

PROVENANCE VARIATION IN THE AGE OF  
TRANSITION FROM JUVENILE TO MATURE  
WOOD SPECIFIC GRAVITY FOR  
LOBLOLLY PINE

By

MARCELLA BRIAN SZYMANSKI

Bachelor of Science in Forest Resources

University of Georgia

Athens, Georgia

1985

Submitted to Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
July, 1987



PROVENANCE VARIATION IN THE AGE OF  
TRANSITION FROM JUVENILE TO MATURE  
WOOD SPECIFIC GRAVITY FOR  
LOBLOLLY PINE

Thesis Approved:

*C. S. Blain*

Thesis Adviser

*Thomas C. Hennessey*

*Ronald W. McNew*

*Norman N. Durham*

Dean of the Graduate College

## ACKNOWLEDGEMENTS

Appreciation is expressed for the farsightedness shown by the Ozan and Fordyce Lumber Company for planting the provenance test twenty-eight years ago. Sincere gratitude is extended to the Potlatch Corporation and Oklahoma Agricultural Experiment Station for funding this project. Appreciation is given to the Potlatch and Weyerhaeuser Corporations for their help in manpower and time. Thanks are due to Dr. C.G. Tauer and Keith Harris for their hard work in collecting the cores.

The author wishes to express a special note of appreciation to her advisor, Dr. C.G. Tauer, for his support, guidance, and friendship throughout this study. Thanks are given to Dr. Ron McNew for his invaluable counseling on the statistical analysis of this study and his service on the advisory committee. Appreciation is also extended to Dr. Tom Hennessey for his service on the advisory committee and his critical review of the thesis, and to Dr. Stephen Hallgren for reviewing the thesis.

A special note of appreciation is extended to Freedom Alavi for his friendship during the course of this study. Lastly, special thanks is given to my parents who encouraged and supported me throughout my educational career.

## TABLE OF CONTENTS

Chapter	Page
I. ABSTRACT . . . . .	1
II. INTRODUCTION . . . . .	2
III. MATERIALS AND METHODS. . . . .	6
IV. RESULTS AND DISCUSSION . . . . .	11
V. CONCLUSIONS. . . . .	19
LITERATURE CITED. . . . .	21
APPENDIX A - PRINTOUT OF SPECIFIC GRAVITY DATA. . . . .	32
APPENDIX B - PRINTOUT OF PERCENT SUMMERWOOD DATA. . . . .	60

## LIST OF TABLES

Table	Page
1. Seed source means for the age of transition and rate of change from juvenile to mature wood specific gravity, core specific gravity; juvenile and mature wood specific gravity, and percent summerwood . . . . .	24
2. Analysis of variance for the age of transition and rate of change from juvenile to mature wood specific gravity, core specific gravity; juvenile and mature wood specific gravity, and percent summerwood . . . . .	25
3. Provenance regional means for the age of transition and rate of change from juvenile to mature wood specific gravity, core specific gravity; juvenile and mature wood specific gravity, and percent summerwood. . .	26
4. Analysis of variance and contrasts for the age of transition and rate of change from juvenile to mature wood specific gravity, core specific gravity; juvenile and mature wood specific gravity, and percent summerwood . . . . .	27
5. Phenotypic correlation between the age of transition and rate of change from juvenile to mature wood specific gravity, core specific gravity; juvenile and mature wood specific gravity, and percent summerwood, based on source means. . . . .	28
6. Comparisons of ranked provenance core specific gravity with previously reported provenance whole tree specific gravity estimates . . . .	29

## LIST OF FIGURES

Figure		Page
1.	The range of loblolly pine showing seed source origins, regional boundaries, and the location of the Arkansas test plantation . . .	30
2.	Expected form of the transition from juvenile to mature wood specific gravity in loblolly pine (a) and the form obtained by plotting specific gravity averaged over 1420 trees against age (b). . . . .	31

ABSTRACT. Regional and source variation was examined for the age of transition from juvenile to mature wood specific gravity in loblolly pine (Pinus taeda L.). No regional or source differences were found for the age of transition or rate of change from juvenile to mature wood specific gravity with an analysis of variance "F" test. However, contrasts for groups of provenance regions defined on the basis of broad geographic characteristics showed transition ages were earlier for regions west of the Mississippi when compared to eastern regions. Variation in core specific gravity and mature wood specific gravity was significant on a source and regional basis. Variation in juvenile wood specific gravity was significant on a regional basis only. No regional or source differences were found with percent summerwood. Specific gravity was highest in sources from the west and northeast regions and lowest for sources from the gulf coast and interior regions. Contrasts for groups of provenance regions reflect similar results for all specific gravity parameters. Percent summerwood, core specific gravity, and juvenile and mature wood specific gravity had negative phenotypic correlations with transition age. Whole tree specific gravity, basal area, and percent summerwood had positive phenotypic correlations with estimated core specific gravity.

ADDITIONAL KEY WORDS. Whole tree specific gravity, core specific gravity, basal area, percent summerwood.

## INTRODUCTION

Due to economic pressure for a continuing wood supply a large percentage of the current growing stock of loblolly pine (Pinus taeda L.) is in plantations with planned short rotations. Already, harvested wood from young plantations, thinnings, and top material has resulted in a higher percentage of juvenile wood, causing problems for the lumber and paper industries. Juvenile wood has thinner cell walls and increased amounts of compression wood and lignin, making it inferior for certain wood products (Zobel et al. 1972, Bendtsen 1978, Thomas 1984). These properties also contribute to a corresponding decrease in specific gravity. Specific gravity is a highly heritable trait ( $h^2=.50-.76$ ) and is considered the best practical index of wood quality (Stonecypher et al. 1973, Bendtsen 1978, Talbert et al. 1982, Megraw 1985). Even a small increase or decrease in specific gravity can have a major impact on yield. Mitchell (1965) stated an increase of .02 in specific gravity translated to an increase of 100 pounds in the dry weight of a cord of pulpwood.

One solution to the problem of increased amounts of juvenile wood in the harvest is to increase juvenile wood specific gravity. An increase of one or two percent in yield per unit dry weight was reported by Zobel et al. (1978) from progeny of parents with high juvenile wood specific gravity. However, juvenile wood with a high



specific gravity does not produce wood with physical qualities equivalent to mature wood (Zobel and Blair 1976). Another solution to the juvenile wood problem, is to breed trees for an earlier age of transition from juvenile to mature wood specific gravity reducing the total percentage of juvenile wood in the harvest. Mitchell (1965) and Zobel et al. (1972) found specific gravity is greatly affected by age. Juvenile wood has a low specific gravity that increases rapidly until 7 to 11 (transition zone) rings from the pith, at which time mature wood begins to form and specific gravity stabilizes (Zobel and McElwee 1958). A study by Loo et al. (1985) suggests trees may be bred for an earlier transition age, thus reducing the volume of juvenile wood, which increases overall wood density and the quality of certain wood products.

The age at which the transition from juvenile to mature wood occurs has been widely debated. Since the transition age encompasses a zone of gradual change in wood properties, it is difficult to define. Zobel and McElwee (1958), using visual examination, determined juvenile wood to be on the average, the first 7 annual rings from the pith with an additional three years of transition wood, causing the transition age to occur at age 10. In a later study by Zobel et al. (1972) juvenile wood was arbitrarily defined as the first 10 growth rings. However, since the age of transition from juvenile to mature wood in the 1972 study was defined as a standard conservative "cutoff" point at age

10, tree to tree variation in the age of transition was not taken into account. The best procedure for estimating the transition age in specific gravity has been the use of regression analysis with specific gravity plotted over age as reported by Loo et al. (1985).

In situ geographic variation in specific gravity of loblolly pine has been documented by a number of investigators (Zobel et al. 1960, Mitchell 1964, Saucier and Taras 1969, Talbert and Jett 1981). In general, these studies have shown specific gravity for loblolly pine is higher in the southern and coastal regions and decreases northward and inland, with differences greatest at the edge of the range. However, Tauer and Loo-Dinkins (1987), examining differences in whole tree specific gravity in a loblolly pine provenance test in southwest Arkansas found the highest specific gravities in the western and northern sources. Variation in the age of transition from juvenile to mature wood also has been reported with respect to specific gravity. Loo et al. (1985) reported loblolly pine family mean variation for the transition age of specific gravity in the range of 9.8 to 13.0 years. They reported a narrow sense heritability estimate of .36 and suggested moderate gains (earlier transition ages) could be obtained by selecting for an earlier age of transition from juvenile to mature wood specific gravity on a family mean basis. No information on seed source variation in the age of transition from juvenile to mature wood specific gravity is

available. If seed source variability is present, selection on a seed source basis could be the first selection step to decrease mean transition age for loblolly pine specific gravity.

The objective of this study was to determine the possibility of selecting loblolly pine for an earlier age of transition from juvenile to mature wood specific gravity on a seed source basis. Data on whole tree specific gravity and basal area from related studies by Tauer and Loo-Dinkins (1987) and Talbert et al. (1987), examining the same population, were used to examine the relationship between whole tree specific gravity, basal area, and core specific gravity. Percent summerwood was also measured and the correlation between it and core specific gravity, juvenile and mature wood specific gravity, and the age of transition and rate of change from juvenile to mature wood specific gravity were estimated.

## MATERIALS AND METHODS

A large loblolly pine provenance test in southwestern Arkansas was planted in 1957 by the Ozan and Fordyce Lumber Company. The provenance test is currently managed by the Potlatch and the Georgia-Pacific Corporations. Thirty-six seed sources representing the entire range of loblolly pine (Fig. 1) were planted on 8 tracts in Hempstead County and 4 tracts in Cleveland County. The provenance test was planted on 12 spacially separated blocks (tracts) with the 36 seed sources randomized within each block. Each seed source was planted in a 49-tree square measurement plot surrounded by two buffer rows of the same source. Initial stocking varied from 988 to 1133 stems per acre among the blocks in Hempstead County, but was consistent for all blocks in Cleveland County with 680 stems per acre. At age 17 all 12 blocks received a light thinning from below. Using age 25 data from this study, Wells and Lambeth (1983) established provenance regions on the basis of seed source performance. Provenance regional boundaries, shown in Figure 1, were corrected for this study after consultation with Lambeth<sup>1</sup>. Since four of the Hempstead County blocks were scheduled for thinning in 1985, material for a series of studies (Tauer and Loo-Dinkins 1987, Talbert et al. 1987, Sprinz et al. 1987) was made available as was material for this study.

---

<sup>1</sup>letter dated 26 May 1987 from C.C. Lambeth, Depto de Investigacion Forestal, Carton de Colombia, S.A., Apartado Aereo 6574, Cali, Columbia.

Prior to thinning, twelve millimeter increment core samples from 10 trees per source per block were collected at breast height for this study. Only cores containing the pith and all clear wood were retained for study. Seed source 26 and 31 were not available for sampling in one block. Estimates for basal area and whole tree specific gravity were obtained from related studies by Tauer and Loo-Dinkins (1987) and Talbert et al. (1987). The trees sampled in the 1987 studies correspond to the first 5 of 10 trees sampled per source plot in this study.

To determine percent summerwood, summerwood ring widths and core length were measured with a caliper to the nearest tenth of a millimeter. Percent summerwood was calculated for each core by dividing the sum of the summerwood ring widths by the total core length and multiplying by 100.

Bored cores were divided into 2-year increment segments beginning at the pith. To avoid a bias in wood specific gravity, extractives were removed from the increment segments. Extractives were removed by cooking increment segments in a soxhlet extractor apparatus with a 2:1 benzene / 95% ethanol mixture for 24 hours. After extraction the increment segments were boiled in distilled water for 4 hours to remove chemical residues. Specific gravity was determined using the maximum moisture content method described by Smith (1954). Core specific gravity was determined by summation of the increment segment dry and wet

weights and was not an average of increment segment specific gravity.

The age of transition was determined by regression analysis with specific gravity plotted over age (Fig 2b), following a method described by Hudson (1966) for fitting segmented curves whose endpoints must be estimated. A regression line for mature wood, with the slope fixed at zero and a regression line for juvenile wood, with the slope and end point allowed to vary, were fitted for each source at each location. The intersection for the two lines with the best fit (smallest error sum of squares) was determined by calculating a series of regression lines, changing the end point with each iteration by a two-year increment. Based on plots of the specific gravity data for each source at each location, the transition age was observed to occur between the ages of 8 to 16, requiring 5 iterations for each source at each location. Using this preliminary information, regressions were calculated for each iteration, dividing samples into two groups beginning with rings less than or equal to age 8 in the juvenile wood group and rings greater than age 8 in the mature wood group. Both groups were incremented by two-year segments up to rings less than or equal to age 16 in the juvenile group and rings greater than age 16 in the mature group. Ages greater than 24 years were omitted from the mature group because of a low number of data points at these ages. The iteration with the point of intersection for the two groups with the best fit

(smallest error sum of squares) was used to determine the transition age. For the best fit iteration, the age at which the mature group began was defined as the age of transition from juvenile to mature wood. From the regression analysis the rate of change from juvenile to mature wood was also determined (change in specific gravity per two year increment). Juvenile and mature wood were defined by the age of transition with juvenile and mature wood specific gravity determined by summation of dry and wet increment segment weights.

The General Linear Models procedure from the Statistical Analysis System (SAS 1985) was used to calculate analysis of variance to test differences in the age of transition, core specific gravity, juvenile wood specific gravity, mature wood specific gravity, the rate of change from juvenile to mature wood specific gravity, and percent summerwood on a source and region basis. Source effects were considered random and blocks were treated as replications. Sources within regions were used to test for regional differences, and the interaction between source and location was used to test for source differences. To determine broad patterns of variation for all parameters, contrasts were determined for all parameters with groups of provenance regions within the range of loblolly pine defined on the basis of broad geographic characteristics.

Phenotypic correlations using Pearson's product moment method (SAS 1985) were computed between all parameter pairs.

Correlations are based on source means with the exception of whole tree specific gravity with core specific gravity, which was calculated on an individual tree basis.



## RESULTS AND DISCUSSION

Specific gravity, averaged over all trees, was plotted against age and yielded a curve similar to the general curve from Zobel and McElwee (1958), as expected. Both curves are shown in Figure 2. The slope of the mature wood line in Figure 2(b) was assumed to be zero with the slight decrease in specific gravity at age 18 and 20 assumed to be due to the thinning the stand received at age 17. Megraw (1985) stated temporary decreases in specific gravity may be expected at breast height following a thinning, but the overall effects from a thinning are expected to be minimal. The increase in specific gravity at age 28 was possibly due to a low number of samples and thus, a larger sampling error. Juvenile wood extended to age 6 with a transition period of rapidly increasing specific gravity from age 6 to approximately age 12 with mature wood extending through age 28. Transition wood was included in the estimate of juvenile wood specific gravity. The rate of change from juvenile to mature specific gravity was defined as the slope of the fitted line for juvenile wood.

Ranks and means for each regression parameter for all sources are presented in Table 1. The mean transition age averaged over all sources and blocks was 12.6 years with corresponding means for rate of change, core specific gravity, juvenile and mature wood specific gravity, and percent summerwood of .016, .427, .397 .511, and 27.92,

respectively. The ranges for core source specific gravity and juvenile and mature wood source specific gravity were relatively wide suggesting broad phenotypic variability among the sources. All parameters were plotted on a map containing seed sources origins to visually examine possible geographic trends. The earliest ages of transition from juvenile to mature wood specific gravity generally occurred in sources from the west, but no geographic trends were apparent for the rate of change from juvenile to mature wood specific gravity. Core specific gravity and juvenile and mature wood specific gravity were generally highest for sources from the west and northeast. Geographic trends for percent summerwood were weak, but the southwestern and northeastern sources generally produced the highest percentages of summerwood. The average transition age for all east Texas sources (12.66 years) was slightly higher than the average transition age (11.45 years) for east Texas families, as reported by Loo et al. (1985). However, since east Texas families were chosen on the basis of high and low specific gravity families and east Texas sources were chosen from a random sample of sources, inferences between east Texas families and source transition age can not be made.

Analysis of variance results are presented in Table 2. No significant differences ( $P=.05$ ) were found among regions or sources for the transition age and rate of change from juvenile to mature wood specific gravity with an analysis of

variance "F" test. Although no significant source differences were found, visual inspection of the data does indicate that source variation for transition age and rate of change are present. A larger sample size may be helpful in determining if true differences between the sources are present for these parameters. No visual differences are apparent on a regional basis for either trait. Regional means are presented in Table 3.

Significant source differences ( $P=.05$ ) were found for core specific gravity and mature wood specific gravity. Juvenile wood specific gravity was significant at the .18 level only, indicating difficulties in source specific gravity selection with young trees. Geographic variation for core specific gravity and juvenile and mature wood specific gravity showed specific gravity highest in sources from the west and northeast regions and lowest for sources from the gulf coast and interior regions, the reverse of trends of reported in situ geographic variation. Tauer and Loo-Dinkins (1987) reported similar provenance results for these sources with whole tree specific gravity. Differences in the length of the growing season and amounts of rainfall and soil moisture probably account for the most of the differences in provenance test and in situ geographic variation. This is suggested by Mitchell (1964), who reported a significant affect from environmental factors such as soil, rainfall, length of growing season, and mean temperature on the specific gravity of the southern pines.

Regional variation for core specific gravity and juvenile and mature wood specific gravity was significant ( $P=.05$ ) and reflected source differences with specific gravity generally highest in the lost pines and northwest regions and lowest in the gulf coast region (Table 3).

Percent summerwood was not significant on a regional or source basis (Tables 2&3), supporting similar seed source results reported by Saucier and Taras (1967) for 13-year-old loblolly pine grown in Alabama. Percent summerwood results suggest the percentage of summerwood laid down by a source was influenced more by environmental factors than by the genetic composition of a source. Cregg (1986) suggested a direct moisture related mechanism is involved in the initiation of latewood formation, indicating environmental influences in percent summerwood formation.

Contrasts for population groups within the range of loblolly pine were calculated to test for broad patterns of variation in all parameters (Table 4). Regions west of the Mississippi River had an earlier age of transition when compared to eastern regions. No significant differences were found among contrasted regional groups for the rate of change from juvenile to mature wood specific gravity and percent summerwood. Core specific gravity and juvenile wood specific gravity contrasts were significant for all provenance region groups, with the exception of the western group contrasted with the lost pines for juvenile and mature wood specific gravity. Regions north of the coastal plain

were significantly higher ( $P=.05$ ) than southern regions for core specific gravity and juvenile and mature wood specific gravity. Regions west of the Mississippi River were significantly higher ( $P=.05$ ) than eastern regions with respect to core specific gravity and juvenile and mature wood specific gravity. The contrasts reflect source and regional variation in specific gravity and the differences between in situ and provenance variation, supporting the evidence that environment is an important factor affecting wood density .

Phenotypic correlations using source means were computed for all parameter pairs and are presented in Table 5. Core specific gravity, the rate of change, and juvenile and mature wood specific gravity were negatively correlated with transition age. All correlations were significant at the .05 level with the exception of juvenile wood specific gravity with transition age ( $P=.19$ ). The data indicate wood specific gravity increases as the age of transition decreases. Of all factors examined, the rate of change showed the highest negative correlation with the age of transition, suggesting it may be an important factor in determining sources with the earliest ages of transition. Loo et al. (1985) reported a negative correlation ( $r_p=-.12$ ) between core specific gravity and the transition age in 25-year old loblolly pine. The correlation between these two parameters on a source basis is three times as high ( $r_p=-.37$ ). The higher correlation for source core specific

gravity and transition age was probably due to the effect of averaging individual trees on a source basis.

The phenotypic correlation between juvenile and mature wood source specific gravity ( $r_p=.68$ ) was similar to phenotypic correlations reported by Talbert and Jett (1981) ( $r_p=.5-.7$ ) for individual loblolly pine trees at breast height. Moderate correlations between core source specific gravity, juvenile wood source specific gravity, and mature wood source specific gravity suggested sources with high juvenile wood specific gravity produce sources with high core and mature wood specific gravity. However, the juvenile estimates wood may be confounded by the inclusion of transition wood, increasing the phenotypic correlations with other traits. Although seed source rankings for core specific gravity and juvenile and mature wood specific gravity changed (Table 1), relative regional ranks did not change (Table 3). Sources with the highest core specific gravity, juvenile and mature wood specific gravity and percent summerwood did not rank consistently with the earliest ages of transition and highest rates of change from juvenile to mature wood specific gravity, indicating a weak relationship between transition age and wood density and a moderate relationship between rate of change and wood density (Table 1).

The correlation between core specific gravity in this study and whole tree specific gravity reported by Tauer and Loo-Dinkins (1987) for the same trees was significant

( $P=.05$ ) and positive ( $r_p=.62$ ). In general, core specific gravity at breast height is expected to be higher than specific gravity of the merchantable portion of the tree, with a high positive correlation between both estimates of specific gravity (Mitchell 1965). However, core specific gravity in this study was lower than whole tree specific gravity reported by Tauer and Loo-Dinkins (1987) (Table 6). The lower estimates of core specific gravity were probably due to differences in extracted and unextracted wood or the method of specific gravity determination. Whole tree specific gravity consisted of unextracted wood and was estimated by the volume displacement method, which probably upwardly biased the estimation of the whole tree specific gravity and lowered the coefficient of correlation. Tauer (1980) reported average differences in extracted and unextracted wood specific gravity of .046 and changes in source rankings for 20 year old shortleaf pine (Pinus echinata Mill.). Although source rankings changed with the method of specific gravity estimation, regional rankings in this study did not change from those reported by Tauer and Loo-Dinkins (1987).

Basal area was not significantly correlated with core specific gravity ( $r_p=.05$ ). Mitchell (1965) found basal area accounted for a small but significant part of the variation found in specific gravity for loblolly pine. Tauer and Loo-Dinkins (1987) reported a low but significant ( $P=.05$ ) correlation ( $r_p=.21$ ). The correlation from this study

supports conclusions by Megraw (1985) that basal area has a minimal effect on specific gravity.

Correlations between percent summerwood and core specific gravity were significant ( $P=.05$ ) and positive ( $r_p=.62$ ) supporting results from other studies (Goggans 1964, Taylor and Burton 1982). Age of transition was significantly ( $P=.05$ ) and negatively correlated with percent summerwood ( $r_p=-.22$ ), suggesting a possible weak positive relationship between higher percentages of summerwood and earlier transition ages on a source basis. Percent summerwood was moderately correlated with juvenile ( $r_p=.48$ ) and mature ( $r_p=.63$ ) wood specific gravity, and the rate of change from juvenile to mature wood specific gravity ( $r_p=.55$ ) (Table 5).



## CONCLUSIONS

Although no significant differences were found on a regional or source basis for the age of transition and rate of change from juvenile to mature wood specific gravity, source variation and general trends in transition age and the rate of change are apparent from visual examination of the data. Generally, western sources have the earliest transition ages, highest rates of change, and the highest core specific gravity, indicating local sources will produce the highest specific gravity wood in the northwestern portion of loblolly pine's range. Trends in geographic variation for source specific gravity reverse in situ trends, indicating the environment is an important factor in specific gravity formation. Broad patterns in regional variation in loblolly pine populations follow the general trends for transition age and wood density, with western regions having slightly earlier ages of transition from juvenile to mature wood specific gravity and higher core specific gravities. Benefits from a breeding program selecting for an earlier transition age appear to be real for certain western and northeastern sources. However, based on this study, increases in specific gravity through selection for an earlier age of transition or faster rate of change from juvenile to mature wood can not be recommended on a seed source basis without further study.

The significant negative correlation between transition age and core specific gravity indicate some improvement for an earlier transition age may be accomplished by selection for higher specific gravity. The rate of change from juvenile to mature wood specific gravity affects the age of transition from juvenile to mature wood specific gravity in loblolly pine, with faster rates of change associated with lower transition ages.

Specific gravity sampled by extracted increment cores show a moderately high correlation with unextracted whole tree specific gravity, indicating increment core specific gravity is a good estimator of whole tree specific gravity. No correlation between basal area and core specific gravity were found, suggesting silvicultural treatments such as pruning or thinning may have no effect on specific gravity at the time of harvesting. This appears to be true in spite of an obvious short term response to a thinning at age 17. Although no source or regional variation was found to be significant for percent summerwood, correlations between percent summerwood and core specific gravity were moderately high, suggesting increases in the percentage of summerwood will be obtained with selection for high specific gravity sources.

## LITERATURE CITED

- Bendtsen, B.A. 1978. Properties of wood from improved and intensively managed trees. *Forest Prod J* 28:61-72.
- Cregg, B.M. 1986. The effects of precommercial thinning on water relations and wood quality of loblolly pine. Thesis, Oklahoma State University, Stillwater, Ok. 74078, 91p.
- Goggans, J.F. 1964. Correlation and heritability of certain wood properties in loblolly pine (*Pinus taeda* L.). *Tappi* 47(6):318-322.
- Hudson, D.J. 1966. Fitting segmented curves whose join points have to be estimated. *J Am Stat Assoc* 61:1097-1129.
- Loo, J.A., C.G. Tauer, and R.W. McNew. 1985. Genetic variation in the time of transition from juvenile to mature wood in loblolly pine (*Pinus taeda* L.) *Silvae Genet.* 34:14-19.
- Megraw, R.A. 1985. Wood quality factors in loblolly pine. TAPPI Press, Atlanta, GA, 88p.
- Mitchell, H.L. 1964. Patterns of variation in specific gravity of southern pine and other coniferous species. *Tappi* 47(5):276-283.
- Mitchell, H.L. 1965. Highlights of results of the southern wood density survey. In Proc of the Symp on density... a key to wood quality, pp.38-64. USDA Forest Serv, FPL, Madison, Wis, May 4-6, 1965. 194p.
- Saucier, J.R. and M.A. Taras. 1967. Wood density and percent summerwood variation among nine loblolly pine seed sources grown in Alabama. In Proc of the ninth south conf on forest tree impr, pp.115-119. Committee on So Forest Tree Impr 28, Macon, Ga, June 8-9, 1967. 138p.
- Saucier, J.R. and M.A. Taras. 1969. Regional variation in specific gravity of seven pines in the southern United States. USDA Forest Serv Res Pap SE-45, So Exp Stn, Asheville, NC, 16p.
- Smith, D.M. 1954. Maximum moisture content method for determining specific gravity of small wood samples. USDA Forest Serv FPL Rept 2014, Madison, Wis, 8p.

- Sprinz, P. 1987. Height-age trends from an Arkansas seed source study. Manuscript in preparation.
- Statistical Analysis System. 1985. SAS User's Guide: Basics. SAS Institute Inc, Raleigh, NC, 1290p.
- Stoncypher, R.W., B.J. Zobel, and Blair. 1973. Inheritance patterns in loblolly pines from a nonselected natural population. Tech Bull 220, NC Agric Exp Stn, Raleigh, NC 60p.
- Talbert, J.T. and J.B. Jett. 1981. Regional specific gravity values for plantation grown loblolly pine in the eastern United States. Forest Sci 27(4):801-807.
- Talbert, J.T., J.B. Jett, F.E. Bridgewater, and S.T. Jahromi. 1982. Genetic parameters of wood specific gravity in a control pollinated loblolly pine genetic test. In Proc of the TAPPI Res and Devel Conf, pp.179-182. Asheville, NC, Aug 29-Sept.1, 1982. p341.
- Talbert, C.B., C.C. Lambeth, M.R. Strub, and P. Sprinz. 1987. Per-acre production and carrying capacity of local and non-local sources of loblolly pine grown in Arkansas, through 29 years. Manuscript in preparation.
- Tauer, C.G. 1980. Twenty-year results of a shortleaf pine seed source study in Oklahoma. Ok Agric Expt Stn Bull B-752, Stillwater, OK, 12p.
- Tauer, C.G., and J.A. Loo-Dinkins. 1987. The effect of seed source transfer on specific gravity of loblolly pine. Manuscript in preparation.
- Taylor, F.W. and J.D. Burton. 1982. Growth ring characteristics, specific gravity, and fiber length of rapidly grown loblolly pine. Wood and Fiber 14(3):204-210.
- Thomas, R.J. 1984. The characteristics of juvenile wood. In Utilization of the changing wood resource in the southern United States, pp. 40-52. Proc Symp NC State Univ, Raleigh, NC, June 12-13, 1984. 295p.
- Wells, O.O. and C.C. Lambeth. 1983. Loblolly pine provenance test in southern Arkansas 25<sup>th</sup> year results. So J Appl For 7(2):71-75.
- Zobel, B.J. and R. Blair. 1976. Wood and pulp properties of juvenile wood and topwood of the southern pines. Appl Polymer Symp 28 pp.421-433.

