



UNITED STATES
CIVILIAN BOARD OF CONTRACT APPEALS

DENIED: June 13, 2008

CBCA 588

CARR FOREST PRODUCTS, INC.,

Appellant,

v.

DEPARTMENT OF AGRICULTURE,

Respondent.

Keith L. Baker and William T. Welch of Barton, Baker, McMahon & Tolle, McLean, VA, counsel for Appellant.

Ronald Mulach, Office of the General Counsel, Department of Agriculture, Milwaukee, WI, counsel for Respondent.

Before Board Judges **DANIELS** (Chairman), **HYATT**, and **POLLACK**.

POLLACK, Board Judge.

This appeal arises out of contract no. 02-152736, Windy City Salvage Timber Sale (Windy City or sale), a fixed sum timber sale, between the United States Department of Agriculture, Forest Service, Allegheny National Forest (FS, ANF or respondent), and Carr Forest Products, Inc. (appellant or Carr). The sale was priced on the basis of the estimated volumes and as such was not dependent on the actual amount of timber removed. Appellant seeks the following relief: (1) a contract adjustment pursuant to the Adjustment for Quantity Error clause of the contract (BT2.43), (2) breach damages, and (3) equitable rescission of the uncut blocks of the contract (reformation on the basis of mutual mistake). This case was submitted for decision on the written record. Appellant has asked the Board to strike

portions of the Declaration of Michael Van Dyck (Oct. 24, 2007), which was submitted by the respondent with its opening brief. Appellant contends that Mr. Van Dyck admitted in a deposition in a related case (deposition testimony attached to the motion) that Mr. Van Dyck did not review any documents concerning the sale, other than the original “generic cruise” plan and the results of the second check cruise. Appellant seeks \$86,286 under BT2.43 and, alternatively, \$199,000 for breach.

Appellant, in making its claim as to breach, has not coupled a specific portion of the claimed volume underrun to a specifically identified procedural failure by the FS. Instead, appellant’s claim is based on what appears to be overall breach of duty or negligence by the FS which appellant claims entitles it to an adjustment for the entire claimed underrun. Basically, appellant is asserting that the claimed underrun itself is evidence of the breach or negligence claimed.

Facts

1. A severe wind event occurred in 2003, resulting in damaged and blown down timber in the Allegheny National Forest, located in northwestern Pennsylvania. This sale was offered to deal with the affected timber. Appeal File, Exhibits 1-9. The sale area to be harvested was divided into eight payment units, each of which had one or more geographical areas identified by an alphanumeric designation. Appeal File, Exhibit 67 at 459. The sale was awarded to Carr on August 11, 2005. Carr harvested payment units 3, 4, 6, 7, and 8A, but did not harvest units 1, 2, 5, and 8B. Declaration of Randall Durner (Oct. 23, 2007) ¶ 17. The FS formally suspended performance on the contract through a letter of April 14, 2006, setting as the basis for the suspension the failure of appellant to pay an invoice for \$99,692.68 for harvested timber. From that time forward, Carr performed no additional work; it had ceased performance on the sale earlier, sometime in January 2006. Appeal File, Exhibits 570-72.

2. In preparation for the advertisement of the sale, ANF and the FS regional office developed a timber sale cruise plan and design for the sale. Through a cruise plan, the FS inventories items and features such as tree species, tree diameter, height, and defect and then records that data for the purpose of providing a quantity estimate for bidding. Cruises can involve one hundred percent of trees or a representative sample. The contracting officer (CO), Randall Durner, prepared the draft of the general cruise plan to be used on the sale. He had approximately thirty-six years experience in the timber industry. Durner Declaration ¶ 1. He compared the cruise design to requirements set out in the FS Timber Cruising Handbook (FSH or Handbook) in order to assure the overall plan was consistent with the Handbook. In his final decision, the CO said that FSH 2409.12 “provides agency-wide direction and methodology to implement timber sale cruises to established standards, under

a variety of conditions.” He then continued that page 2 of the cruise plan for this sale, under CRUISE PLANNING, stated that the Handbook and amendments to it would be the primary reference guide and direction for the project. The timber cruise plan for this sale was both a specific and general document. It provided general guidance as to sampling and measuring, providing that the cruiser consult the Handbook for appropriate measuring techniques for blown down, leaning, and broken timber. The cruise plan also provided on page 11, under “Occluded Measure Trees,” that in some instances hands-on measurements would not be possible. It continued that instead of locating and substituting another tree, and introducing bias into the sample process, the cruiser was to visually estimate and record the measurement parameters of the “occluded tree” to the best of the cruiser’s ability. As to specifics, the cruise plan identified the merchantability parameters for timber on this sale. The sale cruise plan was reviewed by Mr. Michael Van Dyck, Measurements Specialist with the Eastern Region of the FS, who was responsible for oversight of regional use of the national timber cruising program, the computer software used to calculate timber volume. Mr. Van Dyck provided timber measurement advice to personnel stationed on national forests and was responsible for oversight of timber certification. Appeal File, Exhibits 46, 48, 55, 699; Durner Declaration ¶ 3; Van Dyck Declaration ¶¶ 1-2.

3. In presenting its case, appellant directed the Board to a FS memorandum dated March 28, 2001, which included an attachment that set out cruise analysis and accuracy review standards to be used by the ANF on cruises. Although the memorandum and attachment were prepared well before the cruise on the Windy City sale, the FS did not deny that the documents reflected ANF procedures in 2004-2005. It showed a tolerance of +/-0.2 inches for DBH (diameter breast height). The FS, however, qualified the application of that entry in practice, explaining that the information as to tolerances reflected practices with standing timber and not what was used by ANF for blown down salvage sales, such as the one in dispute. Declaration of Randall Durner (Nov. 13, 2007) (Durner Declaration 2) ¶¶ 4-5. The attachment, showing tolerances, was titled “Field Measurement Evaluation” and identified tolerances for various cruise elements used to check the accuracy of a cruise. Six tolerances were listed, as well as “Error Weight”:

Cruise Element	Tolerance	Error Weight
Species	none	5
DBH	+/- 0.2 in.	1
Sawlog Height	none	1
Sawlog Defect	+/-10%	1
Total Height	none	1
Pulpwood/Topwood Defect	+/- 10%	1

The following note was set out at the bottom of the tolerance form: “To pass this check, each item checked must have at least 80 percent correct and the overall accuracy must be at least 85 percent.” Appellant’s Supplement, Exhibit 2.

