

NWLRAG

*NORTHWEST LOG RULES
ADVISORY GROUP*

Official Rules
for the following
LOG SCALING
and
GRADING BUREAUS

COLUMBIA RIVER
NORTHERN CALIFORNIA
PACIFIC RIM
SOUTHERN OREGON
YAMHILL

Northwest Log Rules
Eastside
— and —
Westside
Log Scaling Handbook

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January 1, 2011 Edition



NORTHWEST LOG RULES ADVISORY GROUP



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- **Current Member Bureaus are:**
- *Columbia River LSGB*
- *Northern California LSGB*
- *Pacific Rim LSGB*
- *Southern Oregon LSGB*
- *Yamhill LSGB*

NORTHWEST LOG RULES ADVISORY GROUP

GOVERNMENT AGENCY MEMBERS

- *USDA-Forest Service*
- *USDI-Bureau of Indian Affairs*
- *USDI-Bureau of Land Management*
- *Oregon State*
- *Washington State*

NORTHWEST LOG RULES ADVISORY GROUP

SCALING RULES MAINTAINED

OFFICIAL RULES FOR LOG GRADING

WESTSIDE SCRIBNER DECIMAL C

EASTSIDE SCRIBNER DECIMAL C

NORTHWEST CUBIC FOOT RULE

NORTHWEST LOG RULES ADVISORY GROUP

ASSURE BROAD UNIFORM SCALING PRACTICES

DEVELOP UNIFORM LOG SCALING RULES FOR
DETERMINING GROSS VOLUMES

DEVELOP UNIFORM DEDUCTION METHODS FOR
DETERMINING CONSISTENT NET VOLUMES

DEVELOP AND MAINTAIN RULES FOR DETERMINING
CONSISTENT GRADES

DEVELOP STANDARDS FOR SCALER QUALITY
CONTROL

NWLRA MEMBERS BUREAUS

- Board of Directors comprised of:
 - Timber Sellers
 - Timber Purchasers
 - Logging Contractors
 - Government Agencies