- Zobel, B.J., J.B. Jett and R. Hutto. 1978. Improving wood density of short-rotation southern pine. *Tappi* 61(3):41-44.
- Zobel, B.J., R.C. Kellison, M.F. Matthias, and A.V. Hatcher. 1972. Wood density of the southern pines. NC Agric Expt Stn Tech Bull 208, NC Agric Exp Stn, Raleigh, NC, 56p.
- Zobel, B.J., and R.L. McElwee. 1958. Natural variation in wood specific gravity of loblolly pine and an analysis of contributing factors. *Tappi* 41(4):158-161.
- Zobel, B.J., E. Thorbjornsen, and F. Henson. 1960. Geographic, site, and individual tree variation in wood properties of loblolly pine. *Silvae Genet.* 6:149-158.

TABLE 1. Seed source means for the age of transition (Transition Age) and rate of change (Rate of Change) from juvenile to mature wood specific gravity, core specific gravity (Core SG); juvenile (Juvenile SG) and mature (Mature SG) wood specific gravity, and percent summerwood (Percent Summerwood). Means are ordered from the highest to lowest value for each trait.

Seed Source	Transition Age (yrs.)	Seed Source	Rate of Change ( $\Delta$ in SG per 2 <sup>yr.</sup> increment)	Seed Source	Core SG	Seed Source	Juvenile SG	Seed Source	Mature SG	Seed Source	Percent Summerwood
25	14.04	31	0.019	10	0.450	10	0.420	10	0.542	31	31.93
8	13.83	26	0.018	16	0.450	14	0.418	31	0.535	16	30.74
36	13.59	34	0.018	31	0.442	13	0.416	34	0.532	34	30.32
7	13.47	32	0.017	14	0.442	16	0.413	26	0.530	15	29.78
35	13.33	18	0.017	13	0.441	31	0.408	16	0.529	35	29.21
3	13.26	30	0.017	12	0.441	9	0.407	2	0.528	22	29.14
21	13.09	1	0.017	9	0.440	11	0.406	9	0.526	6	29.06
10	12.97	6	0.017	1	0.436	12	0.406	1	0.525	28	28.98
14	12.95	4	0.017	11	0.436	1	0.406	14	0.523	12	28.84
2	12.94	12	0.017	32	0.433	2	0.404	7	0.518	25	28.66
24	12.86	16	0.017	34	0.432	7	0.403	11	0.518	20	28.57
26	12.83	23	0.017	2	0.432	34	0.402	12	0.517	17	28.45
6	12.80	10	0.017	7	0.431	8	0.398	30	0.517	2	28.37
5	12.77	29	0.016	18	0.430	18	0.397	5	0.515	29	28.35
27	12.73	19	0.016	26	0.428	15	0.397	32	0.515	32	28.29
15	12.71	9	0.016	23	0.427	17	0.397	4	0.515	23	28.29
34	12.69	17	0.016	17	0.426	26	0.396	35	0.514	10	28.26
28	12.59	22	0.016	5	0.425	3	0.396	6	0.514	11	28.11
4	12.52	5	0.016	15	0.424	35	0.395	23	0.512	21	28.03
9	12.55	2	0.016	6	0.423	23	0.395	17	0.511	18	27.95
17	12.45	28	0.016	4	0.422	25	0.394	15	0.508	1	27.86
30	12.40	11	0.016	3	0.422	32	0.394	22	0.507	3	27.86
1	12.39	20	0.016	22	0.421	27	0.394	13	0.507	24	27.59
23	12.38	7	0.016	35	0.421	33	0.392	3	0.506	7	27.53
33	12.31	35	0.015	19	0.421	22	0.392	18	0.505	19	27.48
32	12.30	14	0.015	33	0.421	6	0.391	25	0.505	26	27.27
31	12.24	33	0.015	30	0.421	30	0.391	33	0.500	8	27.06
20	12.16	27	0.015	29	0.420	4	0.391	19	0.497	13	26.99
11	12.14	13	0.015	8	0.419	5	0.390	27	0.497	4	26.93
22	12.09	15	0.015	27	0.418	29	0.389	29	0.496	14	26.85
16	12.02	21	0.015	20	0.418	19	0.389	20	0.496	27	26.75
29	11.93	3	0.014	25	0.417	20	0.386	8	0.495	5	26.67
19	11.92	24	0.014	21	0.415	21	0.385	28	0.495	9	26.54
13	11.71	25	0.014	28	0.414	36	0.384	21	0.495	30	26.21
18	11.49	8	0.013	24	0.408	24	0.380	24	0.487	33	24.66
12	11.34	36	0.012	36	0.403	28	0.378	36	0.475	36	22.29
Mean	12.61		0.016		0.427		0.397		0.511		27.92

TABLE 2. Analysis of variance for the age of transition (a) and rate of change (b) from juvenile to mature wood specific gravity, core specific gravity (c); juvenile (d) and mature (e) wood specific gravity, and percent summerwood (f), based on source means.

## (a) Transition age

Source	df	MS	F	P>F
Block	3	8.4293	6.50	0.0001
Region	6	2.0603	1.50	0.2142
Source(Region)	29	1.3733	0.99	0.4947
Block*Source(Region)	103	1.3937		

## (b) Rate of change

Source	df	MS	F	P>F
Block	3	0.0005766	118.80	0.0008
Region	6	0.0000075	1.15	0.3584
Source(Region)	29	0.0000063	1.31	0.1659
Block*Source(Region)	103	0.0000048		

## (c) Core specific gravity

Source	df	MS	F	P>F
Block	3	0.1147199	145.58	0.0001
Region	6	0.0192994	11.86	0.0001
Source(Region)	29	0.0016267	2.05	0.0044
Block*Source(Region)	103	0.0007880		

## (d) Juvenile wood specific gravity

Source	df	MS	F	P>F
Block	3	0.0042736	44.58	0.0001
Region	6	0.0017547	14.26	0.0001
Source(Region)	29	0.0001230	1.28	0.1816
Block*Source(Region)	103	0.0000959		

## (e) Mature wood specific gravity

Source	df	MS	F	P>F
Block	3	0.0452747	229.79	0.0001
Region	6	0.0026484	7.17	0.0001
Source(Region)	29	0.0003692	1.87	0.0115
Block*Source(Region)	103	0.0001970		

## (f) Percent Summerwood

Source	df	MS	F	P>F
Block	3	3245.5780	31.85	0.0001
Region	6	95.8882	0.93	0.4867
Source(Region)	29	102.4310	1.01	0.4709
Block*Source(Region)	103	101.9066		

TABLE 3. Provenance region means for the age of transition (Transition Age) and rate of change (Rate of change) from juvenile to mature wood specific gravity, core specific gravity (Core SG); juvenile (Juvenile SG) and mature (Mature SG) wood specific gravity, and percent summerwood (Percent Summerwood). Means followed by different letters are significant at P=.05 using a L.S.D. test.

Regions	Transition Age (yrs.)	Rate of Change (Change in SG per 2 yr. increment)	Core <sup>*</sup> SG	Juvenile <sup>*</sup> SG	Mature <sup>*</sup> SG	Percent Summerwood
Lost Pines	12.02	0.017	0.450a	0.413ab	0.529a	30.74
Northwest	12.28	0.016	0.442a	0.412a	0.524a	29.13
Northeast	12.80	0.017	0.430b	0.401bc	0.522a	28.02
East Coast	12.65	0.017	0.428b	0.400c	0.522a	27.84
Southwest	12.24	0.016	0.425b	0.396c	0.507bc	27.71
Interior	12.98	0.015	0.422bc	0.394c	0.506b	27.60
Gulf Coast	12.58	0.015	0.416c	0.386d	0.495c	27.54

<sup>\*</sup>Significant regional mean differences do not always correspond to ranking based on the magnitude of the means due to unequal sample sizes in regions.



TABLE 4. Analysis of variance and contrasts for the age of transition (Transition Age) and rate of change (Rate of change) from juvenile to mature wood specific gravity, core specific gravity (Core SG); juvenile (Juvenile SG) and mature (Mature SG) wood specific gravity, and percent summerwood (Percent Summerwood). Provenance regions were grouped into larger populations within the range of loblolly pine.

Source	df	Transition Age		Rate of Change		Core SG		Juvenile SG		Mature SG		Percent Summerwood	
		F	P>F	F	P>F	F	P>F	F	P>F	F	P>F	F	P>F
Block	3	6.50	0.0001	118.80	0.0008	145.58	0.0001	44.58	0.0001	229.79	0.0001	31.85	0.0001
Region	35	1.50	0.2142	1.15	0.3584	11.86	0.0001	14.26	0.0001	7.17	0.0001	0.93	0.4867
East vs West <sup>a</sup>	1	2.50	0.1248	1.76	0.1950	7.24	0.0117	9.98	0.0037	0.97	0.3334	0.30	0.5898
North of Gulf Coastal Plain vs Southern <sup>b</sup>	1	1.37	0.2511	0.38	0.5409	11.62	0.0019	22.72	0.0001	6.04	0.0202	0.20	0.6578
West of Miss. River vs Eastern <sup>c</sup>	1	6.30	0.0179	0.09	0.7608	36.51	0.0001	43.28	0.0001	6.71	0.0149	0.01	0.9412
West vs Lost Pines	1	0.16	0.6927	0.50	0.4873	4.82	0.0363	1.80	0.1897	1.70	0.2027	3.38	0.0762
Source(Region)	103												

<sup>a</sup>West=Northwest and Southwest; East=East Coast and Northeast

<sup>b</sup>North of the Coastal Plain=Northwest, Interior, and Northeast; Southern=Southwest, Gulf Coast, and East Coast

<sup>c</sup>West of the Mississippi River=Northwest, Southwest, and Lost Pines; Eastern=Northeast, East Coast, Interior, and Gulf Coast

TABLE 5. Phenotypic correlations between the age of transition (Transition age) and rate of change (Rate of Change) from juvenile to mature wood specific gravity, core specific gravity (Core SG); juvenile (Juvenile SG) and mature (Mature SG) wood specific gravity, and percent summerwood (Percent Summerwood), based on source means.

	Transition Age	Rate of Change	Juvenile SG	Mature SG	Percent Summerwood
Core SG	-0.372*	0.691*	0.869*	0.862*	0.623*
Transition Age		-0.625*	-0.035	-0.248*	-0.221*
Rate of Change			0.324*	0.832*	0.546*
Juvenile SG				0.675*	0.479*
Mature SG					0.633*

\*Significant at the  $p=0.05$  level using Pearson's product moment method.

TABLE 6. Comparison of ranked provenance core specific gravity with previously reported provenance whole tree specific gravity estimates.

Seed Source	Location	Provenance	Core SG	S.E.	Whole Tree <sup>*</sup> SG	S.E.
10	AR Delta	Northwest	.450	.0003	.481	.008
16	Tx Lost Pines	Lost Pines	.450	.0002	.492	.007
31	Lower Coastal Plain NC	East Coast	.442	.0001	.461	.005
14	N.E. TX	Northwest	.442	.0002	.466	.010
13	S.E. OK	Northwest	.441	.0004	.451	.014
12	S.W. AR	Northwest	.441	.0004	.471	.010
9	S.E. AR	Northwest	.440	.0001	.467	.008
1	Delware	Northeast	.436	.0002	.453	.006
11	Central AR	Northwest	.436	.0001	.467	.007
32	Piedmont NC	Interior	.433	.0003	.445	.008
34	E. Shore MD	Northeast	.432	.0002	.459	.008
2	S.E. VA	East Coast	.432	.0002	.451	.010
7	N. AL	Interior	.431	.0003	.442	.009
18	Central LA	Southwest	.430	.0004	.455	.007
26	Central GA	Interior	.428	.0002	.460	.007
23	N. AL	Interior	.427	.0004	.445	.008
17	N. Central	Southwest	.426	.0003	.455	.008
5	Upper Coastal Plain SC	East Coast	.425	.0002	.452	.005
15	E. Central TX	Southwest	.424	.0003	.450	.007
6	S. AL	Gulf Coast	.423	.0003	.447	.007
4	Lower Coastal Plain SC	East Coast	.422	.0002	.445	.007
3	Piedmont SC	Interior	.422	.0002	.438	.009
22	N. MS	Interior	.421	.0003	.440	.006
35	W. Shore MD	Northeast	.421	.0002	.446	.008
19	S.E. LA	Gulf Coast	.421	.0004	.446	.007
33	S.E. TX	Southwest	.421	.0002	.448	.006
30	Lower Coastal Plain SC	East Coast	.421	.0003	.442	.010
29	N.E. FL	Gulf Coast	.420	.0002	.448	.006
8	Central AL	Interior	.419	.0001	.437	.008
27	N. GA	Interior	.418	.0001	.444	.007
20	S. MS	Gulf Coast	.418	.0003	.449	.006
25	S. Central GA	Interior	.417	.0003	.434	.006
21	S. MS	Gulf Coast	.415	.0002	.427	.010
28	N.W. FL	Gulf Coast	.414	.0002	.444	.005
24	E. Central AL	Interior	.408	.0002	.425	.008
36	Central FL	Gulf Coast	.405	.0002	.424	.009

<sup>\*</sup>From Tauer and Loo-Dinkins (1987)

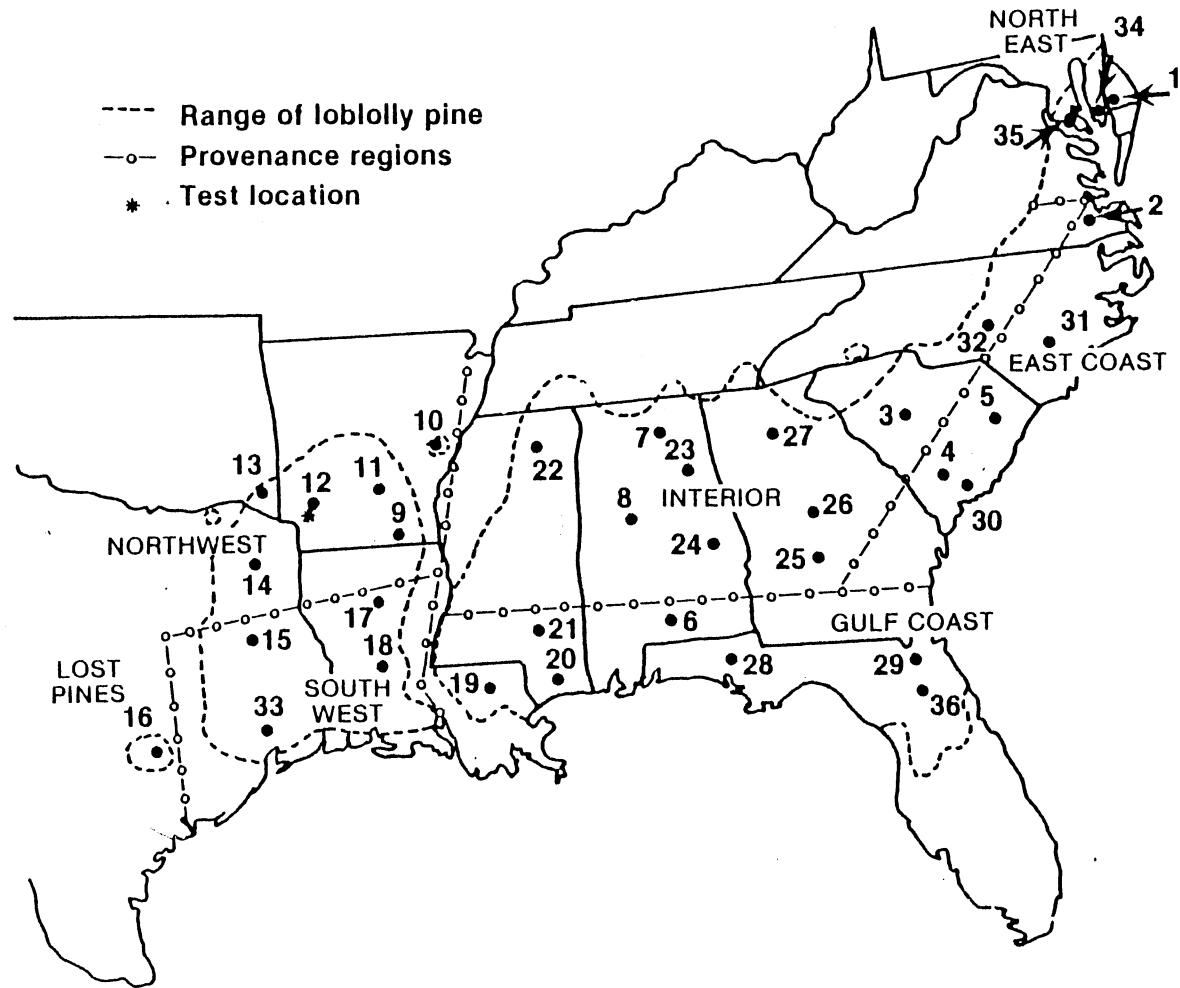


Figure 1. The range of loblolly pine showing seed source origins, regional boundaries, and the location of the Arkansas test plantation.

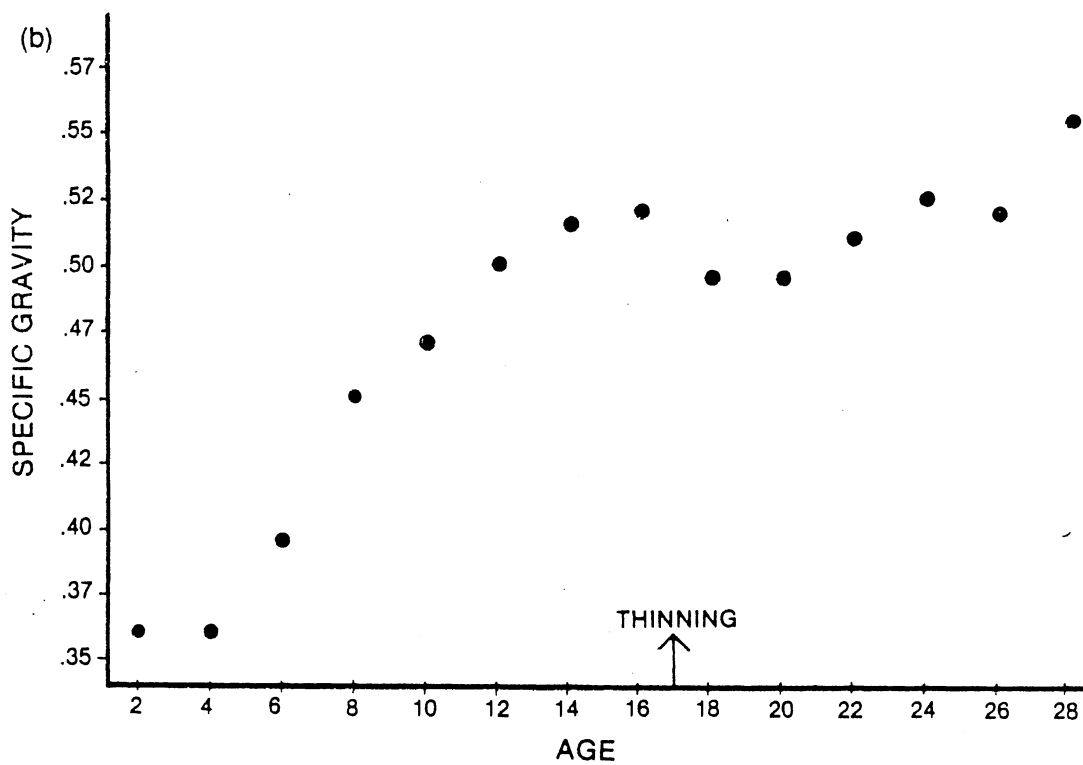
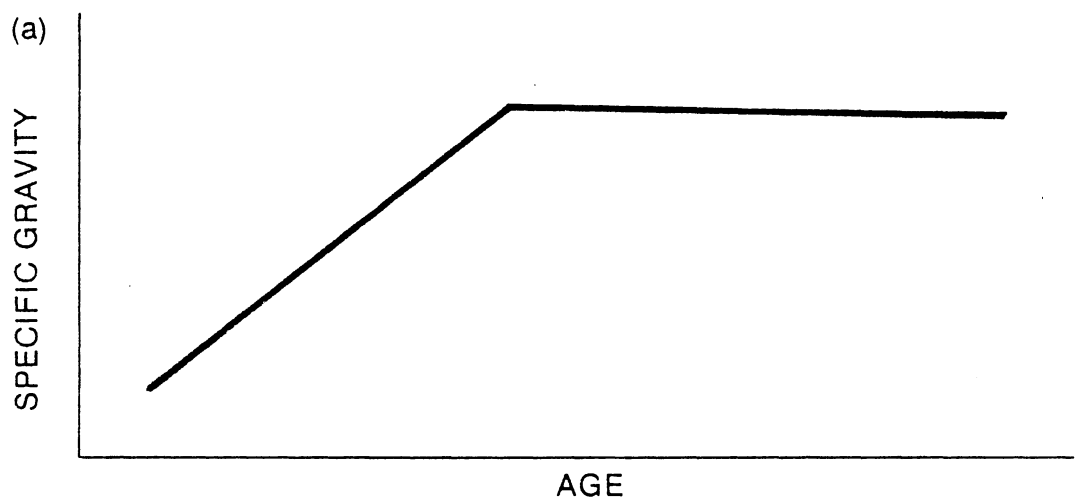


Figure 2. Expected form of the transition from juvenile to mature wood specific gravity in loblolly pine (Zobel and McElwee 1958) (a) and the form obtained by plotting specific gravity averaged over 1420 trees against age (b).

APPENDIX A  
PRINTOUT OF CORE SPECIFIC GRAVITY DATA

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	1	1	0.4003	0.3417	0.3734	0.4674	0.5178	0.5694	0.5556	0.5741	0.4512	0.5178	0.4479	0.4055		
1	1	2	0.3558	0.3927	0.4160	0.4425	0.4750	0.4007	0.4461	0.5667	0.4272	0.4076	0.4643			
1	1	3	0.3290	0.3454	0.3358	0.4087	0.3947	0.5277	0.5317	0.5156	0.4100	0.4820	0.5667			
1	1	4	0.3157	0.3374	0.3460	0.4055	0.4200	0.3496	0.4813	0.4325	0.4350	0.3963	0.3824	0.4826	0.4476	
1	1	5	0.3878	0.3196	0.3339	0.3847	0.4795	0.4097	0.5053	0.5201	0.4950	0.4562	0.4870	0.5797	0.4254	
1	1	6	0.3249	0.3140	0.3808	0.4223	0.4223	0.4870	0.5166	0.3837	0.4380	0.4140	0.4347			
1	1	7	0.3754	0.3688	0.3965	0.4738	0.4328	0.5213	0.4900	0.4360	0.4547	0.4593	0.5191	0.5033		
1	1	8	0.4056	0.4196	0.4186	0.4437	0.4912	0.4618	0.5223	0.5768	0.5253	0.5464	0.5417	0.5458		
1	1	9	0.3601	0.3501	0.3991	0.4367	0.4437	0.4835	0.4946	0.4906	0.4966	0.4437	0.3768	0.4479		
1	1	10	0.3518	0.3397	0.3870	0.4192	0.3851	0.4310	0.4964	0.4272	0.4263	0.3244	0.5686	0.4766		
1	2	1	0.3708	0.3730	0.3662	0.3768	0.4109	0.4223	0.4326	0.5364	0.5033	0.5126	0.3632	0.5331	0.3682	0.5217
1	2	2	0.3262	0.3348	0.3720	0.4643	0.4573	0.5622	0.5596	0.5119						
1	2	3	0.3726	0.3646	0.4298	0.4527	0.4389	0.5300	0.4527	0.4930	0.4416	0.4483	0.4803			
1	2	4	0.3484	0.3603	0.4604	0.4681	0.3877	0.4758	0.5458	0.4341	0.4906	0.5464	0.5395	0.4076		
1	2	5	0.3755	0.3617	0.4113	0.5294	0.5058	0.5641	0.5632	0.5596	0.5582	0.5905	0.5191	0.5653		
1	2	6	0.3127	0.3255	0.3525	0.4358	0.3866	0.4272	0.4794	0.4984	0.3768	0.3546	0.4183			
1	2	7	0.3453	0.3474	0.2944	0.3512	0.3943	0.3334	0.4815	0.3676	0.3670	0.4076	0.3504	0.3891		
1	2	8	0.3340	0.3665	0.4046	0.2966	0.4772	0.5053	0.5703	0.5172	0.4573	0.5033	0.5432	0.5378	0.5713	
1	2	9	0.3768	0.5667	0.4870	0.4434	0.3427	0.3608	0.4119	0.4290	0.4695	0.5354	0.5371	0.4820		
1	2	10	0.3256	0.3126	0.3604	0.3994	0.4512	0.4708	0.4189	0.3866	0.4310					
1	3	1	0.4460	0.5230	0.4547	0.4167	0.4238	0.4296	0.4160	0.4425	0.4614	0.3943	0.4310	0.3909	0.4407	0.4282
1	3	2	0.3747	0.3477	0.3493	0.3859	0.3991	0.3699	0.4238	0.4527	0.4223					
1	3	3	0.3573	0.3822	0.3576	0.4382	0.5033	0.4562	0.5221	0.5454	0.4979	0.4420	0.4367	0.5544	0.4504	
1	3	4	0.3611	0.3275	0.3590	0.3851	0.4004	0.4760	0.4607	0.5253	0.5494	0.5001	0.3402	0.4788		
1	3	5	0.3869	0.3491	0.3706	0.4581	0.4476	0.4882	0.5505	0.5411	0.4815	0.5078	0.4213	0.5107		
1	3	6	0.3546	0.3452	0.3640	0.4448	0.4021	0.4577	0.4597	0.4581	0.4000	0.5072	0.4788	0.4984		
1	3	7	0.3496	0.3220	0.3586	0.4367	0.4160	0.4593	0.4912	0.5313	0.3676	0.4407	0.3943	0.5395		
1	3	8	0.3962	0.3747	0.3594	0.4000	0.4065	0.4373	0.4855	0.4930	0.3943	0.4376	0.4234	0.4950		
1	3	9	0.3877	0.4066	0.4310	0.4643	0.4900	0.4728	0.5217	0.5345	0.5253					
1	3	10	0.3561	0.3504	0.3916	0.3687	0.4294	0.4272	0.4625	0.4562	0.4076	0.4310	0.3921	0.4758		
1	4	1	0.3293	0.3232	0.3857	0.3820	0.4455	0.4984	0.5156	0.5033	0.3768					
1	4	2	0.3360	0.3377	0.4050	0.4209	0.3983	0.4919	0.5166	0.5172	0.4870	0.4046	0.4915	0.5331		
1	4	3	0.3367	0.3255	0.3487	0.5300	0.4367	0.5281	0.4919	0.4803	0.4973	0.3933	0.5354			
1	4	4	0.3447	0.3261	0.3768	0.3673	0.4107	0.4930	0.4744	0.3916	0.4389					
1	4	5	0.3528	0.3342	0.3496	0.3834	0.4177	0.4643	0.4507	0.4483	0.5119	0.5183	0.3644	0.3768		
1	4	6	0.3260	0.3216	0.3738	0.4284	0.3878	0.4780	0.4604	0.4437	0.4160	0.4507	0.3702	0.5138		
1	4	7	0.3862	0.3480	0.3608	0.4334	0.4183	0.4547	0.4782	0.4581	0.4310	0.3348				
1	4	8	0.3299	0.3314	0.3581	0.4085	0.4254	0.5270	0.5267	0.4884	0.4601	0.4687	0.4389	0.4437		
1	4	9	0.4432	0.3424	0.3983	0.4138	0.4476	0.4728	0.5141	0.5587	0.4870	0.5033				
1	4	10	0.3756	0.3416	0.3912	0.4501	0.4339	0.4701	0.5368	0.3994	0.3275	0.4160	0.5494	0.4437		
1	5	1	0.3696	0.3796	0.4146	0.4669	0.5086	0.4887	0.5797	0.5667	0.5223	0.4494	0.5156	0.5667	0.6047	
1	5	2	0.3666	0.3131	0.3768	0.5520	0.5033	0.5317	0.5494	0.5779	0.5395	0.5253				
1	5	3	0.3596	0.4223	0.3358	0.4367	0.4487	0.3713	0.4601	0.4950	0.4512	0.5432	0.5667			
1	5	4	0.3476	0.3481	0.4403	0.4601	0.4835	0.5432	0.4643	0.5596	0.4347	0.5092	0.4996			
1	5	5	0.4113	0.3990	0.3410	0.4204	0.4142	0.4566	0.4952	0.4830	0.4437	0.5078	0.4407	0.4712	0.4803	
1	5	6	0.3444	0.3368	0.3873	0.3768	0.4004	0.4275	0.4358	0.4040	0.3854	0.3244	0.4367			
1	5	7	0.3296	0.3319	0.3275	0.3291	0.4174	0.3768	0.4437	0.4815	0.4643	0.3866	0.4470			
1	5	8	0.3546	0.3391	0.3558	0.3878	0.4173	0.3933	0.4673	0.4337	0.4186	0.4282	0.4518	0.4957	0.4900	
1	5	9	0.3413	0.3825	0.3768	0.4643	0.3955	0.5443	0.4952	0.4786	0.4684	0.5128	0.5253	0.4930		
1	5	10	0.3418	0.3120	0.3377	0.3768	0.3722	0.4217	0.4516	0.4643	0.4367	0.3768	0.4310	0.4597		
1	6	1	0.3957	0.3562	0.3947	0.4257	0.4501	0.5015	0.5226	0.5119	0.4360	0.5228	0.4984			
1	6	2	0.4474	0.3491	0.3535	0.4477	0.4893	0.4389	0.5033	0.4830	0.3768	0.4367	0.5331	0.4643		
1	6	3	0.3085	0.3340	0.3157	0.4021	0.4292	0.4501	0.4716	0.4902	0.4611	0.4076	0.4285	0.4643	0.4952	
1	6	4	0.3412	0.3283	0.3709	0.4465	0.4194	0.4568	0.4455	0.4957	0.3891	0.4076	0.3599			
1	6	5	0.3619	0.2962	0.3768	0.4708	0.4803	0.4842	0.5307	0.5033	0.4160	0.5667				