4. Due to the unavailability of ANF personnel to mark trees and to conduct a cruise for the sale, ANF contracted with T.E.A.M.S Enterprise Group (TEAM) for those services. The FS described TEAM as “a mobile response unit of Forest Service employees trained and experienced in timber sale preparation, marking, and cruising work, available to National Forests.” At the time of contracting for the cruise (July 23, 2004), TEAM was already performing similar work on other sales for ANF. ANF provided TEAM with the cruise plan for the sale. The contract for the marking and cruising did not specifically reference the Handbook; however, TEAM was following the cruise plan prepared by ANF, which did reference that document. Further, the Handbook was provided to TEAM at the initial meeting between ANF and TEAM prior to entering into a work order. Appeal File, Exhibits 12, 29-35, 38, 46-57, 148-49, 170-79, 199-217; Appellant’s Supplement, Exhibit 6, ¶ 5.¹

5. The cruise plan that ANF provided to TEAM included product merchantability specifications, which identified the criteria to be used by cruisers in categorizing classes of timber. In order to qualify as hardwood sawtimber, a tree had to have a minimum DBH of 11 inches and a small end diameter of at least 9.6 inches. “Sawtimber” was further described “as containing at least one merchantable log that meets Factory Lumber Log Grade 3, specifications, or better” On a gradation scale, a lower grade designation, such as grade 2, would be better than a grade 3. ANF also described a second and separate hardwood category, “Sawtimber**/Constrctn/Local.” That category carried the same dimension criteria as “Sawtimber” and was further described,

Sawtimber size trees, due to insect boring problems (worm holes are usually considered grade defects and have associated stain) that do not meet Factory Lumber Log Grade 3 specifications, but are suited for construction or local use rather than pulpwood. Trees greater than 11.0” DBH that do not meet either

¹ Appellant has charged that various TEAM cruisers did not meet the certification requirements called for in the Handbook and has further charged that TEAM and the FS failed to follow Handbook procedures as to aspects of the cruising. The FS has disagreed. Appellant’s Supplement, Exhibit 5; Durner Declaration 2 ¶¶ 9-10; Van Dyck Declaration ¶¶ 7-8. Resolution of the dispute as to certification is not necessary to decide this case.

sawtimber criteria should be classified as pulpwood specifications, or culled, depending on tree conditions.

Appeal File, Exhibit 49.

6. Brian Slagle was the crew leader on the initial cruise. In answer to interrogatories, the FS said that the original cruise measured 719 sample trees. Mr. Slagle prepared written tally sheets, identifying each tree surveyed, which included for each tree the stratum and tree line number, the sample group, the species, the DBH, the tree count, the estimated number of saw logs and total timber, the defect percentage, and the cruiser's initials. Tape measurements were used in many instances; however, on some of the sample trees, cruisers did not measure DBH with tape, but instead performed an ocular measure. The FS had anticipated the need to make visual measurements because of lack of access due to blow down or other conditions. Appeal File, Exhibits 53-56, 228-71, 283-302; Van Dyck Declaration ¶ 10; Declaration of Brian Slagle (Oct. 15, 2007) ¶ 5. The cruisers transferred the information from the tally sheets to a document titled "Sorted List of Measured Trees." The data was then entered into a computer database and a computer program applied to it in order to calculate the estimated quantity of sawtimber and non-sawtimber for each tree species. Appeal File, Exhibits 283-302; Appellant's Supplement, Exhibit 6, ¶ 31.

7. On August 9, 2004, ANF issued a procurement request for a check cruise to verify the accuracy of the TEAM cruise data. Thirty-one trees were check cruised, of which thirty were sawtimber and one was pulpwood. Appeal File, Exhibits 218-27. The check cruise was conducted on or about August 25, 2004, by Joe Hepinger, a former district check estimator for the Ranger District. His check cruise indicated that the volume was overestimated for merchantable logs and that the cruise had other errors and inaccuracies. Appeal File, Exhibits 272-76; Appellant's Supplement, Exhibit 6, ¶ 31.

8. The CO prepared a "Results Summary" of the check cruise, wherein he set out a number of observations. He said that the initial cruise had correctly identified species on the sale. He noted that the FS had expected differences between the check cruise and original cruise regarding DBH. The expectation was related to the techniques used for measuring, which the CO described as half diameter measurements or measuring at other points. The FS used those measuring techniques because much of the timber was blown down and, as such, the FS was not confident that it could accurately measure the DBH with tape. Additionally, a check cruiser could not always utilize that same measurement technique used by the original cruisers, which meant that the check cruiser would likely not use the same point of measurement for each sample tree as did the original cruiser. The CO stated that on a normal cruise of standing timber, the ANF tolerance for DBH differences was +/- 0.2 inches. If that tolerance was doubled to account for the more difficult measurement

conditions, it became +/- 0.4 inches. Based on the doubled tolerance, the CO said that three trees out of thirty² sawtimber trees sampled on the Windy City sale, were outside the tolerance. For two of the three, the DBH had to be estimated. Tolerance in the context of cruising is a value that represents the maximum departure from the check cruiser's findings. Put another way, if the check measure was greater or less by 0.4 inches than that measured by the original cruise, the original cruise measure was out of tolerance. Appeal File, Exhibits 275-76; Appellant's Supplement, Exhibit 4 at 13-14; Exhibit 6, ¶ 7; Durner Declaration ¶ 5; Van Dyck Declaration ¶¶ 12-13.

9. Appellant has asserted that using 0.4 inches rather than 0.2 inches for DBH was a breach by the FS, because the tolerance did not follow the Handbook or earlier established FS procedures. Appellant provides in its brief two different (albeit close) comparisons. At one point, appellant said that if 0.2 inches had been applied, the check cruiser would have determined that eight of the check cruised trees were outside the 0.2 inch tolerance, and at another point, appellant says that using 0.2, nine trees out of thirty-one were out of the tolerance. Appellant's Brief at 8, 10. With either of those results, the score for DBH would have exceeded the 80% standard in the Handbook for that item. In his deposition of the CO, appellant's counsel had the CO address a number of the sample trees that had been cruised, and showed deviations of greater than 0.2 inches. Appellant's Supplement, Exhibit 4 at 19-21.

