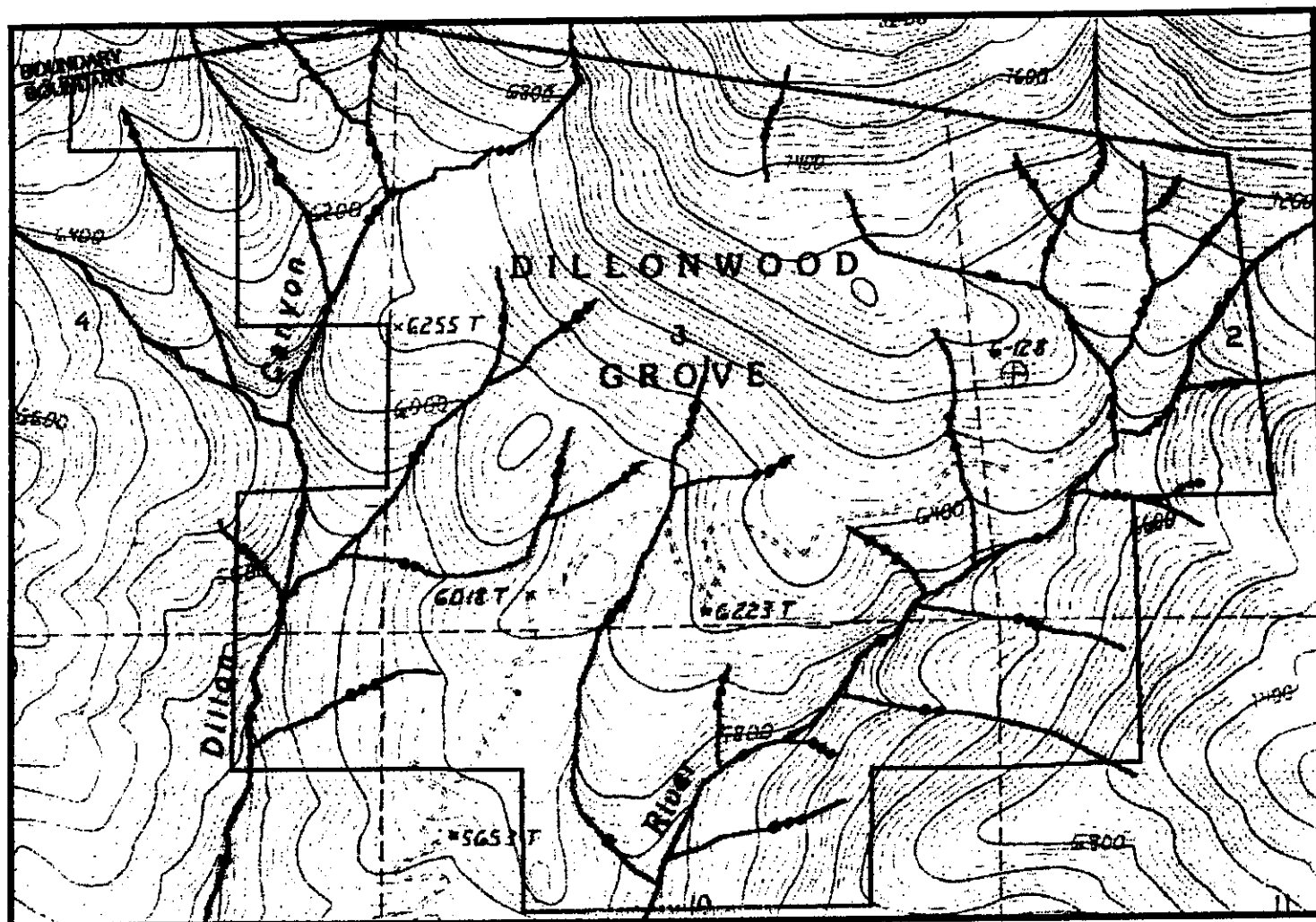
Using 1,540 acres reported from the Tulare County assessor's map of the property, uncut old growth giant sequoia stands occupy 58 acres, residual mixed conifer stands occupy 93 acres, young growth timber stands occupy acres 1,338 acres, pole stands occupy 28 acres, and non-timber occupies 23 acres.

From the property line configuration on the 1988 Moses Mt. U.S.G.S. 7 ½ minute quadrangle, the mapped acres are 1,328. Of this, 50 acres are uncut old growth giant sequoia stands, residual mixed conifer stands occupy 80 acres, young growth timber stands occupy acres 1,154 acres, pole stands occupy 24 acres, and non-timber occupies 20 acres.

July 31, 2001

Road access to the Dillonwood Tract is available by taking County Road 296 at the east end of the town of Springville, then County Road 276, and finally USFS Road #19S09 that connects to the property's internal road system. Very short segments of the USFS road have retained a paved surface, but the rest of the road is in poor condition, severely limiting rate of travel and is not advisable for low clearance vehicles. Some of the road system within the Dillonwood Tract shows evidence of having been paved or oiled in the past, but the road has essentially reverted to a dirt surface. Although the road system within the Dillonwood Tract has degraded to a dirt surface, it is in good condition with properly placed over-side drains, dips, waterbars, and culverts. The main roads within the property would only require minimal grading to accommodate low clearance vehicles and log truck traffic.

GENERAL PROPERTY MAP



Scale = 1" = 1600'

LEGEND

Property Boundary

Watercourses: Class I Class II Class III

NOTE: Property boundary lines are approximate,
And do not represent legal property line locations

Portions of U.S.G.S. Moses Mtn. 7.5' Quadrangle (1988)
Contour interval = 40 feet



Description of Tables Presented in this Report:

Summary tables report volumes for the entire tract and for each timber strata summarized by species, breast-height diameter class, and by log diameter class. An acreage summary reports acres by stand strata. The detailed tables report the following information by timber strata:

- Timber volume, numbers of trees and board foot volumes by species, diameter class measured at breast height (dbh), and log grade. Because of the requirements of the volume table used for old growth giant sequoia, the diameter shown is diameter outside bark (DOB) at 20 feet.

It should be noted that the volume listings show all volume present, not just the volume immediately available for harvest. Restrictions in the California Forest Practice Rules on harvesting within Watercourse and Lake Protection Zones, and restrictions incorporated into rules to ensure maximum sustained protection of high-quality timber products over time will make portions of the reported volume unavailable for immediate harvest.

Watercourse Buffers:

The California Forest Practice Rules for the Southern District restrict timber equipment and harvesting within "Stream Buffers" along Class I, II, and III watercourses.

To permit reliable estimation of the impact of the harvest restrictions within stream buffers on the volume of timber harvestable from this tract, the classification of all watercourses was field inspected in July 2001. The watercourse classifications shown on the maps attached to this inventory report are the basis for reductions in harvestable volume due to watercourse restrictions in this report.

Description Of Timber Strata Classification:

For the purpose of this inventory, the existing timber stand types developed by HJW in 2001 for the Dillonwood inventory, were aggregated into 8 timber strata conditions.

The vegetation type map was developed by HJW using classification by photo interpretation and field review. Some stand and species composition information was gleaned from an earlier inventory of the tract. As a final check, the inventory field crew reported and mapped stands they encountered on the ground that did not match the strata as mapped. The vegetation strata mapping used for this inventory reflects the results of all of the vegetation classification reviews described above, and in our opinion accurately describes the condition of the timber.

TABLE 1
ENTIRE TRACT
VOLUME SUMMARY BY SPECIES
OF ALL CONIFER TREES 10" DBH & LARGER¹

BALANCED TO 1,540 ASSESSOR'S ACRES

<u>Total Property Volume</u> (Board feet)			
Species	Number of Trees	Net Volume	Gross Volume
YG Giant Sequoia	25,829	11,698,000	11,953,000
OG Giant Sequoia	162	2,641,000	3,573,000
Ponderosa & Jeffrey Pine	1,521	1,395,000	1,464,000
Sugar Pine	14,158	9,447,000	9,638,000
White & Red Fir	77,503	24,370,000	25,226,000
Incense Cedar	32,646	4,899,000	5,824,000
All Conifers	151,819	54,450,000	57,678,000

BALANCED TO 1,328 MEASURED ACRES

<u>Total Property Volume</u> (Board feet)			
Species	Number of Trees	Net Volume	Gross Volume
YG Giant Sequoia	22,250	10,087,000	10,304,000
OG Giant Sequoia	162	2,641,000	3,573,000
Ponderosa & Jeffrey Pine	1,312	1,207,000	1,267,000
Sugar Pine	12,214	8,148,000	8,311,000
White & Red Fir	66,838	21,016,000	21,751,000
Incense Cedar	28,157	4,226,000	5,024,000
All Conifers	130,933	47,325,000	50,230,000

¹ Volumes in board feet Scribner log scale to utilized top. Top log diameter inside bark varied by species. See Procedures section for details. Includes a small amount of dead & down material.

Timber strata used in this inventory are:

<u>Stand Condition</u>	<u>Inventory Strata Included</u>
Dense Uncut Old Growth Stands	OY1/GW
Residual Stands with Young Growth	OY2/GSW
Young Growth Stands	Y2/GSW, Y2/GW
Open Young Growth	Y3/GPSW, Y3/GSW, Y4/PSW
Pole Size Stands	P2/GW
Non Timber	H, K

Descriptions Of The Timber Stand Conditions:

Dense Uncut Old Growth Stands:

These stands are dominated by large uncut old growth giant sequoia with white fir containing a small portion of the volume.