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	6	6	0.3810	0.3456	0.3535	0.3628	0.4466	0.4183	0.4643	0.4795	0.5069	0.4792	0.4461	0.5567	0.5033	
1	6	7	0.3391	0.3485	0.4029	0.4750	0.4494	0.4722	0.4691	0.5208	0.4076	0.4754	0.5472	0.4643		
1	6	8	0.3584	0.3656	0.4037	0.3573	0.4009	0.4367	0.4754	0.4177	0.4206	0.4870	0.4389	0.5253	0.5605	
1	6	9	0.3542	0.3470	0.3126	0.4046	0.4427	0.4516	0.5223	0.4050	0.3658	0.3477	0.4046	0.4643	0.4643	
1	6	10	0.3423	0.3116	0.3594	0.3898	0.4189	0.5185	0.5380	0.5294	0.4766	0.4803				
1	7	1	0.4215	0.3885	0.3625	0.4693	0.4782	0.4823	0.5069	0.4870	0.4643	0.3654	0.4766	0.4470		
1	7	2	0.3511	0.3288	0.3477	0.3695	0.3581	0.4100	0.4395	0.4363	0.3658	0.4090	0.4234	0.5033	0.5011	
1	7	3	0.3373	0.3605	0.3861	0.4121	0.4113	0.5033	0.5086	0.5300	0.4991	0.5395	0.5001	0.4957		
1	7	4	0.3550	0.3613	0.3541	0.3594	0.4249	0.3768	0.4744	0.4842	0.4420	0.4055	0.3968	0.4728		
1	7	5	0.3568	0.3639	0.3533	0.3768	0.4310	0.4278	0.4412	0.4033	0.4268	0.5056	0.4994			
1	7	6	0.3297	0.3287	0.3143	0.3722	0.3358	0.4531	0.4681	0.4437	0.3927	0.4643	0.3302	0.4146		
1	7	7	0.3667	0.3637	0.3906	0.3818	0.4712	0.4900	0.4744	0.3171	0.3444					
1	7	8	0.3604	0.3074	0.3065	0.3407	0.3816	0.3768	0.4194	0.4593	0.4238					
1	7	9	0.3362	0.3048	0.3646	0.3936	0.3768	0.4576	0.4744	0.4670	0.4021	0.4055	0.4643	0.4507		
1	7	10	0.3651	0.4298	0.4232	0.4181	0.4150	0.3768	0.5033	0.4712	0.4160	0.4310				
1	8	1	0.3846	0.3729	0.3996	0.4257	0.4422	0.5253	0.5211	0.5009	0.4643	0.4815	0.5870			
1	8	2	0.3546	0.3386	0.4200	0.4257	0.4576	0.4533	0.4716	0.4779	0.5464	0.4900	0.3983	0.3845		
1	8	3	0.3561	0.3140	0.3248	0.3487	0.3684	0.4066	0.3977	0.4290	0.4033	0.4581	0.3588	0.3768		
1	8	4	0.3458	0.3370	0.3887	0.4324	0.4744	0.4722	0.4739	0.4160	0.4504	0.4750				
1	8	5	0.3407	0.3594	0.3210	0.3504	0.3805	0.4527	0.4669	0.4815	0.3687	0.4160	0.3845	0.4803		
1	8	6	0.3634	0.3583	0.3662	0.3936	0.4352	0.4187	0.4670	0.4699	0.4516	0.4310	0.4331	0.5239	0.5266	
1	8	7	0.3919	0.4082	0.3798	0.4437	0.4245	0.4206	0.4383	0.4713	0.4893	0.4957				
1	8	8	0.3477	0.3444	0.4035	0.4249	0.4121	0.4470	0.5253	0.5060	0.4695	0.4882	0.4326			
1	8	9	0.3533	0.3713	0.3983	0.3960	0.4578	0.4890	0.4739	0.4010	0.4093	0.4817	0.5086			
1	8	10	0.4182	0.3632	0.4142	0.4010	0.3945	0.4470	0.4691	0.4681	0.3632	0.5060	0.4573			
1	9	1	0.3636	0.3647	0.3602	0.3983	0.4215	0.5051	0.4803	0.4820	0.5910	0.4416	0.4782	0.5928	0.4852	
1	9	2	0.3768	0.3632	0.4124	0.4090	0.4695	0.4786	0.4494	0.4494	0.4282	0.4425	0.4728			
1	9	3	0.4081	0.3596	0.3975	0.4290	0.4329	0.4858	0.5016	0.4520	0.4728	0.4684	0.4870	0.4766		
1	9	4	0.3460	0.3452	0.3666	0.4413	0.4103	0.4917	0.4885	0.4614	0.4350	0.4504	0.3916	0.4362		
1	9	5	0.3837	0.3477	0.4124	0.3813	0.4568	0.4350	0.4290	0.3691	0.4076	0.3275	0.3546			
1	9	6	0.3565	0.3490	0.3940	0.4266	0.4893	0.5063	0.4739	0.4924	0.4896	0.4754	0.4776	0.5924	0.5033	
1	9	7	0.3939	0.3950	0.4186	0.4452	0.5063	0.4830	0.4776	0.4562						
1	9	8	0.3730	0.3688	0.4058	0.4581	0.4716	0.4870	0.5331	0.4701	0.4716	0.4896				
1	9	9	0.3643	0.3671	0.3912	0.4428	0.4446	0.4870	0.4973	0.4437	0.4407	0.4275	0.5542	0.4835		
1	9	10	0.3726	0.4517	0.4088	0.4418	0.5033	0.4643	0.5605	0.5089	0.4479	0.4597	0.4189	0.5582	0.5341	
1	10	1	0.4633	0.4334	0.5072	0.4887	0.5582	0.5805	0.5567	0.4708	0.5779	0.5861	0.6879			
1	10	2	0.3997	0.4227	0.5015	0.5682	0.5033	0.5331	0.5395	0.5567	0.4547	0.5294	0.6879			
1	10	3	0.4066	0.3743	0.4053	0.4249	0.4362	0.4964	0.5053	0.5165	0.4470	0.4597	0.4837	0.4930		
1	10	4	0.3842	0.3847	0.4068	0.4427	0.4290	0.4643	0.5213	0.5253	0.5448	0.4389	0.4355	0.5667		
1	10	5	0.3925	0.3914	0.4097	0.5156	0.5078	0.5632	0.5423	0.5321	0.5253	0.5223	0.5899	0.5757		
1	10	6	0.3590	0.3829	0.3499	0.3839	0.4568	0.4324	0.5033	0.4752	0.4149	0.4437	0.4766	0.4794	0.4437	
1	10	7	0.3310	0.4337	0.3386	0.3321	0.4716	0.4782	0.4915	0.5099	0.6047	0.5920	0.5878	0.4470	0.5253	
1	10	8	0.3905	0.4000	0.4009	0.4347	0.4076	0.4407	0.4555	0.4830	0.4179	0.5033	0.4643	0.5178		
1	10	9	0.3738	0.4120	0.4229	0.4731	0.4470	0.5124	0.5230	0.4584	0.4310	0.4389	0.4969	0.5004		
1	10	10	0.3630	0.3311	0.3725	0.4146	0.4223	0.4331	0.4887	0.4842	0.4906	0.4991	0.6285			
1	11	1	0.3522	0.3365	0.3933	0.4487	0.4244	0.4334	0.4724	0.5141	0.4803	0.4794	0.4695			
1	11	2	0.3429	0.3271	0.4272	0.4229	0.3487	0.6657	0.4674	0.4087	0.3654	0.4037	0.4792	0.4776		
1	11	3	0.3432	0.3444	0.4100	0.4470	0.4146	0.4597	0.4716	0.4100						
1	11	4	0.4596	0.4151	0.4012	0.4181	0.4946	0.4996	0.5226	0.4766	0.4593	0.4604	0.4915			
1	11	5	0.3567	0.3790	0.4278	0.4687	0.5239	0.6047								
1	11	6	0.3569	0.3617	0.3658	0.4058	0.4065	0.5113	0.5266	0.4890	0.4766	0.4527	0.3768	0.4766		
1	11	7	0.3619	0.3824	0.4547	0.3963	0.5004	0.5427	0.5438	0.4915						
1	11	8	0.3487	0.3331	0.4345	0.4323	0.4105	0.5094	0.5540	0.3311	0.4420	0.4547	0.6856	0.5656		
1	11	9	0.3625	0.3822	0.4093	0.4254	0.4870	0.4568	0.4803	0.4573	0.4870					
1	11	10	0.3871	0.3377	0.3316	0.3733	0.3571	0.4465	0.4817	0.4046	0.4238	0.4437	0.3546			



CORE SPECIFIC GRAVITY DATA

OBS	BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
111	1	12	1	0.3636	0.6399	0.3671	0.4341	0.4507	0.4505	0.4823	0.4394	0.3527	0.4179	0.4397	0.4760		
112	1	12	2	0.3437	0.3993	0.4349	0.4389	0.4213	0.4437	0.4673	0.4160	0.4310	0.4494	0.4538			
113	1	12	3	0.3634	0.3670	0.3768	0.4238	0.4132	0.4964	0.4607	0.5099	0.4055	0.4135	0.4562			
114	1	12	4	0.3768	0.3587	0.4337	0.4051	0.4223	0.5092	0.5341	0.4461	0.4643					
115	1	12	5	0.3331	0.3302	0.3225	0.3723	0.4196	0.4076	0.4527	0.4559	0.3632	0.4189	0.3818	0.4817	0.4643	
116	1	12	6	0.3582	0.3333	0.3608	0.4087	0.4029	0.4748	0.4425	0.4504	0.3866	0.4991	0.4113	0.4093		
117	1	12	7	0.3968	0.4026	0.4355	0.4957	0.4643	0.5321	0.5307	0.5582	0.4716	0.4643	0.4643	0.5141		
118	1	12	8	0.3948	0.4068	0.4910	0.4494	0.5378	0.5111	0.5217	0.4587	0.3768	0.4355				
119	1	12	9	0.3974	0.3463	0.4021	0.4437	0.4527	0.5311	0.5331	0.5336	0.4842	0.5119	0.4792	0.5290		
120	1	12	10	0.3806	0.3394	0.3768	0.3487	0.4030	0.4587	0.4527	0.4604	0.4234	0.5307	0.3943	0.3943		
121	1	13	1	0.3800	0.3949	0.4593	0.4643	0.5004	0.5237	0.5156	0.4597	0.4848	0.4842	0.4437			
122	1	13	2	0.3498	0.3289	0.3660	0.4012	0.5228	0.4776	0.4803							
123	1	13	3	0.3884	0.5340	0.4189	0.4581	0.4543	0.5467	0.4882	0.5331	0.4962	0.6047	0.4687	0.4257		
124	1	13	4	0.3819	0.3520	0.3477	0.3120	0.3670	0.3768	0.3818	0.4288	0.4407	0.4344	0.4643	0.3955	0.3822	
125	1	13	5	0.4096	0.4274	0.3975	0.4394	0.4533	0.4403	0.4870	0.4930	0.3768	0.4076	0.3768			
126	1	13	6	0.3975	0.4080	0.4452	0.5148	0.4614	0.5494	0.5548	0.5540	0.3968	0.4416	0.4906	0.4930		
127	1	13	7	0.5102	0.4280	0.4424	0.5074	0.4223	0.5567	0.5469	0.5331	0.5331	0.4310	0.4160			
128	1	13	8	0.4141	0.3958	0.4559	0.4710	0.4684	0.5444	0.5205	0.4994	0.4476	0.5321	0.4744	0.5772		
129	1	13	9	0.3627	0.3955	0.3924	0.3644	0.4160	0.4507	0.4744	0.5134	0.5072	0.4470	0.3632	0.3881	0.4223	
130	1	13	10	0.3953	0.3723	0.3875	0.3689	0.4218	0.4479	0.4223	0.4507	0.4643	0.4674	0.4776			
131	1	14	1	0.4150	0.3936	0.4082	0.4263	0.4527	0.4228	0.4850	0.4993	0.4266	0.4272	0.3768	0.5012	0.5012	
132	1	14	2	0.4029	0.3424	0.3768	0.4083	0.4200	0.4923	0.4870	0.4681	0.4249	0.4581	0.3768	0.4581		
133	1	14	3	0.3752	0.3366	0.4217	0.4527	0.3909	0.4055	0.4538	0.4160						
134	1	14	4	0.3796	0.4026	0.3897	0.4512	0.4466	0.4890	0.5033	0.5007	0.4643	0.4966	0.5183	0.4919		
135	1	14	5	0.3438	0.3477	0.3617	0.3924	0.3962	0.4534	0.4538	0.4042	0.4257	0.4076	0.4527			
136	1	14	6	0.3785	0.3768	0.4217	0.3487	0.4461	0.4160	0.4581	0.3702	0.4957	0.4604				
137	1	14	7	0.3713	0.3629	0.3926	0.4339	0.4206	0.5049	0.5384	0.5074	0.4577	0.4691	0.4848			
138	1	14	8	0.4121	0.3025	0.3562	0.3551	0.4405	0.3945	0.4398	0.4507	0.4547	0.4021	0.3955	0.4310	0.3902	
139	1	14	9	0.3589	0.3331	0.3795	0.4404	0.5060	0.4416	0.5033	0.5741	0.5294	0.5567	0.4527	0.5703	0.5703	
140	1	14	10	0.3803	0.3817	0.4200	0.4257	0.4943	0.4859	0.5269	0.4732	0.4900	0.4547	0.4996			
141	1	15	1	0.4136	0.3687	0.3907	0.4132	0.4458	0.4770	0.4925	0.4132	0.4413	0.4693	0.4290	0.5354		
142	1	15	2	0.3656	0.3959	0.3612	0.3768	0.4350	0.4160	0.4803	0.4437	0.4547					
143	1	15	3	0.3753	0.3904	0.4070	0.4597	0.4900	0.5290	0.5348	0.5757	0.4754	0.5364				
144	1	15	4	0.4280	0.3459	0.3800	0.4512	0.4310	0.5099	0.4803	0.4143	0.4494	0.5078				
145	1	15	5	0.3282	0.3249	0.3293	0.3718	0.4127	0.4337	0.4358	0.4427	0.3947	0.3891	0.3576	0.4021	0.4380	
146	1	15	6	0.3840	0.3599	0.3644	0.4192	0.4531	0.4722	0.4859	0.5046	0.4376	0.3975	0.4643	0.5196	0.5191	
147	1	15	7	0.3581	0.3808	0.3584	0.3916	0.4242	0.4566	0.4977	0.4921	0.4597	0.3968	0.4643			
148	1	15	8	0.3531	0.3490	0.4000	0.4684	0.4782	0.5033	0.4738	0.4587	0.4263	0.3768				
149	1	15	9	0.3656	0.4117	0.3691	0.4494	0.4138	0.4093	0.4465	0.4397	0.4179	0.4272				
150	1	15	10	0.3665	0.3541	0.4263	0.4389	0.4403	0.4577	0.5113	0.4708	0.3963	0.4213	0.5277	0.4803		
151	1	16	1	0.3609	0.3705	0.4260	0.4147	0.4494	0.5337	0.5454	0.4941	0.4512					
152	1	16	2	0.3845	0.3745	0.4093	0.4593	0.4722	0.6437	0.6047	0.4728	0.4407	0.4355	0.4930			
153	1	16	3	0.3825	0.3883	0.4253	0.4981	0.4930	0.4533	0.4788	0.5325	0.6417	0.4716	0.5718	0.5861		
154	1	16	4	0.3788	0.3390	0.3590	0.3533	0.4272	0.4000	0.3444	0.4367	0.3074					
155	1	16	5	0.3386	0.3407	0.4000	0.4616	0.4915	0.5033	0.5069	0.5294	0.4815	0.4973	0.5494	0.5211		
156	1	16	6	0.3517	0.3518	0.3590	0.3902	0.4870	0.4389	0.4643	0.4127	0.4643					
157	1	16	7	0.3820	0.3392	0.3567	0.3622	0.4084	0.4278	0.4754	0.4461	0.4397	0.4407	0.3826	0.4113		
158	1	16	8	0.3998	0.3753	0.3933	0.4294	0.4494	0.5107	0.4611	0.4587	0.5092	0.5920	0.5584	0.5104		
159	1	16	9	0.3620	0.3504	0.4076	0.4196	0.4266	0.4290	0.4671	0.4337	0.5033	0.4728	0.5221	0.5060		
160	1	16	10	0.3860	0.3897	0.4223	0.5033	0.4376	0.5172	0.4643	0.5395	0.5703	0.4601				
161	1	17	1	0.3339	0.3937	0.3708	0.4382	0.4310	0.4774	0.4776	0.4527	0.4527	0.4437	0.5317			
162	1	17	2	0.4010	0.3664	0.3955	0.3768	0.3870	0.4362	0.4476	0.4105	0.4437	0.4238				
163	1	17	3	0.3617	0.3646	0.3511	0.4033	0.3947	0.4105	0.4538	0.4966	0.4643	0.4437	0.4046			
164	1	17	4	0.3990	0.3551	0.3743	0.3736	0.3834	0.4049	0.4552	0.4178	0.4065	0.4334	0.4427	0.4000		
165	1	17	5	0.3332	0.3023	0.3371	0.4389	0.4601	0.5078	0.5078							