10. The CO consulted with a regional measurement specialist and then concluded that the use of the diameter information was in accordance with the Handbook and the diameter measurements were within acceptable tolerances for blown down timber. Therefore, he decided that the DBH did not need to be re-measured. In his first declaration, the CO stated that diameters were not re-measured as part of the second cruise, because the FS had contemplated in the cruise plan that it would be very difficult, in some cases, to make a standard DBH measurement due to the nature of the blown down timber. Durner Declaration ¶ 3, 5. As a consequence, the FS had to do some ocular measurement of DBH. He further said that field conditions required estimation of some measurements. He continued that of the three trees that exceeded the 0.4 inches tolerance, the diameter measurements of two of them had been estimated because it was not possible to measure the diameter of those trees at the proper measurement point. Finally, although three trees exceeded the allowable limit (referring to 0.4 inches), overall the tree diameter measurements for the first cruise were within the acceptable limit of 80%, citing FSH 2409.12, 632.1(Handbook). It is noteworthy that the same form referenced by the CO as establishing

² At times the parties referred to thirty and thirty-one sample trees. The distinction is not critical to the decision.

80% as an acceptable score also showed the tolerance standard for DBH to be ± 0.2 inches. The cited form was titled, 62.1 - Exhibit 01, "Sample Format for Field Measurement Evaluation." However, while the cited form contains specific tolerance values, other segments of the Handbook, specifically 62.1, indicate that the tolerances on the form could be subject to change, and provide:

Use a scorecard for evaluating individual performance on field measurements.
The Regional Foresters shall establish:

- a. The items to be checked;
- b. Tolerances;
- c. Error weights; and
- d. Acceptable scores with format similar to that shown in exhibit 01.

Furthermore, the CO pointed out that ANF did not limit the use of the 0.4 tolerance solely to this sale. Of nineteen salvage timber sales prepared in the wake of the 2003 windstorm, the CO believed that all used a tolerance of 0.4 because of the salvage condition. Appeal File, Exhibits 119-21, 275, 699-700; Durner Declaration ¶¶ 5, 9, 13; Durner Declaration 2 ¶¶ 4-6. Appellant, at page 4 of its reply brief, states that of the thirty-one sample measure trees check cruised, the diameters of only two had to be estimated on both the cruise and check cruise. Appeal File, Exhibits 277-79.

11. The FS has acknowledged that ± 0.2 inches is the FS tolerance for checking DBH in standing timber. It also has appears to agree that there is no specific document that supports doubling the tolerance for DBH from 0.2 to 0.4 inches. The CO, however, says that the Handbook does not specify any particular tolerance and the choice is within the discretion allowed to local managers, based on field conditions. He also says there was no written directive or regional policy on tolerances for salvage sales at the time of the check cruising, reiterating that the March 1, 2001, memorandum addressed tolerances involving standing green timber and not for salvage situations, where timber was blown down. Additionally, he pointed out that the 2001 memorandum was never officially adopted by the FS, which continued to use different tolerances depending on field conditions. Appellant's Supplement, Exhibit 6, ¶ 68; Durner Declaration 2 ¶¶ 4-5.

12. Mr. Van Dyck also weighed in on the use of the 0.4 tolerance. He stated that a liberal tolerance (0.4) was used because of the difficult field conditions. He said that a fairly high proportion of the recorded diameters had been measured using specialized measures for damaged trees or had been estimated. He said that such conditions made it difficult to replicate a diameter measurement in a check cruise, asserting that overall, the

diameter measurements were within acceptable error tolerances. He acknowledged that some individual tree diameters in the first cruise did not precisely match the first check cruise, but said the overall sample of diameters was statistically reliable. Because conditions were still difficult and some diameters would still have had to be estimated rather than measured in a second sample, he thought it unlikely that the results of re-measurement of DBH would have improved the quality or statistical reliability of the sample as to that element. He concluded that the FS general cruise design was consistent with FSH 2409.12 chapter 10 and employed standard, acceptable procedures for taking tree measurements in blown down timber. Van Dyck Declaration ¶¶ 10-12.

13. While the FS was satisfied with the accuracy of the TEAM cruise as to the DBH measurements, the FS was not satisfied as to TEAM's accuracy for height measurements and defect counts. About 65% of the checked trees exhibited sawlog heights greater than that measured by the check cruiser. Fifty-five percent of the sawtimber trees had the total height overestimated by one additional bolt. A bolt is a short section of log or timber. As to the count of defects, the FS found five of the thirty sawtimber trees checked exceeded tolerance for defect, with four high and one low. The FS decided to recount both height and defects through a re-cruise. Appeal File, Exhibits 275-76; Appellant's Supplement, Exhibit 6, ¶ 7; Durner Declaration ¶ 6; Van Dyck Declaration ¶ 14.

14. Once it was decided that the FS needed to re-cruise, the CO, once again, consulted with Mr. Van Dyck, this time as to the scope and appropriate design for the re-cruise. Durner Declaration ¶ 9; Van Dyck Declaration ¶¶ 16-18. On or about October 2, 2005, the FS issued a procurement request to TEAM to conduct a re-cruise. The re-cruise was to involve approximately a third of the sample trees from the first cruise. The CO explained that the FS limited the number of trees measured, because of the low combined sale error for the first cruise. Further, while the FS reduced the sample size on the re-cruise, it still preserved the randomness of the sample by selecting every third tree. Mr. Durner continued that since the Region had not established an acceptable level for check cruises, the FS followed the evaluation example in the Handbook for that item. Durner Declaration ¶¶ 4, 11; Van Dyck Declaration ¶¶ 16-19.

15. Mr. Slagle directed the re-cruise, working with William Campbell, who was new to ANF but experienced in forestry. This was, however, only the second blow-down cruise that Mr. Campbell had worked on. Appellant's Supplement, Exhibit 3 at 10. The second cruise did not rely on the measurement or count data from the first cruise for either the height or defects. Those elements were re-cruised. Mr. Slagle attempted to measure one out of every three sample trees; however, he reported that he was unable to locate and measure nine of the sample trees used in the first cruise. TEAM re-measured a total of 219

trees during the second cruise. Appeal File, Exhibits 353-65; Appellant's Supplement, Exhibit 6, ¶ 31; Slagle Declaration ¶¶ 1, 2, 7.