Residual Stands with Young Growth:

These stands contain significant numbers of large and medium sized trees and naturally-occurring younger trees scattered throughout the stand.

Young Growth Stands:

These stands are dominated by young trees, ranging from pole size (P) through medium size with diameters up to 28" (Y), to large size with diameters up to 40" and larger (YY). These stands have resulted mostly from past harvesting.

Pole Stands:

These stands are dominated by pole size (P) trees.

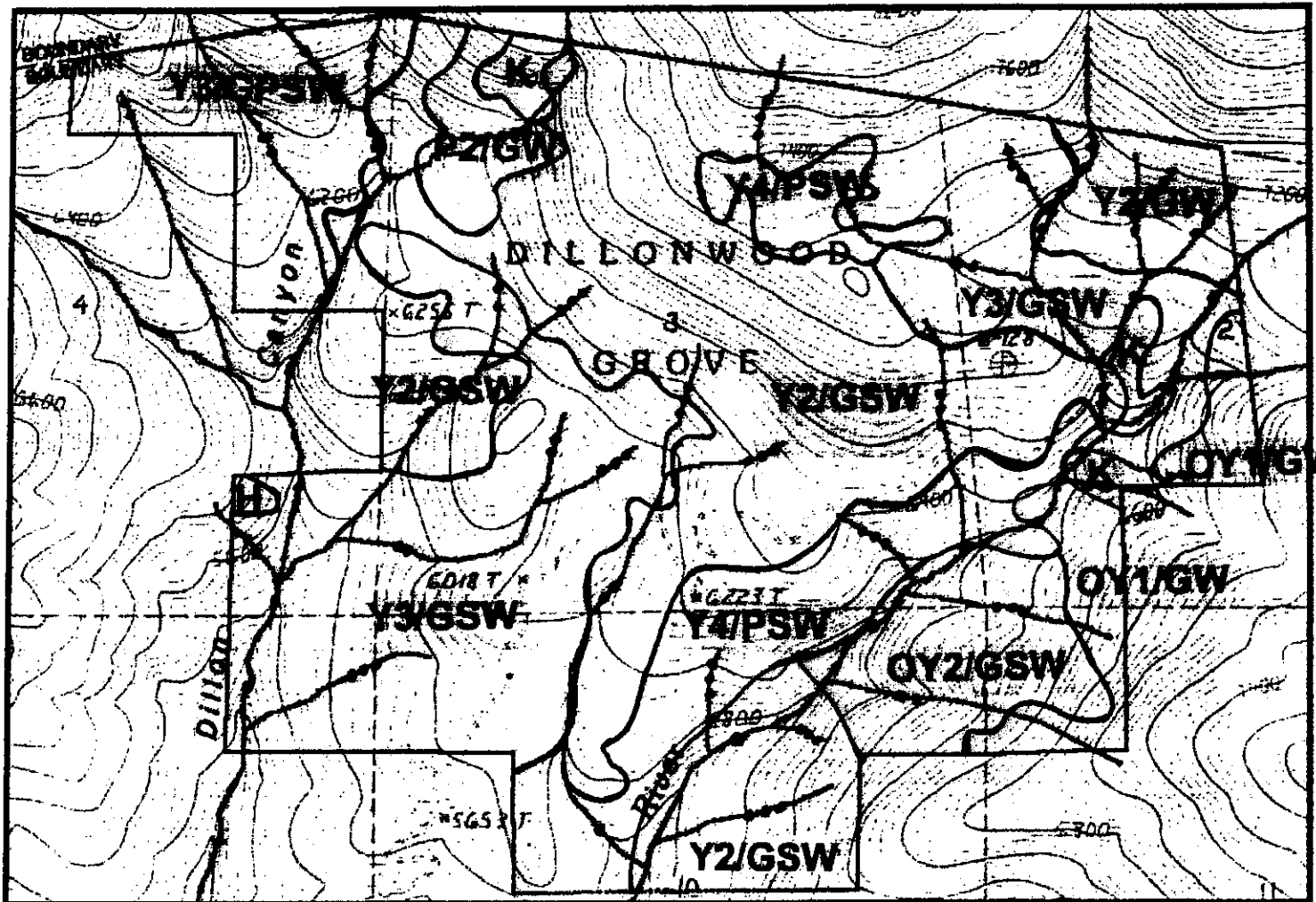
TABLE 2
ACRES BY INVENTORY STRATA

Stratum	Measured Acres	Assessor's Acres
OY1/GW	50	58
OY2/GSW	80	93
Y2/GSW	442	512
Y2/GW	86	100
Y3/PSW	94	109
Y3/GSW	395	458
Y4/PSW	137	159
P2/GW	24	28
H (hardwoods)	4	5
K (Rock)	16	18
Entire Property	1,328	1,540

ACRES BY STAND CONDITION

Stand Condition	Measured Acres	Assessor's Acres
Dense Uncut Old Growth Stands	50	58
Residual Stands with Young Growth	80	93
Young Growth Stands	528	612
Open Young Growth Stands	626	726
Pole Size Stands	24	28
Non Timber	20	23
Entire Property	1,328	1,540

VEGETATION TYPE MAP



Scale = 1" = 1600'

LEGEND

Property Boundary

Watercourses: Class I  Class II  Class III 

Vegetation Type Boundaries

NOTE: Property boundary lines are approximate,
And do not represent legal property line locations

Portions of U.S.G.S. Moses Mtn. 7.5' Quadrangle (1988)
Contour interval = 40 feet





The Dillonwood Tree, 242 inches (20.17 feet) DBH



Existing skid trail in a Young Growth Stand. Note ponderosa pine tree on the right, and vigorous young growth giant sequoia trees in center.



Young growth giant sequoia trees in a dense young growth stand.

Stump from selective harvest in a dense young growth stand.





Note sharply pointed crown of fast-growing young growth sequoia in an open young growth stand.



Large diameter young-growth giant sequoia in a Residual Stand with Young Growth.

Part 2 - ESTIMATE OF HARVESTABLE TIMBER VOLUME

Inventory data for the subject property identifies the quantity and quality of the timber present but does not address the volume of timber that could be lawfully removed from the property or the time-period required for its removal. The Forest Practice Act for the State of California establishes the minimum standards of operations for logging the timber on privately-owned timberland in the state. Development of a Timber Harvesting Plan (THP) or Non Industrial Management Plan (NTMP) for a property is site-specific; permit applications are reviewed by a multi-agency Review Team chaired by a representative of the California Department of Forestry and Fire Protection (CDF), the lead agency, and made up of representatives of other state agencies including the Department of Fish & Game, the Department of Mines & Geology, the Regional Water Quality Control Board, and other state and local agencies as appropriate. At a minimum, the plan must identify the method of logging, the silvicultural practice proposed, the method of regeneration following logging, the procedures for protecting water quality and for protecting endangered plant, fish and wildlife species and their associated habitats, and the methods for minimizing soil erosion. The subject property lies within the Southern District of the California Department of Forestry. CDF is the state agency that enforces the California Forest Practice Act. THPs and NTMPs prepared pursuant to this Act have been certified by the State Secretary of Resources as the "functional equivalent" of an Environmental Impact Report, and as such are also subject to the environmental review and protection standards of the California Environmental Quality Act (CEQA). The volume of timber that could be logged from the property is dependent upon the requirements established in an approved timber harvest plan (THP or NTMP). The California Department of Forestry and Fire Protection is the lead state agency for approval and administration of THPs and NTMPs.

The current landowner has an approved NTMP for the subject property, NTMP Number N-4-99-9, approved by CDF on 9-29-99. This NTMP is a permit that allows any owner of the Dillonwood property to harvest timber in accordance with the guidelines and limitation detailed in the approved NTMP, as well as the California Forest Practice Rules that existed on the date the NTMP was approved. Unlike a THP that has a maximum permit life of five years, a NTMP has no expiration period, and can be assumed by a new owner of the property. While the NTMP protects the landowner from changes in the Forest Practice rules, current and future state and federal regulations concerning botanical and wildlife values could further restrict timber harvesting under an approved NTMP.

The maximum timber volume an owner of the property could legally harvest in a single entry was estimated using two separate harvest scenarios:

1. The maximum volume harvestable pursuant to the existing approved NTMP; and
2. The volume harvestable pursuant to a new THP designed to maximize harvest volume from the property in a single entry.

To perform these estimates, two separate logging plans were prepared based on the stand table volumes reported in the 2001 inventory. The most significant constraints that affect the ability of an owner to harvest timber from the property are harvest restrictions of the Forest Practice Rules. For example, Section 953 et seq. governing silvicultural methods, establishes minimum basal

area retention requirements by timber site, minimum seed tree retention standards, and requires residual trees be left across the range of tree diameters existing in the stand before harvest, when the Single Tree Selection regeneration method is used. Group size limitations, reentry time limitations, and limitations on use of point count stocking requirements restrict harvest using the Group Selection regeneration method. Maximum harvest unit size, harvest unit adjacency limitations, and reentry time limitations apply to the clearcut regeneration method. Other sections of the rules establish a minimum percentage of the overstory and understory crown canopy to be retained within the Water and Lake Protection Zones (WLPZs) established around Class I and II watercourses, and restrictions on heavy equipment use adjacent to Class I, II and III watercourses.