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	17	6	0.3696	0.3576	0.4028	0.4196	0.3988	0.4857	0.4894	0.4160	0.4021	0.4174	0.5033	0.4794		
1	17	7	0.3949	0.3705	0.3599	0.4555	0.4234	0.5004	0.5033	0.4906	0.4249	0.4223	0.5119			
1	17	8	0.3452	0.3217	0.4206	0.3386	0.4113	0.4004	0.4566	0.4835	0.4389	0.4060	0.5286	0.4412	0.4744	
1	17	9	0.4024	0.3786	0.3983	0.4060	0.4339	0.4852	0.5269	0.5067						
1	17	10	0.3768	0.3460	0.3047	0.3968	0.4206	0.4607	0.5092	0.4912	0.4160	0.4389	0.4337	0.5141		
1	18	1	0.3629	0.3465	0.3859	0.4172	0.3965	0.4417	0.4485	0.4447	0.3891	0.4815	0.4223	0.4590		
1	18	2	0.3600	0.3768	0.4597	0.4752	0.4192	0.5602	0.5053	0.4577	0.4996	0.4555	0.5128			
1	18	3	0.3153	0.3105	0.3580	0.3738	0.3715	0.4397	0.5033	0.5119	0.5107	0.3983	0.4728	0.5086		
1	18	4	0.3428	0.3475	0.3568	0.4200	0.4537	0.4257	0.3560	0.6250	0.4249	0.4518	0.3831	0.4502		
1	18	5	0.3513	0.3361	0.3657	0.4701	0.4621	0.4915	0.4848	0.4581	0.3768	0.4906	0.4455	0.4687		
1	18	6	0.3714	0.3715	0.4132	0.4310	0.4371	0.4977	0.4860	0.4482	0.4826	0.4738	0.4701	0.4748		
1	18	7	0.3916	0.3684	0.3849	0.3886	0.3854	0.4775	0.4906	0.4427	0.4483	0.4310	0.4803	0.5307		
1	18	8	0.4147	0.3543	0.4061	0.3808	0.3875	0.4373	0.4212	0.6204	0.4160	0.4127	0.4135	0.4483		
1	18	9	0.3539	0.3264	0.3348	0.3768	0.3562	0.4014	0.4211	0.4085	0.3554	0.3676	0.3997	0.3933		
1	18	10	0.3691	0.3402	0.3612	0.4049	0.4135	0.4437	0.4962	0.5011	0.4555	0.4268	0.4691			
1	19	1	0.3804	0.4113	0.4031	0.5432	0.5427	0.6047	0.5253	0.4966	0.5713	0.5395				
1	19	2	0.3632	0.3424	0.3198	0.3497	0.3823	0.4179	0.4508	0.4060	0.4347	0.4192	0.3283	0.3870		
1	19	3	0.4301	0.4093	0.4590	0.3970	0.3803	0.5653	0.5134	0.6725	0.5253	0.3171	0.3768			
1	19	4	0.4396	0.4142	0.4363	0.4875	0.4731	0.5503	0.5690	0.4547	0.4643	0.4448	0.4772	0.5520		
1	19	5	0.3287	0.3143	0.3521	0.3499	0.4296	0.4601	0.4621	0.4244	0.4593	0.4813				
1	19	6	0.3779	0.3959	0.3830	0.3912	0.4596	0.4834	0.5017	0.4278	0.5082	0.4285	0.4643			
1	19	7	0.3674	0.4571	0.4609	0.5009	0.5582	0.5331	0.5208							
1	19	8	0.3302	0.3289	0.3468	0.3597	0.4397	0.5046	0.4467	0.4326	0.4538	0.4427	0.5866	0.4796		
1	19	9	0.4814	0.4249	0.4328	0.4461	0.4896	0.5056	0.5060	0.4643	0.4716	0.5345	0.5331			
1	19	10	0.3260	0.3296	0.3376	0.3740	0.3438	0.4097	0.4010	0.3691	0.3887	0.3562	0.3604			
1	20	1	0.3802	0.3926	0.3768	0.3994	0.4397	0.4494	0.4813	0.4881	0.4310	0.4722	0.4479	0.4896		
1	20	2	0.3907	0.3533	0.4704	0.5286	0.5053	0.4527	0.5840	0.5371	0.5033	0.6258	0.6331			
1	20	3	0.4225	0.3789	0.3896	0.4294	0.4254	0.4310	0.5527	0.4870	0.3702	0.4776	0.4483	0.4870		
1	20	4	0.4033	0.3366	0.3477	0.4310	0.4371	0.4263	0.4667	0.4923	0.4766	0.4984	0.4268	0.4760		
1	20	5	0.3947	0.3275	0.3699	0.3994	0.4964	0.4924	0.5217	0.5241	0.4837	0.4437	0.4601	0.5253		
1	20	6	0.3320	0.3082	0.3960	0.4076	0.4101	0.4643	0.5130	0.4244	0.4204	0.4113	0.4712	0.4669		
1	20	7	0.4055	0.3524	0.3504	0.4407	0.4611	0.4328	0.4577	0.4857	0.4179	0.4890	0.5144	0.4803		
1	20	8	0.3028	0.2933	0.3530	0.3407	0.3487	0.4051	0.3649	0.4160	0.3902	0.3955	0.4547			
1	20	9	0.4836	0.3475	0.3469	0.3800	0.3922	0.4245	0.4984	0.4411	0.3868	0.4278	0.4082	0.4577		
1	20	10	0.3334	0.3280	0.3182	0.4042	0.3056	0.4147	0.4189	0.4310	0.2958	0.3849	0.4238			
1	21	1	0.3971	0.3828	0.3798	0.4160	0.3813	0.4280	0.4622	0.4533	0.4643	0.5141	0.4310	0.3625		
1	21	2	0.3409	0.3364	0.3159	0.3520	0.3530	0.4203	0.4331	0.4754	0.4206	0.3866	0.4177	0.4288	0.4678	
1	21	3	0.3259	0.3163	0.3444	0.3909	0.3941	0.4272	0.4400	0.4160	0.4004	0.4946	0.4344	0.4272		
1	21	4	0.3425	0.3444	0.4147	0.4722	0.4731	0.4870	0.4437							
1	21	5	0.3417	0.3023	0.3217	0.3731	0.3540	0.3644	0.4483	0.4389	0.4437	0.4420				
1	21	6	0.3217	0.3094	0.3740	0.4507	0.4337	0.4118	0.4324	0.5208	0.4691	0.3768	0.4347	0.4803		
1	21	7	0.3557	0.3017	0.3212	0.4010	0.3649	0.4324	0.4733	0.4060	0.3768	0.4000	0.5191	0.4378		
1	21	8	0.3521	0.3056	0.4042	0.3884	0.3875	0.4573	0.4728	0.4518	0.4337	0.4643	0.4394	0.4325		
1	21	9	0.4154	0.3275	0.1682	0.4029	0.4234	0.4364	0.4581	0.4268	0.4349	0.5679	0.5033	0.5231		
1	21	10	0.3690	0.3161	0.3294	0.3625	0.3397	0.3768	0.4223	0.4207	0.3822	0.4573	0.4403	0.4674		
1	22	1	0.3554	0.3424	0.2956	0.4238	0.4601	0.4107	0.4912	0.5208	0.4813	0.5587	0.4930	0.3968	0.5354	
1	22	2	0.3672	0.3654	0.4152	0.5054	0.4555	0.5078	0.4055	0.5099						
1	22	3	0.3794	0.3546	0.4026	0.4516	0.4268	0.4470	0.5441	0.4716	0.4055	0.4234	0.4593			
1	22	4	0.3428	0.3255	0.3898	0.4063	0.3983	0.4518	0.4643	0.4278	0.4643	0.5605	0.5172			
1	22	5	0.3628	0.3892	0.3527	0.3910	0.3839	0.3803	0.4160	0.4263	0.4076	0.3873	0.3235	0.4824	0.4400	
1	22	6	0.4047	0.3881	0.4031	0.4455	0.4400	0.4772	0.5131	0.4732	0.3909	0.4601	0.5427			
1	22	7	0.3899	0.4183	0.4068	0.4643	0.4744	0.4935	0.4919	0.4966	0.3576	0.4562	0.4292	0.5803	0.4762	
1	22	8	0.3836	0.3970	0.3768	0.4130	0.4347	0.4096	0.4738	0.4382	0.4268	0.4643	0.4403	0.5033	0.5186	
1	22	9	0.3638	0.3535	0.3494	0.4113	0.4105	0.4003	0.4728	0.4620	0.4331	0.4334	0.4735	0.4698	0.4698	
1	22	10	0.3710	0.3525	0.3702	0.4547	0.4407	0.4735	0.4761	0.5345	0.4100	0.4189	0.4792	0.4973		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	23	1	0.3448	0.3402	0.3475	0.3726	0.4085	0.4127	0.4350	0.4367	0.4179	0.4494	0.3916	0.4643		
1	23	2	0.4356	0.3768	0.3309	0.4012	0.4000	0.4826	0.4470	0.4969	0.4837	0.4643	0.5119	0.5253	0.4788	
1	23	3	0.3980	0.3252	0.3824	0.4643	0.4360	0.4870	0.5156	0.4766	0.4007	0.4400	0.5134	0.5156		
1	23	4	0.3670	0.3732	0.3994	0.4064	0.4276	0.4943	0.5317	0.4607	0.5063	0.4870				
1	23	5	0.3352	0.3131	0.3424	0.3714	0.3994	0.4310	0.4217	0.4138	0.3768	0.4055	0.4744	0.4691	0.4278	
1	23	6	0.3985	0.3512	0.3690	0.4107	0.4280	0.4587	0.4555	0.4643	0.3849	0.3302	0.4824	0.4310		
1	23	7	0.3950	0.3789	0.3991	0.4599	0.4418	0.4516	0.4470	0.3849	0.4347	0.4830	0.4708			
1	23	8	0.3564	0.3012	0.3061	0.3894	0.4093	0.4701	0.4662	0.4643	0.4103	0.4259	0.5009			
1	23	9	0.4052	0.4003	0.4332	0.4394	0.3943	0.4676	0.4893	0.3909	0.5134	0.4512	0.5072			
1	23	10	0.4747	0.4189	0.4174	0.3541	0.4310	0.4643	0.4296	0.4687	0.4494	0.3768	0.4896	0.4957		
1	24	1	0.3722	0.3311	0.3966	0.4043	0.4643	0.5156	0.4716	0.4695	0.4766	0.4643	0.5131			
1	24	2	0.3444	0.3295	0.3044	0.3444	0.3662	0.3546	0.3921	0.4124	0.3444	0.4140	0.4541	0.4483		
1	24	3	0.3507	0.3038	0.3183	0.3576	0.3922	0.4332	0.4523	0.4643	0.3983	0.4337	0.3768	0.4613		
1	24	4	0.3078	0.2971	0.3262	0.3348	0.3809	0.4083	0.3682	0.4347	0.3244	0.3768	0.3101	0.4076		
1	24	5	0.3490	0.3629	0.3795	0.4287	0.4601	0.4118	0.4254	0.4621	0.4160	0.4512	0.4310	0.4921		
1	24	6	0.3348	0.3700	0.3542	0.4135	0.3613	0.4181	0.4512	0.4337	0.3768	0.3670	0.4147	0.5067		
1	24	7	0.3655	0.3440	0.3800	0.4266	0.4350	0.4979	0.4310	0.5033	0.5448	0.5253	0.5520	0.4643		
1	24	8	0.3768	0.3180	0.3275	0.3348	0.3878	0.4899	0.4701	0.4171	0.4010	0.3527	0.4820	0.4842		
1	24	9	0.3601	0.3439	0.4234	0.4428	0.4329	0.4845	0.4494	0.4984	0.4310	0.4160	0.4712			
1	24	10	0.3785	0.3411	0.3420	0.4845	0.4448	0.4559	0.4713	0.4268	0.4437	0.3768	0.5820	0.5323		
1	25	1	0.3768	0.3540	0.3546	0.3863	0.4095	0.4229	0.4310	0.5083	0.4476	0.3599	0.4420	0.5472	0.5395	
1	25	2	0.3652	0.3591	0.3259	0.3936	0.4053	0.3768	0.4259	0.4728	0.4107	0.3768	0.4310	0.4470	0.4254	
1	25	3	0.4187	0.3397	0.3424	0.4084	0.4033	0.4728	0.4040	0.5063	0.4848	0.4310	0.5033	0.4695		
1	25	4	0.3933	0.4070	0.3945	0.4344	0.4058	0.4380	0.4534	0.3849	0.3050	0.4100				
1	25	5	0.4024	0.3768	0.3895	0.4531	0.5094	0.5166	0.5348	0.5358	0.4691	0.3916	0.5294	0.4830		
1	25	6	0.3389	0.3358	0.3407	0.4055	0.3715	0.3768	0.4292	0.4113	0.3902	0.4984				
1	25	7	0.3593	0.2928	0.3053	0.3305	0.3329	0.3632	0.4117	0.3924	0.3617	0.3725	0.3943	0.4206		
1	25	8	0.3548	0.3483	0.3768	0.3943	0.4004	0.4046	0.4593	0.4268	0.3670	0.3348	0.4593	0.4200		
1	25	9	0.3307	0.3519	0.3444	0.4083	0.4174	0.4021	0.4842	0.4906	0.4209	0.3617	0.4272	0.4547	0.4360	
1	25	10	0.4021	0.4142	0.4169	0.4423	0.3768	0.4919	0.4803	0.4389	0.4135	0.3768	0.4643			
1	27	1	0.4723	0.3806	0.3572	0.4667	0.4809	0.4516	0.4788	0.5119	0.4744	0.5307	0.5514	0.4643		
1	27	2	0.3555	0.4051	0.3905	0.4728	0.4538	0.5739	0.5455	0.5168	0.5072	0.5820	0.5072			
1	27	3	0.3510	0.4098	0.4377	0.3728	0.4133	0.4321	0.4660	0.4973	0.5128	0.4943	0.4389	0.4712	0.4143	
1	27	4	0.3012	0.3035	0.3145	0.3527	0.3687	0.4376	0.4870	0.3638	0.4179	0.3943	0.3943			
1	27	5	0.4285	0.4091	0.4197	0.4521	0.4050	0.4754	0.5001	0.4272	0.3873	0.4331	0.5004	0.4815		
1	27	6	0.3219	0.3195	0.3357	0.4358	0.3968	0.5001	0.5092	0.4701	0.4597	0.4896				
1	27	7	0.3935	0.3379	0.4170	0.4055	0.3309	0.4310	0.4272	0.4278	0.3963					
1	27	8	0.3458	0.3007	0.3004	0.3640	0.3960	0.4029	0.4744	0.4407	0.4870	0.4643	0.5622			
1	27	9	0.3378	0.3354	0.3576	0.4204	0.4050	0.4437	0.5058	0.4788	0.4437	0.4100	0.5779			
1	27	10	0.3522	0.3539	0.3231	0.4021	0.4010	0.4625	0.4703	0.4576	0.4820	0.4310	0.4979			
1	28	1	0.3888	0.3847	0.4941	0.4593	0.4400	0.5253	0.5596	0.4915	0.4643	0.5788	0.4984			
1	28	2	0.3439	0.3434	0.4285	0.5208	0.4512	0.4607	0.4609	0.4337	0.3467	0.5703	0.5307			
1	28	3	0.3277	0.3439	0.3993	0.4257	0.3899	0.4461	0.4178	0.4474	0.4093	0.4643	0.4494	0.4760		
1	28	4	0.3371	0.3275	0.3673	0.4412	0.4119	0.4337	0.4403	0.5464	0.5178	0.5253	0.5395			
1	28	5	0.3499	0.3326	0.4274	0.4236	0.4397	0.4814	0.5084	0.4007	0.4547	0.4604	0.3873			
1	28	6	0.3548	0.3216	0.3571	0.4325	0.4217	0.4912	0.5253	0.5380	0.4643	0.3854	0.4930	0.4416		
1	28	7	0.3693	0.3330	0.3731	0.3679	0.4151	0.4547	0.4407	0.4400	0.3562	0.5086				
1	28	8	0.3668	0.3861	0.3365	0.3651	0.4014	0.5137	0.4930	0.4803	0.4870	0.4643	0.4915	0.6821		
1	28	9	0.3622	0.3342	0.3381	0.3993	0.4175	0.4723	0.4951	0.4901	0.4447	0.5134	0.4673	0.5080		
1	28	10	0.3543	0.3206	0.4016	0.4576	0.4782	0.5067	0.5942	0.5791	0.6701	0.4562	0.5587	0.6047		
1	29	1	0.3460	0.4957	0.3455	0.3809	0.4418	0.4420	0.4820	0.4809	0.4609	0.4416	0.4643	0.4803	0.5567	
1	29	2	0.3699	0.3202	0.3546	0.4389	0.4292	0.4906	0.4748	0.4494	0.3955	0.5119	0.4076			
1	29	3	0.3682	0.3267	0.3314	0.3632	0.4223	0.4400	0.4930	0.3768	0.4803	0.4389				
1	29	4	0.3540	0.3318	0.3477	0.4643	0.4673	0.4946	0.5056	0.4643	0.3599	0.2737	0.3983	0.5078		
1	29	5	0.3584	0.3802	0.3444	0.3878	0.4476	0.4900	0.4380	0.5092	0.5331	0.3504	0.4249	0.4249		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	29	6	0.3400	0.2980	0.3695	0.3997	0.3955	0.4527	0.4328	0.4744	0.4367	0.5144	0.4173	0.5016		
1	29	7	0.3481	0.2951	0.3249	0.3504	0.4518	0.4915	0.4174	0.4701	0.4527	0.4189	0.4127			
1	29	8	0.3564	0.3278	0.3451	0.4060	0.3912	0.4518	0.4785	0.4728	0.4355	0.4996	0.4681	0.4486		
1	29	9	0.3551	0.3187	0.3869	0.4185	0.4057	0.4628	0.4378	0.4229	0.3847	0.5331	0.4398	0.4601		
1	29	10	0.3598	0.3186	0.3078	0.4479	0.3768	0.6236	0.4254	0.4774	0.3924	0.4337	0.5053	0.5058		
1	30	1	0.3641	0.3321	0.3866	0.3818	0.4371	0.4882	0.4850	0.4051	0.4213	0.3710	0.4842	0.4437		
1	30	2	0.4055	0.3515	0.3310	0.3163	0.4016	0.3987	0.4030	0.4756	0.4393	0.4147	0.3768	0.4695	0.5277	
1	30	3	0.3623	0.3551	0.3504	0.4533	0.4896	0.4803	0.4231	0.4848	0.4389	0.5253	0.4643			
1	30	4	0.3295	0.3163	0.3572	0.4376	0.3565	0.4347	0.4673	0.5033	0.4272	0.4360	0.4183			
1	30	5	0.3689	0.3348	0.3511	0.4231	0.3937	0.4209	0.5092	0.4437						
1	30	6	0.3481	0.3601	0.4232	0.4775	0.4335	0.4826	0.4643	0.4209	0.4687	0.4483	0.5507			
1	30	7	0.3469	0.3306	0.3331	0.4053	0.3960	0.4012	0.4241	0.4562	0.4538	0.3691	0.4021	0.5072		
1	30	8	0.3755	0.3404	0.3916	0.4467	0.4204	0.4754	0.4616	0.4830	0.4555	0.4915	0.4601	0.4701		
1	30	9	0.3535	0.3171	0.3398	0.3902	0.4119	0.4331	0.3822	0.3768	0.4100	0.3546	0.4310	0.4930		
1	30	10	0.3474	0.3271	0.4147	0.4616	0.4952	0.4420	0.4740	0.4609	0.4090	0.3617	0.4882			
1	32	1	0.4051	0.3587	0.3884	0.4613	0.4882	0.5203	0.5423	0.5472	0.5436	0.5676	0.5567			
1	32	2	0.3800	0.3405	0.3610	0.4170	0.3983	0.4554	0.4569	0.4774	0.4643	0.4238	0.3866	0.4416		
1	32	3	0.4129	0.3999	0.3680	0.3886	0.4573	0.4527	0.4989	0.4664	0.4617	0.3916	0.5191	0.4160	0.4870	
1	32	4	0.3861	0.3518	0.4189	0.4815	0.3886	0.4358	0.5033	0.4350	0.4601	0.4744	0.4601	0.4887		
1	32	5	0.3436	0.3285	0.3555	0.3818	0.3873	0.3813	0.4206	0.4779	0.4494	0.4416	0.3933	0.4870	0.4691	
1	32	6	0.3539	0.3283	0.3849	0.3909	0.4242	0.4527	0.5510	0.5494	0.4581	0.5622	0.5533			
1	32	7	0.3680	0.3036	0.3938	0.3883	0.4151	0.4585	0.4518	0.4878	0.5033	0.4938	0.5307	0.4257	0.4870	
1	32	8	0.3559	0.3307	0.3861	0.3906	0.4378	0.4362	0.4189	0.4200	0.4420	0.4614				
1	32	9	0.3946	0.3650	0.3629	0.4259	0.3884	0.4272	0.4060	0.3968	0.3617	0.3916				
1	32	10	0.4091	0.3462	0.3941	0.4358	0.4296	0.4682	0.5111	0.5143	0.4487	0.4076	0.4360	0.5208		
1	33	1	0.3728	0.3430	0.4282	0.4782	0.4792	0.4238	0.3768	0.4613	0.4964	0.4984	0.3983			
1	33	2	0.3557	0.3768	0.3546	0.4127	0.4037	0.4590	0.4533	0.4795	0.4355	0.4400	0.4007	0.5144	0.5001	
1	33	3	0.3880	0.3752	0.4206	0.4326	0.4223	0.5567	0.4754	0.4573	0.4906	0.3768	0.4389			
1	33	4	0.3593	0.3412	0.3983	0.4449	0.4100	0.4423	0.5099	0.3831	0.3768	0.5423	0.5063			
1	33	5	0.3651	0.3804	0.3680	0.4553	0.4581	0.4573	0.5723	0.4547	0.3768	0.5208				
1	33	6	0.4059	0.3739	0.4404	0.4687	0.4728	0.4691	0.4830	0.4930	0.3933	0.4906	0.5033			
1	33	7	0.3630	0.3368	0.3859	0.3973	0.4230	0.4795	0.4643	0.3768	0.4754	0.4238	0.4842	0.4716		
1	33	8	0.3444	0.3494	0.3371	0.3926	0.4339	0.4076	0.4695	0.4754	0.4328	0.4541	0.4209	0.4879	0.4543	
1	33	9	0.3305	0.3415	0.3644	0.4380	0.4263	0.6810	0.4837	0.3094	0.3546	0.4310	0.4946			
1	33	10	0.3630	0.4257	0.4150	0.3906	0.3717	0.4337	0.4174	0.3916	0.3444	0.3902	0.4512	0.4416		
1	34	1	0.3149	0.3243	0.3314	0.3941	0.4223	0.4427	0.4673	0.4486	0.4140	0.4701	0.4722	0.5458		
1	34	2	0.3475	0.3275	0.4344	0.4553	0.4673	0.5134	0.5156	0.5011	0.4587	0.4507	0.5653	0.5458		
1	34	3	0.3374	0.3640	0.3546	0.4030	0.4643	0.4782	0.4735	0.5183	0.4093	0.4562				
1	34	4	0.3588	0.3964	0.3930	0.4621	0.5054	0.5395	0.5217	0.5567	0.5533	0.5840	0.5840	0.6355	0.5286	
1	34	5	0.3354	0.3475	0.3394	0.4425	0.4100	0.4681	0.5253	0.4722	0.4076	0.4249	0.6047			
1	34	6	0.3755	0.3411	0.3081	0.3736	0.3812	0.4339	0.4923	0.4046	0.4687	0.3824	0.5099	0.4754		
1	34	7	0.3438	0.3712	0.3516	0.3884	0.4824	0.5011	0.5191	0.5156	0.4766	0.4643	0.4803	0.5274	0.4957	
1	34	8	0.3500	0.3400	0.3095	0.3605	0.4172	0.4083	0.3950	0.5656	0.4643	0.4678	0.4160	0.5567	0.4455	
1	34	9	0.3677	0.3628	0.3641	0.4355	0.4160	0.4969	0.5111	0.5544	0.3768	0.5395	0.4896	0.5703	0.4803	
1	34	10	0.3720	0.3870	0.3902	0.3909	0.4087	0.4389	0.4437	0.4573						
1	35	1	0.3886	0.3668	0.3898	0.4930	0.4671	0.4921	0.5208	0.5765	0.5395	0.4754	0.5354			
1	35	2	0.3584	0.3736	0.3386	0.3188	0.3886	0.4090	0.4684	0.4643	0.4360	0.3302	0.3348	0.4930	0.4766	
1	35	3	0.3303	0.3431	0.3720	0.5156	0.4412	0.5004	0.5448	0.5128	0.4870	0.3983	0.5307			
1	35	4	0.4093	0.2823	0.3494	0.3465	0.3924	0.4383	0.4140	0.4643	0.4617	0.4132	0.4389	0.4887	0.4678	
1	35	5	0.3830	0.3588	0.3604	0.4064	0.4109	0.4444	0.4255	0.4272	0.3682	0.3924	0.3576	0.4105		
1	35	6	0.3815	0.3420	0.3194	0.3687	0.4160	0.4186	0.4437	0.4758	0.5033	0.4437	0.4581	0.5208		
1	35	7	0.3581	0.3431	0.3868	0.4091	0.3718	0.5331	0.4716	0.4310	0.4389	0.4355	0.4906			
1	35	8	0.3713	0.3790	0.4274	0.4437	0.4740	0.5018	0.5101	0.4488	0.4257	0.4842	0.5358	0.4788		
1	35	9	0.3551	0.3240	0.3704	0.4160	0.4587	0.4779	0.4906	0.4701	0.4722	0.5371	0.4160	0.5582		
1	35	10	0.3601	0.3261	0.3275	0.3725	0.3520	0.4241	0.4540	0.4371	0.4437	0.4234	0.3940	0.4177		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
1	36	1	0.3862	0.3295	0.3511	0.3693	0.3834	0.4076	0.4404	0.4395	0.4121	0.4341	0.5033	0.4547		
1	36	2	0.3504	0.3038	0.3743	0.4084	0.3768	0.3498	0.3487	0.4050	0.3977	0.3673	0.3567	0.3533	0.3483	
1	36	3	0.3504	0.3155	0.3971	0.3768	0.3907	0.4029	0.4463	0.4033	0.4093	0.4896				
1	36	4	0.3614	0.3845	0.3813	0.3546	0.4014	0.3768	0.4452	0.4803	0.5253	0.4310	0.4643			
1	36	5	0.3788	0.3955	0.4174	0.4160	0.4029	0.4722	0.4068	0.4396	0.4014	0.4093	0.4725	0.4339		
1	36	6	0.3808	0.3219	0.3571	0.4562	0.4282	0.4607	0.5007	0.5033	0.3768	0.4278	0.5107			
1	36	7	0.3139	0.2817	0.2837	0.3314	0.3126	0.3632	0.3605	0.3768	0.3126	0.3287	0.3662	0.3617		
1	36	8	0.4416	0.3325	0.3063	0.3397	0.3599	0.3929	0.4121	0.3725	0.3287	0.3617	0.4242			
1	36	9	0.3483	0.3059	0.3348	0.3929	0.4150	0.5124	0.4521	0.4761	0.4234	0.3829	0.5086	0.5128		
1	36	10	0.3910	0.3018	0.2475	0.5236	0.3710	0.4684	0.4360	0.4870	0.3768	0.5622				
2	1	1	0.3833	0.3926	0.3936	0.4986	0.5134	0.5460	0.5544	0.6278	0.5286	0.5281	0.4803			
2	1	2	0.3300	0.3323	0.2974	0.4272	0.4209	0.5156	0.4887	0.5582	0.3983	0.5395	0.5703	0.6542		
2	1	3	0.3533	0.3748	0.3540	0.4583	0.4494	0.5253	0.5080	0.5703	0.5203	0.4906	0.5286	0.5520	0.5417	
2	1	4	0.3324	0.3549	0.3881	0.4728	0.4538	0.4597	0.3171	0.3171	0.5033					
2	1	5	0.3392	0.3234	0.4084	0.4437	0.4569	0.4698	0.4678	0.5395	0.3873	0.4249	0.4355			
2	1	6	0.3686	0.3501	0.3848	0.4667	0.4143	0.5708	0.5364	0.5214	0.4964	0.5033	0.5082	0.4744		
2	1	7	0.3567	0.3993	0.3348	0.4515	0.3348	0.5494	0.5166	0.5228	0.5785	0.4347	0.4461	0.5253	0.4695	
2	1	8	0.3857	0.3916	0.3641	0.5102	0.4310	0.5579	0.4815	0.5354	0.5703	0.4470	0.5851			
2	1	9	0.3570	0.3456	0.3021	0.4501	0.4964	0.5533	0.5596	0.5253						
2	1	10	0.3856	0.4254	0.3966	0.4393	0.5281	0.5178	0.6134	0.6270	0.5341	0.5438	0.4643	0.5582	0.5768	
2	2	1	0.3745	0.3440	0.4284	0.4310	0.5166	0.4673	0.5902	0.5432	0.5104	0.4541	0.4555			
2	2	2	0.3628	0.3537	0.3825	0.4383	0.4966	0.4135	0.5605	0.5033	0.5099	0.5472				
2	2	3	0.3983	0.3363	0.3386	0.5072	0.4820	0.5567	0.5874	0.5935	0.5797	0.6451	0.7065			
2	2	4	0.3210	0.4626	0.4280	0.5307	0.4076	0.5634	0.5567	0.5086	0.4562					
2	2	5	0.3656	0.3935	0.3919	0.4621	0.4331	0.4912	0.5128	0.5629	0.5427	0.4695	0.5476	0.4547		
2	2	6	0.3623	0.3572	0.3718	0.4552	0.4782	0.4194								
2	2	7	0.4089	0.3283	0.3326	0.3790	0.3933	0.4076	0.4329	0.4358	0.4568	0.4512	0.4915	0.5156	0.4788	
2	2	8	0.3385	0.3379	0.3610	0.4465	0.4803	0.5033	0.4870	0.4055	0.4200	0.4076				
2	2	9	0.3793	0.3678	0.4971	0.5277	0.5476	0.5910	0.6047	0.5525	0.5286	0.5718	0.6705	0.5805		
2	2	10	0.3597	0.3061	0.3471	0.4900	0.3955	0.4830	0.5550	0.4643	0.4437	0.4160				
2	3	1	0.3512	0.3359	0.3031	0.4643	0.5313	0.5448	0.6278	0.5472	0.4437	0.5156				
2	3	2	0.3532	0.3319	0.3244	0.4076	0.4362	0.4803	0.4732	0.4681	0.4455	0.4915				
2	3	3	0.3663	0.3787	0.3317	0.4666	0.4670	0.4845	0.4870	0.4611	0.6047	0.5198	0.4568	0.4701		
2	3	4	0.3895	0.3566	0.4160	0.5058	0.4722	0.5253	0.5281	0.6047	0.6047					
2	3	5	0.3414	0.3136	0.4068	0.3891	0.4174	0.5094	0.4813	0.3768	0.4263	0.4507				
2	3	6	0.3552	0.3688	0.3662	0.3464	0.4107	0.4418	0.4427	0.4952	0.4643	0.3849	0.4183	0.4643	0.4470	
2	3	7	0.3419	0.3296	0.4217	0.4919	0.4744	0.5423	0.5165	0.5191	0.5119	0.6186	0.5567			
2	3	8	0.3915	0.3531	0.3533	0.4543	0.3973	0.5134	0.5054	0.5058	0.4687	0.4643	0.5472	0.5870		
2	3	9	0.3610	0.2927	0.3431	0.4643	0.5004	0.4547	0.4830	0.3768	0.4127	0.4957				
2	3	10	0.3550	0.3580	0.3605	0.4427	0.4234	0.5001	0.4930	0.4337	0.4437	0.5622				
2	4	1	0.3493	0.3040	0.3094	0.4249	0.3691	0.4010	0.4194	0.4494	0.4200					
2	4	2	0.3153	0.3705	0.4211	0.4527	0.5058	0.5313	0.5676	0.5533	0.5086	0.4996	0.5033			
2	4	3	0.3215	0.2848	0.3095	0.3348	0.4000	0.4573								
2	4	4	0.3741	0.3348	0.3662	0.3768	0.4350	0.4705	0.4448	0.4465	0.4455	0.4924	0.4820			
2	4	5	0.3554	0.3786	0.4055	0.5265	0.4941	0.5632	0.5523	0.5718	0.5725	0.5550	0.4581	0.5653	0.6197	
2	4	6	0.3566	0.3666	0.3453	0.3275	0.3940	0.4470	0.4996	0.5667	0.6763	0.5001	0.4507	0.5191		
2	4	7	0.3667	0.3231	0.4058	0.5183	0.5099	0.4870	0.5605	0.5395	0.5622					
2	4	8	0.3288	0.2851	0.3625	0.4065	0.4837	0.5395	0.4609	0.4337	0.3873	0.3477	0.4347	0.4930		
2	4	9	0.3669	0.3250	0.3335	0.4360	0.4643	0.4957	0.5432	0.5156						
2	4	10	0.3584	0.3319	0.3768	0.4716	0.4370	0.5201	0.5317	0.4643	0.4813	0.4643	0.4643			
2	5	1	0.3597	0.3364	0.3849	0.4870	0.5286	0.5123	0.5269	0.4803	0.5033	0.5494	0.5395			
2	5	2	0.3615	0.3798	0.4060	0.4728	0.4830	0.5208	0.5689	0.5713	0.4461	0.4716	0.5622			
2	5	3	0.3490	0.3450	0.3768	0.4602	0.4917	0.4948	0.5095	0.5510	0.5307	0.4527	0.4416	0.5845	0.5915	
2	5	4	0.3829	0.3221	0.4205	0.3136	0.3911	0.4811	0.5386	0.5567	0.4899	0.4722	0.4512	0.5591	0.5438	
2	5	5	0.3550	0.3257	0.4027	0.4684	0.4817	0.5358	0.5622	0.5253	0.6047					