16. The FS verified the accuracy of the re-cruise by having it checked by Robert Luke, a former forest check cruiser, who was assisted by Mr. Campbell. Appeal File, Exhibits 343-52, 364-65; Appellant's Supplement, Exhibit 3 at 14. The FS noted that there was a significant improvement in the quality of merchantable length estimates as a result of re-measurement. Mr. Campbell then ran a "check cruise program," through which he compared TEAM's findings on the re-cruise with Mr. Luke's recheck. On the form titled "Results of Check," the FS showed SP, DBH, HT and DEF as 100% correct. Element NCF (net cubic feet) was shown as fifteen wrong (fifteen trees) and as such deviated from Mr. Luke's re-check cruise by at least 10%. That total error of fifteen translated to 55% correct. When the FS calculated the average for all elements, it concluded that the cruise met the required overall average of eighty-five that was set out in the Handbook (scoring it as eighty-six). The FS therefore proceeded with the sale and with the estimate derived from the re-cruise. As an added check, Mr. Van Dyck recalculated the heights and defects on the second cruise to assure their accuracy. He did so because he had concerns due to the conduct of the first cruise. Appeal File, Exhibits 343-52, 364-66, 370; Durner Declaration ¶ 13; Van Dyck Declaration ¶¶ 5-19.

17. The FS calculated a passing grade of 86% for the re-cruise. The FS had not re-measured the DBH on its re-cruise, and the FS entered 100% for DBH on the recheck cruise scoring form, because diameters from the first cruise were not re-measured in the re-cruise. Accordingly, there was no deviation to report between the diameter estimates for the re-cruise and the re-check cruise. Appeal File, Exhibits 366-70; Appellant's Supplement, Exhibit 3 at 26. It seems apparent that had the FS showed a deviation for DBH other than 100%, that entry would have affected the final re-check score downward. That might have dropped the overall score to under eighty-five, the threshold identified on the Handbook tolerance form. Appeal File, Exhibit 120; Appellant's Supplement, Exhibit 2.

18. As to the number of trees to be re-measured and rechecked, the CO said that the first cruise functioned like a reconnaissance cruise in that the FS discovered that the variability across the sale area was low. Therefore, the FS concluded that it could measure fewer sample trees for the re-cruise. The CO acknowledged that a few sample measure trees (less than 5%) could not be relocated during the second cruise, but added that such a result was not unusual, given field conditions. Appeal File, Exhibits 101-05; Durner Declaration ¶ 11.

19. Appellant points out that per the Handbook, not only must the overall average of all categories be 85%, but also "each item checked must have at least 80% correct." The

number 55% listed for NFC is clearly less than 80% correct. That said, we need to point out that neither the listing of tolerances on the Handbook sheet (Appeal File, Exhibit 120), nor the 2001 tolerance sheet (Appellant Supplement, Exhibit 2) lists NCF as a category. Mr. Campbell, who prepared the form that used NCF, addressed his use of the NCF score and explained what was being evaluated. Regarding the relationship of the NCF number and an 85% passing grade, he said that if one looked at the top of the form for the absolute tolerance, it says “NCF, net cubic feet, is zero.” He said that reference meant there was absolutely no tolerance and one, therefore, had to get it exactly right. He explained that the use of no tolerance was obviously an oversight on his part and that the tolerance is usually in the 10% range. Appeal File, Exhibit 370; Appellant’s Supplement, Exhibit 3 at 27-29.

20. Appellant points out at page 11 of its brief that the tree counts in the FS tally, titled “Sorted List of Measured Trees,” dated January 12, 2005, Appeal File, Exhibits 395-404, differed from the tree totals in UC5 (the computer printout of the cruise), with UC5 showing 2725 trees, while the “Sorted List” showed 2615 trees. Appeal File, Exhibits 371-94, 404. It also claims that the FS failed to meet the Handbook requirement that called for the timber sale office to check all sales, record them in the timber sale cruise evaluation report, and have the district ranger certify the results. Appeal File, Exhibits 113-14. In reply, the FS asserted the above was not mandatory. It continued that while the Handbook provides an example as to a summary, no particular format is prescribed, and additionally; the record for the cruise showed the FS conducted a detailed analysis on the sale, the cruise data was evaluated by the district ranger’s staff, and the ranger certified that the sale met all applicable manual and Handbook standards. Appeal File, Exhibits 121-27; 275-79, 370; Durner Declaration 2 ¶ 8. Paragraph 63.1 of the Handbook provides as follows:

Cruises should be systematically reviewed for completeness. Exhibit 1 includes a list of office and field components that should be examined as appropriate: the list also includes cross-references to the sections or chapters in this Handbook and other Handbooks containing related direction. Use this list to develop a unit checklist similar to the sample shown in exhibit 2 that can be initialed, dated and filed in the sale folder after the inspection has been completed.

Appeal File, Exhibit 122.

Advertisement and award

21. Once the FS completed the cruise process, it proceeded with advertising the sale. It issued a timber sale prospectus and bidding documents. A prospectus is a document which furnishes prospective bidders with information not contained in the published

advertisement and is intended to enable bidders to decide whether or not to further investigate the sale. The prospectus, which was available to purchasers, provided information including estimated quantities and sale requirements. It included a sample bid form, which listed four species, identifying the first three as sawtimber and the last as pulpwood. It provided an estimated hundred cubic feet (ccf) volume for each. The practice of the FS is to advertise sales in hundred cubic feet, which is how it advertised this sale. The sample bid form listed the estimated volume for each species as follows:

689 ccf of Black Cherry
7 ccf of Hardwood-Other
214 ccf of Red Maple
269 ccf of Hardwood-Other.

The FS explained in its answer to Interrogatory 21 that cubic feet is a measure of wood fiber content of a tree based on diameter and height measurement, and also includes taper adjustments. Cubic foot volumes are an estimate of the total amount of solid wood in the logs. Cubic foot volume is generally accepted as the most accurate estimate of total amount of wood products that can be removed in a timber sale. That is one key reason why the FS adopted this unit of measure. Appeal File, Exhibits 405-14, 700; Appellant's Supplement, Exhibit 6, ¶ 21; Durner Declaration ¶ 14; Van Dyck Declaration ¶¶ 24, 26, 27.