The following assumptions and limitations were assumed in preparation of the logging plans:

1. According to the approved NTMP, all but a small portion of the property is timber Site Class I. The NTMP site classification is accepted for this analysis, and site Class I basal area retention standards of 100 square feet were used in developing estimates of harvestable volume.
2. Thirty-seven acres of Class I and one hundred twenty-three acres of Class II WLPZ are contained within the property, based on watercourse classification in the approved NTMP, and modified by field observation of HJW field professionals. The subject property does not lie within a threatened or impaired watershed within the meaning of 14 CCR §895.1. The standard WLPZ retention requirements, as included in the approved NTMP, require leaving at least 50% of the total canopy covering the ground. At least 25% of the residual overstory canopy must be composed of the existing overstory conifers. The NTMP permits only selection harvest, and the alternative THP analysis assumes selection harvest in WLPZ buffers. On the first entry, the presence of the WLPZ is expected to have little effect on the volume of timber harvestable from the property, but would have a substantial effect on subsequent harvests.
3. Selection harvest modeled under both harvest scenarios assume cutting each timber strata down to approximately 100 square feet of residual basal area. The NTMP modeled tree data for the property using the CACTOS computer growth simulator; based on that analysis, it estimates average annual stand growth equal to approximately two percent of the average net volume per acre. At this growth rate, it is estimated that at least fifteen to twenty years stand growth will be required after harvest before a subsequent selection harvest can produce economically feasible timber volumes.
4. The NTMP prohibits the cutting of the "large old-growth, or 'specimen' trees" found on the property. No old growth sequoia volume is included in the NTMP harvest schedule, but the basal area contribution of these trees is included in calculations of post-harvest basal area retention trees.
5. The new THP scenario assumes preferential harvest of old growth sequoia as the highest value species. Section 4726 of the California Public Resources Code prohibits the cutting of any giant sequoia trees greater than 16 feet (192 inches) in diameter in the Counties of Fresno, Tulare, or Kern. Four such trees were inventoried on the subject property and were excluded from harvest consideration, but their basal area contribution was recognized in the post-harvest stocking calculations.

Estimated volumes from the two harvest scenarios are presented in Tables 3 and 4.

Summary of Logging methods

Approximately 60% of the timbered area is estimated to be loggable using tractors or rubber tired skidders, 20% using short-span cable yarding, and another 20% is loggable only by helicopter. To facilitate cost-effective logging throughout the property, additional roads would need to be constructed. To develop our estimate of harvest method, the following analysis were performed, but are not included in this report: The existing and proposed roads and cable yarder landings were mapped; helicopter, tractor and rubber tired skidder, and cable yarding areas were delineated; skid trails on steep ground, which the Forest Practice Rules would require to be designated on the ground, were mapped; and logging methods, locations of roads, skid trails, and yarder landing locations were developed by taking the following factors into account:

1. Topography.
2. Equipment limitations and efficiency.
3. Physical obstacles such as cliffs, and waterfalls.
4. California Forest Practice regulations restrictions for watercourses and wet areas.
5. Watercourse location and classification.
6. Economic feasibility such as road construction costs.
7. Likelihood of obtaining a DFG permit and CDF approval to truck logs across the Tule River or Dillon Canyon.

Tables 5 and 6 show acres by timber strata, Silvicultural system, and yarding method identified for the new THP harvest scenario presented in Table 4.

TABLE 3

MAXIMUM HARVESTABLE VOLUME PER EXISTING NTMP

NET HARVESTABLE VOLUME BY SPECIES
OF ALL CONIFER TREES 10" DBH & LARGER²

BALANCED TO 1,540 ASSESSOR'S ACRES

Species	Thousands of Board Feet
OG Giant Sequoia	0
YG Giant Sequoia	7,211
Ponderosa & Jeffrey Pine	788
Sugar Pine	5,431
White & Red Fir	13,552
Incense Cedar	2,924
All Conifers	29,906

BALANCED TO 1,328 MEASURED ACRES

Species	Thousands of Board Feet
OG Giant Sequoia	0
YG Giant Sequoia	6,218
Ponderosa & Jeffrey Pine	680
Sugar Pine	4,685
White & Red Fir	11,689
Incense Cedar	2,523
All Conifers	25,795

² Volumes in board feet Scribner log scale to utilized top. Top log diameter inside bark varied by species. See Procedures section for details. Includes a small amount of dead & down material.

TABLE 4

**MAXIMUM HARVESTABLE VOLUME PER
NEW THP**

NET HARVESTABLE VOLUME BY SPECIES
OF ALL CONIFER TREES 10" DBH & LARGER³

BALANCED TO 1,540 ASSESSOR'S ACRES

Species	Thousands of Board Feet		
	Selection Harvest	Clearcut Harvest	Total Harvest
OG Giant Sequoia	1,204	1,258	2,462
YG Giant Sequoia	3,952	4,652	8,604
Ponderosa & Jeffrey Pine	347	727	1,074
Sugar Pine	2,709	3,876	6,585
White & Red Fir	6,971	11,023	17,994
Incense Cedar	1,514	2,143	3,657
All Conifers	16,697	23,679	40,376

BALANCED TO 1,328 MEASURED ACRES

Species	Thousands of Board Feet		
	Selection Harvest	Clearcut Harvest	Total Harvest
OG Giant Sequoia	1,034	1,087	2,121
YG Giant Sequoia	3,403	4,019	7,422
Ponderosa Pine	298	628	926
Sugar Pine	2,332	3,352	5,684
White Fir	5,997	9,536	15,533
Incense Cedar	1,303	1,854	3,157
All Conifers	14,367	20,476	34,843

³ Volumes in board feet Scribner log scale to utilized top. Top log diameter inside bark varied by species. See Procedures section for details. Includes a small amount of dead & down material.

TABLE 5

Acres by Yarding Method Per New THP

Balanced to Assessor's Acres

Strata	Clearcut Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	31	31
OY2/GSW	0	0	34	34
Y2.GSW	97	86	27	210
Y2/GW	0	17	35	52
Y3/GPSW	66	0	0	66
Y3/GSW	146	46	21	213
Y4/PSW	73	7	0	80
P2/GW	7	0	7	14
Total	389	156	155	700

Strata	Selection Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	27	27
OY2/GSW	0	8	51	59
Y2.GSW	128	128	46	302
Y2/GW	28	0	20	48
Y3/GPSW	43	0	0	43
Y3/GSW	195	15	35	245
Y4/PSW	48	31	0	79
P2/GW	0	5	9	14
Total	442	187	188	817

Strata	Total Harvest Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	58	58
OY2/GSW	0	8	85	93
Y2.GSW	225	214	73	512
Y2/GW	28	17	55	100
Y3/GPSW	109	0	0	109
Y3/GSW	341	61	56	458
Y4/PSW	121	38	0	159
P2/GW	7	5	16	28
Total	831	343	343	1,517

TABLE 6

Acres by Yarding Method Per New THP

Balanced to Measured Acres

Strata	Clearcut Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	27	27
OY2/GSW	0	0	29	29
Y2.GSW	84	75	23	182
Y2/GW	0	15	30	45
Y3/GPSW	57	0	0	57
Y3/GSW	126	40	18	184
Y4/PSW	63	6	0	69
P2/GW	6	0	6	12
Total	336	136	133	605

Selection Acres

Strata	Selection Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	23	23
OY2/GSW	0	7	44	51
Y2.GSW	110	110	40	260
Y2/GW	24	0	17	41
Y3/GPSW	37	0	0	37
Y3/GSW	168	13	30	211
Y4/PSW	41	27	0	68
P2/GW	0	4	8	12
Total	380	161	162	703

Total Harvest Acres

Strata	Total Harvest Acres			Total
	Tractor	Cable	Helicopter	
OY1/GW	0	0	50	50
OY2/GSW	0	7	73	80
Y2.GSW	194	185	63	442
Y2/GW	24	15	47	86
Y3/GPSW	94	0	0	94
Y3/GSW	294	53	48	395
Y4/PSW	104	33	0	137
P2/GW	6	4	14	24
Total	716	297	295	1,308

Part 3 - PROCEDURES

The timber volume estimate presented in this report is based on a line plot prism cruise related to timber stand classification. To stratify different stand conditions for the inventory, the timber stands were classified on USFS 1:15,840 scale color aerial photographs dated July 3, 1996. The southwest portion of the property has been harvested since the date of photography, and the photo classification was adjusted by means of on-the-ground observation to reflect the altered condition.

Summary of Cruising Techniques used in this inventory

Line Spacing = 12 chains
Plot Spacing = 5 chains

BAF used = 40

Field location of nearest plot on cruise line:

- Two hundred and two sample plots were distributed in a regular grid pattern with the lines running east and west. Distances between plots were paced, and distances between lines were measured if accurate pacing was not possible. A starting point was established near the northeast corner of the property, and all lines and plots were worked based on that starting point.
 - Plot centers were identified with a flagged stick in the ground and a hanging flag at eye level.
 - Each plot was identified with the line and plot numbers assigned on the layout map.
 - Plot centers falling in a physically impossible field situation were offset by $\frac{1}{2}$ chain in the direction suited to avoid the situation.
 - For broken topped trees estimated normal height was recorded, and missing logs were recorded as "X."
 - A tree was included if its base was more than half inside the plot. For trees exactly on the line, every other one was included.
-
- Diameter and height measurements on the line between classes were rounded up and down alternately based on all plots worked.