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	5	6	0.3496	0.3421	0.4005	0.4538	0.5739	0.5765	0.6047	0.4820	0.4973	0.5596				
2	5	7	0.3802	0.3322	0.3902	0.4124	0.3576	0.4516	0.4643	0.5277	0.4720	0.5072	0.5307	0.4950	0.3695	
2	5	8	0.3552	0.3326	0.4033	0.4512	0.4494	0.4643	0.4870	0.5395	0.4512	0.4766				
2	5	9	0.3051	0.2778	0.3275	0.3348	0.4676	0.4380	0.4708	0.4848	0.4716	0.4249	0.5718			
2	5	10	0.3754	0.3348	0.3926	0.4097	0.4825	0.4643	0.5373	0.5395	0.5294	0.4938	0.4973	0.4984	0.5892	0.6227
2	6	1	0.3380	0.3237	0.3087	0.3657	0.4294	0.4957	0.5065	0.5265	0.4912	0.4597	0.4896	0.4941	0.4782	
2	6	2	0.2956	0.3070	0.3126	0.3933	0.3849	0.4127	0.4577	0.4076						
2	6	3	0.4060	0.3704	0.3714	0.4961	0.4293	0.5148	0.4991	0.5867	0.4766	0.5472	0.6172	0.5448		
2	6	4	0.3267	0.3392	0.3494	0.4297	0.4613	0.4772	0.4937	0.5307	0.5113	0.5567	0.5514			
2	6	5	0.4025	0.3330	0.3627	0.4288	0.4160	0.4739	0.5007	0.4676	0.5472	0.4716	0.5156	0.5128		
2	6	6	0.3570	0.3518	0.4367	0.5234	0.4310	0.5198	0.5319	0.5417	0.4915	0.5286	0.5827	0.5582		
2	6	7	0.3106	0.3744	0.3099	0.3916	0.4000	0.4735	0.4796	0.5033	0.5056	0.4607	0.5228	0.4684	0.5348	
2	6	8	0.3477	0.3328	0.3520	0.4380	0.5354	0.6154	0.5703							
2	6	9	0.3481	0.3712	0.3311	0.3869	0.3768	0.4676	0.4437	0.4033	0.4957	0.4189				
2	6	10	0.3272	0.3358	0.2961	0.3629	0.3905	0.3235	0.3891	0.4446	0.4815	0.4290	0.3983	0.4950	0.4852	
2	7	1	0.3588	0.3696	0.3217	0.4732	0.5253	0.4754	0.6197	0.5395	0.4820	0.6047				
2	7	2	0.3657	0.3731	0.3316	0.3452	0.4100	0.4294	0.4577	0.4553	0.5236	0.4643	0.4870			
2	7	3	0.3300	0.2925	0.2927	0.4012	0.3933	0.4803	0.4837	0.6258						
2	7	4	0.3510	0.3675	0.4049	0.4590	0.2880	0.4616	0.5436	0.5494	0.4479	0.4587	0.4643	0.5307		
2	7	5	0.4004	0.3307	0.3540	0.4292	0.4310	0.5033	0.5217	0.5567	0.5208	0.4494	0.4687	0.5317		
2	7	6	0.3546	0.3644	0.4244	0.4050	0.4835	0.4870	0.4792	0.5208	0.4906	0.5078	0.4984			
2	7	7	0.3471	0.3007	0.3641	0.3990	0.3975	0.4786	0.5326	0.4448	0.4643	0.3834	0.5703	0.4957		
2	7	8	0.3357	0.3354	0.3680	0.4437	0.4209	0.4482	0.4752	0.4607	0.3933	0.4209	0.5757	0.4093		
2	7	9	0.3680	0.3960	0.3800	0.4762	0.4669	0.4881	0.5753	0.4547	0.5592	0.5905	0.6214	0.5567	0.5007	
2	7	10	0.3746	0.3476	0.3228	0.4352	0.3891	0.4943	0.5095	0.5047	0.4921	0.4234	0.5313	0.5072		
2	8	1	0.3319	0.3042	0.3619	0.4230	0.3983	0.4629	0.4629	0.4752	0.4540	0.4263	0.4830	0.4701		
2	8	2	0.3752	0.3735	0.4731	0.4666	0.5253	0.5213	0.4946	0.4573						
2	8	3	0.3324	0.3093	0.3830	0.4246	0.5011	0.4859	0.4837	0.4766	0.3275	0.6293	0.4946			
2	8	4	0.3412	0.3085	0.3614	0.3994	0.3768	0.4551	0.4181	0.4820	0.4360	0.4946	0.4815	0.4355		
2	8	5	0.3527	0.3539	0.3866	0.4663	0.4852	0.5099	0.5072	0.4238	0.5178	0.4494				
2	8	6	0.3819	0.3654	0.3875	0.3540	0.4254	0.4215	0.4257	0.3909	0.3599	0.4973	0.5099			
2	8	7	0.3255	0.2899	0.3637	0.3877	0.4407	0.4666	0.4540	0.5092	0.5033	0.5667				
2	8	8	0.3079	0.2703	0.4014	0.4278	0.4223	0.5146	0.5622	0.5086						
2	8	9	0.3302	0.3171	0.3791	0.3665	0.4881	0.4728	0.5253	0.5174	0.4830	0.4643	0.5009			
2	8	10	0.3234	0.3366	0.3836	0.4310	0.3326	0.4488	0.4881	0.3997	0.4347	0.4040	0.4722			
2	9	1	0.3643	0.3593	0.4063	0.4902	0.5448	0.5432	0.5454	0.5582	0.4494	0.5659	0.5638	0.5567		
2	9	2	0.3530	0.2581	0.3888	0.5099	0.5054	0.5217	0.5156	0.5610	0.5587					
2	9	3	0.3171	0.2883	0.3444	0.4186	0.4425	0.4728	0.4930	0.5272						
2	9	4	0.3640	0.3652	0.3745	0.4617	0.4643	0.5443	0.5866	0.5948	0.5208	0.6047	0.5813	0.6047		
2	9	5	0.3504	0.3527	0.4445	0.4786	0.5114	0.5266	0.5718	0.5540	0.5768	0.5910	0.6143			
2	9	6	0.3683	0.3328	0.4241	0.4450	0.4643	0.4870	0.5348	0.4021	0.4538	0.5078				
2	9	7	0.3753	0.3721	0.4223	0.4969	0.5380	0.5174	0.5689	0.5646	0.4957	0.5217	0.5141	0.5033		
2	9	8	0.3447	0.3885	0.4714	0.5113	0.4744	0.5033	0.4870	0.5423	0.4643	0.5307	0.5156	0.4870		
2	9	9	0.3662	0.3281	0.3856	0.4494	0.5481	0.5134	0.5311	0.5307	0.5364	0.5567	0.5436	0.5007		
2	9	10	0.3670	0.3805	0.4437	0.4423	0.4890	0.5458	0.5813	0.5033						
2	10	1	0.4171	0.3893	0.3664	0.4229	0.4124	0.4788	0.5501	0.5474	0.4938	0.5317	0.5808	0.5217		
2	10	2	0.3359	0.3364	0.3366	0.3893	0.4127	0.4984	0.4855	0.4930	0.4754	0.4643	0.4820			
2	10	3	0.4014	0.3599	0.3732	0.3025	0.4173	0.3395	0.5033	0.5099	0.5554	0.5703	0.6191			
2	10	4	0.3768	0.3542	0.4477	0.5577	0.5567	0.5945	0.6751	0.6821						
2	10	5	0.3397	0.3469	0.3937	0.4643	0.5253	0.5277	0.6342	0.5033	0.4915	0.5656	0.5514			
2	10	6	0.3488	0.3481	0.3665	0.4543	0.4113	0.4930	0.5213	0.5703	0.4310	0.4547	0.6211	0.5178		
2	10	7	0.3807	0.3993	0.3687	0.3477	0.4902	0.5286	0.5579	0.5768	0.5156	0.5286	0.5168	0.4803		
2	10	8	0.3385	0.3444	0.3806	0.4259	0.3520	0.4323	0.4618	0.4994	0.4577	0.4695	0.4527	0.4643		
2	10	9	0.3720	0.3522	0.4482	0.4984	0.5131	0.5146	0.6411	0.5395	0.5622	0.6355	0.5156			
2	10	10	0.3581	0.3567	0.3768	0.4276	0.4160	0.4370	0.4966	0.4917	0.4331	0.4437	0.4282	0.4744		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	11	1	0.3926	0.3790	0.4376	0.4794	0.4906	0.4590	0.4906	0.5476	0.4337					
2	11	2	0.3858	0.3952	0.4211	0.5146	0.4966	0.5703	0.5156	0.5432	0.6047	0.6320				
2	11	3	0.3373	0.3433	0.4223	0.4105	0.4803	0.5033	0.5119	0.4766	0.4355					
2	11	4	0.3509	0.3452	0.3768	0.4830	0.5178	0.5409	0.5505	0.4779	0.4887	0.5317	0.5942	0.5805		
2	11	5	0.3663	0.3510	0.3540	0.4820	0.4476	0.4643	0.4930	0.6047	0.4900	0.5427	0.5253			
2	11	6	0.3692	0.3719	0.3648	0.5012	0.5033	0.5507	0.5550	0.4581	0.4127	0.5622	0.5827			
2	11	7	0.3642	0.3283	0.3857	0.4053	0.4830	0.5001	0.5476	0.4957	0.5354					
2	11	8	0.3713	0.3320	0.4133	0.4505	0.4076	0.5069	0.5143	0.5505	0.4728	0.4538	0.5092	0.4135		
2	11	9	0.3461	0.3522	0.4053	0.4915	0.5208	0.5253	0.6047							
2	11	10	0.3626	0.3434	0.4160	0.4862	0.3902	0.5362	0.5151	0.5084	0.4395	0.4347	0.5253	0.5423		
2	12	1	0.3490	0.3943	0.4470	0.5436	0.5470	0.5983	0.5454	0.4852	0.5715	0.4249				
2	12	2	0.3758	0.3410	0.3979	0.3898	0.3576	0.4082	0.4584	0.4466	0.4552	0.4569	0.5107			
2	12	3	0.3419	0.3310	0.3171	0.3943	0.3851	0.4147	0.4643	0.4380	0.4788	0.4782	0.3768	0.5364	0.6047	
2	12	4	0.3448	0.3966	0.4427	0.4826	0.4969	0.5191	0.4695	0.3983	0.5217	0.4461				
2	12	5	0.3353	0.3382	0.3625	0.4229	0.4803	0.5321	0.4437	0.3411	0.3101	0.3302				
2	12	6	0.3365	0.3197	0.4152	0.4604	0.4752	0.4803	0.5653	0.5104	0.4754	0.5323	0.5307			
2	12	7	0.3209	0.3252	0.4035	0.3717	0.5114	0.4367	0.4830	0.4367	0.3983	0.4461	0.4310			
2	12	8	0.3892	0.3522	0.4160	0.4539	0.4337	0.5114	0.5302	0.6246	0.5827	0.5253				
2	12	9	0.3641	0.3528	0.4345	0.4470	0.3886	0.5123	0.5294	0.5813	0.5253	0.4708	0.5494			
2	12	10	0.3625	0.3580	0.4137	0.4326	0.4347	0.4981	0.4973	0.5060	0.4461	0.3654	0.4906	0.4461		
2	13	1	0.3546	0.3895	0.3800	0.4266	0.4367	0.4284	0.5186	0.3902	0.4282	0.5007	0.5144			
2	13	2	0.3849	0.3744	0.3875	0.4552	0.4981	0.4113	0.4708	0.3933	0.4310	0.5191				
2	13	3	0.4018	0.3593	0.3960	0.4486	0.4461	0.4643	0.5311	0.5267	0.4857	0.4930	0.4581	0.6172	0.4848	
2	13	4	0.3361	0.3284	0.4223	0.4437	0.4643	0.5172	0.5033	0.4803						
2	13	5	0.3728	0.3548	0.3705	0.4324	0.3546	0.5078	0.5494	0.5765	0.4420	0.4160	0.4991	0.4896		
2	13	6	0.4121	0.3794	0.4109	0.4744	0.4437	0.4577	0.5213	0.5622	0.5033	0.4830	0.4957	0.5178		
2	13	7	0.3873	0.3451	0.3727	0.4553	0.4957	0.4494	0.5703							
2	13	8	0.3495	0.3368	0.4138	0.3831	0.5099	0.4558	0.5653	0.5253	0.5253	0.5072	0.5797	0.5300		
2	13	9	0.3889	0.3359	0.4016	0.4544	0.4882	0.5253	0.4643	0.4425	0.5033	0.4573	0.5703	0.4547		
2	13	10	0.4043	0.3868	0.4324	0.4744	0.4704	0.5253	0.6191	0.4562	0.4494	0.5086	0.5156			
2	14	1	0.3591	0.3210	0.3803	0.4173	0.4105	0.4370	0.4574	0.4477	0.4160	0.4837	0.3504			
2	14	2	0.3508	0.3097	0.3959	0.4458	0.5134	0.5277	0.6191	0.4728						
2	14	3	0.3649	0.3801	0.3651	0.4296	0.4160	0.4910	0.5286	0.6047	0.4766	0.3768	0.4021	0.3955		
2	14	4	0.3568	0.3205	0.3871	0.4310	0.3705	0.5242	0.5046	0.4970	0.4712	0.4991	0.5156			
2	14	5	0.3336	0.3050	0.3504	0.4063	0.4380	0.5448	0.6047	0.4527	0.3699	0.5156	0.5223			
2	14	6	0.3768	0.3805	0.3650	0.4062	0.4870	0.4607	0.5132	0.5667	0.4900	0.4996	0.5228	0.5168		
2	14	7	0.3946	0.3962	0.4326	0.4470	0.5086	0.5641	0.5711	0.5201	0.5033	0.4708	0.5156			
2	14	8	0.3657	0.3081	0.4350	0.4643	0.4380	0.4609								
2	14	9	0.3993	0.3868	0.4021	0.4453	0.5015	0.5095	0.5404	0.5180	0.4882	0.4870	0.4643	0.4915	0.4744	
2	14	10	0.3701	0.3973	0.3477	0.4937	0.5213	0.5214	0.5423	0.5279	0.5213	0.4728	0.4728	0.5033		
2	15	1	0.3392	0.3342	0.4144	0.4293	0.4037	0.5230	0.4904	0.4826	0.4573	0.4512	0.4708			
2	15	2	0.3261	0.3343	0.3727	0.3994	0.4021	0.4643	0.5703							
2	15	3	0.3402	0.3557	0.3370	0.4027	0.4055	0.4772	0.4815	0.5325	0.4290	0.5168	0.4695			
2	15	4	0.3527	0.3768	0.3361	0.4357	0.4870	0.5577	0.5172	0.6132	0.5605	0.5072				
2	15	5	0.3249	0.3402	0.3715	0.4882	0.4242	0.4643	0.5198	0.3916	0.4282	0.4830	0.5086			
2	15	6	0.3990	0.3965	0.3477	0.4938	0.5078	0.4996	0.4470	0.4160						
2	15	7	0.3898	0.3328	0.3564	0.4260	0.4065	0.4593	0.4840	0.5082	0.4890	0.4803	0.4604	0.5156	0.4547	
2	15	8	0.3277	0.3768	0.3074	0.3803	0.3678	0.4014	0.4708	0.4538	0.4037	0.4573	0.3859			
2	15	9	0.3504	0.3886	0.3768	0.4370	0.3826	0.5367	0.4904	0.5109	0.4969	0.5156	0.4811	0.5694		
2	15	10	0.3439	0.3369	0.3074	0.4521	0.4076	0.5111	0.5383							
2	16	1	0.3613	0.3568	0.4183	0.5104	0.5138	0.5281	0.5404	0.4263	0.4890	0.5119	0.5544	0.4882		
2	16	2	0.3424	0.3328	0.4055	0.5099	0.5253	0.5354	0.5899	0.4744						
2	16	3	0.4056	0.3650	0.4527	0.5395	0.4643	0.5494	0.6556	0.5156	0.5646	0.5494	0.6770			
2	16	4	0.3232	0.3702	0.4105	0.5156	0.5156	0.5368	0.5683	0.5348	0.4915	0.4820	0.5395	0.5472		
2	16	5	0.3718	0.3690	0.3909	0.4466	0.4186	0.4684	0.4930	0.4732	0.4643	0.4337	0.5111	0.4870	0.5861	

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	16	6	0.3867	0.3749	0.4046	0.4957	0.5191	0.5253	0.5380	0.4310	0.4046	0.4249				
2	16	7	0.3784	0.3671	0.3906	0.4754	0.5307	0.5236	0.5307	0.4716	0.6211	0.5494				
2	16	8	0.3935	0.3851	0.4566	0.4760	0.4466	0.4614	0.4984	0.4581	0.4541	0.4820				
2	16	9	0.4038	0.4037	0.3881	0.4740	0.4930	0.4845	0.6047	0.5501	0.5094	0.4890	0.5414	0.5920		
2	16	10	0.3393	0.3367	0.4174	0.3699	0.4223	0.4566	0.4631	0.4625	0.4553	0.4611	0.4416			
2	17	1	0.5146	0.3319	0.4103	0.3902	0.4848	0.5191	0.5548	0.4704	0.4930	0.5840	0.5208			
2	17	2	0.3464	0.3365	0.3560	0.4310	0.4213	0.4367	0.4981	0.5144	0.5001	0.5364				
2	17	3	0.3388	0.3281	0.3412	0.3768	0.5300	0.5185	0.4367	0.4310	0.4830	0.5119				
2	17	4	0.3101	0.3357	0.3477	0.4349	0.3902	0.5294		0.5281	0.4754	0.4425	0.4852	0.5494	0.4708	
2	17	5	0.3639	0.3223	0.3483	0.4553	0.4416	0.5156								
2	17	6	0.3542	0.3518	0.3829	0.4671	0.5313	0.4870	0.5448	0.5223	0.5156	0.5567	0.5494			
2	17	7	0.3789	0.4263	0.4118	0.4643	0.5286	0.5234	0.5667	0.5525	0.5870					
2	17	8	0.3376	0.2889	0.3101	0.3541	0.3902	0.4140	0.4547	0.4937	0.4076	0.5033	0.5307			
2	17	9	0.3348	0.3617	0.3836	0.4744	0.4284	0.4888	0.4973	0.4531	0.4957	0.5354	0.4852			
2	17	10	0.3338	0.3242	0.3620	0.3815	0.4040	0.4732	0.4450	0.3050	0.4830					
2	18	1	0.3736	0.3825	0.3340	0.4643	0.5086	0.5191	0.5375	0.4666	0.4328	0.4538	0.4257	0.5411		
2	18	2	0.3668	0.3564	0.3768	0.3960	0.4852	0.5667	0.6459	0.6542	0.5797					
2	18	3	0.3910	0.4407	0.3804	0.4230	0.4609	0.4597	0.5119	0.5149	0.5058	0.4754	0.4376	0.4774	0.5119	
2	18	4	0.3755	0.3411	0.4171	0.4643	0.5056	0.4965	0.5584	0.5622	0.5274	0.3768	0.5567	0.4973		
2	18	5	0.3679	0.3421	0.3395	0.4119	0.4476	0.4837	0.4969	0.4991	0.4581	0.5156		0.4870		
2	18	6	0.3504	0.3795	0.3955	0.4792	0.5099	0.6047	0.5469	0.4957	0.5228	0.5605				
2	18	7	0.3893	0.4004	0.3809	0.5186	0.4494	0.5582	0.5137	0.5201	0.5111	0.4643	0.5861	0.5294		
2	18	8	0.3371	0.3161	0.3460	0.3768	0.4870	0.5191	0.4389							
2	18	9	0.3449	0.2941	0.3722	0.3720	0.4116	0.4310	0.4060	0.4102	0.4230	0.4380	0.4842	0.4505		
2	18	10	0.3582	0.2804	0.4007	0.4282	0.4584	0.5072	0.4507	0.5164	0.4853	0.4607	0.4684	0.5277		
2	19	1	0.3374	0.3348	0.3987	0.3636	0.4558	0.5191	0.5525	0.4870	0.5253	0.5596	0.5290	0.5307	0.4527	
2	19	2	0.3582	0.3336	0.3920	0.4365	0.4021	0.4552	0.4596	0.4775	0.4618	0.4921	0.4852	0.4766		
2	19	3	0.3569	0.3078	0.3042	0.4130	0.4360	0.5768	0.4607	0.4779	0.4238	0.4735				
2	19	4	0.3557	0.3451	0.3873	0.4093	0.3462	0.4621	0.4363	0.4559	0.4230	0.2868	0.3983	0.4527	0.4870	
2	19	5	0.3017	0.2974	0.3120	0.3943	0.4231	0.4263	0.5172	0.4341	0.4527	0.5033				
2	19	6	0.3282	0.3486	0.3398	0.4725	0.4750	0.4820	0.4830	0.5832	0.5191	0.5067	0.5697	0.3983	0.5483	
2	19	7	0.3209	0.3179	0.3674	0.3809	0.4887	0.4744	0.5550	0.5072	0.4754	0.4973	0.4310			
2	19	8	0.3613	0.3552	0.3244	0.3983	0.3891	0.5178	0.5709	0.5214	0.4835	0.5072	0.4673	0.4748	0.4547	
2	19	9	0.3942	0.3639	0.3171	0.4573	0.3576	0.5313	0.4921	0.3955	0.4494	0.3670				
2	19	10	0.3438	0.3648	0.4682	0.4331	0.5083	0.5090	0.5960	0.5156	0.4842	0.4278				
2	20	1	0.3180	0.3457	0.3357	0.4192	0.4119	0.5060	0.5341	0.4573	0.4643	0.4076	0.6879			
2	20	2	0.3003	0.3419	0.3191	0.4206	0.4418	0.5223								
2	20	3	0.3426	0.3419	0.3553	0.4050	0.3843	0.4618	0.4720	0.4643	0.4483	0.4403	0.4423			
2	20	4	0.3371	0.3057	0.3891	0.3674	0.4502	0.4667	0.4194	0.4021	0.4643	0.4223				
2	20	5	0.3698	0.3256	0.4143	0.4389	0.5507	0.5331	0.5638	0.5033	0.3916	0.4470				
2	20	6	0.3563	0.3391	0.4341	0.4249	0.4842	0.5861	0.5448	0.5099	0.5423	0.4896				
2	20	7	0.3162	0.3320	0.3504	0.4029	0.4173	0.4643	0.4334	0.3402	0.3768	0.3599				
2	20	8	0.3642	0.3596	0.4266	0.4118	0.4617	0.5360	0.4573	0.4643	0.5622	0.5732				
2	20	9	0.2897	0.2788	0.3951	0.3374	0.3924	0.4398	0.4554	0.4446	0.4244	0.4329	0.4830			
2	20	10	0.3090	0.3416	0.3670	0.4217	0.4507	0.4215	0.3943	0.3670	0.3562	0.3873				
2	21	1	0.3751	0.3391	0.3929	0.5047	0.4088	0.3706	0.5183	0.4890	0.5113	0.4722	0.5198	0.5004		
2	21	2	0.3188	0.3537	0.3509	0.4140	0.4310	0.4643	0.4738	0.4957	0.4643	0.4896	0.5605			
2	21	3	0.3342	0.3454	0.3290	0.4830	0.4687	0.5113	0.4788	0.5382	0.5078	0.4021				
2	21	4	0.3377	0.2879	0.4033	0.4121	0.4593	0.4684	0.4728							
2	21	5	0.3275	0.3154	0.3171	0.4403	0.4708	0.5119	0.5395	0.5217	0.4930	0.4113				
2	21	6	0.3510	0.3262	0.4021	0.4461	0.4915	0.4160	0.4803	0.3632	0.3768					
2	21	7	0.3434	0.3283	0.4486	0.4826	0.5204	0.4938	0.4643	0.5099	0.5544	0.4964				
2	21	8	0.3768	0.3318	0.3030	0.4362	0.4285	0.5241	0.5367	0.4923	0.5414	0.4691	0.5965			
2	21	9	0.3828	0.2707	0.3514	0.3371	0.4200	0.3991	0.4760	0.4835	0.5269	0.4735	0.4389	0.5033	0.5286	
2	21	10	0.3021	0.3079	0.4217	0.4121	0.5165	0.4797	0.4930	0.4766	0.4919					



CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	22	1	0.3316	0.2764	0.3630	0.3695	0.4310	0.4477	0.4930	0.4760	0.4331	0.4842	0.5317	0.4712		
2	22	2	0.3154	0.2834	0.3323	0.4276	0.4135	0.5094	0.5311	0.5757	0.4870	0.5307	0.4581			
2	22	3	0.3192	0.3610	0.3411	0.4236	0.4584	0.5191	0.5015	0.5240	0.5185	0.4643	0.4870	0.6483		
2	22	4	0.3270	0.3427	0.4173	0.4906	0.5458	0.5960								
2	22	5	0.3300	0.3407	0.4160	0.5011	0.4355	0.5011	0.5253	0.4744	0.4200	0.4046	0.3768		0.4930	
2	22	6	0.3127	0.3354	0.4192	0.4204	0.4400	0.5033	0.5099							
2	22	7	0.3263	0.2978	0.3470	0.4245	0.3921	0.4766	0.4930	0.4616	0.4643	0.4347	0.5092	0.4140		
2	22	8	0.3243	0.3306	0.3951	0.4084	0.4607	0.4738	0.4750	0.4310						
2	22	9	0.3484	0.3499	0.3979	0.5107	0.4643	0.4527	0.5345	0.5156	0.5364	0.5228	0.4504	0.5001		
2	22	10	0.3434	0.3272	0.3651	0.4211	0.4407	0.4986	0.5584	0.4601	0.4416	0.4360	0.4076			
2	23	1	0.3189	0.3517	0.3420	0.4870	0.4803	0.5928	0.6047	0.4946						
2	23	2	0.3518	0.3455	0.3963	0.4268	0.5050	0.3348	0.5378	0.5409	0.5557	0.4852	0.5086	0.4643	0.4021	
2	23	3	0.3293	0.3363	0.4466	0.4476	0.4795	0.4879	0.4776	0.4766	0.4263					
2	23	4	0.3617	0.3118	0.2969	0.3768	0.3431	0.4000	0.4021	0.4701	0.3409	0.3546	0.3444			
2	23	5	0.3625	0.3239	0.3559	0.4328	0.4852	0.4957	0.5321	0.5141	0.5622	0.4461	0.5494			
2	23	6	0.3411	0.3186	0.2945	0.4230	0.3955	0.4691	0.4643	0.5331	0.4520	0.4310	0.4890	0.4919	0.4766	
2	23	7	0.3568	0.3664	0.3318	0.4724	0.4527	0.4950	0.4943	0.5178	0.4601	0.5033	0.5208			
2	23	8	0.3931	0.4352	0.3699	0.4953	0.4140	0.5920	0.5840	0.4957	0.5423	0.4803	0.6047			
2	23	9	0.3556	0.3477	0.3658	0.3644	0.3841	0.3894	0.3873	0.4607	0.4200	0.4310	0.3924	0.4684	0.4209	
2	23	10	0.3717	0.3735	0.2896	0.3420	0.4021	0.4055	0.5294	0.4962	0.4412	0.4000	0.4367	0.4984		
2	24	1	0.3207	0.3334	0.3061	0.3803	0.4465	0.3768	0.4275	0.5507	0.4310	0.3567	0.3859			
2	24	2	0.3246	0.3310	0.3171	0.3199	0.3576	0.3392	0.4427	0.4411	0.4100	0.3902	0.4113	0.4527	0.4403	
2	24	3	0.3165	0.3406	0.3241	0.3379	0.3632	0.4183	0.4374	0.4331	0.4347	0.4263	0.4263	0.3768		
2	24	4	0.3779	0.4977	0.5464	0.4728	0.4470	0.4046	0.5185	0.4223	0.2974	0.3722	0.3994	0.4695		
2	24	5	0.3153	0.2918	0.3121	0.3420	0.3849	0.4761	0.4321	0.4427	0.4562	0.4437	0.4538			
2	24	6	0.3268	0.3449	0.4197	0.4160	0.4200	0.5015	0.5047	0.4704	0.4360	0.4452	0.5270	0.4766		
2	24	7	0.3235	0.3415	0.3678	0.3302	0.3768	0.3402	0.5060	0.4278	0.4887	0.4581	0.4643	0.5004	0.4507	
2	24	8	0.3271	0.3123	0.3595	0.3708	0.4217	0.5146	0.5533	0.5317	0.4930	0.5119				
2	24	9	0.3171	0.5479	0.3078	0.3912	0.2486	0.3983	0.4285	0.5033	0.4681	0.3834	0.3768	0.3768		
2	24	10	0.3659	0.3295	0.3402	0.4010	0.3715	0.4744	0.5267	0.5757	0.5134	0.6047				
2	25	1	0.3212	0.3029	0.4102	0.4040	0.4380	0.4695	0.5270	0.4735	0.4189	0.4310	0.5622	0.4842		
2	25	2	0.3326	0.3390	0.3491	0.4016	0.4012	0.4857	0.5099	0.5788						
2	25	3	0.3326	0.4140	0.3572	0.3660	0.4230	0.4774	0.4741	0.5215	0.5033	0.4527	0.4479	0.5757		
2	25	4	0.3333	0.2472	0.4140	0.4732	0.5072	0.4815	0.5550	0.5851	0.4957					
2	25	5	0.2870	0.2822	0.3107	0.3690	0.3802	0.4310	0.4179	0.4504	0.3687	0.4046	0.4355			
2	25	6	0.3104	0.3101	0.3436	0.4310	0.4830	0.5472	0.5646	0.5596						
2	25	7	0.3549	0.3197	0.3678	0.4782	0.4130	0.2834	0.5910	0.4782	0.4766	0.4416	0.5395			
2	25	8	0.3496	0.3504	0.4494	0.4786	0.4708	0.5503	0.5253	0.5832	0.5191	0.6758	0.5494	0.4744		
2	25	9	0.3447	0.3405	0.4003	0.4455	0.4590	0.4420	0.5021	0.4458	0.4373	0.4389	0.5741	0.4848		
2	25	10	0.4870	0.3511	0.3490	0.3916	0.5294	0.4803	0.5768	0.4842	0.5331	0.4527				
2	26	1	0.3476	0.2919	0.3656	0.4169	0.4113	0.5001	0.5137	0.5788	0.5237	0.4930	0.4884	0.4837		
2	26	2	0.3354	0.3096	0.2853	0.4194	0.3768	0.5063	0.5286	0.5813						
2	26	3	0.3601	0.3396	0.3834	0.4597	0.4752	0.4894	0.5033	0.4643	0.4483	0.4820	0.4996	0.4341		
2	26	4	0.3990	0.3811	0.3602	0.4244	0.4950	0.4021	0.5694	0.5840	0.6565	0.5703	0.4870	0.5033		
2	26	5	0.3491	0.3234	0.3884	0.4268	0.4416	0.4792	0.5099	0.5813	0.5033	0.5718	0.5119	0.5395		
2	26	6	0.3381	0.3016	0.4066	0.3715	0.5033	0.4466	0.4906	0.4360	0.4547	0.4494	0.4984			
2	26	7	0.3343	0.3529	0.3462	0.4437	0.4223	0.4643	0.4643	0.5114	0.4890	0.4643	0.4803	0.5745	0.5317	
2	26	8	0.3216	0.3041	0.3377	0.3662	0.3050	0.4310	0.5082							
2	26	9	0.3656	0.3257	0.3397	0.4367	0.2834	0.4977	0.5094	0.5341	0.4754	0.5732	0.5861	0.5354		
2	26	10	0.3311	0.3179	0.3444	0.4310	0.3894	0.4121	0.5109	0.4395	0.3991	0.4553	0.4994	0.4147		
2	27	1	0.3498	0.3514	0.4007	0.4244	0.3676	0.5298	0.5326	0.6047	0.4412	0.5001	0.4815	0.5667	0.4367	
2	27	2	0.3266	0.3444	0.4347	0.4113	0.4423	0.5178	0.4930	0.6849	0.3829					
2	27	3	0.3412	0.3542	0.4230	0.4012	0.4249	0.4282	0.4691	0.5514	0.5033	0.5178	0.4249	0.3916		
2	27	4	0.3348	0.3163	0.3676	0.4616	0.3916	0.5417	0.4938	0.5905	0.5033		0.4223	0.4494		
2	27	5	0.3482	0.3204	0.3919	0.4117	0.4118	0.4858	0.4930	0.4915	0.4334	0.4573	0.4744	0.4223		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	27	6	0.3206	0.3027	0.3938	0.4691	0.3968	0.5230	0.5063	0.5494	0.4553	0.5281	0.4758	0.5107		
2	27	7	0.3450	0.2896	0.3806	0.4698	0.5213	0.5009	0.5239	0.5414	0.5354	0.5448	0.5033			
2	27	8	0.3411	0.3382	0.4217	0.4984	0.5409	0.5099	0.4830	0.5033	0.4728	0.4494	0.5638			
2	27	9	0.3308	0.3633	0.3694	0.5302	0.3886	0.4643	0.5253	0.5004	0.5156	0.3386	0.4455			
2	27	10	0.3177	0.3125	0.3988	0.4617	0.4007	0.5111	0.5138	0.4643	0.3916	0.3994	0.4581			
2	28	1	0.3460	0.3114	0.3768	0.4389	0.4090	0.4643	0.4817	0.3940	0.4407	0.4684				
2	28	2	0.3487	0.3259	0.4373	0.4389	0.3896	0.4518	0.5438	0.4355	0.4076	0.4437				
2	28	3	0.3366	0.3569	0.3420	0.4326	0.3605	0.5063	0.4848	0.5156	0.4380	0.5033	0.5231	0.5236		
2	28	4	0.3380	0.3091	0.4716	0.4310	0.4263	0.5033								
2	28	5	0.3364	0.3538	0.3087	0.4450	0.3244	0.5119	0.4969	0.4774	0.4160	0.4604	0.4183			
2	28	6	0.3279	0.3134	0.3467	0.3632	0.4437	0.4669	0.3968	0.5144	0.5203	0.5612	0.5033	0.5472		
2	28	7	0.3425	0.3106	0.3546	0.4113	0.3963	0.4835	0.5892	0.4479	0.4100	0.4691	0.5779			
2	28	8	0.3523	0.3198	0.3328	0.3463	0.3682	0.4331	0.4728	0.5119	0.4238	0.4479	0.4643	0.4842		
2	28	9	0.3611	0.3728	0.3124	0.3955	0.3816	0.4543	0.4705	0.4160	0.4254	0.4100	0.4512	0.3676		
2	28	10	0.3432	0.3030	0.3460	0.4389	0.3520	0.5253	0.4310							
2	29	1	0.3421	0.3298	0.3444	0.4149	0.4209	0.4541	0.4902	0.4870	0.5004	0.5281	0.5237	0.5494	0.5063	
2	29	2	0.3736	0.4101	0.3794	0.4452	0.4909	0.5162	0.5351	0.4716	0.5382	0.5107	0.5556	0.5191		
2	29	3	0.3311	0.3078	0.3949	0.3662	0.4288	0.4479	0.3933	0.4407	0.3968					
2	29	4	0.3375	0.3116	0.4412	0.4269	0.5069	0.5331	0.4984	0.4728	0.3768	0.4547				
2	29	5	0.3234	0.3366	0.4046	0.4744	0.5015	0.5307	0.6047	0.5307	0.5033	0.5476	0.5494			
2	29	6	0.3605	0.3454	0.4627	0.3919	0.5554	0.4510	0.5033	0.4103	0.4803	0.4173	0.5056			
2	29	7	0.3077	0.3130	0.2917	0.4326	0.4194	0.5226	0.5265	0.5469	0.4815	0.3768	0.5464			
2	29	8	0.3785	0.3022	0.3768	0.4418	0.4234	0.4870	0.5779	0.4494						
2	29	9	0.3460	0.3257	0.3666	0.4500	0.4087	0.4857	0.5667	0.5375	0.4643	0.4021	0.4494			
2	29	10	0.3539	0.3563	0.4009	0.4215	0.3649	0.5788	0.5226	0.5935	0.4538	0.5797				
2	30	1	0.3609	0.3612	0.3407	0.4732	0.4597	0.5067	0.5185	0.5395	0.4887	0.5582	0.5223	0.5191		
2	30	2	0.3348	0.3613	0.3700	0.5054	0.4494	0.5183	0.5156	0.6218	0.4494	0.4930				
2	30	3	0.3504	0.3400	0.3588	0.5004	0.4735	0.5033	0.5331	0.5544	0.5395					
2	30	4	0.3453	0.3369	0.4345	0.4910	0.5119	0.5537	0.6111	0.5053	0.5281	0.5033	0.4794			
2	30	5	0.3352	0.2844	0.3498	0.3768	0.4147	0.4835	0.4820	0.4012	0.4037	0.4310	0.5141			
2	30	6	0.3896	0.3727	0.4411	0.4946	0.4547	0.4609	0.5739	0.4803	0.4946	0.4966	0.4337			
2	30	7	0.3311	0.3249	0.3444	0.4565	0.4562	0.4870	0.5111	0.5514	0.4930	0.5294	0.5732			
2	30	8	0.3472	0.3395	0.3803	0.4400	0.4527	0.4569	0.4952	0.4263	0.4504	0.4979	0.4040			
2	30	9	0.3480	0.3364	0.4144	0.4735	0.4037	0.4823	0.4766	0.4979	0.4758	0.5146	0.4681			
2	30	10	0.3210	0.3121	0.3406	0.4728	0.4744	0.5414	0.6227	0.4906	0.5191	0.5331				
2	31	1	0.3752	0.3768	0.3768	0.4453	0.4748	0.5279	0.5017	0.5072	0.5156	0.4450	0.4483	0.4946		
2	31	2	0.3386	0.2676	0.3187	0.3335	0.4174	0.4930	0.4609	0.4957	0.5078	0.4708	0.6047			
2	31	3	0.3601	0.3702	0.3933	0.4810	0.4310	0.5542	0.5406	0.5688	0.5302	0.4470	0.4906	0.5191	0.5277	
2	31	4	0.3789	0.3752	0.2986	0.4587	0.4581	0.4984	0.5448	0.6047	0.4803	0.4728				
2	31	5	0.3541	0.3153	0.3768	0.5172	0.5380	0.5494	0.6047	0.4890	0.4643					
2	31	6	0.3586	0.3490	0.5086	0.3842	0.4736	0.4735	0.5151	0.4917	0.5745	0.4376	0.4000	0.4093	0.5201	
2	31	7	0.3627	0.3359	0.3807	0.4223	0.5272	0.5178	0.5323	0.5183	0.5060	0.5228	0.4643			
2	31	8	0.3751	0.4040	0.4661	0.5063	0.4470	0.5993	0.5932	0.6047	0.5458	0.5072	0.5228	0.5679		
2	31	9	0.3450	0.3171	0.3768	0.4547	0.5011	0.4504	0.5317	0.4842	0.3933	0.4842				
2	31	10	0.3483	0.3636	0.3768	0.4130	0.3658	0.4568	0.4695	0.4919	0.5840	0.6017	0.4716	0.4494		
2	32	1	0.3508	0.3582	0.3159	0.4058	0.4643	0.4884	0.5479	0.4820	0.5772	0.4747	0.3699			
2	32	2	0.3029	0.3566	0.3171	0.4249	0.4254	0.4785	0.4625	0.4942	0.5454	0.4746	0.3929	0.4103	0.4848	
2	32	3	0.3110	0.2909	0.2938	0.3921	0.4310	0.5056	0.5464	0.4573	0.4587	0.5107	0.4643			
2	32	4	0.3354	0.3521	0.3275	0.4213	0.3921	0.4811	0.5033	0.5461	0.4813	0.4257	0.4701	0.5540	0.5174	
2	32	5	0.3564	0.3360	0.3997	0.4744	0.5128	0.5550	0.5307	0.5634	0.5033					
2	32	6	0.3287	0.3242	0.3617	0.4275	0.4343	0.4446	0.4183	0.4691	0.4527	0.4518	0.4775			
2	32	7	0.4040	0.3768	0.4597	0.4786	0.5362	0.5915	0.5602	0.5779	0.6342	0.5579	0.5694			
2	32	8	0.3373	0.3473	0.3920	0.4870	0.4988	0.4617	0.4681	0.4183	0.5317	0.5134				
2	32	9	0.4113	0.3791	0.3424	0.3571	0.4698	0.3854	0.4813	0.5119	0.5217	0.4973	0.5587	0.5427	0.5092	
2	32	10	0.3201	0.3360	0.4310	0.3927	0.5253	0.5150	0.5267	0.4643	0.4946	0.4140	0.5056	0.6285		