22. The FS included, as part of the prospectus, three pages of a computer report on the timber, designated as UC5. These were summary sheets, part of a larger document of twenty-three pages. The UC5 report, which was derived from the re-cruise, contained information such as counts of timber in various areas and estimates as to volume. Further, UC5 not only provided details as to the ccf quantities set out in the prospectus and sample bid form, but also provided estimated quantities in board feet for those same items. In addition, it set out separate estimates for net and gross cubic feet and board feet volumes. Net volumes are less than gross volumes, as the net volume is the residual volume after deducting wood loss (defect) from gross volume. Gross is the total volume in a tree to a specified top limit. The board foot volumes set out in UC5 were measured using the International 1/4-inch rule (scale), and the cubic foot volumes were measured by use of the FS Cubic Scaling Handbook. According to the FS, the 1/4-inch International rule is generally accepted as the most accurate measure for board feet. Cubic feet, however, is considered a more accurate means to measure timber volume. Finally, the prospectus, at paragraph 4, Timber Quantity and Rates, provided in pertinent part that the timber estimates are "based on detailed cruise information on file and available for inspection at the Forest Service offices listed above." Neither party addressed exactly what was available for review. Appeal File, Exhibits 371-94, 405-15; Appellant's Supplement, Exhibit 6, ¶¶ 21, 59.

23. We have been cited to nothing in the prospectus or in the UC5 documents that demonstrates that the FS identified to a reader the specific tolerance it used to check the accuracy of DBH measures. The prospectus and UC5 each identify the two species in issue in this appeal as Item 762, black cherry, and Item 316, red maple. The black cherry volume (the considerably more expensive timber) was estimated on UC5 at 68,879 net cubic feet, while the red maple was estimated at 21,489 net cubic feet. On the sample bid form in the prospectus, the FS rounded the black cherry to 689 ccf and the red maple to 214 ccf. Those figures were also the figures shown on the contract which was bid. The FS expected that bidders would review the quantity estimates in the prospectus as part of the process before providing a bid. Appeal File, Exhibits 408, 412-15, 425-30.

24. The CO explained that although the FS included a board foot estimate in UC5 of the prospectus, that information was not contractual and was provided because it was desired by the industry to help the industry transition from the FS's prior use of board feet to the use of cubic feet for FS timber sale contracting. As the FS sees it, any determination as to the validity of the estimate or what was harvested or available must be measured through cubic feet, the measure used in the contract for bidding. Appellant's Supplement, Exhibit 6, ¶¶ 17, 28; Durner Declaration ¶ 14.

25. The measures for timber in ccf and board feet are not interchangeable. Each is calculated independently. Normally, one does not come to a ccf total by converting from board foot volume. Instead, to estimate ccf, the FS uses national timber cruising software, which relies on tree measurement data, such as DBH, sawlog height, species, and defects, and then calculates the data through a complex set of equations. Appellant's Supplement, Exhibit 6, ¶¶ 17-18, 21.

26. The following prospectus provisions are pertinent to this appeal and contain warnings to purchasers not to rely on estimates set out therein. The provisions also clearly state that the prospectus is not legally binding and the sample contract, not the prospectus, will govern as to the obligations and expectations of the parties. Section 1, INTRODUCTION, states in pertinent part:

This prospectus furnishes prospective bidders with information not contained in the published advertisement and is designed to enable bidders to decide whether or not to further investigate the sale. The prospectus is not a legally binding document, but is offered to provide general information about a sale. The contract does not include descriptions, estimates and other data in this prospectus, unless otherwise stated. In the event that the prospectus contains an error or contradicts the sample contract,

the contract governs. Bidders are urged to examine the timber sale and make their own estimates. Timber sale contract 2400-6T will be used. Inspect the sale area and the sample contract before submitting a bid. Obtain the appraisal, other information on the timber, and conditions of sale and bidding at Forest Service offices listed above and in the named attached advertisement.

Section 4, TIMBER QUANTITIES AND RATES, includes the statement:

The quality, size, cut per acre, and product suitability of the timber are estimates based on detailed cruise information on file and available for inspection at the Forest Service offices listed above and in the advertisement. VOLUME QUANTITIES LISTED HEREIN ARE MADE AVAILABLE WITH THE UNDERSTANDING THAT VALUES SHOWN ARE FOREST SERVICE ESTIMATES AND ARE NOT GUARANTEED. For these reasons, bidders are urged to examine the timber sale area and make their own estimates.

Appeal File, Exhibit 407.

Quantities

27. Bids on the sale were opened on March 31, 2005. Three firms submitted bids, ranging from appellant at \$705,541.34 to the low bid at \$683,155.34. Due to environmental litigation, the contract was not awarded until August 11, 2005. The contract required Carr to pay a lump sum price based on applying the bid price for each species to the respective quantity. The contract was set to terminate on September 30, 2006. Appeal File, Exhibits 456-60.

28. Appellant's owner, Gerry Carr, an engineer with approximately twenty years of experience in cruising and harvesting, prepared appellant's bid. He pointed out that the volume Carr had harvested from approximately twenty other FS sales was never less than 90% of the estimated volume. On a number of sales, the harvest was greater than the FS estimate. He said that he spent four days walking through each payment unit, viewing the timber. He was somewhat hampered in access due to snow conditions. Affidavit of Gerry Carr (Oct. 26, 2007) ¶¶ 3-5.

29. Bidding documents included a number of provisions warning bidders to make their own estimates and not rely upon the FS figures. Among those were:

Section 16. BIDDER RESPONSIBILITY CERTIFICATION

....

d. That if awarded this contract that Bidder will complete the timber sale contract to its terms and any modifications thereof including requirements to purchase, cut, and remove the included timber or forest products by the termination date.

Section 23. DISCLAIMER OF ESTIMATES AND BIDDERS' WARRANTY OF INSPECTION. Before submitting this bid, the Bidder is advised and cautioned to inspect the sale area, review the requirements of the sample contract, and take other steps as may be reasonably necessary to ascertain the location, estimated volumes, construction estimates, and operating costs of the offered timber or forest product. Failure to do so will not relieve the Bidder from responsibility for completing the contract.