Old Growth Giant Sequoia Inventory:

All old growth giant sequoias were referenced either directly or indirectly through other trees to a Global Positioning System (GPS) location. Since a 3-D GPS fix rarely can be obtained directly under the trees, GPS points were established nearby where a 3-D fix could be obtained. These points were flagged and labeled with the GPS file name. The normal tree information was recorded for each tree, and an azimuth and horizontal distance from the GPS reference point (or from an intermediate reference tree) to the tree were also recorded. The GPS files were collected on a Trimble GeoExplorer. Electronic data files for the GPS coordinates of the trees are a part of this report, files are located on the report Compact Disk.

The measurements for old growth sequoia were DOB at 20 feet and the number of 16-foot logs to a 12-inch top dib. The diameter outside bark at 20 feet was derived by the ratio of DOB at 20 feet measured with a wide-scale relaskop to the relaskop measurement for DBH. Each individual giant sequoia tree measured was marked with flagging and numbered. Detailed giant sequoia tree measurements for each of the 162 trees, is contained in Appendix A.

On sample plots, all conifer trees (except Giant Sequoias) 10 inches DBH and larger were measured. Hardwoods were not measured. The position of the tree was defined as the base of the tree, even on leaning trees.

All merchantable conifer snags 10 inches DBH and 12 feet tall and larger at least 25% sound were recorded. The position of down trees was based on the root collar.

Merchantable down logs 10 inches dib (small end) and 8 feet long and larger, including old growth sequoia, that are at least 25% sound were measured on a prism plot basis. "In" and "out" were determined by working log dib (small end) against the limiting distance factor.

Plot Data Collected:

1. Species.
2. DBH in 2-inch classes.
3. Number of 16-foot logs to an 8-inch top dib for all species except young growth sequoia.
4. Young growth sequoia, total tree height to the nearest 10 feet.
5. Defect by 16-foot log position for all species. Estimate of logs that would be lost to breakage.
6. Grade for all species except sequoia and cedar.

ESTIMATED DEFECT :

- Recorded by log position.
- Sound logs too rough or deformed to be used for sawlogs and those logs that the cruiser judged would be lost to breakage were classed as unmerchantable.
- Cull logs are those with indications of extensive rot or badly fire scarred.
- Partial defect of merchantable logs. (example -- 1/4, 1/3, 1/2, 2/3, or 3/4 defective.) Logs more than 75% defective were considered 100% defective.

STATISTICAL CONTROL:

The calculated standard error of the total gross conifer volume estimate of all species except old growth giant sequoia resulting from this sample was $\pm 4.1\%$ at one standard deviation, or $\pm 8.1\%$ at the 95% confidence level (two standard deviations). This means that if the tract were re-inventoried using the same sampling procedure and merchantable timber specifications as used to develop this report, 95 times out of 100, the estimated gross total conifer timber volumes (except old growth giant sequoia) should vary not more than 8.1%. All old growth giant sequoia trees present on the subject property were measured. Sampling statistical control descriptors are not applicable to 100% inventories such as was done in the case of old growth giant sequoia.

TREE VOLUME TABLES:

Several volume sources have been drawn upon to accommodate the tree species present on the property. The incense-cedar volumes were based on the published USFS Region 5 table.

The volume source specifications for all the species included in the inventory are summarized below (the specific volume table computer file name is shown in brackets and all caps):

<u>Species</u>	<u>Volume Table Used</u>
Ponderosa and Jeffrey pine	USFS Region 5 Handbook Table, 16 foot logs to an 8" top [R5PPS2]
Sugar pine	USFS Region 5 Handbook Table 16 foot logs to an 8" top [R5SPS2]
White & Red fir	USFS Region 5 Handbook Table 16 foot logs to an 8" top [R5WFS2]
Incense-cedar	USFS Region 5 to Handbook Table 16 foot logs to an 8" top [R5ICALL]
Old Growth Giant Sequoia	Hallin 1941 Old Growth Redwood 20.5' logs, DOB @ 20', log ht to 12" top [GIANTSEQ]
Young Growth Giant Sequoia	California Forestry Note, 1941 Young Growth Sierra Redwood equation [GSB06T]

Trees were graded according to the following grading rules:

LOG GRADES:

Ponderosa and sugar pine

Improved pine grading system

- GRADE 1 Primary (log knots), one log knot not over one-half inch. Secondary (scars, etc.) confined to 3 panels or less
- GRADE 2 Primary (log knots), confined to 4 panels or less. Secondary (scars, etc.) plus primary confined to 6 panels.
- GRADE 3 6 panels free of all grading defects.
- GRADE 4 Primary (log knots), a) 80 percent bark limbs, b) bark limbs not exceed one-sixth log diameter. Other log knots not exceed one-twelfth log diameter. c) not more than 24 near maximum size. Secondary (scars, etc.) confined to 3 panels or less
- GRADE 5 All other logs if net scale one-third or more of gross.

GENERAL SPECIFICATIONS

1. Apply to 16-foot logs as cruised.
2. Must be live logs with one-third net scale.
3. Grading defects apply without reference to scaling practice.
4. Grading defects: log-surface abnormalities that influence quality of lumber sawn from log.
5. Primary defects: "Log knots"—limbs, stubs, limb holes, overgrown knots.
6. Secondary defects: scars, large or unsound burls, forks, crooks, cracks, cankers.
7. Log knots within scars disregarded if 2 in. or smaller and 5 in. or more below normal wood surface; otherwise counted.
8. False defects (disregard): small sound burls, bumps, flutes or flanges, bird peck, minor bark distortions.
9. Indeterminate defects (disregard): sweep, spiral grain.
10. Panel: one-fourth circumference, 4 feet long. May be scattered over log but must not overlap.
11. Primary defect takes precedence over secondary on any panel.

White and red fir

Dinuba study fir grades

- GRADE 1 90 percent clear any one of the following permissible:
- 1) one knot over 3" in central portion
 - 2) two knots 3" or smaller in central portions
 - 3) four scattered pin knots;
 - 4) any number of knots within 1 foot of one end;
 - 5) group of knots affecting $\frac{1}{4}$ of circumference for a distance of not over 6 feet from one end;
 - 6) or a line of knots smaller than 3" for the full length of the log affecting a strip of circumference not over $\frac{3}{10}$ of log d.i.b.
- GRADE 2 50 percent surface clear in areas at least 8 feet long by 6" or more in width between knots.
- GRADE 3 Logs less than 50 percent surface clear. Any combination of knots or blemishes which are not permitted on the higher grades. Any number of knots not over 3 inches in d.i.b.
- GRADE 4 Merchantable logs not qualifying for Grades 1, 2, or 3.

Incense-cedar and giant sequoia were not graded due to the absence of any standard grading system.

PLOT CARD CODING

1 - Species - Sp

Commercial conifers

- 1_ Ponderosa pine and Jeffrey pine
- 2_ Sugar pine
- 4_ White fir
- 6_ Red fir
- 7_ Incense-cedar
- 9_ Giant sequoia

- _1 Old growth
- _2 Young growth

- 2 - DBH - **DBH**
- 2-inch classes (e.g., 12" class = 11.1" through 13.0").
 - For bucked logs and chunks (**tree class 3**) record small end dib to nearest inch.

3. Height - **LOG HT & TOT HT**
- Log height to 8" top dib for live trees, merchantable snags, and down trees except for young growth sequoias which will be total height to tip.
 - Scaling length in feet for bucked logs and chunks (**tree class 3**).

- 6 - Tree Class - **TREE CLASS**
- For merchantable dead material record:
 - 1 for Merchantable snag or down tree expressed as a tree
 - 3 for Merchantable bucked log or chunk

- 7 - Special class - **SPEC. CLASS** Defect indicators

- 8 - Partial defect - record at right side of sheet

- 2 - 1/4
- 3 - 1/3
- 5 - 1/2
- 6 - 2/3
- 7 - 3/4

EX: 338 = 1/3 of log 3 is unmerch
219 = 1/4 of butt log is cull
57X = 1/2 of log 7 is missing

Part 4 - DETAIL TABLES

LIST OF TABLES

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Table 8	VOLUME OF STANDING OLD GROWTH GIANT SEQUOIA	38 – 46
Table 9	VOLUME BY LOG DIB, EXCEPT OLD GROWTH GIANT SEQUOIA ⁴	47 – 51