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
2	33	1	0.4172	0.3228	0.2987	0.3605	0.4328	0.4476	0.4977	0.4143	0.3902	0.4738	0.4483			
2	33	2	0.3585	0.3458	0.3389	0.4547	0.4643	0.5201	0.5354	0.4782						
2	33	3	0.3504	0.3563	0.3097	0.4238	0.4766	0.5448	0.6136	0.5033	0.4896	0.4941	0.4930			
2	33	4	0.3943	0.3571	0.4108	0.3905	0.4149	0.4830	0.3941	0.4486	0.4930	0.4643				
2	33	5	0.3527	0.3673	0.3305	0.3260	0.4310	0.4209	0.4527	0.5060	0.5494	0.4527				
2	33	6	0.3425	0.3291	0.3348	0.3836	0.3504	0.4627	0.4507	0.4630	0.4335	0.4643	0.5144	0.4913	0.4555	
2	33	7	0.3412	0.3354	0.3357	0.4418	0.4040	0.4815	0.5953	0.4766	0.4416	0.4310				
2	33	8	0.3534	0.3171	0.3826	0.3262	0.4465	0.3994	0.5253	0.5253						
2	33	9	0.4156	0.3533	0.3298	0.3768	0.4033	0.4021								
2	33	10	0.3844	0.3120	0.4003	0.4562	0.4673	0.4957	0.5375	0.4584	0.4852	0.5277	0.6197			
2	34	1	0.3783	0.3338	0.4367	0.4760	0.5131	0.5294	0.5915	0.5134	0.5494					
2	34	2	0.3171	0.3261	0.3309	0.4562	0.4121	0.4984	0.4984	0.5567	0.5448	0.3546	0.5432			
2	34	3	0.3780	0.3463	0.4229	0.4890	0.4282	0.4999	0.5166	0.4712	0.5395	0.5371				
2	34	4	0.3444	0.3484	0.3314	0.4569	0.4143	0.5191	0.4826	0.5126	0.4870	0.4984	0.5448	0.5354		
2	34	5	0.3140	0.3113	0.4292	0.4400	0.5156	0.4884	0.5928	0.4991	0.4470					
2	34	6	0.3677	0.3681	0.3364	0.5265	0.4230	0.5011	0.4919	0.5263	0.5307	0.5156	0.4820	0.5544	0.5610	
2	34	7	0.3754	0.4453	0.6181	0.5241	0.6154	0.6148	0.6437	0.6047	0.6186	0.5718				
2	34	8	0.3556	0.3617	0.4200	0.3514	0.4146	0.4878	0.5092	0.4643	0.4249	0.4870	0.5476			
2	34	9	0.3815	0.3416	0.4160	0.4494	0.3275	0.4695	0.5016	0.5575	0.4855	0.4538	0.5942			
2	34	10	0.3548	0.3370	0.4160	0.5099	0.5007	0.5791	0.5866	0.4984	0.4437	0.5294				
2	35	1	0.3288	0.3144	0.3873	0.3905	0.4581	0.4051	0.4607	0.4744	0.4127	0.4400	0.5567			
2	35	2	0.3400	0.3197	0.4395	0.4687	0.4483	0.5345	0.5432							
2	35	3	0.3895	0.3522	0.3195	0.3562	0.4859	0.3584	0.4643	0.4347	0.4512	0.4397	0.4055	0.4143		
2	35	4	0.3572	0.3300	0.4169	0.4739	0.4870	0.4902	0.4756	0.4754	0.4076	0.4127	0.4964	0.4786		
2	35	5	0.3398	0.3271	0.4552	0.4698	0.4174	0.4946	0.6047	0.5703	0.5432	0.4803				
2	35	6	0.3517	0.3810	0.3768	0.4347	0.4738	0.4979	0.5757	0.3768						
2	35	7	0.3447	0.3034	0.3335	0.4257	0.4331	0.3997	0.4887	0.3516	0.4021	0.4146	0.4887			
2	35	8	0.3648	0.3742	0.3377	0.4140	0.4324	0.4249	0.5128	0.4643	0.4000	0.4416	0.5294			
2	35	9	0.3309	0.3183	0.4027	0.4200	0.4573	0.5317	0.4786	0.4562	0.5272	0.5432				
2	35	10	0.3723	0.3426	0.3738	0.4035	0.4007	0.4906	0.4282	0.5395	0.3983	0.3768	0.5797	0.4941		
2	36	1	0.3089	0.3128	0.3971	0.3768	0.4275	0.3869	0.4400	0.4643	0.5414	0.3896				
2	36	2	0.3410	0.3394	0.4068	0.4249	0.5234	0.5178	0.5417	0.4735	0.4310	0.5099				
2	36	3	0.3208	0.3208	0.3541	0.3467	0.4200	0.3498	0.5172	0.6598	0.3968	0.4870				
2	36	4	0.3463	0.3237	0.3101	0.4150	0.4587	0.5033	0.3662	0.5510	0.4643					
2	36	5	0.3768	0.3068	0.3613	0.3877	0.3709	0.4509	0.4981	0.4622	0.3991	0.4581	0.3991	0.4380	0.3135	
2	36	6	0.3548	0.3294	0.3662	0.3672	0.3291	0.4981	0.4881	0.5009	0.4494	0.4310	0.4643	0.4547		
2	36	7	0.3171	0.2883	0.3317	0.3477	0.4310	0.4416	0.3768							
2	36	8	0.3607	0.4135	0.3480	0.4431	0.4042	0.5067	0.5148	0.5749	0.4870	0.5520				
2	36	9	0.3125	0.3160	0.3420	0.2841	0.3983	0.4254	0.4744	0.4055	0.4347	0.4257				
2	36	10	0.3345	0.3388	0.3171	0.4209	0.4070	0.3921	0.4906	0.4223	0.1996	0.5253				
3	1	1	0.3287	0.3768	0.4450	0.4611	0.5269	0.5414	0.5723	0.6619	0.5464	0.5395	0.5567			
3	1	2	0.3621	0.3976	0.4555	0.5033	0.5063	0.5378	0.5228	0.4643	0.4830					
3	1	3	0.4040	0.4091	0.4367	0.4631	0.4934	0.5653	0.5749	0.5291	0.4830	0.5605	0.5957	0.5851		
3	1	4	0.3567	0.4200	0.4259	0.5058	0.3859	0.4037	0.4991	0.5533	0.5596	0.4870				
3	1	5	0.3744	0.4842	0.5054	0.5479	0.5779	0.5183	0.6181	0.5317	0.5228					
3	1	6	0.3592	0.4179	0.4622	0.5323	0.5827	0.5409	0.6879	0.6047	0.6211	0.6459	0.7125			
3	1	7	0.3427	0.3977	0.4673	0.5336	0.5603	0.4935	0.5345	0.5818	0.5856	0.5078	0.5156	0.5851		
3	1	8	0.3353	0.3830	0.4508	0.5277	0.4952	0.5269	0.5395	0.5851	0.5107	0.5718	0.6191	0.5667		
3	1	9	0.3691	0.4608	0.4748	0.5348	0.5099	0.5920	0.6368	0.6383	0.5134	0.6047	0.5533			
3	1	10	0.3922	0.4607	0.5021	0.5273	0.5357	0.5732	0.5934	0.5228	0.2969	0.6275	0.5939	0.5788		
3	2	1	0.3495	0.4232	0.4552	0.6164	0.5417	0.6227	0.6821	0.7028	0.7210					
3	2	2	0.3829	0.3888	0.4120	0.4444	0.4896	0.5099	0.5267	0.5484	0.5378	0.5191	0.5797	0.6172	0.5253	
3	2	3	0.3712	0.3980	0.4245	0.5099	0.5840	0.6368	0.6160	0.6368	0.5667	0.6047	0.4930			
3	2	4	0.3490	0.3388	0.4011	0.4298	0.4994	0.5622	0.5494	0.5514	0.4919	0.4587	0.6181	0.6047		
3	2	5	0.3562	0.3470	0.3705	0.4643	0.4988	0.5007	0.5360	0.5458	0.5494	0.5307	0.6047	0.5646		













CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
3	30	1	0.3195	0.3266	0.3402	0.4134	0.5111	0.5313	0.5840	0.6168	0.5905	0.5191	0.5899	0.6459		
3	30	2	0.3227	0.3462	0.3463	0.4310	0.5494	0.5510	0.6191	0.6160	0.5119	0.5448	0.4842			
3	30	3	0.3861	0.3730	0.4147	0.5021	0.5311	0.5469	0.6657	0.6505	0.6331	0.6695	0.5757	0.6986	0.6331	
3	30	4	0.3665	0.3555	0.4209	0.5001	0.5878	0.5364	0.6211	0.6285	0.5596	0.5757				
3	30	5	0.3768	0.3667	0.3477	0.4028	0.4761	0.4712	0.4597	0.5910	0.6047	0.6342	0.5878	0.6270	0.5851	
3	30	6	0.3508	0.3841	0.4015	0.4310	0.5411	0.5591	0.5198	0.5567	0.6331	0.5567	0.5208	0.5099		
3	30	7	0.3314	0.3288	0.3741	0.4754	0.4969	0.4946	0.5622	0.5550	0.5099	0.5886	0.5732	0.5099	0.6047	
3	30	8	0.3078	0.3698	0.3983	0.4334	0.4437	0.4988	0.4794	0.5448	0.4848	0.4389	0.4355	0.4643		
3	30	9	0.4004	0.3491	0.3585	0.4533	0.4792	0.4848	0.4766	0.5813	0.6047					
3	30	10	0.3587	0.3504	0.4196	0.5119	0.4951	0.5441	0.5542	0.6483	0.5533	0.5667	0.5395	0.5732		
3	31	1	0.3851	0.4021	0.4482	0.4859	0.4795	0.5472	0.5481	0.6378	0.5476	0.5178	0.5679	0.5638		
3	31	2	0.3176	0.3240	0.4521	0.4373	0.5141	0.5924	0.5667	0.6211						
3	31	3	0.3768	0.4236	0.4151	0.4681	0.5269	0.5765	0.6151	0.5827	0.6643	0.6197				
3	31	4	0.3667	0.3335	0.3393	0.4160	0.4824	0.5175	0.5053	0.5294	0.5703	0.5223	0.6047	0.6160		
3	31	5	0.3853	0.3975	0.4578	0.5483	0.5341	0.6160	0.5587							
3	31	6	0.3754	0.4189	0.4594	0.4885	0.4902	0.4952	0.5472	0.5432	0.5345	0.5086	0.4782			
3	31	7	0.4045	0.4733	0.5456	0.5797	0.6997	0.5772	0.6252	0.6176	0.6619	0.6047	0.6451	0.7475		
3	31	8	0.3290	0.3728	0.4318	0.4810	0.4735	0.5011	0.5213	0.5866	0.5156	0.5033	0.5423	0.5813	0.5253	
3	31	9	0.3849	0.3635	0.4333	0.4844	0.5483	0.5382	0.5378	0.5270	0.5840	0.4684	0.5375	0.5348	0.5525	
3	31	10	0.3582	0.3611	0.3997	0.4357	0.4870	0.5436	0.5745	0.5138	0.4915	0.5939	0.5341	0.5141		
3	32	1	0.3722	0.3611	0.4183	0.4695	0.5395	0.5686	0.5614	0.6204	0.5978	0.6116	0.6047	0.5638		
3	32	2	0.3801	0.3768	0.4389	0.5033	0.5086	0.5168	0.5905	0.6176	0.5605	0.6047	0.6047	0.5423		
3	32	3	0.3791	0.3111	0.4137	0.4270	0.4840	0.5406	0.6123	0.5395	0.5899	0.4842	0.5472	0.4852		
3	32	4	0.3726	0.3872	0.4547	0.5300	0.5567	0.5612	0.6047	0.5834	0.5331	0.6591	0.6047	0.7258		
3	32	5	0.3944	0.3925	0.4693	0.4676	0.5104	0.5622	0.5797	0.4735	0.4376	0.4728	0.5341	0.4744		
3	32	6	0.3780	0.5861	0.4511	0.4878	0.5504	0.5924	0.5611	0.6181	0.5922	0.6183	0.6243	0.6047		
3	32	7	0.3705	0.3661	0.4689	0.5420	0.5441	0.5409	0.5703	0.6651	0.5191	0.4803	0.5208	0.5870		
3	32	8	0.3694	0.3511	0.3678	0.4555	0.5307	0.4830	0.4973	0.5146	0.5438	0.4076	0.4160	0.5686		
3	32	9	0.3541	0.3308	0.4219	0.5444	0.5653	0.6047	0.5836	0.5974	0.5768	0.6047	0.5979	0.5762		
3	32	10	0.3463	0.3688	0.4058	0.4775	0.5228	0.5383	0.5605	0.5638	0.5354	0.4643	0.4695	0.6176	0.5622	
3	33	1	0.3948	0.3362	0.4090	0.4991	0.5375	0.5067	0.5874	0.6351	0.5861	0.6879	0.4189	0.5464		
3	33	2	0.3692	0.3376	0.4143	0.4326	0.4704	0.5231	0.5899	0.5905	0.5596	0.6047				
3	33	3	0.3752	0.3640	0.4848	0.5092	0.5172	0.4842	0.4704	0.5622	0.5111	0.4547	0.5423	0.5567		
3	33	4	0.3616	0.3557	0.4178	0.4996	0.5610	0.4870	0.4890	0.5520	0.5253	0.4848	0.5208	0.5253		
3	33	5	0.3653	0.3330	0.3998	0.4502	0.4852	0.5438	0.5281	0.5514	0.4200	0.5033	0.4643	0.4643		
3	33	6	0.3624	0.3468	0.3955	0.4739	0.5686	0.5011	0.5082	0.6047	0.4494	0.5156	0.6047			
3	33	7	0.3709	0.3580	0.4527	0.4470	0.5544	0.5464	0.5253	0.5679	0.5307	0.5472	0.5582	0.5156		
3	33	8	0.3463	0.3444	0.4367	0.5113	0.4820	0.5054	0.5126	0.5725	0.5107	0.5686				
3	33	9	0.3430	0.3393	0.4260	0.4547	0.4684	0.5107	0.5056	0.5567	0.4643	0.5371	0.5910	0.5935		
3	33	10	0.3662	0.3902	0.4671	0.5360	0.5432	0.5455	0.5965	0.5703	0.4842	0.5646	0.5886	0.6047		
3	34	1	0.3768	0.3706	0.4096	0.5554	0.5605	0.6342	0.5653	0.5757	0.5253	0.5331				
3	34	2	0.3369	0.3895	0.4255	0.5033	0.5554	0.6383	0.5605							
3	34	3	0.3294	0.3564	0.4144	0.4748	0.5183	0.5331	0.4857	0.5144	0.5533	0.6565	0.5870	0.5253		
3	34	4	0.3485	0.3704	0.4442	0.5123	0.5494	0.5713	0.5834	0.6164	0.5892	0.6186	0.5646	0.6619		
3	34	5	0.3832	0.4095	0.4412	0.5587	0.5757	0.6368	0.6204	0.6285	0.4870	0.5395				
3	34	6	0.3842	0.4143	0.4335	0.5083	0.5622	0.5217	0.5514	0.6047	0.6047	0.5033	0.5033	0.5533		
3	34	7	0.3213	0.3668	0.3112	0.4470	0.4160	0.5567	0.5596	0.5286	0.5395	0.4754	0.4708			
3	34	8	0.3878	0.3799	0.3800	0.4412	0.5582	0.4957	0.5840	0.6047						
3	34	9	0.3824	0.3768	0.4795	0.5610	0.5845	0.5596	0.5749	0.6821	0.6047	0.6342	0.6725	0.6879		
3	34	10	0.3444	0.3593	0.4173	0.4437	0.4518	0.5375	0.5591	0.5596	0.6047					
3	35	1	0.2931	0.3280	0.3670	0.5001	0.5033	0.4900	0.5253	0.5354	0.6236	0.5924	0.5805			
3	35	2	0.4437	0.3983	0.4207	0.4523	0.4930	0.6351	0.6047	0.5078	0.6301	0.6218	0.5840	0.5567		
3	35	3	0.3948	0.3426	0.4384	0.4626	0.5502	0.5861	0.5950	0.5567	0.6047	0.6047	0.6342	0.6218	0.6047	
3	35	4	0.3275	0.3892	0.3969	0.4814	0.5523	0.6231	0.5757	0.5915	0.6218	0.6619	0.6301	0.5851	0.6342	
3	35	5	0.3461	0.3515	0.3949	0.4722	0.3924	0.5494	0.5078	0.3955	0.4766					



CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
4	5	1	0.3706	0.3319	0.3590	0.4458	0.5217	0.5375	0.5646		0.5915	0.3348	0.6383	0.5099		
4	5	2	0.2987	0.2959	0.3632	0.4341	0.4425	0.5033	0.4988	0.5186	0.4835	0.4179	0.4494	0.4708	0.5001	
4	5	3	0.3422	0.3515	0.4076	0.4604	0.5033	0.5276	0.5377	0.5518	0.5484	0.4882	0.5119	0.6047	0.6047	
4	5	4	0.3497	0.3680	0.3951	0.5454	0.5520	0.5201	0.5458	0.4966	0.5494	0.5033	0.4160			
4	5	5	0.3502	0.3636	0.4446	0.5186	0.5082	0.5520	0.4957							
4	5	6	0.3908	0.3716	0.3837	0.4160	0.4310	0.5458	0.4257	0.5156	0.5458	0.5178	0.5208			
4	5	7	0.3696	0.3624	0.4173	0.4085	0.5514	0.5156	0.5458	0.6047	0.5905	0.4973				
4	5	8	0.3662	0.3622	0.4981	0.4830	0.4766	0.5732	0.5494	0.6047	0.5281	0.5820	0.5033	0.5899		
4	5	9	0.3546	0.3546	0.4418	0.4803	0.4704	0.4533	0.5444	0.5567	0.5303	0.4842	0.5156	0.5840	0.5738	
4	5	10	0.3494	0.3012	0.3348	0.3975	0.4367	0.4788	0.4957	0.4568	0.4735	0.4728	0.4581	0.3632		
4	6	1	0.3535	0.3275	0.3804	0.4121	0.4957	0.4941	0.4090	0.5277	0.4761	0.4416	0.5198	0.5290	0.4952	
4	6	2	0.3351	0.3236	0.4559	0.4859	0.5313	0.5779	0.5520	0.5939	0.5878	0.6047				
4	6	3	0.3332	0.3440	0.3726	0.5131	0.5448	0.5679	0.5834	0.5587	0.5432					
4	6	4	0.3371	0.3447	0.3978	0.4991	0.4788	0.5674	0.4973	0.5354	0.4966	0.5768	0.5033			
4	6	5	0.2959	0.3592	0.3587	0.4183	0.4437	0.4037	0.4803	0.4957	0.4527	0.4547				
4	6	6	0.3391	0.3157	0.3679	0.4776	0.4643	0.4996	0.5805	0.5805	0.5201					
4	6	7	0.3266	0.3302	0.3392	0.4581	0.4577	0.5772	0.5395	0.5866	0.2267	0.5587	0.4643			
4	6	8	0.3519	0.3881	0.4389	0.5253	0.5321	0.5448	0.4973	0.5820	0.5134	0.5494				
4	6	9	0.3644	0.3720	0.3479	0.4152	0.4494	0.4448	0.4559	0.4453	0.5201	0.4912	0.4518	0.4555	0.5128	
4	6	10	0.3463	0.3229	0.3611	0.4553	0.4930	0.5165	0.5226	0.5793	0.5383	0.4268	0.4852	0.5423	0.4754	
4	7	1	0.3616	0.4116	0.4855	0.5638	0.5520	0.5395	0.4728	0.5550	0.5395	0.5141	0.5878			
4	7	2	0.3501	0.3560	0.4253	0.4290	0.5550	0.5253	0.5653	0.5223	0.6047	0.4930				
4	7	3	0.3740	0.3379	0.3768	0.4241	0.4194	0.5464	0.5107	0.4915	0.4643	0.4973	0.4930			
4	7	4	0.3593	0.3119	0.3592	0.3859	0.5156	0.4969	0.5364	0.5723	0.5253	0.4973	0.5253	0.5067		
4	7	5	0.3509	0.3633	0.4060	0.4609	0.5253	0.5436	0.5240	0.5584	0.5111	0.5033	0.4687	0.5067	0.4906	
4	7	6	0.4076	0.3608	0.4578	0.5156	0.5659	0.5011	0.6204	0.6148	0.5942	0.5033	0.5772	0.5723		
4	7	7	0.3849	0.3482	0.2629	0.4756	0.5427	0.4676	0.5840	0.5331	0.5632	0.6301	0.6399	0.6047	0.5851	
4	7	8	0.3510	0.3672	0.4986	0.5331	0.6145	0.5856	0.6437	0.6241	0.6466	0.6619	0.6948			
4	7	9	0.3625	0.3513	0.3979	0.4660	0.5550	0.5408	0.5957	0.5827	0.5953	0.5172	0.5191	0.5820	0.6186	
4	7	10	0.3494	0.3384	0.3691	0.4616	0.4425	0.4573	0.5082	0.4988	0.5713	0.5375	0.5827	0.6246		
4	8	1	0.3897	0.3800	0.3793	0.4573	0.4512	0.4189	0.4698	0.4826	0.5007	0.4420	0.5033	0.5441	0.4977	
4	8	2	0.3308	0.3482	0.4228	0.4534	0.4906	0.4766	0.5056	0.5004	0.5086					
4	8	3	0.3789	0.3807	0.3546	0.4229	0.5302	0.5520	0.5253	0.5063	0.6154	0.5915	0.5667	0.6047	0.5622	
4	8	4	0.3435	0.3768	0.4040	0.4350	0.5253	0.5016	0.4494	0.5395	0.5253	0.5223	0.5694			
4	8	5	0.3623	0.3632	0.4611	0.4906	0.4470	0.5242	0.4590	0.5181	0.4966	0.4310	0.5438	0.5797		
4	8	6	0.3031	0.2813	0.3588	0.4241	0.4021	0.4140	0.4343	0.4087	0.4339	0.4509	0.4200	0.4887		
4	8	7	0.3297	0.3593	0.3894	0.4234	0.4852	0.4587	0.5345	0.5253	0.5432					
4	8	8	0.3661	0.3817	0.3722	0.4587	0.4437	0.4553	0.5368	0.5461	0.5221	0.6047	0.5432	0.4389	0.4643	
4	8	9	0.3457	0.3395	0.3740	0.4140	0.4823	0.4265	0.4664	0.4968	0.4861	0.4425	0.4407	0.5827	0.4339	
4	8	10	0.3470	0.3283	0.3622	0.4416	0.4268	0.4803	0.5138	0.5358	0.4782	0.5253	0.5317			
4	9	1	0.3456	0.3509	0.4452	0.4558	0.5241	0.5484	0.4772	0.5483	0.5510	0.6047	0.4310			
4	9	2	0.3525	0.3596	0.4173	0.5033	0.4900	0.5827	0.5696	0.5533	0.6359	0.4941	0.5432	0.6047		
4	9	3	0.3601	0.3377	0.4160	0.4376	0.4776	0.4890	0.4994	0.5577	0.5950	0.6578	0.4957	0.6270		
4	9	4	0.3871	0.3305	0.3421	0.3602	0.4102	0.4040	0.4803	0.4935	0.4957	0.4712	0.4213	0.4494	0.5056	
4	9	5	0.3467	0.3862	0.4494	0.4643	0.4754	0.5234	0.6047							
4	9	6	0.4168	0.4055	0.5134	0.4817	0.5053	0.5667	0.5378	0.6747	0.5878	0.5217	0.6542			
4	9	7	0.3147	0.3024	0.3348	0.4476	0.4042	0.5139	0.5267	0.5577	0.5494	0.5886				
4	9	8	0.3472	0.3422	0.4310	0.4772	0.4547	0.4793	0.4834	0.5164	0.5156	0.4813	0.5510	0.5033		
4	9	9	0.3704	0.3955	0.4643	0.5253	0.5818	0.5458	0.4952	0.5408	0.5172	0.5438	0.5178			
4	9	10	0.3390	0.3145	0.4213	0.4728	0.4766	0.4758	0.4720	0.5226	0.5494	0.4946	0.5494	0.5033	0.5395	
4	10	1	0.3459	0.4220	0.4900	0.5185	0.5709	0.5559	0.5840	0.6047	0.5253	0.5371	0.6047	0.5899		
4	10	2	0.3525	0.3432	0.3658	0.4160	0.4298	0.5232	0.5186	0.4924	0.4946	0.4562	0.4803	0.5820	0.5277	
4	10	3	0.3744	0.3881	0.1923	0.5905	0.5423	0.5464	0.5703	0.6047	0.5494	0.5395	0.6258			
4	10	4	0.3625	0.4167	0.4411	0.5438	0.5691	0.5001	0.5432	0.5745	0.5464					
4	10	5	0.3342	0.3585	0.4245	0.5033	0.4848	0.4593	0.6047							



CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
4	16	2	0.4809	0.4160	0.4338	0.5211	0.4999	0.4899	0.5960	0.5307	0.5094	0.4527	0.5458	.	.	.
4	16	3	0.4068	0.3936	0.4110	0.4323	0.5307	0.4691	0.5228	0.5713	0.5345	0.4562	.	.	.	.
4	16	4	0.3704	0.4057	0.4589	0.4837	0.4870	0.5679	0.5362	0.5805	0.5932	0.5703	.	.	.	.
4	16	5	0.3828	0.3605	0.4404	0.4643	0.5166	0.5323	0.5240	0.4830	0.4617	0.4527	0.3927	0.5253	0.4870	.
4	16	6	0.3728	0.3848	0.4160	0.5432	0.4776	0.5610	0.5178	0.5939	0.5779	0.5423	0.6047	0.6399	.	.
4	16	7	0.3404	0.3884	0.4357	0.4569	0.4760	0.4857	0.5272	0.5479	0.5134	0.4744	0.4643	0.6879	.	.
4	16	8	0.3696	0.4042	0.4494	0.2051	0.5395	0.5703	0.5237	0.5915	0.5126	0.5458	0.5141	0.6164	.	.
4	16	9	0.3972	0.4089	0.4643	0.5191	0.5641	0.5448	0.5851	0.5718	0.4766	0.5892	0.5861	.	.	.
4	16	10	0.4072	0.4228	0.4489	0.4861	0.4845	0.5033	0.5556	0.5395	0.4611	0.4890	0.4708	0.4766	0.5395	.
4	17	1	0.3792	0.3744	0.4288	0.4643	0.4701	0.5703	0.5294	0.5395	.	.	.	.	.	.
4	17	2	0.3721	0.3523	0.4172	0.4984	0.5208	0.5732	0.5313	0.5907	0.5948	0.5033	0.5567	0.6270	.	.
4	17	3	0.3621	0.3288	0.3978	0.4285	0.4007	0.4681	0.5441	0.5797	0.5448	0.4494	0.5494	0.5494	.	.
4	17	4	0.4003	0.3946	0.4152	0.5033	0.5134	0.5676	0.4879	0.5201	0.4973	0.4257	0.4716	0.4996	0.5060	.
4	17	5	0.3395	0.3406	0.4437	0.5172	0.4870	0.5745	0.5395	0.6948	.	.	.	.	.	.
4	17	6	0.3497	0.3620	0.4294	0.4870	0.4830	0.5354	0.4613	0.5236	0.5033	0.5067	0.4930	.	.	.
4	17	7	0.3484	0.3482	0.4447	0.5099	0.5331	0.4716	0.4701	0.5360	0.6047	0.5667	0.6437	0.5432	.	.
4	17	8	0.3912	0.3699	0.4103	0.4581	0.4555	0.5507	0.5082	0.5732	0.5567	.	.	.	.	.
4	17	9	0.3939	0.3621	0.4012	0.5063	0.4803	0.4890	0.4587	0.6047	.	.	.	.	.	.
4	17	10	0.3525	0.3096	0.3691	0.4509	0.4966	0.5483	0.4979	0.5213	0.5128	0.4397	0.5092	0.5378	0.4950	.
4	18	1	0.3523	0.3748	0.4217	0.4678	0.5368	0.5290	0.5078	0.6154	0.4021	0.5191	0.7125	0.5878	.	.
4	18	2	0.3504	0.3367	0.3834	0.4494	0.4906	0.4105	0.4884	0.5270	0.5058	0.4272	0.5605	0.5432	0.4732	.
4	18	3	0.3361	0.3219	0.3676	0.5156	0.5307	0.5067	0.5092	0.4701	0.5317	0.4708	.	.	.	.
4	18	4	0.3171	0.3422	0.3988	0.5063	0.5354	0.5172	0.5107	0.5544	0.5092	0.4716	0.5033	0.4984	.	.
4	18	5	0.3584	0.3788	0.4367	0.4766	0.5820	0.5520	0.5691	0.5208	0.6301	.	.	.	.	.
4	18	6	0.3304	0.3636	0.3862	0.4766	0.5060	0.4870	0.4512	0.5510	0.4900	0.4979	0.5423	.	.	.
4	18	7	0.3810	0.3626	0.4437	0.5371	0.4857	0.5223	0.5441	0.5584	0.5300	0.4915	0.4887	0.4268	.	.
4	18	8	0.3657	0.3687	0.4416	0.5156	0.5605	0.5745	0.6437	0.5448	.	.	.	.	.	.
4	18	9	0.3452	0.3422	0.3768	0.4479	0.5345	0.5302	0.4329	0.5186	0.5540	0.5033	0.4782	0.5239	.	.
4	18	10	0.3487	0.3591	0.4310	0.4282	0.4238	0.5033	0.4562	0.5253	0.4341	0.4021	0.5878	0.4728	.	.
4	19	1	0.3397	0.3328	0.4310	0.5360	0.4930	0.4788	0.4735	0.4282	.	.	.	.	.	.
4	19	2	0.3501	0.3237	0.3963	0.4135	0.5567	0.4966	0.4820	0.4906	0.4890	0.5134	.	.	.	.
4	19	3	0.3583	0.3467	0.4616	0.5004	0.5711	0.5718	0.4747	0.5015	0.5144	0.4416	0.5432	0.5667	.	.
4	19	4	0.3797	0.3724	0.4487	0.5928	0.5667	0.5608	0.5630	0.5523	0.6047	0.6145	0.5820	0.6047	.	.
4	19	5	0.3275	0.2834	0.3471	0.4100	0.3768	0.4278	0.4347	0.4957	.	.	.	.	.	.
4	19	6	0.3324	0.3089	0.4060	0.5004	0.5001	0.5191	0.5272	0.5517	0.5476	0.4135	0.4310	0.4643	.	.
4	19	7	0.3550	0.3933	0.4204	0.5191	0.5395	0.5592	0.4951	0.5676	0.5237	0.5063	0.5851	0.5840	0.5253	.
4	19	8	0.3155	0.3234	0.3553	0.3859	0.4701	0.4991	0.4380	0.6047	0.4135	0.4046	0.4643	.	.	.
4	19	9	0.3576	0.3491	0.4494	0.4607	0.5092	0.5867	0.5567	0.6243	0.5294	0.5567	0.5414	0.5494	.	.
4	19	10	0.3396	0.3532	0.4177	0.4957	0.5156	0.5274	0.4842	0.5630	0.5805	0.5172	0.5432	0.5464	.	.
4	20	1	0.3258	0.3154	0.3896	0.5840	0.5679	0.5567	0.5472	0.5817	0.4893	0.4845	0.5156	0.5779	.	.
4	20	2	0.3469	0.3012	0.3843	0.4367	0.4076	0.4930	0.4310	0.4837	0.4437	0.4437	0.4984	0.5544	.	.
4	20	3	0.3337	0.3630	0.3746	0.4076	0.4367	0.4630	0.4684	0.4113	0.4364	0.4310	0.4691	0.6047	0.5217	.
4	20	4	0.3768	0.3754	0.5156	0.3945	0.4766	0.5544	0.5395	.	.	.	.	.	.	.
4	20	5	0.3320	0.3611	0.4270	0.4930	0.5458	0.5231	0.5112	0.4818	0.5015	0.4774	0.5380	0.5614	.	.
4	20	6	0.3286	0.3313	0.3480	0.3623	0.3818	0.4476	0.4479	0.4310	0.4786	0.4750	0.4597	0.5915	0.5905	.
4	20	7	0.3334	0.3588	0.4437	0.5099	0.4830	0.5269	0.5443	0.4893	0.5550	0.4973	0.4820	.	.	.
4	20	8	0.3851	0.3753	0.4374	0.4716	0.5168	0.5253	0.5253	0.5548	0.5856	0.5191	0.4643	0.6355	.	.
4	20	9	0.3714	0.3936	0.4957	0.4776	0.5417	0.6140	0.5957	0.6526	0.5001	0.5550	0.5886	.	.	.
4	20	10	0.3265	0.3213	0.3524	0.4004	0.5141	0.5138	0.5170	0.4527	0.4341	0.4310	0.4597	0.4423	.	.
4	21	1	0.3705	0.3785	0.3958	0.3987	0.4723	0.4370	0.4785	0.4738	0.5409	0.4782	0.5745	.	.	.
4	21	2	0.3608	0.3994	0.4382	0.4230	0.4687	0.5354	0.6411	0.4896	0.4643	0.6168	.	.	.	.
4	21	3	0.3498	0.3644	0.4276	0.4758	0.4470	0.4420	0.5033	.	.	.	.	.	.	.
4	21	4	0.3926	0.3262	0.3768	0.4178	0.4552	0.4826	0.4735	0.4772	0.4562	0.5939	0.4512	0.4946	.	.
4	21	5	0.3596	0.3750	0.4577	0.4451	0.4934	0.4625	0.5529	0.5082	0.5056	0.5007	.	.	.	.
4	21	6	0.3553	0.3912	0.4093	0.3955	0.4290	0.4185	0.4618	0.4912	0.4946	0.4310	.	.	.	.

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
4	16	2	0.4809	0.4160	0.4338	0.5211	0.4999	0.4899	0.5960	0.5307	0.5094	0.4527	0.5458			
4	16	3	0.4068	0.3936	0.4110	0.4323	0.5307	0.4691	0.5228	0.5713	0.5345	0.4562				
4	16	4	0.3704	0.4057	0.4589	0.4837	0.4870	0.5679	0.5362	0.5805	0.5932	0.5703				
4	16	5	0.3828	0.3605	0.4404	0.4643	0.5166	0.5323	0.5240	0.4830	0.4617	0.4527	0.3927	0.5253	0.4870	
4	16	6	0.3728	0.3848	0.4160	0.5432	0.4776	0.5610	0.5178	0.5939	0.5779	0.5423	0.6047	0.6399		
4	16	7	0.3404	0.3884	0.4357	0.4569	0.4760	0.4857	0.5272	0.5479	0.5134	0.4744	0.4643	0.6879		
4	16	8	0.3696	0.4042	0.4494	0.2051	0.5395	0.5703	0.5237	0.5915	0.5126	0.5458	0.5141	0.6164		
4	16	9	0.3972	0.4089	0.4643	0.5191	0.5641	0.5448	0.5851	0.5718	0.4766	0.5892	0.5861			
4	16	10	0.4072	0.4228	0.4489	0.4861	0.4845	0.5033	0.5556	0.5395	0.4611	0.4890	0.4708	0.4766	0.5395	
4	17	1	0.3792	0.3744	0.4288	0.4643	0.4701	0.5703	0.5294	0.5395						
4	17	2	0.3721	0.3523	0.4172	0.4984	0.5208	0.5732	0.5313	0.5907	0.5948	0.5033	0.5567	0.6270		
4	17	3	0.3621	0.3288	0.3978	0.4285	0.4007	0.4681	0.5441	0.5797	0.5448	0.4494	0.5494	0.5494		
4	17	4	0.4003	0.3946	0.4152	0.5033	0.5134	0.5676	0.4879	0.5201	0.4973	0.4257	0.4716	0.4996	0.5060	
4	17	5	0.3395	0.3406	0.4437	0.5172	0.4870	0.5745	0.5395	0.6948						
4	17	6	0.3497	0.3620	0.4294	0.4870	0.4830	0.5354	0.4613	0.5236	0.5033	0.5067	0.4930			
4	17	7	0.3484	0.3482	0.4447	0.5099	0.5331	0.4716	0.4701	0.5360	0.6047	0.5667	0.6437	0.5432		
4	17	8	0.3912	0.3699	0.4103	0.4581	0.4555	0.5507	0.5082	0.5732	0.5567					
4	17	9	0.3939	0.3621	0.4012	0.5063	0.4803	0.4890	0.4587	0.6047						
4	17	10	0.3525	0.3096	0.3691	0.4509	0.4966	0.5483	0.4979	0.5213	0.5128	0.4397	0.5092	0.5378	0.4950	
4	18	1	0.3523	0.3748	0.4217	0.4678	0.5368	0.5290	0.5078	0.6154	0.4021	0.5191	0.7125	0.5878		
4	18	2	0.3504	0.3367	0.3834	0.4494	0.4906	0.4105	0.4884	0.5270	0.5058	0.4272	0.5605	0.5432	0.4732	
4	18	3	0.3361	0.3219	0.3676	0.5156	0.5307	0.5067	0.5092	0.4701	0.5317	0.4708				
4	18	4	0.3171	0.3422	0.3988	0.5063	0.5354	0.5172	0.5107	0.5544	0.5092	0.4716	0.5033	0.4984		
4	18	5	0.3584	0.3788	0.4367	0.4766	0.5820	0.5520	0.5691	0.5208	0.6301					
4	18	6	0.3304	0.3636	0.3862	0.4766	0.5060	0.4870	0.4512	0.5510	0.4900	0.4979	0.5423			
4	18	7	0.3810	0.3626	0.4437	0.5371	0.4857	0.5223	0.5441	0.5584	0.5300	0.4915	0.4887	0.4268		
4	18	8	0.3657	0.3687	0.4416	0.5156	0.5605	0.5745	0.6437	0.5448						
4	18	9	0.3452	0.3422	0.3768	0.4479	0.5345	0.5302	0.4329	0.5186	0.5540	0.5033	0.4782	0.5239		
4	18	10	0.3487	0.3591	0.4310	0.4282	0.4238	0.5033	0.4562	0.5253	0.4341	0.4021	0.5878	0.4728		
4	19	1	0.3397	0.3328	0.4310	0.5360	0.4930	0.4788	0.4735	0.4282						
4	19	2	0.3501	0.3237	0.3963	0.4135	0.5567	0.4966	0.4820	0.4906	0.4890	0.5134				
4	19	3	0.3583	0.3467	0.4616	0.5004	0.5711	0.5718	0.4747	0.5015	0.5144	0.4416	0.5432	0.5667		
4	19	4	0.3797	0.3724	0.4487	0.5928	0.5667	0.5608	0.5630	0.5523	0.6047	0.6145	0.5820	0.6047		
4	19	5	0.3275	0.2834	0.3471	0.4100	0.3768	0.4278	0.4347	0.4957						
4	19	6	0.3324	0.3089	0.4060	0.5004	0.5001	0.5191	0.5272	0.5517	0.5476	0.4135	0.4310	0.4643		
4	19	7	0.3550	0.3933	0.4204	0.5191	0.5395	0.5592	0.4951	0.5676	0.5237	0.5063	0.5851	0.5840	0.5253	
4	19	8	0.3155	0.3234	0.3553	0.3859	0.4701	0.4991	0.4380	0.6047	0.4135	0.4046	0.4643			
4	19	9	0.3576	0.3491	0.4494	0.4607	0.5092	0.5867	0.5567	0.6243	0.5294	0.5567	0.5414	0.5494		
4	19	10	0.3396	0.3532	0.4177	0.4957	0.5156	0.5274	0.4842	0.5630	0.5805	0.5172	0.5432	0.5464		
4	20	1	0.3258	0.3154	0.3896	0.5840	0.5679	0.5567	0.5472	0.5817	0.4893	0.4845	0.5156	0.5779		
4	20	2	0.3469	0.3012	0.3843	0.4367	0.4076	0.4930	0.4310	0.4837	0.4437	0.4437	0.4984	0.5544		
4	20	3	0.3337	0.3630	0.3746	0.4076	0.4367	0.4630	0.4684	0.4113	0.4364	0.4310	0.4691	0.6047	0.5217	
4	20	4	0.3768	0.3754	0.5156	0.3945	0.4766	0.5544	0.5395							
4	20	5	0.3320	0.3611	0.4270	0.4930	0.5458	0.5231	0.5112	0.4818	0.5015	0.4774	0.5380	0.5614		
4	20	6	0.3286	0.3313	0.3480	0.3623	0.3818	0.4476	0.4479	0.4310	0.4786	0.4750	0.4597	0.5915	0.5905	
4	20	7	0.3334	0.3588	0.4437	0.5099	0.4830	0.5269	0.5443	0.4893	0.5550	0.4973	0.4820			
4	20	8	0.3851	0.3753	0.4374	0.4716	0.5168	0.5253	0.5253	0.5548	0.5856	0.5191	0.4643	0.6355		
4	20	9	0.3714	0.3936	0.4957	0.4776	0.5417	0.6140	0.5957	0.6526	0.5001	0.5550	0.5886			
4	20	10	0.3265	0.3213	0.3524	0.4004	0.5141	0.5138	0.5170	0.4527	0.4341	0.4310	0.4597	0.4423		
4	21	1	0.3705	0.3785	0.3958	0.3987	0.4723	0.4370	0.4785	0.4738	0.5409	0.4782	0.5745			
4	21	2	0.3608	0.3994	0.4382	0.4230	0.4687	0.5354	0.6411	0.4896	0.4643	0.6168				
4	21	3	0.3498	0.3644	0.4276	0.4758	0.4470	0.4420			0.5033					
4	21	4	0.3926	0.3262	0.3768	0.4178	0.4552	0.4826	0.4735	0.4772	0.4562	0.5939	0.4512	0.4946		
4	21	5	0.3596	0.3750	0.4577	0.4451	0.4934	0.4625	0.5529	0.5082	0.5056	0.5007				
4	21	6	0.3553	0.3912	0.4093	0.3955	0.4290	0.4185	0.4618	0.4912	0.4946	0.4310				

CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
4	21	7	0.3670	0.3355	0.4383	0.4587	0.5144	0.5237	0.5198	0.5354						
4	21	8	0.3336	0.3501	0.3805	0.3947	0.4420	0.5107								
4	21	9	0.3250	0.3504	0.4284	0.5291	0.5217	0.5253	0.6128	0.5768	0.4076	0.5395	0.5870	0.4830		
4	21	10	0.3306	0.3262	0.3338	0.4072	0.4359	0.4567	0.4947	0.5021	0.4923	0.4177	0.4803	0.5146	0.4520	
4	22	1	0.3563	0.3632	0.4337	0.5126	0.4534	0.5504	0.5414	0.6047	0.5892	0.5395	0.5395			
4	22	2	0.3783	0.3822	0.4349	0.5181	0.5656	0.5423	0.5277	0.5494	0.4597	0.5183	0.4416	0.5520		
4	22	3	0.3655	0.3747	0.4376	0.4470	0.5217	0.5156	0.4127	0.5520	0.4991					
4	22	4	0.3425	0.3192	0.4279	0.3658	0.4713	0.4470	0.4735	0.4999	0.4512	0.4587	0.4527	0.5094		
4	22	5	0.3457	0.3099	0.3730	0.4393	0.4547	0.4407	0.3291	0.5779	0.5476	0.7388	0.5395	0.6047		
4	22	6	0.3412	0.3910	0.4560	0.4691	0.4989	0.5263	0.4850	0.5313	0.5004	0.4593	0.4121	0.4113		
4	22	7	0.3552	0.3511	0.3973	0.4701	0.4614	0.5004	0.5612	0.6157	0.4820	0.4461	0.6258	0.5892		
4	22	8	0.4413	0.3650	0.4152	0.4716	0.4569	0.5048	0.4643	0.5124	0.4722	0.5072	0.4915	0.4930		
4	22	9	0.3348	0.3417	0.3795	0.4223	0.6132	0.3371	0.4217	0.4750	0.4803	0.3829	0.3074			
4	22	10	0.3353	0.3295	0.3520	0.4021	0.5156	0.4076	0.4380	0.5602	0.4890	0.4263	0.4766	0.4744		
4	23	1	0.3516	0.3398	0.3342	0.4663	0.5259	0.5172	0.5587	0.4622	0.5854	0.4870	0.4341	0.6047	0.5886	
4	23	2	0.3617	0.4007	0.4544	0.4921	0.5427	0.6047	0.5614	0.6134	0.6619	0.6047	0.5732	0.6270		
4	23	3	0.3479	0.3788	0.4510	0.5253	0.5920	0.6423	0.6437	0.6301	0.5870					
4	23	4	0.3297	0.3501	0.4552	0.4837	0.6204	0.5915	0.5208	0.6437						
4	23	5	0.3734	0.3702	0.3521	0.4223	0.4915	0.4738	0.5779	0.5711	0.5878	0.5861	0.5078	0.5331	0.5567	
4	23	6	0.3373	0.3665	0.4359	0.4761	0.4558	0.5208	0.4906	0.4973	0.4249	0.4113	0.5307	0.4437		
4	23	7	0.3727	0.3536	0.4229	0.4830	0.5168	0.5820	0.5423	0.6047						
4	23	8	0.3591	0.3504	0.4322	0.5014	0.4921	0.5550	0.5201	0.5373	0.5479	0.4803	0.5228	0.5567		
4	23	9	0.3465	0.3444	0.4151	0.4704	0.5298	0.5406	0.5718	0.5274	0.4217	0.5277	0.4695	0.5458		
4	23	10	0.3673	0.3025	0.4033	0.4423	0.4234	0.4842	0.4609	0.6168	0.4643	0.4643				
4	24	1	0.3457	0.3357	0.3793	0.3444	0.4007	0.4272	0.5166	0.4830	0.5845	0.4695	0.4581	0.5514	0.4996	
4	24	2	0.3587	0.3587	0.3790	0.4197	0.3933	0.4684	0.4695	0.5033	0.4160	0.4738	0.4465			
4	24	3	0.3546	0.3581	0.3883	0.4760	0.4912	0.5667	0.5119	0.5544	0.5274	0.5033	0.5432	0.4776		
4	24	4	0.3249	0.3096	0.4192	0.4744	0.4494	0.5004	0.5414	0.5375	0.5851	0.4389	0.6511	0.6342		
4	24	5	0.3362	0.3222	0.3554	0.4051	0.5622	0.4701	0.4803	0.5622	0.6211	0.5307				
4	24	6	0.3916	0.3418	0.3597	0.4350	0.4870	0.4358	0.5141	0.4941	0.4681	0.4766	0.4527	0.5667	0.5060	
4	24	7	0.4028	0.3668	0.4098	0.4187	0.3993	0.4573	0.5226	0.5104	0.3644	0.4788	0.4285	0.5094		
4	24	8	0.3412	0.3495	0.4027	0.4310	0.5307	0.5411	0.5460	0.4744	0.5494	0.5371	0.5851			
4	24	9	0.3460	0.3444	0.3971	0.4284	0.4254	0.5004	0.5533	0.5004	0.4984	0.3916	0.3768			
4	24	10	0.3616	0.3513	0.5234	0.4712	0.5331	0.5072	0.5198	0.4684	0.4870	0.6047	0.6047			
4	25	1	0.3725	0.3606	0.3912	0.4930	0.4870	0.5765	0.5612	0.5375	0.5086	0.4716	0.5033	0.5646		
4	25	2	0.3147	0.3540	0.2128	0.4113	0.4543	0.4416	0.4712	0.4643	0.5414	0.4643	0.5092	0.5476	0.4587	
4	25	3	0.3579	0.3437	0.3853	0.4007	0.4244	0.4850	0.4881	0.5632	0.5274	0.4160	0.5520			
4	25	4	0.3359	0.3204	0.4043	0.4218	0.4249	0.4858	0.4643	0.4950	0.4257	0.4479	0.4848	0.5395		
4	25	5	0.3779	0.3704	0.4581	0.4961	0.4893	0.5803	0.4906	0.5667	0.5221	0.5156	0.5395	0.5099		
4	25	6	0.4285	0.3613	0.3904	0.4684	0.4969	0.5078	0.5146	0.5298	0.5656	0.5395	0.5622	0.5072		
4	25	7	0.3632	0.3431	0.3841	0.4527	0.5957	0.5172	0.6986	0.6047	0.6437	0.4896	0.4984	0.6047	0.5827	
4	25	8	0.3471	0.3362	0.4265	0.4996	0.4125	0.5033	0.5971	0.5494	0.6047	0.6047	0.6047	0.5294	0.5119	
4	25	9	0.3488	0.3471	0.3825	0.4595	0.5348	0.6437	0.5935	0.6357	0.6301	0.4776	0.5679	0.6145	0.5345	
4	25	10	0.3574	0.3711	0.4113	0.4962	0.5146	0.5253	0.5510	0.6047	0.5253	0.5713	0.5178			
4	26	1	0.3232	0.2988	0.3483	0.4051	0.4389	0.5494	0.4906	0.5432	0.4758	0.4957	0.5119	0.5667		
4	26	2	0.3557	0.3360	0.3768	0.4367	0.4437	0.4744	0.5146	0.5078	0.4113	0.4437	0.5086			
4	26	3	0.4153	0.3386	0.3684	0.4643	0.4113	0.5001	0.4830	0.5217	0.4744	0.4766				
4	26	4	0.3717	0.3838	0.4562	0.4917	0.4882	0.5001	0.4893	0.5779	0.5476	0.5395	0.5126	0.5371		
4	26	5	0.3396	0.3820	0.4213	0.4775	0.4884	0.5191	0.5667	0.4930	0.4643	0.5141				
4	26	6	0.3161	0.3811	0.4332	0.4337	0.4389	0.5141	0.5533	0.5605	0.5331	0.4643	0.5667			
4	26	7	0.3032	0.2862	0.3500	0.3893	0.4143	0.4906	0.4803	0.7051						
4	26	8	0.4098	0.3319	0.3538	0.4437	0.5253	0.5348	0.4573	0.5902	0.5667	0.5341	0.5438	0.4479		
4	26	9	0.3381	0.3353	0.4146	0.5124	0.4952	0.5089	0.4541	0.5371	0.5126	0.4597	0.5691	0.5274		
4	26	10	0.3511	0.3641	0.4100	0.5075	0.5204	0.5445	0.4892	0.5610	0.4670	0.4437				
4	27	1	0.3546	0.3260	0.3566	0.4037	0.4290	0.4643	0.4448	0.5001	0.4367	0.4242	0.4687	0.4815	0.5072	