NWLrag MEMBER BUREAUS

ASSURE APPLICATION OF UNIFORM SCALING PRACTICES

STATE LICENSED THIRD PARTY CORPORATIONS

IMPLEMENT UNIFORM LOG SCALING RULES FOR
DETERMINING GROSS VOLUMES

IMPLEMENT UNIFORM DEDUCTION METHODS FOR
DETERMINING CONSISTENT NET VOLUMES

IMPLEMENT RULES FOR DETERMINING CONSISTENT LOG
GRADES

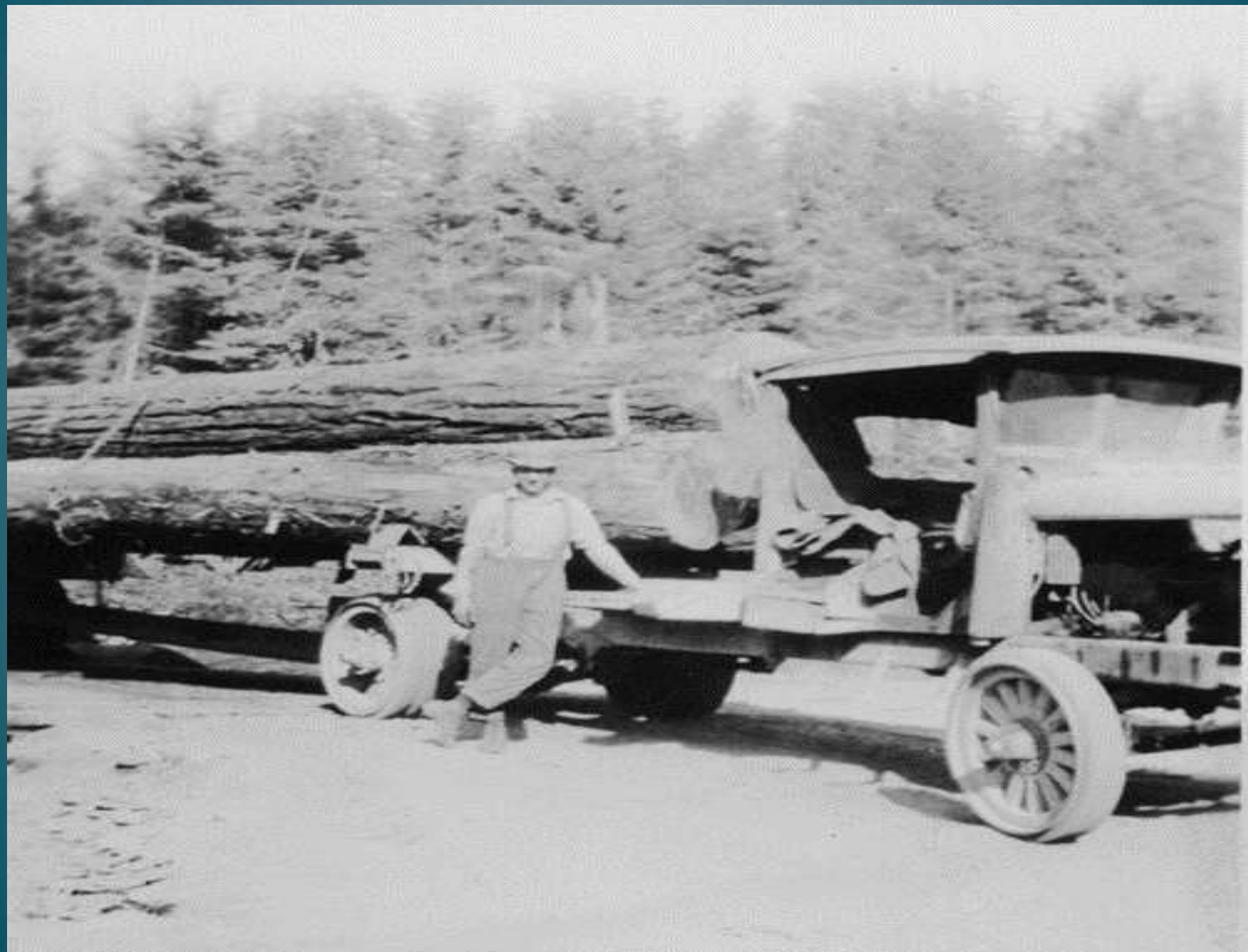
TRAIN SCALERS AND PERFORM QUALITY CONTROL CHECK
SCALES

NWLTRAG MEMBER BUREAUS

- *Final answer for transactions between seller & buyer.*
- *Determines volumes for payment for falling, logging, and trucking services.*
- *Determines Quantity and Quality that may be expected to be recovered for mills.*
- *Accuracy of timber cruises and timber sale evaluations.*

THIRD PARTY BUREAU LOG SCALER

- *Code of Ethics*
- *Reputation*
- *Accuracy*
- *Knowledge of Rules*
- *Unbiased Application of Rules.*
- *Consistency*
- *Scaler Judgment*



**DEVELOPMENT AND
APPLICATION OF
NORTHWEST CUBIC FOOT
LOG SCALING RULE**

- IN 1972 THE NWLRAG FORMED THE “CUBIC LOG SCALING COMMITTEE”
- PURPOSE WAS TO DEVELOP A CUBIC FOOT LOG SCALING RULE.
- THAT WOULD BE EASILY APPLIED BY LOG SCALERS USING THE SAME DIMENSIONS.
- REPLACE VARIOUS RULES BEING USED
- TO BE GENERALLY ACCEPTED WHEREVER CUBIC SCALING WAS NEEDED.

- IN 1978 THE NWLRAG APPROVED AND ADOPTED THE NORTHWEST CUBIC FOOT LOG SCALING RULE.
- IT WAS BASED ON THE WESTSIDE SCRIBNER DIMENSIONS FOR GROSS AND NET LUMBER/PLYWOOD RECOVERY.
- ADDED CUBIC GROSS, NET, AND CHIP NET TO CURRENT SCALE REPORTS.
- ONLY REQUIRED SCALERS TO RECORD THE SECOND DIAMETER AND PERCENTAGE OF LOG NOT SUITABLE FOR PULP PRODUCTION.

- $V = .005454 \times (L + 1.00^*) \times$

- $$\left[\frac{(D_s + 0.7)^2 + (D_L + 0.7)^2 + (D_s + 0.7) \times (D_L + 0.7)}{3} \right]$$
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- WHERE: V = VOLUME IN CUBIC FEET

- L = SCALED LENGTH IN FEET

- D_s = SCALED SMALL END DIAMETER IN INCHES

- D_L = SCALED LARGE END DIAMETER IN INCHES

- $^* = 1.00$ LOGS 17' AND LONGER

- $^* = 0.67$ LOGS 16' AND SHORTER

- LOG IS 32 FEET 10 INCHES LONG
- SMALL END DIAMETER IS 24 INCHES
- LARGE END DIAMETER IS 28 INCHES



$$V = .005454 \times 33 \times \\ 24.7^2 + 28.7^2 + (24.7 \times 28.7) / 3$$

$$V = .179982 \times \\ (610.09 + 823.69 + 708.89) / 3$$

$$V = .179982 \times (2142.67 / 3)$$

$$V = .179982 \times 714.22333$$

$$V = 128.547343 \text{ Cubic Feet}$$

WE NOW HAVE THE GROSS VOLUMES OF:

SCRIBNER: 2000 BOARD FEET

NWLRAG CUBIC: 129 CUBIC FEET

DEFECT DEDUCTIONS FOR “NET MERCH”



- LOG IS 32 FEET 10 INCHES LONG
- SMALL END DIAMETER IS 24 INCHES
- LARGE END DIAMETER IS 28 INCHES



LENGTH DEFECT DEDUCTION OF 8 FEET
DIAMETER DEFECT DEDUCTION OF 2 INCHES

**NET MERCH LENGTH =
32 FEET MINUS 8 FEET = 24**

**NET MERCH DIAMETERS ARE
REDUCED 2 INCHES TO 22 & 26**

**TO COMPENSATE THE LENGTH
REDUCTION, THE DIAMETERS
WILL BE ADJUSTED FOR TAPER.**

**THE LOG HAS 4 INCHES OF TAPER IN 32 FEET
TAPER EQUALS 1 INCH PER 8 FEET
TAKING 4 FEET FROM EACH END NEED TO:
ADD ½ INCH TO SMALL END
SUBTRACT ½ INCH FROM LARGE END**

- THE “NET MERCH” LOG IS 24 FEET
- SMALL END DIAMETER IS 24.5 INCHES
- LARGE END DIAMETER IS 27.5 INCHES



Net Merch log

$$V = .005454 \times 25 \times \\ 25.2^2 + 28.2^2 + (25.2 \times 28.2) / 3$$

$$V = .13635 \times \\ (635.04 + 795.24 + 710.64) / 3$$

$$V = .13635 \times (2140.92 / 3)$$

$$V = .13635 \times 713.64$$

$$V = 97.3048 \text{ Cubic Feet}$$

allegro mx





1473 - Giant Fir Log Ready for the Mill Oregon

- LOG IS 34 FEET 6 INCHES LONG
- SMALL END DIAMETER IS 24 .75 x 25 .5 INCHES
- LARGE END DIAMETER IS 27.25 x 29.0 INCHES



RECORDED LENGTH IS 33 FEET
RECORDED SE DIAMETER 24 INCH