⁴ As requested by Client

TABLE 7

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

YOUNG GROWTH GIANT SEQUOIA

Scribner Log Rule Estimated Volume (THOUSANDS of BOARD Feet)					
DBH CLASS (IN)	NUMBER OF TREES	NET MERCH. VOLUME	UNMER. VOLUME	CULL VOLUME	GROSS VOLUME
10	4992	134	14	0	148
12	4584	245	0	0	245
14	2008	139	15	0	154
16	2788	306	0	0	306
18	1749	287	0	0	287
20	2347	515	0	0	515
22	1070	297	9	0	306
24	1265	454	0	0	454
26	663	349	0	0	349
28	514	390	0	0	390
30	414	264	0	0	264
32	297	256	12	0	268
34	245	231	5	0	236
36	591	690	5	0	695
38	351	484	5	0	489
40	397	597	2	0	599
42	154	264	34	0	298
44	245	420	58	0	478
46	75	152	0	0	152
48	208	503	0	0	503
50	254	672	17	0	689
52	115	313	5	0	318
54	114	367	0	0	367
56	70	244	5	0	249
58	81	282	33	0	315
60	45	187	5	0	192
62	39	172	0	0	172
64	27	155	0	0	155
68	37	197	5	0	202
72	33	198	5	0	203
74	10	51	5	0	56
78	9	82	5	0	87
84	6	80	2	0	82
86	14	105	0	0	105
90+	18	239	9	0	248
DEAD + DOWN		1377	0	0	1377
TOTAL	25,829	11,698	255	0	11,953

SUBSETS---

10- 16	14372 :	824 :	29	0 :	853 :
18- 22	5166 :	1099 :	9	0 :	1108 :
24- 34	3398 :	1944 :	17	0 :	1961 :
36- 46	1813 :	2607 :	104	0 :	2711 :
48- 58	842 :	2381 :	60	0 :	2441 :
60+	238 :	1466 :	36	0 :	1502 :
TOTAL	25,829 :	10,321 :	255	0 :	10,576 :

Standard Error of Gross Volume Estimate = 1433.9 or 12.0%

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

PONDEROSA AND JEFFREY PINE

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DBH CLASS (IN)	NUMBER OF TREES	MERCHANTABLE LOG GRADES					NET	
		1SAWLOG	2SAWLOG	3SAWLOG	4&5 SAW		MERCH VOLUME	GROSS VOLUME
14	248	0	0	0	22	:	22	22
16	189	0	0	0	27	:	27	33
18	138	0	0	0	15	:	15	15
22	110	0	0	0	65	:	65	65
24	84	0	0	0	18	:	18	18
26	72	0	0	0	57	:	57	57
30	265	0	0	17	261	:	278	283
32	155	40	20	0	197	:	257	261
34	50	0	0	0	83	:	83	83
36	41	0	0	0	95	:	95	97
38	64	0	0	43	110	:	153	161
40	64	25	24	20	63	:	132	166
48	21	0	0	0	59	:	59	65
52	20	78	0	0	56	:	134	138
TOTAL	1,521	143	44	80	1,128	:	1,395	1,464
SUBSETS---								
10- 16	437	0	0	0	49	:	49	55
18- 22	248	0	0	0	80	:	80	80
24- 34	626	40	20	17	616	:	693	702
36- 46	169	25	24	63	268	:	380	424
48- 58	41	78	0	0	115	:	193	203
60+	0	0	0	0	0	:	0	0
TOTAL	1,521	143	44	80	1,128	:	1,395	1,464

Standard Error of Gross Volume Estimate = 390.9 or 26.5%

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

SUGAR PINE

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DBH CLASS (IN)	NUMBER OF TREES	MERCHANTABLE LOG GRADES					NET MERCH VOLUME	GROSS VOLUME
		1SAWLOG	2SAWLOG	3SAWLOG	4&5 SAW			
10	1009	0	0	0	18		18	18
12	967	0	0	0	30		30	30
14	1264	0	0	0	58		58	68
16	1901	0	0	19	306		325	337
18	1750	0	0	0	445		445	455
20	1098	0	0	0	389		389	394
22	643	0	0	41	241		282	282
24	1116	0	0	0	700		700	720
26	860	0	20	47	511		578	591
28	953	0	0	99	799		898	915
30	714	0	0	0	829		829	837
32	476	0	0	0	547		547	563
34	302	0	0	0	422		422	429
36	471	0	51	164	656		871	888
38	165	0	0	48	317		365	378
40	159	0	0	0	384		384	396
42	115	0	0	41	232		273	283
44	26	0	0	0	72		72	72
46	71	26	65	35	186		312	315
48	20	0	0	0	87		87	87
50	78	26	90	79	231		426	444
DEAD + DOWN		43	44	132	917		1136	1136
TOTAL	14,158	95	270	705	8,377		9,447	9,638
SUBSETS----								
10- 16	5141	0	0	19	412		431	453
18- 22	3491	0	0	41	1075		1116	1131
24- 34	4421	0	20	146	3808		3974	4055
36- 46	1007	26	116	288	1847		2277	2332
48- 58	98	26	90	79	318		513	531
60+	0	0	0	0	0		0	0
TOTAL	14,158	52	226	573	7,460		8,311	8,502

Standard Error of Gross Volume Estimate = 1026.5 or 10.7%

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

WHITE AND RED FIR

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DBH CLASS (IN)	NUMBER OF TREES	MERCHANTABLE LOG GRADES				NET MERCH VOLUME	GROSS VOLUME
		1SAWLOG	2SAWLOG	3SAWLOG	4SAWLOG		
10	14509	0	0	262	43	305	375
12	13841	0	0	565	148	713	774
14	11557	0	0	978	89	1067	1128
16	8570	0	0	1140	365	1505	1546
18	5262	0	0	877	352	1229	1279
20	4260	0	0	1122	371	1493	1534
22	4594	0	0	1910	272	2182	2218
24	4292	0	189	1934	578	2701	2760
26	2865	0	79	1579	453	2111	2195
28	3106	0	136	2064	737	2937	3029
30	1392	0	143	1178	409	1730	1786
32	997	36	20	680	528	1264	1305
34	848	36	31	894	380	1341	1380
36	245	0	46	358	52	456	466
38	297	0	66	293	274	633	638
40	439	23	185	332	549	1089	1144
42	130	0	96	93	170	359	364
44	172	68	154	22	289	533	568
46	48	0	57	18	78	153	163
48	61	0	15	67	154	236	241
56	18	0	0	0	92	92	92
DEAD + DOWN		0	17	204	20	241	241
TOTAL	77,503	163	1,234	16,570	6,403	24,370	25,226
SUBSETS---							
10- 16	48477	0	0	2945	645	3590	3823
18- 22	14116	0	0	3909	995	4904	5031
24- 34	13500	72	598	8329	3085	12084	12455
36- 46	1331	91	604	1116	1412	3223	3343
48- 58	79	0	15	67	246	328	333
60+	0	0	0	0	0	0	0
TOTAL	77,503	163	1,217	16,366	6,383	24,129	24,985

Standard Error of Gross Volume Estimate = 1616.8 or 6.4%

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA
INCENSE-CEDAR

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DBH CLASS (IN)	NUMBER OF TREES	NET MERCH. VOLUME	UNMER. VOLUME	CULL VOLUME	GROSS VOLUME
10	9597	95	116	10	221
12	4370	69	51	8	128
14	5448	183	10	19	212
16	3261	186	23	22	231
18	2129	217	4	22	243
20	1405	240	5	24	269
22	1129	198	5	24	227
24	1288	264	0	31	295
26	801	297	0	42	339
28	830	349	0	38	387
30	523	254	31	30	315
32	311	216	0	31	247
34	250	216	5	22	243
36	479	455	39	54	548
38	217	299	0	33	332
40	113	184	0	20	204
42	168	263	3	34	300
44	51	78	5	8	91
46	50	101	0	19	120
48	64	156	0	19	175
50	19	40	0	6	46
52	59	160	0	19	179
54	31	87	3	10	100
56	15	56	0	5	61
58	15	26	0	26	52
68	23	77	1	48	126
DEAD + DOWN		133	0	0	133
TOTAL	32,646	4,899	301	624	5,824

SUBSETS---

10- 16	22676	533	200	59	792
18- 22	4663	655	14	70	739
24- 34	4003	1596	36	194	1826
36- 46	1078	1380	47	168	1595
48- 58	203	525	3	85	613
60+	23	77	1	48	126
TOTAL	32,646	4,766	301	624	5,691

Standard Error of Gross Volume Estimate = 798.4 or 13.6%

DILLONWOOD TRACT
VOLUME OF STANDING TIMBER
UNIT SUMMARY - ALL SPECIES
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

ALL SOFTWOODS

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DBH CLASS (IN)	NUMBER OF TREES	NET MERCH VOLUME	UNMER. VOLUME	CULL VOLUME	GROSS VOLUME
10	30107	552	162	48	762
12	23762	1057	70	50	1177
14	20525	1469	86	29	1584
16	16709	2349	65	39	2453
18	11028	2193	41	45	2279
20	9110	2637	51	24	2712
22	7546	3024	40	34	3098
24	8045	4137	51	59	4247
26	5261	3392	74	65	3531
28	5403	4574	94	53	4721
30	3308	3355	51	79	3485
32	2236	2540	55	49	2644
34	1695	2293	46	32	2371
36	1827	2567	73	54	2694
38	1094	1934	31	33	1998
40	1172	2386	58	65	2509
42	567	1159	47	39	1245
44	494	1103	98	8	1209
46	244	718	8	24	750
48	374	1041	5	25	1071
50	351	1138	35	6	1179
52	194	607	9	19	635
54	145	454	3	10	467
56	103	392	5	5	402
58	96	308	33	26	367
60	45	187	5	0	192
62	39	172	0	0	172
64	27	155	0	0	155
68	60	274	6	48	328
72	33	198	5	0	203
74	10	51	5	0	56
78	9	82	5	0	87
84	6	80	2	0	82
86	14	105	0	0	105
90+	18	239	9	0	248
DEAD + DOWN		2887	0	0	2887
TOTAL	151,657	51,809	1,328	968	54,105