The Bidder warrants that this bid/offer is submitted solely on the basis of its examination and inspection of the quality and quantity of the timber or forest product offered for sale and is based solely on its opinion of the value thereof and its costs of recovery. Bidder further acknowledges that the Forest Service (i) expressly disclaims any warranty of fitness of timber or forest product for any purpose; (ii) offers this timber or forest products as is without any warranty of quality or merchantability or quantity; and (iii) expressly disclaims any warranty as to the quantity or quality of timber or forest product sold except as may be expressly warranted in the sample contract.

The Bidder further holds the Forest Service harmless for any error, mistake, or negligence regarding estimates except as expressly warranted against in the sample contract.

Appeal File, Exhibits 426-28.

30. In addition, several contract provisions addressed the responsibilities and risks associated with the estimates:

BT2.4 Quantity Estimate. The estimated quantities of timber by species designated for cutting under BT2.3 and expected to be cut under Utilization Standards are listed in AT2. Estimated quantity in AT2 does not include the following:

- (a) Damaged timber under BT2.13;
- (b) Unintentionally cut timber under BT2.14;
- (c) Construction timber under BT2.15 cut outside of Payment Units and removed from construction use for utilization by Purchaser;
- (d) Timber within clearing limits of Temporary Roads or other authorized clearings and that is not designated under BT2.31, BT2.33, BT2.34, or BT2.35; or
- (e) Dead or unstable live trees that are sufficiently tall to reach Purchaser's landings or the roadbed of Specified Roads under BT2.32.

Estimated quantities for such timber not included in AT2 shall be determined as stated in CT6.8.

If Sale Area Map shows Payment Units where Marking or Measuring is to be completed after date of timber sale advertisement, the objective of Forest Service shall be to designate for cutting in such Payment Units sufficient timber so that Sale Area shall yield the approximate estimated quantities by species or species groups stated in AT2. However, the estimated quantities stated in AT2 are not to be construed as guarantees or limitations of the timber quantities to be designated for cutting under the terms of this contract.

Quantity adjustments shall not be made under this Section after there is modification for Catastrophic Damage under BT8.32.

BT2.41 Adjustment for Quantity Deficit. If Sale Area Map shows Payment Units where Marking or Measuring is to be completed after the date of timber sale advertisement and if Contracting Officer determines that a deficit in the estimated quantity will cause the quantity designated to be less than 90 percent of the total estimate shown in AT2, Forest Service, upon request by Purchaser, shall designate additional timber within Sale Area. Such additional timber shall be limited to that estimated to be necessary to reach approximately the estimated quantities by species listed in AT2. Any such additional designation shall be consistent with land and resource management plans.

BT2.43 Adjustment for Quantity Errors. An estimated quantity shown in AT2 shall be revised by correcting identified errors made in determining estimated quantity that result in a change in total timber sale quantity of at least 10 percent or \$1,000 in value, whichever is less, when an incorrect estimated quantity is caused by computer malfunction or an error in calculations, area determination, or computer input.

No adjustments in quantity shall be made for variations in accuracy resulting from planned sampling and Measuring methods or judgments of timber quality or defect. For payment purposes, corresponding revisions in quantity and total payment shall be shown in AT4c for each Payment Unit involved. Adjustment in rates will not be made. Adjustment in quantities shall not obligate Forest Service to designate additional quantities when the original quantity estimate is overstated.

Appeal File, Exhibits 472-73.

31. Provision AT-2 of the contract, titled “Volume Estimate and Utilization Standards, applicable to BT2.1, BT2.2, BT2.4 and BT6.4,” listed the four species of timber on the sale, along with the estimated quantities in ccf (689 ccf for black cherry and 214 ccf for red maple), as well as items such as minimum specifications for DBH, number of minimum pieces per tree, length, and diameter inside bark. Under the sale contract, a merchantable black cherry or red maple tree had to be at least 11 inches diameter at breast height, 9.6 inches diameter at the small end, and at least 8 feet in length. Appeal File, Exhibit 457. Provision AT4c broke down the expected volume by harvest unit or block. The various units added up to the advertised total on the bid sheet. Appeal File, Exhibits 459-60.

Actions During Contract

32. Carr began the harvest in Blocks (or units) 3 and 6, starting in the fall of 2005. In October 2005, following Carr’s cutting of the blocks, Carr notified the CO that the volume of estimated timber, particularly black cherry, was not being reflected in the harvest of the initial blocks. Appeal File, Exhibit 511. Carr said that soon thereafter, the CO assured him the volumes were there overall, but maybe not in the individual blocks, saying it had to do with the computer program and the strata. Carr then proceeded to cut units 4, 7A and B, and 8A, performing those harvests in October and November 2005. On February 3, 2006, the FS submitted an invoice to Carr for the full contract price of \$99,692.68 for payment units 4, 7A, and 7B. Carr Affidavit ¶¶ 19, 20.

33. By letter of March 17, 2006, Carr notified the FS of the amount of claimed shortfalls in blocks 3, 4, 6, 7, and 8A, basing the conclusion on its records of “all sawtimber” harvested for those blocks. Carr provided forty-six pages of scaling records, which identified the dimension of every sawlog delivered to the lumberyard from the sale. Carr stated that the volume shortfalls had prevented it from paying the FS invoice and set out its calculation of harvested footage, using board feet, and calculating those board feet using the Doyle scale, the measuring scale Carr typically used for timber it harvested,

Block 3	Cherry	14911	Soft Maple	4726
Block 6	Cherry	7706	Soft Maple	4284
Block 8	Cherry	64847	Soft Maple	19563
Block 7	Cherry	58048	Soft Maple	230
Block 4	Cherry	18731	Soft Maple	1116

Appeal File, Exhibits 521-67; Appellant’s Supplement, Exhibit 1, ¶ 22.

34. Carr stated that depending on whether it used net or gross volume, it was “out” over 106,000 board feet in cherry and 33,000 board feet in maple. Carr calculated the cost impact as over \$170,000 and indicated that it might not have the capital to complete, but was trying to find a way. Carr asked if there was any way to make an adjustment in volume or price at that point. Appeal File, Exhibit 521.

35. The CO responded by letter of April 14, 2006, asserting that Carr was in default of the contract by not paying the invoice for \$99,692.68. The letter also stated, “At this time operations are suspended.” Accordingly, Carr suspended its operations. According to Mr. Carr, he was told by the CO that the CO would review block 5, but did not hear from the CO as to results of any examination. Carr states, “It was mentioned that the Forest Service could withdraw funds in the \$100,000 payment bond to cover the outstanding invoice. Neither the CO nor Mr. Campbell ever modified the April 14, 2006 direction to suspend operations.” Appeal File, Exhibits 570-72, 577; Appellant’s Supplement, Exhibit 1, ¶ 23.