CORE SPECIFIC GRAVITY DATA

BLOCK	SOURCE	TREE	AGE2	AGE4	AGE6	AGE8	AGE10	AGE12	AGE14	AGE16	AGE18	AGE20	AGE22	AGE24	AGE26	AGE28
4	32	7	0.3171	0.3361	0.3870	0.5033	0.6047	0.4465	0.5380	0.5360	0.5622	0.5567	0.4643			
4	32	8	0.3502	0.3704	0.3955	0.4754	0.5587	0.5653	0.5520	0.5331	0.4076					
4	32	9	0.3312	0.3308	0.3551	0.3911	0.4231	0.4850	0.4665	0.5062	0.5092	0.4568	0.4979	0.5286		
4	32	10	0.3352	0.3487	0.3929	0.4760	0.5414	0.5757	0.4483	0.6047	0.5217	0.6047	0.5622	0.4728		
4	33	1	0.2542	0.3329	0.4228	0.4795	0.4292	0.5265	0.5015	0.5236	0.4160	0.3983	0.6047	0.4930		
4	33	2	0.3629	0.3573	0.4192	0.4870	0.5146	0.5123	0.4803	0.6047	0.5253	0.5111	0.5191			
4	33	3	0.4263	0.3911	0.3567	0.4531	0.4407	0.4268	0.5836	0.5602	0.5774	0.4991	0.5472	0.5494	0.5128	
4	33	4	0.2976	0.3339	0.3949	0.4263	0.4382	0.4964	0.5567	0.5448	0.5156	0.5294	0.5354			
4	33	5	0.3512	0.3623	0.3825	0.4695	0.4479	0.4923	0.4857	0.5579	0.5099	0.5567				
4	33	6	0.3468	0.3674	0.4337	0.4437	0.4837	0.4684	0.5231	0.5920						
4	33	7	0.4084	0.4014	0.3788	0.4343	0.4735	0.4906	0.5080	0.4643	0.5395	0.5001	0.5156	0.5107	0.4643	
4	33	8	0.3377	0.3493	0.4289	0.4973	0.5185	0.5589	0.5279	0.5377	0.5395	0.5144	0.5395	0.5411		
4	33	9	0.3703	0.4208	0.4952	0.5632	0.5718	0.5283	0.5368	0.5438	0.4803					
4	33	10	0.3690	0.3484	0.3881	0.4288	0.4527	0.4691	0.4776	0.5119	0.4494	0.3768	0.4930	0.5494	0.5567	
4	34	1	0.3454	0.3379	0.3680	0.4124	0.4855	0.5156	0.5313	0.5408	0.4887	0.4722	0.4389	0.6342		
4	34	2	0.3370	0.3693	0.4283	0.4591	0.5198	0.4964	0.5011	0.5882		0.4996	0.5942	0.5281		
4	34	3	0.3510	0.3787	0.4454	0.5358	0.5579	0.6399	0.5905	0.6758	0.6227					
4	34	4	0.3678	0.3899	0.4490	0.4826	0.4803	0.5438	0.5797	0.4754						
4	34	5	0.3744	0.3737	0.4013	0.4820	0.4620	0.5015	0.5395	0.5641	0.4609	0.5345	0.6126			
4	34	6	0.3529	0.3803	0.3991	0.4037	0.4400	0.4698	0.4986	0.5448	0.5058	0.5307	0.4257			
4	34	7	0.3091	0.3831	0.3927	0.4848	0.4984	0.5441	0.5805	0.4848	0.5107					
4	34	8	0.3672	0.3682	0.4197	0.4774	0.4643	0.5272	0.5058	0.5741	0.4461	0.4716	0.5099			
4	34	9	0.3255	0.4799	0.4589	0.5485	0.5779	0.6349	0.6186	0.6047	0.5427	0.5596	0.5856			
4	34	10	0.3415	0.3626	0.4058	0.5520	0.2208	0.5452	0.5065	0.5395	0.4573	0.4593	0.4906	0.5765		
4	35	1	0.3905	0.3487	0.4064	0.4355	0.4534	0.4957	0.5033	0.4915	0.4587	0.5078				
4	35	2	0.3393	0.3845	0.4397	0.5119	0.6157	0.4230	0.6570	0.6483	0.5840					
4	35	3	0.3424	0.3586	0.4026	0.4398	0.4613	0.4896	0.5469	0.5423	0.6157	0.4691	0.5745	0.7125	0.5886	
4	35	4	0.3509	0.3654	0.4200	0.5141	0.5001	0.5749	0.5659	0.5527	0.4534	0.5119	0.4842	0.5520		
4	35	5	0.3621	0.3428	0.4260	0.4760	0.4941	0.5331	0.5178	0.5788	0.5596	0.5622	0.5870	0.5253		
4	35	6	0.3632	0.3473	0.3827	0.4389	0.4735	0.4930	0.5544	0.5955	0.5277	0.5686	0.5646	0.6301		
4	35	7	0.3555	0.3859	0.4071	0.4643	0.4803	0.5395	0.5253	0.5932	0.5395	0.4494	0.6047	0.6483		
4	35	8	0.3286	0.3380	0.3878	0.4010	0.4334	0.5063	0.4712	0.5178	0.4249	0.3955				
4	35	9	0.3109	0.3302	0.3768	0.3540	0.4681	0.5223	0.5156	0.5567	0.5331	0.6368				
4	35	10	0.4228	0.3544	0.4240	0.4265	0.4593	0.4380	0.5174	0.5520	0.5481	0.5395	0.4347	0.5033	0.5223	
4	36	1	0.4155	0.2550	0.3593	0.3632	0.3886	0.5144	0.4407	0.4322	0.3891	0.4979	0.4105	0.4329		
4	36	2	0.3498	0.3205	0.3733	0.4084	0.5060	0.5092	0.4476	0.3975	0.4587	0.4494	0.4708			
4	36	3	0.3419	0.5673	0.3848	0.4418	0.5014	0.4689	0.4946	0.5718	0.5331	0.5331	0.5178	0.5667	0.5141	
4	36	4	0.3250	0.3163	0.3689	0.4483	0.4223	0.4507	0.5144	0.6047	0.4470	0.5567				
4	36	5	0.3538	0.3613	0.3644	0.3912	0.4231	0.3699	0.4362	0.5063	0.4470	0.4494	0.4766	0.5718		
4	36	6	0.3355	0.3674	0.4151	0.4674	0.4573	0.5016	0.4620	0.5094	0.3963	0.4681				
4	36	7	0.3290	0.2930	0.3359	0.3879	0.4587	0.5533	0.5053	0.5567	0.4160	0.4643				
4	36	8	0.3314	0.3319	0.3906	0.3768	0.5851	0.5307	0.4870	0.5472	0.3244					
4	36	9	0.3533	0.3387	0.3539	0.4218	0.3546	0.4830	0.4416	0.5236	0.4534	0.4010	0.4597	0.4604		
4	36	10	0.3324	0.3627	0.4275	0.4884	0.4206	0.4803	0.5739	0.5119	0.5331	0.4996				

APPENDIX B  
PRINTOUT OF PERCENT SUMMERWOOD DATA

PERCENT SUMMERWOOD DATA

BLOCK	SOURCE	TREE 1	TREE 2	TREE 3	TREE 4	TREE 5	TREE 6	TREE 7	TREE 8	TREE 9	TREE 10
1	1	30.9286	29.7030	35.7009	36.8082	38.4615	24.5955	37.7500	37.3711	20.0620	26.1250
1	2	25.1331	23.2581	25.9101	22.1020	23.5294	25.8918	29.7701	27.4235	21.7884	35.0763
1	3	21.4943	25.7725	27.7664	27.5328	29.0563	24.6792	26.9353	26.5347	19.8361	20.2703
1	4	25.6538	23.1936	25.3731	27.6243	22.6368	21.4575	21.3142	28.1352	23.4273	17.4334
1	5	23.9779	22.7816	32.2112	25.4879	25.8852	26.8448	23.5825	28.9023	32.5962	11.2790
1	6	20.8088	14.6119	18.6981	21.6535	26.4350	21.1911	22.6725	21.0383	20.0813	21.4651
1	7	31.6712	26.5565	28.4910	28.8986	32.4114	34.4762	31.2564	36.7975	33.8358	31.8856
1	8	20.9296	19.2263	21.0177	21.7975	22.0621	22.6415	20.1183	26.3590	20.7092	22.2910
1	9	30.0388	27.4194	30.3944	21.5278	19.9336	30.6931	24.4060	30.3957	27.1762	29.5800
1	10	25.2101	21.4556	25.2496	29.8091	23.0909	28.7222	31.9048	21.4039	28.5311	24.0000
1	11	23.5622	30.6873	25.7053	22.9665	28.4007	26.0000	22.1511	26.8898	23.9018	29.5874
1	12	27.6855	23.4043	32.8217	31.9876	25.9764	32.3657	28.6285	27.7387	29.5105	34.3900
1	13	33.3786	29.2486	31.2906	23.4747	23.2095	28.1124	36.6467	19.3920	24.0789	32.9778
1	14	24.4941	27.2262	29.8387	25.9560	42.2002	44.2235	27.3396	34.0617	19.7941	24.0125
1	15	21.0339	21.3012	34.9081	36.7629	34.1660	25.0462	23.1959	27.5781	19.7253	28.4779
1	16	32.4891	28.4370	34.3046	26.9730	34.8876	32.0313	33.3758	37.2216	29.3383	40.8023
1	17	18.1034	26.4051	17.3077	23.3333	25.3188	27.6693	25.0000	30.9211	24.1325	24.7029
1	18	24.1212	19.3038	25.3943	22.7224	32.0885	32.9658	24.4918	21.4408	34.7178	26.1146
1	19	22.4638	25.3859	22.8543	25.4138	22.0848	39.7770	36.7311	20.8010	24.7403	36.7965
1	20	35.2941	23.8095	32.9736	27.3098	32.6055	23.5031	27.4834	25.9143	32.1812	26.6603
1	21	31.7532	25.7276	23.4352	25.8209	28.0133	39.5048	27.1883	16.6423	25.5363	24.7928
1	22	26.4342	26.1186	26.4075	26.3158	26.5086	26.5833	27.7949	23.8514	18.3971	
1	23	29.5262	32.8838	24.1758	25.7042	32.4408	27.6531	28.2387	36.8807	24.8532	24.0139
1	24	33.7383	31.6384	36.3378	35.5383	37.1314	35.6444	32.2016	33.8965	30.1435	31.2057
1	25	30.9922	38.1207	31.9844	40.4473	29.5490	29.0017	34.0862	34.5271	28.7253	26.0726
1	26	29.8293	19.8614	19.9176	24.7111	19.0476	20.6468	16.1747	25.8383	23.2633	26.8405
1	27	22.8956	24.1581	18.5476	25.2834	28.9398	23.9669	22.1463	28.0272	22.9660	22.9660
1	28	35.8192	35.8015	35.0120	38.7555	25.3814	28.1850	46.0000	39.7201	32.4092	31.7123
1	29	17.3210	23.8294	29.5918	21.5174	29.2103	25.2114	28.7348	28.0714	29.5829	
1	30	26.7819	28.7269	25.0646	27.9968	24.3394	36.0814	25.0397	26.5756	21.9978	30.6283
1	31	34.1402	27.8317	28.3210	19.0909	25.8600	33.4495	30.1775	29.6526	32.4144	27.0297
1	32	33.8583	28.0193	33.4311	29.9189	28.0519	29.7165	29.1803	24.1600	25.1295	24.1730
1	33	25.7304	23.5474	18.1042	28.9174	24.0119	30.5851	29.6943	37.9032	33.7947	29.3922
1	34	23.7844	30.2013	26.7153	24.8210	28.7234	39.1304	27.0053	30.4400	33.8619	34.5210
1	35	30.9524	29.7927	27.2354	29.0735	26.1220	25.4162	29.7685	23.4375	24.9703	25.9599
1	36	19.6664	22.0284	19.7917	16.6864	17.1937	25.6949	16.7086	11.7355	14.9109	25.3731
2	1	32.2545	24.7511	26.9475	33.1104	31.5716	38.2500	31.9643	33.8630	36.3504	40.5858
2	2	35.2066	33.7748	31.5862	39.3694	30.3393	31.6216	38.3282	34.8554	37.0172	33.5094
2	3	30.1663	36.1217	30.5589	29.6694	26.8542	26.0490	33.3803	29.2378	25.5688	39.3770
2	4	34.3529	41.8660	37.5953	34.2817	28.7532	26.7800	28.8288	31.9310	32.1598	35.4886
2	5	30.9869	35.2795	37.5587	33.2731	32.4869	34.1121	25.3369	31.9389	36.1087	28.8163
2	6	34.3718	34.2762	38.2562	38.9183	33.1586	39.3828	45.3221	36.0437	27.7987	33.3716
2	7	35.9817	27.8857	26.1796	40.1036	35.8575	29.4017	32.7391	34.0959	36.5664	32.3031
2	8	28.1433	28.1294	20.5980	28.0476	30.4636	36.2215	32.5084	35.0064	26.3855	29.2663
2	9	28.4281	26.5672	29.3156	34.6205	29.7030	27.4347	25.9508	25.1710	31.5682	37.9524
2	10	29.9566	29.3381	27.9070	34.8120	36.0656	34.7006	24.2294	33.4006	35.4280	30.2808
2	11	37.6378	30.2766	29.8901	28.1919	38.9387	32.7068	32.1300	25.8621	30.5623	30.1872
2	12	36.7589	29.5535	46.1756	34.4965	36.7465	40.0336	38.0374	34.7938	33.4247	37.9630
2	13	30.1043	34.8112	32.2545	30.1624	25.2949	29.2655	33.5810	32.2488	26.1694	29.1952
2	14	29.7872	27.4747	32.2699	29.3624	37.8882	34.6968	38.1960	34.6154	28.8191	30.1162
2	15	41.6842	30.3672	27.7090	32.7526	31.0714	26.6731	26.5332	36.6240	26.5570	32.9245
2	16	33.8983	34.2000	23.5211	32.9361	40.8931	35.4331	29.6375	41.3242	37.0079	40.8275
2	17	31.5482	32.4444	30.7826	36.5654	29.1755	36.5604	39.0678	27.9070	42.4099	34.5438
2	18	38.6164	31.9010	31.9842	27.4900	41.3233	36.0294	38.5834	38.2318	29.8246	40.4922
2	19	36.9215	29.3919	28.0075	27.8766	24.5009	23.6818	21.4067	30.6294	29.9083	29.6695

PERCENT SUMMERWOOD DATA

BLOCK	SOURCE	TREE1	TREE2	TREE3	TREE4	TREE5	TREE6	TREE7	TREE8	TREE9	TREE10
2	20	30.9333	34.5561	34.6897	30.8017	35.2564	31.6860	28.8230	33.4234	30.6548	21.7731
2	21	33.5821	28.4146	33.1063	25.6963	23.5714	25.7548	22.5403	29.5690	36.6250	36.2050
2	22	30.2696	32.4779	26.8603	32.3315	30.7609	31.4898	30.4706	33.0599	46.7652	32.4904
2	23	34.4684	24.5192	36.6963	43.8116	20.9259	35.9511	39.1442	37.1940	37.9603	34.4512
2	24	38.5434	26.5089	29.2403	26.7696	31.7726	33.4211	31.8093	22.2749	31.7016	32.6168
2	25	32.7440	28.1026	31.0912	34.2241	29.5872	31.5975	28.5064	26.2456	28.4375	35.8100
2	26	30.7761	30.9898	29.8663	26.7605	33.5766	30.5164	34.9451	34.5815	38.7629	32.0000
2	27	29.5547	34.7150	33.0381	35.0211	33.0793	32.9624	30.6865	32.2581	29.6640	23.6062
2	28	29.6662	34.3003	29.8477	26.7418	28.4069	21.8509	26.3244	23.3075	34.5020	33.6889
2	29	28.2628	29.9202	39.8243	36.9673	30.1282	32.4257	29.3922	38.7737	32.8482	30.2905
2	30	34.0206	40.2247	38.9333	36.6999	31.6808	38.1517	30.6818	30.9346	33.1099	33.9389
2	31	30.6180	29.2187	27.3399	26.4685	30.0149	43.7500	39.7134	28.6458	36.1413	32.2747
2	32	42.5778	44.8905	44.6732	37.4275	30.1471	33.1496	35.9392	33.7222	36.4222	35.3312
2	33	28.5714	30.7692	34.7779	28.2288	29.5318	31.5361	32.8608	27.6873	29.4545	24.8330
2	34	30.0279	36.3363	37.0637	41.8632	30.4940	32.5167	43.8867	36.8493	41.7783	38.5965
2	35	31.4721	34.1463	38.8031	40.4519	29.8834	27.9101	27.6576	34.5324	32.0144	33.3623
2	36	4.9756	28.4496	25.5319	34.3434	24.9436	25.2427	24.4172	21.3349	26.3834	27.8846
3	1	24.3189	24.6930	20.0560	16.0900	21.4285	24.5630	23.6124	23.9560	22.6365	28.2051
3	2	31.2375	19.0041	25.3968	23.5937	38.6093	27.7064	26.2871	32.4294	34.7648	29.5419
3	3	27.9755	26.0591	30.6528	29.7721	25.5005	35.4455	33.8882	28.8083	26.6471	21.5054
3	4	24.5742	27.2620	15.9551	28.6828	26.3311	29.4857	30.9987	26.8433	34.1426	29.5977
3	5	29.2605	34.4056	25.0842	24.4389	25.1331	22.2222	22.0939	22.1980	21.0063	29.8822
3	6	25.5732	29.8153	32.8494	31.0850	28.3291	29.0795	25.4453	34.0996	26.4591	27.2315
3	7	21.5506	18.7117	20.6471	23.0430	22.4192	27.3494	18.4133	22.9525	21.2181	22.8377
3	8	32.7778	39.9390	29.1111	30.9035	29.6703	27.3469	24.6900	25.3435	30.4348	31.1715
3	9	30.8028	27.4056	28.0822	29.0098	19.3016	21.1937	23.5737	19.9772	21.1845	18.5811
3	10	16.0202	24.2938	26.7218	30.2439	29.0092	28.7162	28.1116	30.3030	33.2366	30.2792
3	11	24.8307	29.4643	30.2288	26.9303	31.0000	26.8263	27.0525	30.3207	27.8600	29.0616
3	12	22.3801	22.2222	20.8723	26.4430	27.9321	25.0471	26.3421	20.5464	19.8058	24.5146
3	13	25.4565	20.9653	27.0413	25.0194	30.1242	25.3254	22.7431	26.1603	29.3720	32.2181
3	14	18.9238	19.5925	26.7073	23.5653	23.2376	23.4401	23.3291	21.4041	20.7469	25.9669
3	15	33.3942	20.3540	34.0850	34.8276	32.6757	30.2448	32.8499	33.0357	33.0537	28.0597
3	16	31.4439	38.1356	35.9016	27.6906	28.0262	24.8731	32.6560	30.7407	29.5257	34.3324
3	17	32.1903	33.1081	28.9954	35.4866	24.9568	33.4278	45.6647	26.6985	32.5736	37.5618
3	18	26.7902	26.1667	25.4745	26.1270	22.5554	24.1255	33.3072	27.4510	33.9109	33.1749
3	19	21.3130	22.3026	19.7232	20.3598	22.0195	23.7439	23.3412	26.1168	28.0600	31.8229
3	20	25.8197	21.8861	22.4059	27.2517	29.7214	28.4672	26.1294	27.4399	24.1886	21.2226
3	21	31.2712	27.3756	24.3816	29.3893	35.2859	22.8018	32.8358	37.3581	23.7752	25.6936
3	22	29.0404	33.5534	31.4438	30.0059	32.6870	28.5926	26.1815	29.3436	35.1014	34.4797
3	23	23.4139	23.1373	28.1840	17.2205	27.7987	25.6360	18.7500	27.7644	26.2551	22.4352
3	24	19.1466	22.6212	19.1023	20.9109	19.4732	19.4631	15.5417	18.1932	14.1956	20.1483
3	25	27.8361	22.3665	28.3501	28.6131	20.7263	22.0820	18.8124	29.4833	28.2219	43.4564
3	26	30.5580	23.5008	30.2785	24.7207	30.9613	22.5446	28.6949	20.4485	29.2067	28.3471
3	27	23.8220	27.6356	26.5957	25.2747	24.7059	28.0289	29.0598	30.9140	25.6243	27.5330
3	28	30.5814	29.5987	28.7303	21.9064	30.6122	31.2843	23.0971	21.9488	27.3176	29.1667
3	29	27.2903	32.7490	29.2899	30.9783	31.0580	26.2514	24.3649	24.5557	28.2714	33.3021
3	30	22.2222	19.4326	17.7977	19.0939	18.5149	21.2632	20.4134	22.5664	31.9965	25.0000
3	31	26.3947	31.7373	43.6911	38.5779	34.2273	35.7973	30.5931	40.5460	31.4440	32.7245
3	32	31.1523	28.7938	18.9610	23.3279	22.3119	19.3496	23.6140	22.1209	24.0909	24.5117
3	33	21.2219	16.6934	18.5323	14.5188	18.5430	24.3284	20.7692	14.0575	15.2000	14.0859
3	34	26.2963	24.0903	24.4776	22.2110	27.9710	29.5707	25.0277	25.1451	23.8835	29.9202
3	35	28.8030	28.7319	26.3520	24.1088	31.0513	26.3804	29.0284	30.8314	27.2128	24.1379
3	36	20.4607	18.7128	25.8633	20.1591	26.1538	18.1655	15.9281	22.9373	19.2755	20.0957
4	1	21.5247	35.8760	28.0677	19.4191	23.0064	25.7895	28.4393	17.4618	22.6000	25.5741
4	2	25.1025	16.6979	20.1124	24.0822	23.5359	20.8251	20.7197	27.7975	30.7471	31.2121

PERCENT SUMMERWOOD DATA

BLOCK	SOURCE	TREE1	TREE2	TREE3	TREE4	TREE5	TREE6	TREE7	TREE8	TREE9	TREE10
4	3	27.1528	29.9517	24.4782	26.7027	36.7061	2A.9820	25.7000	21.0309	26.1006	24.6025
4	4	27.7677	24.3605	24.4286	20.6442	20.4751	21.9882	24.3772	27.6906	22.5155	20.8848
4	5	26.4865	22.1854	20.5290	21.4646	24.9339	19.8668	22.2365	26.5969	25.3636	22.2656
4	6	30.3337	67.7656	26.1611	26.3006	19.8238	31.7881	25.9533	28.8410	23.2250	22.7097
4	7	21.0753	15.8579	28.0723	33.4239	21.2698	20.3069	23.3524	28.6872	20.5151	22.2222
4	8	25.7032	28.0837	26.1094	26.3830	25.6870	25.2435	22.9205	32.4211	33.3915	23.0769
4	9	26.5718	23.7650	21.5431	26.5677	21.8204	29.5918	26.4113	24.7012	25.4499	27.9188
4	10	31.3754	28.4041	26.5285	28.3800	30.7167	25.6780	25.5968	26.4881	26.0954	28.7856
4	11	30.0245	22.2892	22.0056	29.6574	28.1831	29.4615	22.8435	28.3582	28.6364	23.2063
4	12	24.5114	30.5747	21.7045	20.5052	22.0175	24.6225	31.7419	25.4676	28.3457	25.6881
4	13	23.2711	26.2561	25.3300	19.4719	17.7806	13.8090	24.0559	30.1075	20.3585	28.7406
4	14	28.2682	24.3007	21.6582	23.1365	21.1806	21.1306	19.1160	18.8567	23.9714	23.2161
4	15	27.2354	19.6226	28.0277	28.1988	25.7173	29.3215	21.3043	23.2456	64.0138	26.8443
4	16	18.2809	22.7931	29.9230	14.6154	26.6725	26.1986	19.4317	26.6221	26.8449	25.2441
4	17	24.8148	25.6818	25.3612	19.1108	18.1976	20.3069	25.6793	21.0285	19.8044	23.5437
4	18	19.7267	25.1282	24.7134	19.4270	20.6009	17.1382	27.7095	19.6078	26.2266	20.9945
4	19	27.8960	28.8395	23.7013	30.5598	29.6059	30.7288	37.0242	24.8120	45.9459	22.1638
4	20	28.0607	31.4815	27.7319	34.9262	32.0378	28.2031	33.8154	25.4926	25.5580	20.4363
4	21	21.2707	24.2483	25.9468	31.3471	25.4310	25.5255	31.4192	28.1169	27.6190	25.6167
4	22	26.8340	23.2520	29.2940	29.6044	26.6212	25.7000	31.1429	24.8490	23.9697	27.2000
4	23	28.6369	28.0142	24.2944	28.5878	21.0442	30.6102	25.5291	23.8593	24.1561	23.6530
4	24	24.4585	17.4292	25.8492	29.4009	27.2568	32.3770	22.2816	26.9811	31.4286	35.2008
4	25	20.9709	25.2518	21.4583	29.4040	24.5895	22.8162	24.1667	25.5411	21.4900	30.9255
4	27	32.9682	25.3133	23.8539	21.4953	27.0916	19.5000	28.6608	25.0000	22.9567	19.4497
4	28	29.1916	36.7120	12.7547	27.4032	24.0339	28.7344	22.2819	24.4221	23.1108	18.9850
4	29	24.9077	26.8346	23.0887	22.0581	24.0372	20.5153	38.0392	25.9570	26.3889	23.7843
4	30	20.3647	13.1200	21.8789	19.6035	18.4971	26.0287	24.7752	24.0376	18.5268	21.6411
4	32	27.8746	28.2799	20.3292	20.4520	21.1973	22.5185	25.5495	20.8092	23.1156	23.3660
4	33	26.5403	20.3723	21.6645	18.9504	26.2048	18.2203	27.1310	21.1149	23.7381	24.4295
4	34	25.5185	26.8657	28.3582	31.5848	30.0971	23.0838	28.8279	35.4872	30.1775	25.5629
4	35	34.9186	25.7477	29.9859	32.9640	23.3979	28.8344	25.5344	27.8566	30.9990	28.4372
4	36	28.3417	19.9319	25.0918	27.8710	20.9059	29.5165	21.1855	22.2638	25.8945	29.5933

VITA

Candidate for the Degree of  
Master of Science

Thesis: PROVENANCE VARIATION IN THE AGE OF TRANSITION FROM  
JUVENILE TO MATURE WOOD SPECIFIC GRAVITY FOR  
LOBLOLLY PINE

Major field: Forest Resources

Biographical:

Personal Data: Born in Columbus, Georgia, November 22,  
1962, daughter of Marcella and John Szymanski.

Education: Graduated from Baker High School, Columbus,  
Georgia, in June, 1980; received Bachelor of  
Science degree in Forest Resources from the  
University of Georgia in March, 1985; completed  
requirements for Master of Science degree at  
Oklahoma State University in July, 1987.

Professional Experience: Student Intern for Union Camp  
Corporation at Baxley, Georgia, summer of 1982;  
Forest Technician, School of Forest Resources,  
University of Georgia, Athens, Georgia, from May  
1984 to August 1984; Research Technician,  
School of Forest Resources, University of Georgia,  
Athens, Georgia, from January 1985 to March 1985;  
Graduate Teaching Assistant, Forestry Department,  
Oklahoma State University, August 1985 to July  
1987.

Member: Xi Sigma Pi