SUBSETS---

10- 16	91103 :	5427 :	383	166 :	5976 :
18- 22	27684 :	7854 :	132	103 :	8089 :
24- 34	25948 :	20291 :	371	337 :	20999 :
36- 46	5398 :	9867 :	315	223 :	10405 :
48- 58	1263 :	3940 :	90	91 :	4121 :
60+	261 :	1543 :	37	48 :	1628 :
TOTAL	151,657 :	48,922 :	1,328	968 :	51,218 :

Standard Error of Gross Volume Estimate = 2218.6 or 4.1%

TABLE 8

VOLUME OF STANDING

OLD GROWTH GIANT SEQUOIA

ENTIRE PROPERTY

DBH Subset	Number of Trees	Volume in MBF	
		Net	Gross
36" - 46"	8	23	26
48" - 58"	25	116	134
60" - 190"	125	2,432	3,138
192" +	4	0	57,730
Total	162	2,571	3,298

Summary Worksheet

DBH Subset	Strata	Acres	Number of Trees	----Basal Area----		---Volume in MBF---	
				per acre	total	Net	Gross
36" - 46"	OY1/GW	50	2	0.37	83.80	4.19	4.83
	OY2/GSW	80	6	0.75	59.82	19.23	21.45
	TOTAL		8	1.10	143.62	23.42	26.28
48" - 58"	OY1/GW	50	5	1.71	85.61	24.22	28.12
	OY2/GSW	80	13	2.58	206.52	60.84	70.69
	Y2/GSW	442	4	0.15	66.10	19.71	22.38
	Y4/PSW	137	3	0.28	38.77	11.18	12.50
	TOTAL		25	0.56	397.00	115.95	133.69
60" -190"	OY1/GW	50	39	44.80	2,239.82	785.11	939.05
	OY2/GSW	80	37	27.08	2,166.78	677.94	881.37
	Y2/GSW	442	33	5.69	2,513.84	698.74	922.64
	Y2/GW	86	2	0.80	68.61	22.01	28.17
	Y3/GPSW	94	6	4.66	438.03	123.99	164.74
	Y3/GSW	395	4	0.51	201.80	58.64	69.11
	Y4/PSW	137	4	2.24	306.63	65.62	132.55
	TOTAL		125	6.18	7,935.51	2,432.05	3,137.63
192"+	Y2/GSW	442	1	0.47	209.53	0.00	57.73
	Y3/GSW	395	3	2.21	871.92	70.63	275.70
	TOTAL		4	1.29	1,081.45	70.63	333.43

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

OY1/GW
50 Acres

Tree #	DBH	DOB		Basal Area	Volume (bd ft)		# of trees
		@ 20'			Net	Gross	
16	36	30		7.07	1,240	1,340	-
17	46	32		11.54	2,950	3,490	-
Total				18.61	4,190	4,830	2
Per Acre				0.37	83.80	96.60	0.04
30	54	38		15.90	4,030	4,670	-
48	54	40		15.90	3,890	5,070	-
15	56	42		17.10	5,500	6,170	-
31	58	42		18.35	5,500	6,170	-
44	58	44		18.35	5,300	6,040	-
Total				85.61	24,220	28,120	5
Per Acre				1.71	484.40	562.40	0.10
35	60	48		19.63	6,530	7,880	-
47	62	46		20.97	5,720	6,500	-
19	64	54		22.34	9,890	10,720	-
20	64	54		22.34	8,810	9,690	-
25	66	44		23.76	6,000	6,000	-
36	66	52		23.76	6,560	8,180	-
24	68	54		25.22	8,090	9,690	-
10	70	50		26.73	4,595	5,020	-
11	70	64		26.73	10,390	14,850	-
26	72	50		28.27	6,970	8,400	-
42	72	54		28.27	5,850	7,770	-
23	76	60		31.50	9,950	11,810	-
27	76	64		31.50	11,220	13,260	-
38	78	62		33.18	11,980	13,790	-
12	78	70		33.18	11,990	15,670	-
22	80	60		34.91	9,950	11,810	-
18	82	54		36.67	10,890	11,860	-
45	82	68		36.67	12,660	14,880	-
14	84	66		38.48	15,590	18,270	-
6	86	64		40.34	14,220	15,960	-
29	90	72		44.18	13,170	18,460	-
43	90	76		44.18	15,640	18,370	-
9	96	68		50.27	13,650	14,880	-
5	96	80		50.27	23,550	27,910	-
8	96	80		50.27	18,360	24,200	-
46	96	86		50.27	22,410	25,440	-
37	114	86		70.88	17,710	22,990	-
40	118	80		75.94	19,778	24,200	-
41	120	90		78.54	25,350	30,300	-
28	122	98		81.18	33,420	38,780	-
4	126	102		86.59	29,960	38,710	-
21	130	92		92.18	29,490	34,280	-
33	130	104		92.18	37,450	43,490	-
7	134	122		97.93	51,080	59,410	-
39	136	102		100.88	27,640	32,260	-
3	142	112		109.98	36,865	46,450	-
32	160	130		139.63	59,480	72,440	-
34	162	120		143.14	43,381	53,070	-
13	190	152		196.89	79,070	93,780	-
Total				2,239.82	785,109	939,050	39
Per Acre				44.80	15,702.18	18,781.00	0.78

ALL TREES
TOTAL
PER ACRE

2,344.04 813,519 972,000 46.00
46.88 16,270.38 19,440.00 0.92

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

OY2/GSW
80 Acres

Tree #	DBH	DOB		Volume (bd ft)		# of trees
		@ 20'	Basal Area	Net	Gross	
100	38	28	7.88	1,700	1,800	
72	40	32	8.73	2,950	3,490	
70	44	36	10.56	3,230	3,330	
73	44	36	10.56	4,190	4,760	
96	44	36	10.56	3,470	3,780	
98	46	36	11.54	3,690	4,290	
Total			59.82	19,230	21,450	6
Per Acre			0.75	240.38	268.13	0.08
71	48	38	12.57	3,500	3,600	
151	48	38	12.57	4,230	5,230	
69	50	40	13.64	5,000	5,630	
95	50	42	13.64	4,820	5,520	
93	52	42	14.75	4,170	4,270	
153	54	40	15.90	4,580	5,630	
92	56	42	17.10	4,820	5,520	
94	56	42	17.10	4,820	5,520	
91	56	44	17.10	5,300	6,040	
149	56	44	17.10	4,550	5,380	
87	58	44	18.35	4,750	6,040	
89	58	46	18.35	4,380	5,120	
97	58	46	18.35	5,920	7,190	
Total			206.52	60,840	70,690	13
Per Acre			2.58	760.50	883.63	0.16
145	60	46	19.63	6,460	7,190	
90	60	48	19.63	6,530	7,880	
152	60	48	19.63	7,380	8,620	
76	62	50	20.97	7,990	9,330	
68	66	48	23.76	5,600	6,970	
77	66	50	23.76	6,970	8,400	
150	66	52	23.76	7,580	9,100	
154	66	52	23.76	8,250	9,100	
63	68	54	25.22	7,740	8,710	
99	70	50	26.73	6,970	8,400	
59	72	54	28.27	6,700	7,770	
85	72	58	28.27	10,580	12,210	
88	76	60	31.50	10,320	12,970	
86	82	62	36.67	7,503	12,560	
62	84	68	38.48	16,580	19,380	
56	86	68	40.34	17,580	19,380	
84	88	70	42.24	13,860	17,320	
83	90	72	44.18	16,510	19,880	
64	92	74	46.16	18,760	20,940	
148	94	76	48.19	13,490	16,430	
80	94	78	48.19	19,190	22,970	
114	96	80	50.27	20,220	24,200	
81	98	82	52.38	17,230	18,990	
55	100	80	54.54	20,220	24,200	
75	100	80	54.54	22,442	27,910	
79	104	78	58.99	18,771	22,970	
67	116	92	73.39	29,490	34,290	
57	122	92	81.18	22,560	26,380	
61	124	98	83.86	36,750	41,770	
66	126	100	86.59	27,520	34,070	
82	130	90	92.18	14,503	25,180	
144	136	104	100.88	37,450	43,490	
78	150	120	122.72	31,382	44,010	
58	152	112	126.01	43,310	50,310	
65	160	120	139.63	0	57,470	
60	174	138	165.13	53,240	67,150	
74	174	138	165.13	60,310	73,490	
Total			2,166.78	677,941	881,370	37
Per Acre			27.08	8,474.26	11,017.13	0.46