36. Carr spoke with the FS on June 5 and June 23, 2006, telling the CO on the latter date that Carr had obtained a 100% cruise of the balance of the sale (uncut blocks 1, 2, and 5) through an independent company. There is no specific evidence establishing when the report of this cruise, prepared by Forecon and dated June 16, 2006, was given to the CO. According to appellant, Forecon did not include block 8B because there was no government estimate which it could compare to block 8B. By modification 1 to the contract, the parties had agreed to split the original estimates for blocks 8A and B for payment purposes, and therefore what was estimated for 8A and 8B did not necessarily reflect the actual quantities

in each subpart. Appeal File, Exhibits 459, 512-14, 575-76; Appellant's Supplement, Exhibit 6, ¶ 51, Exhibit 7.

37. The Forecon report stated that Forecon inventoried all timber measuring 11.1 diameter at breast height and greater. Forecon reported that it used the USFS grade 2 specifications and reported in two-inch diameter classes. The cruise included both standing and blown down timber. Forecon stated that some trees had been marked by the FS as sawtimber, but those trees did not meet USFS grade 2 specifications. Forecon additionally made a separate tally of the trees that the FS had marked as sawtimber, but which Forecon did not find to meet the specifications. Forecon provided the following volume comparison, taking the FS volume from gross board feet (bf) on the prospectus:

Block 1	40,768.2 bf (63.8% of the FS volume estimate of 63,900 bf);
Block 2	106,462 bf (66.8% of the FS volume estimate of 159,289 bf); and
Block 3	31,259.1 bf (72.7% of the FS volume estimate of 43,021 bf).

Appeal File, Exhibits 412-14; Appellant's Supplement, Exhibit 7.

38. Forecon stated that Carr had done no cutting or removal of material in the three blocks that it had cruised and pointed out that a few trees had been cut to clear for access roads, trails, and well sites. Additionally it reported that some merchantable timber remained and further, that there were some instances where merchantable material had recently been removed, possibly for firewood. Forecon did not place a quantity on the above items. Forecon then addressed, in narrative form, each block that it had cruised, and for each block, it identified trees that had been marked as sawtimber as to number, size, and species. In deciding what to count, Forecon's analysis indicates that it did not count trees unless they met grade 2 specifications. The cruise plan criteria showed that grade 3, not grade 2, was the threshold used for the FS cruise numbers. We take notice that grade 2 is superior to grade 3. Finding 5; Appeal File, Exhibit 49; Appellant's Supplement, Exhibit 7.

39. The record does not show when the FS got the Forecon report, or whether the CO even had it prior to discovery. Appellant did not use or reference the report in its September 2006 claim letter, and the CO did not address it in the CO final decision. There was correspondence between the parties during the summer of 2006, relating to non-payment by Carr of an invoice. The payment and collection actions are discussed briefly below in a separate section. While the parties have addressed the invoice in their briefing, as well as a suspension of performance, the matters have not been addressed in an appealable final CO decision.

40. With matters still unresolved, Carr, through letter of counsel dated September 12, 2006, submitted a formal request for a contract correction or reform of the payment amounts for the units it had harvested. It also asked to cancel payment units 1, 2, 5, and 8B, or otherwise have the contract reformed. Counsel for appellant charged that the estimates used by FS were grossly overstated and attached a table, which counsel said compared Carr's harvested quantities for black cherry and maple (designated by numbers 762 and 316) against the FS estimated quantities for those same species and locations. The table is set out below, with numbers in the first three columns representing board feet of timber, and the triangle symbol indicating difference. Further, the last column, CCF, represents appellant's conversion of board feet to ccf by use of a formula:

Cherry (762)

	Cherry Estimated BDFT	Cherry Actual BDFT	Δ BDFT	Δ CCF
Block 3	37,155	14,911	(22,244)	35.30
Block 4	29,842	18,731	(11,111)	17.60
Block 6	19,714	7,706	(12,008)	19.00
Block 7	65,737	58,048	(7,689)	12.20
Subtotal	152,448	99,396	53,052	84.10

Maple (316)

	Maple Estimated BDFT	Maple Actual BDFT	Δ BDFT	Δ CCF
Block 3	9,962	4,726	(5,236)	8.30
Block 4	3,025	1,116	(1,909)	3.00
Block 6	9,153	4,284	(4,869)	7.70
Block 7	7,518	230	(7,288)	11.60
Subtotal	29,658	10,356	19,302	30.60

Appeal File, Exhibits 587-93.

41. The figures on the above table track Carr's March 17, 2006, comparison, except the above does not include block 8. Carr takes the FS volume from the gross board foot column on UC5. The FS, in advertising the sale and as reflected on UC5, took its estimated ccf volume from the net's cubic foot column, not the gross foot column. Net volume, be it in cubic feet or board feet, would show a smaller volume than gross. Net volume is reduced for defects. Accordingly, a comparison of net board feet to the harvested quantity would have resulted in a narrower difference than that claimed by appellant. The net estimates as compared to the gross estimates as to black cherry are set out below:

Block 3	33,535 rather than 37,155
Block 4	26,620 rather than 29,842
Block 6	17,108 rather than 19,714
Block 7	59,359 rather than 65,737

There would have been similar proportional differences for red maple. Appeal File, Exhibits 412-13, 521, 593; Appellant's Supplement, Exhibit 6, ¶ 59.

42. The CO evaluated Carr's claimed harvest volume by calculating Carr's harvested units, using Carr's scaling records, and then applying that data to the cubic scaling handbook. In deposition, counsel for Carr walked the CO through the process used by the

CO to arrive at his ccf volume from Carr's scaling records. Using tree 349 as an example, the CO explained that he took the tree length of fourteen feet and diameter of sixteen feet and after applying a two-inch taper, took the volume from the table. Using those dimensions, tree 349 calculated to 22.1 cf. The CO used the same procedure for each tree from the referenced scaling records. Appeal File, Exhibits 522, 634-92; Appellant's Supplement, Exhibit 4, ¶¶ 42-47.