ALL TREES

TOTAL	2,433.12	758,011	973,510	56
PER ACRE	30.41	9,475.14	12,168.88	0.70

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

Y2/GSW
442 Acres

—Volume (bd ft)—

Tree #	DBH	DOB @ 20'	Basal Area	Net	Gross	# of trees
156	52	42	14.75	3,890	4,270	
159	54	44	15.90	5,300	6,040	
157	56	44	17.10	5,510	6,690	
160	58	44	18.35	5,010	5,380	
Total			66.10	19,710	22,380	4
Per Acre			0.15	44.59	50.63	0.01
155	60	44	19.63	5,010	5,380	
161	60	46	19.63	4,610	5,020	
162	60	48	19.63	5,880	6,270	
164	68	54	25.22	7,740	8,710	
142	70	54	26.73	9,530	11,660	
158	72	58	28.27	8,810	9,860	
163	74	60	29.87	9,950	11,810	
119	76	60	31.50	9,137	11,810	
118	80	60	34.91	10,657	12,970	
134	80	60	34.91	8,200	9,440	
123	86	68	40.34	14,280	16,350	
108	88	54	42.24	8,222	10,720	
143	92	72	46.16	20,260	23,150	
109	98	66	52.38	12,410	15,510	
121	100	76	54.54	15,640	18,370	
122	100	76	54.54	16,930	18,370	
124	100	76	54.54	18,340	21,940	
117	112	90	68.42	18,620	22,660	
132	124	92	83.86	26,982	31,610	
138	124	94	83.86	21,940	27,450	
128	124	98	83.86	28,271	32,880	
130	124	100	83.86	31,140	37,190	
131	134	100	97.93	27,550	40,220	
129	142	114	109.98	29,630	35,940	
136	142	114	109.98	39,286	48,020	
137	142	114	109.98	35,666	48,020	
113	144	110	113.10	0	21,110	
120	144	110	113.10	36,190	41,060	
133	144	110	113.10	38,934	48,550	
107	144	122	113.10	45,880	54,880	
125	154	118	129.35	41,520	47,120	
135	158	126	136.16	47,150	53,390	
127	160	120	139.63	44,375	57,470	
Total			2304.31	698,740	864,910	33
Per Acre			5.21	1580.86	1956.81	0.07
126	196	138	209.53	0	57,730	
Total			209.53	0	57,730	1
Per Acre			0.47	0.00	130.61	0.00

ALL TREES

TOTAL	2,579.94	718,450	945,020	38
PER ACRE	5.84	1,625.5	2,138.1	0.09

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

Y2/GW
86 Acres

-----Volume (bd ft)-----

Tree #	DBH	DOB @ 20'	Basal Area	Net	Gross	# of trees
110	72	58	28.27	10,580	12,210	
111	86	64	40.34	11,430	15,960	
TOTAL			68.61	22,010	28,170	2
PER ACRE			0.80	255.93	327.56	0.02

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

Y3/GPSW 94 Acres

Tree #	DBH	DOB @ 20'	Basal Area	-----Volume (bd ft)-----		# of trees
				Net	Gross	
105	60	46	19.63	4,225	5,020	
104	78	58	33.18	8,350	8,830	
101	88	68	42.24	11,310	11,890	
106	118	76	75.94	16,720	20,140	
103	144	116	113.10	46,330	53,860	
102	168	140	153.94	37,050	65,000	6
TOTAL			438.03	123,985	164,740	6
PER ACRE			4.66	1,318.99	1,752.55	0.06

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

Y3/GSW
395 Acres

Tree #	DBH	DOB @ 20'	Basal Area	----Volume (bd ft)----		# of trees
				Net	Gross	
1	70	56	26.73	5,580	6,150	
139	82	66	36.67	6,870	9,770	
2	100	74	54.54	15,637	17,380	
112	124	98	83.86	30,557	35,810	
TOTAL			201.80	58,644	69,110	4
<i>Per Acre</i>			0.51	148.47	174.96	0.01
115	220	180	263.98	70,627	127,150	
140	230	180	288.52	0	63,580	
116	242	180	319.42	0	84,970	3
TOTAL			871.92	70,627	275,700	3
<i>Per Acre</i>			2.21	178.80	697.97	0.01
<u>ALL TREES</u>						
TOTAL			1,073.73	129,271	344,810	7
PER ACRE			2.72	327.27	872.94	0.02

OLD GROWTH GIANT SEQUOIA

Dillonwood Tract
July 31, 2001

Y4/PSW
137 Acres

-----Volume (bd ft)-----						
Tree #	DBH	DOB @ 20'	Basal Area	Net	Gross	# of trees
53	48	36	12.57	3,470	3,780	
51	48	38	12.57	2,710	3,090	
52	50	40	13.64	5,000	5,630	
TOTAL			38.77	11,180	12,500	3
Per Acre			0.28	81.61	91.24	0.02
146	94	76	48.19	16,720	20,140	
50	100	80	54.54	23,550	27,910	
49	122	90	81.18	25,350	30,300	
147	150	112	122.72	0	54,200	
TOTAL			306.63	65,620	132,550	4
Per Acre			2.24	478.98	967.52	0.03
 ALL TREES						
TOTAL			345.40	76,800	145,050	7
PER ACRE			2.52	560.58	1,058.76	0.05

TABLE 9

DILLONWOOD TRACT
VOLUMES BY DIBS
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA
YOUNG GROWTH GIANT SEQUOIA

DIB CLASS (IN)	Estimated volume (THOUSANDS of BOARD Feet)					
	NET	MERCH	CULL	UNMER	CULL	GROSS
	VOLUME	VOLUME	PEELER	VOL.	VOL.	VOLUME
	:	:	:	:	:	:
SUBSETS---						
6- 12	1991	:	0	78	0	2069
13- 21	3606	:	0	120	0	3726
22+	6081	:	0	38	0	6119
TOTAL	11678	:	0	236	0	11914

DILLONWOOD TRACT
VOLUMES BY DIBS
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA
PONDEROSA AND JEFFREY PINE

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DIB CLASS (IN)	MERCHANTABLE LOG GRADES					NET		CULL		UNMER		CULL		GROSS	
	1SAWLOG	2SAWLOG	3SAWLOG	4SAWLOG	5SAWLOG	MERCH	VOLUME	PEELER	VOL.	VOL.	VOL.	VOL.	VOL.	VOLUME	VOLUME
SUBSETS															
6- 15	0	0	0	104	73	177	0	0	13	0	0	0	0	190	190
16- 24	19	20	17	291	259	606	0	0	18	7	7	7	7	631	631
25- 32	47	24	63	72	242	448	0	0	2	22	22	22	22	472	472
33+	79	0	0	0	75	154	0	0	0	6	6	6	6	160	160
TOTAL	145	44	80	467	649	1,385	0	0	33	35	35	35	35	1,453	1,453

DILLONWOOD TRACT
VOLUMES BY DIBS
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

SUGAR PINE

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DIB CLASS (IN)	MERCHANTABLE LOG GRADES					NET		CULL		UNMER		CULL		GROSS	
	1SAWLOG	2SAWLOG	3SAWLOG	4SAWLOG	5SAWLOG	MERCH	VOLUME	PEELER	VOL.	VOL.	VOL.	VOL.	VOL.	VOLUME	VOLUME

SUBSETS

6- 15	0	0	19	1,258	1,202	2,479	0	138	5	2,622	
16- 24	20	20	259	2,177	2,227	4,703	0	20	25	4,748	
25- 32	0	51	284	641	637	1,613	0	2	5	1,620	
33+	74	200	139	174	51	638	0	8	0	646	
TOTAL	94	271	701	4,250	4,117	9,433	0	168	35	9,636	

DILLONWOOD TRACT
VOLUMES BY DIBS
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

WHITE AND RED FIR

Scribner Log Rule
Estimated Volume (THOUSANDS of BOARD Feet)

DIB CLASS (IN)	MERCHANTABLE LOG GRADES					NET		CULL		UNMER		CULL		GROSS	
	1SAWLOG	2SAWLOG	3SAWLOG	4SAWLOG		MERCH	VOLUME	PEELER	VOL.			VOL.		VOLUME	
SUBSETS															
6- 15	0	0	7,120	3,014		10,134		0	469		175		10,778		
16- 24	46	585	8,181	2,548		11,360		0	95		89		11,544		
25- 32	43	515	1,171	770		2,499		0	9		10		2,518		
33+	68	119	65	74		326		0	0		0		326		
TOTAL	157	1219	16,537	6,406		24,319		0	573		274		25,166		

DILLONWOOD TRACT
VOLUMES BY DIBS
USING ASSESSORS PARCEL ACRES
TULARE COUNTY, CALIFORNIA

INCENSE-CEDAR

Estimated volume (THOUSANDS of BOARD Feet)

DIB CLASS (IN)	NET	MERCH	CULL	UNMER	CULL	GROSS
	VOLUME	VOLUME	PEELER	VOL.	VOL.	VOLUME
	:	:	:	:	:	:

SUBSETS---

6- 12	1198	0	265	141	1604
13- 21	1919	0	57	224	2200
22+	1771	0	5	247	2023
TOTAL	4888	0	327	612	5827

APPENDIX A

DILLONWOOD TRACT OLD GROWTH SEQUOIA TREE LOCATIONS GUIDE

**FROM Reference TO Tree*						UTM Zone 11 Coordinates	
Tree Number	DBH	Position Reference	Feet	Azimuth	GPS File	X (East)	Y (North)
1	70	GPS	[at tree]		C070114A	348111.483	4019294.327
2	100	GPS	[at tree]		C070114B	348178.697	4019398.539
3	142	GPS	49	293	C070115A	348475.990	4019254.837
4	126	GPS	42	277	C070115A	348475.990	4019254.837
5	96	GPS	31	82	C070116A	348459.213	4019170.135
6	86	GPS	31	101	C070116A	348459.213	4019170.135
7	134	GPS	130	310	C070116A	348459.213	4019170.135
8	96	TREE 6	108	191			
9	96	TREE 8	141	143			
10	70	TREE 9	68	172			
11	70	TREE 10	61	252			
12	78	TREE 11	8	222			
13	190	GPS	85	342	C070118A	348462.125	4018967.701
14	84	TREE 11	75	285			
15	56	TREE 3	140	260			
16	36	TREE 15	4	0			
17	46	TREE 15	16	43			
18	82	TREE 15	43	270			
19	64	TREE 18	26	305			
20	64	TREE 19	40	0			
21	130	TREE 20	60	340			
22	80	TREE 20	40	15			
23	76	TREE 20	110	55			
24	68	TREE 20	130	65			
25	66	TREE 20	100	270			
26	72	TREE 25	65	230			
27	76	TREE 18	95	225			
28	122	TREE 27	150	195			
29	90	TREE 28	22	180			
30	54	TREE 27	95	250			
31	58	TREE 28	165	280			
32	160	TREE 14	215	235			
33	130	TREE 32	60	180			
34	162	GPS	22	155	C071018A	348355.253	4019048.986
35	60	TREE 34	120	220			
36	66	TREE 35	120	225			
37	114	TREE 34	240	255			
38	78	TREE 34	135	310			
39	136	TREE 34	170	0			
40	118	GPS	45	40	C071019A	348291.865	4019185.262
41	120	GPS	70	10	C071019A	348291.865	4019185.262

APPENDIX A

DILLONWOOD TRACT OLD GROWTH SEQUOIA TREE LOCATIONS GUIDE

**FROM Reference TO Tree*					UTM Zone 11 Coordinates		
Tree Number	DBH	Position Reference	Feet	Azimuth	GPS File	X (East)	Y (North)
42	72	GPS	110	275	C071019A	348291.865	4019185.262
43	90	GPS	25	0	C071114A	348077.594	4018806.595
44	58	TREE 43	125	215			
45	82	TREE 43	210	310			
46	96	TREE 45	80	215			
47	62	TREE 46	110	260			
48	54	TREE 47	140	210			
49	122	GPS	38	340	C071114B	347885.493	4018766.787
50	100	TREE 43	250	170			
51	48	TREE 50	6	0			
52	50	TREE 49	150	275			
53	48	TREE 52	65	5			
54		Void					
55	100	GPS	56	15	C071116A	348140.379	4018537.468
56	86	GPS	30	270	C071117A	348104.039	4018604.005
57	122	TREE 56	205	230			
58	152	TREE 57	110	340			
59	72	TREE 57	60	310			
60	174	GPS	20	90	C071117B	347996.306	4018563.459
61	124	TREE 60	120	5			
62	84	TREE 61	10	50			
63	68	TREE 62	5	80			
64	92	TREE 60	125	315			
65	160	TREE 58	210	330			
66	126	GPS	12	210	C071119A	347827.240	4018648.586
67	116	GPS	17	350	C071119B	347655.539	4018669.388
68	66	TREE 67	95	290			
69	50	TREE 67	180	260			
70	44	TREE 69	5	200			
71	48	TREE 69	30	225			
72	40	TREE 71	30	210			
73	44	TREE 69	40	285			
74	174	TREE 73	130	205			
75	100	TREE 74	130	195			
76	62	GPS	58	315	C071120A	347650.101	4018601.953
77	66	GPS	55	330	C071120A	347650.101	4018601.953
78	150	GPS	25	280	C071121A	347659.354	4018495.258
79	104	GPS	80	260	C071121B	348002.189	4018520.872
80	94	GPS	120	110	C071121B	348002.189	4018520.872
81	98	GPS	50	260	C071122A	348038.225	4018347.232
82	130	TREE 81	65	285			

APPENDIX A

DILLONWOOD TRACT OLD GROWTH SEQUOIA TREE LOCATIONS GUIDE

**FROM Reference TO Tree*					UTM Zone 11 Coordinates		
Tree Number	DBH	Position Reference	Feet	Azimuth	GPS File	X (East)	Y (North)
83	90	TREE 81	250	230			
84	88	GPS	145	45	C071123A	347894.987	4018289.945
85	72	GPS	28	175	C071123A	347894.987	4018289.945
86	82	GPS	80	250	C071123A	347894.987	4018289.945
87	58	TREE 86	200	240			
88	76	TREE 87	200	275			
89	58	TREE 88	80	285			
90	60	TREE 88	75	250			
91	56	GPS	60	315	C071200A	347771.661	4018364.204
92	56	GPS	30	205	C071200A	347771.661	4018364.204
93	52	GPS	40	15	C071200A	347771.661	4018364.204
94	56	GPS	40	60	C071200B	347578.525	4018430.589
95	50	GPS	50	135	C071200B	347578.525	4018430.589
96	44	GPS	90	165	C071200B	347578.525	4018430.589
97	58	TREE 96	8	170			
98	46	TREE 96	40	140			
99	70	TREE 96	85	120			
100	38	TREE 99	4	90			
101	88	GPS	45	240	C070920A	345926.651	4019876.508
102	168	GPS	170	280	C070921A	345858.505	4019962.202
103	144	GPS	160	210	C070921A	345858.505	4019962.202
104	78	GPS	45	75	C070922A	345823.689	4019881.711
105	60	GPS	16	190	C070922A	345823.689	4019881.711
106	118	GPS	50	150	C070922B	346046.965	4019654.601
107	144	GPS	51	180	C070923A	346139.029	4020025.623
108	88	GPS	20	80	C071000A	346188.996	4020105.251
109	98	TREE 108	400	145			
110	72	GPS	60	180	C071020A	348202.681	4019634.207
111	86	no trees near - on W bank of river]					
112	124	GPS	90	80	C071022A	346521.523	4018185.329
113	144	GPS	55	195	C071023A	347062.309	4018839.697
114	96	GPS	10	75	C071316A	347603.576	4018545.194
115	220	GPS	35	120	C071214A	347543.161	4019847.085
116	242	GPS	25	240	C071214B	347414.753	4019678.096
117	112	GPS	35	300	C071215A	347059.000	4019759.861
118	80	GPS	165	145	C071216A	346951.102	4019835.078
119	76	TREE 118	7	165			
120	144	TREE 118	75	230			
121	100	TREE 120	155	225			
122	100	GPS	85	315	C071217A	346807.793	4020056.344
123	86	TREE 122	250	245			

APPENDIX A

DILLONWOOD TRACT OLD GROWTH SEQUOIA TREE LOCATIONS GUIDE

Tree Number	DBH	**FROM Reference TO Tree*			UTM Zone 11 Coordinates		
		Position Reference	Feet	Azimuth	GPS File	X (East)	Y (North)
124	100	TREE 123	75	275			
125	154	TREE 124	105	240			
126	196	TREE 123	230	180			
127	160	GPS	80	45	C071218B	346665.830	4019898.284
128	124	GPS	70	150	C071218B	346665.830	4019898.284
129	142	GPS	170	185	C071218B	346665.830	4019898.284
130	124	GPS	120	220	C071218B	346665.830	4019898.284
131	134	GPS	180	245	C071218B	346665.830	4019898.284
132	124	TREE 131	10	320			
133	144	GPS	240	270	C071218B	346665.830	4019898.284
134	80	GPS	20	310	C071219A	346581.092	4019938.653
135	158	TREE 129	120	155			
136	142	TREE 135	230	260			
137	142	GPS	30	210	C071221A	346744.636	4019865.264
138	124	GPS	35	80	C071221A	346744.636	4019865.264
139	82	GPS	35	50	C071222A	347448.353	4019520.122
140	230	GPS	40	0	C071222B	347444.103	4019600.845
141		Void					
142	70	GPS	35	345	C071314B	347270.625	4018284.239
143	92	TREE 144	150	240			
144	136	GPS	55	245	C071315A	347419.471	4018408.781
145	60	GPS	75	85	C071315A	347419.471	4018408.781
146	94	GPS	35	250	C071316B	347432.711	4018618.945
147	150	GPS	70	155	C071316C	347518.681	4018691.672
148	94	GPS	45	195	C071317A	347540.466	4018421.752
149	56	TREE 148	70	270			
150	66	TREE 148	110	175			
151	48	GPS	38	100	C071318A	347570.869	4018392.149
152	60	TREE 151	10	100			
153	54	GPS	52	170	C071318A	347570.869	4018392.149
154	66	GPS	17	250	C071318B	347572.902	4018258.664
155	60	GPS	23	90	C071319A	347123.399	4017968.981
156	52	GPS	40	250	C071319A	347123.399	4017968.981
157	56	GPS	25	35	C071320A	347184.280	4017943.335
158	72	GPS	45	140	C071321A	347198.259	4018081.312
159	54	TREE 158	135	340			
160	58	GPS	6	350	C071321B	347147.986	4018142.254
161	60	TREE 160	6	55			
162	60	TREE 160	95	5			
163	74	GPS	120	335	C071323A	347471.721	4018783.775
164	68	GPS	25	160	C071323B	347578.454	4018855.934

RUEGER REPORT