43. On November 30, 2006, the CO issued his final decision on Carr's claim. Much of the decision addressed how and why the FS carried out the cruise as it did. Another portion addressed the volume issue. We start with the discussion as to volume. The CO compared the net volume in ccf, set out in the contract at AT4c, to the converted log volumes from appellant's yard tickets, using the yard ticket data to calculate ccf for that timber. Set out below is the CO's comparison of the black cherry by payment unit, for those units harvested.

Pay unit	AT4c volume	Converted log volume	Difference
3	53	31.47	-21.53
4	41	36.99	-4.01
6	27	17.29	-9.71
7A	46	72.88	26.88
7B	47	2.87	-4.13
8A	95	136.74	41.74
TOTALS	309	338.24	29.24

The CO conducted a similar comparison for maple, concluding that the maple underrun was -3.75 ccf. The calculated underrun was only for the harvested units and not for the entire sale. Appeal File, Exhibits 656-710.

44. The CO pointed out that there are a number of reasons why the purchaser's volume recovery might not directly correspond to estimated quantities in the contract. First, there was no way of determining whether the sawlog volume in the purchaser's data represented all the volume according to utilization specifications in the contract. For example, the CO noted that if a purchaser only took grade 2 or better logs, there would be a difference in volume attributable to the difference in merchantability specifications. Further, differences might also be attributable to hidden or latent defects in some sawlogs. The CO stated that he and a FS representative (in response to the purchaser's concerns as to volume) conducted a field review in late March and early April 2006, as well as an extensive office review of the adjusted cruise data after the initial check cruise and re-cruise. They

found “no evidence to support errors that resulted in overstating the estimated quantities.” Appeal File, Exhibits 704-09; Durner Declaration ¶¶ 15,16.

45. The CO then addressed Carr’s calculations. He pointed out that the estimated board volume that Carr used to compare with its harvest was taken from the gross and not net board foot volume. Net volume reflects a deduction for defects. By using the gross board foot volume, the appellant omitted any defect deduction. Appeal File, Exhibit 707.

46. The CO also focused on his contention that the process not only improperly handled net and gross, but was also materially inaccurate because Carr compared board foot volumes derived from two separate and distinct measurement formulas, the International 1/4 inch rule, used to develop board foot volume estimates in FS cruises for standing or down trees, and the Doyle log scale, used for measuring cut log volumes. The CO stated that appellant compounded that error by applying an inaccurate conversion factor to convert appellant’s claimed difference in board feet to a difference in ccf. More specifically, the CO took issue with the fact that Carr applied a constant board foot to cubic foot ratio of 6.3 in all the calculations. The CO said that there is no constant ratio to convert board feet to ccf. Conversions may display considerable variation, depending on average tree size, across the sale. Appeal File, Exhibits 707-08.

47. The CO reiterated that ccf was the unit of measure used in the contract and shown in AT2 and 4. Since the sale was in ccf, the CO concluded that his calculation in cubic feet using the purchaser’s log scale tickets (individually for each log) provided a more accurate and consistent assessment of comparable volume estimates than would a comparison using conversions from board feet to ccf. The CO pointed out that his calculations in his final decision showed that once Carr’s harvest was measured in cubic feet, it was approximately equal to or exceeded the FS’s estimated quantities in the contract for maple and black cherry. This result covered multiple and not individual blocks, with the CO acknowledging that Carr had experienced under-runs in blocks 3 and 6. The CO continued that once the overall log volumes were converted to cubic measure, sizeable over-runs were shown in other blocks on the sale, and overall, the sale and harvest were in line. As such, and given disparities in the purchaser’s table and the CO’s converted cubic foot log volumes, the CO could not support any remedy based on the estimated quantities being erroneous. Appeal File, Exhibits 707-08.

48. The CO’s conversion of recovered timber volume to cubic feet and comparison with the estimated volume indicated that appellant recovered 106% of the volume estimated in the contract for the units that appellant had cut. The CO used the National Forest Cubic Scaling Handbook to determine the proper cubic volume of each log. The FS computation,

accounting for defects, comparable log rules, and appropriate board feet to cubic feet ratio, indicated no shortfall. Appeal File, Exhibits 457, 634-92, 704-08.

49. Appellant, in challenging the CO, focused on the accuracy of the CO's use of appellant's scaling records. Appellant charged that the CO included in the count of Carr's harvested trees, a number of trees that did not meet merchantability standards, even though the trees were harvested and sent to the mill. As set out below, the CO conceded the point and acknowledged that he included some timber that did not meet size standards. Despite the fact that they were harvested, those trees did not qualify as merchantable timber. However, once conceding the point, the CO recalculated, removing the trees claimed to be in error. His results showed that Carr's harvest, even with the adjustment, was in line with the estimate for the blocks addressed. The CO included in this second calculation, as recovered sawlog volume, only those logs reasonably believed to meet the "diameter inside bark at small end" of 9.6 inches at 8 feet (the merchantability specification of the contract). The CO said that the omitted logs involved approximately 12.485 ccf black cherry and .809 ccf of red maple, and after omitting these logs from the recovered volume, he calculated that the total recovered volume was 103% of the total contract estimate of volume expressed in ccf for black cherry and 93% of the estimate for the red maple on the units harvested by Carr. He further stated that the contract volume estimate expressed in cubic feet included the entire net merchantable volume of trees. He therefore used the entire volume of logs when converting the log tickets in the Doyle log rule to ccf, as there was no defect listed for that material. Durner Declaration 2 ¶ 3.

50. Soon after receiving the final decision, appellant by letter of December 22, 2006, filed a timely appeal. Among issues raised, in addition to breach, is appellant's claim for an adjustment under BT2.463, on the basis that the FS made an error in either input or calculation. According to appellant, if erroneous information, such as an inaccurately measured tree diameter, is inputted into the computer program for calculating timber volumes, that is an error in computer input or in calculation and qualifies a purchaser for relief. The CO states otherwise, limiting "error in computer input" only to transposed figures or other typographical errors and not inputting incorrect data. Appellant's Supplement, Exhibit 4 at 47.

51. In support of its briefing, appellant included portions of several depositions, all of which have been incorporated into the record, including portions of depositions from a separate appeal involving the James River sale, a matter with some parallel issues but a different purchaser. In addition, the parties have filed affidavits and other supporting documents. In briefing, appellant puts into contention the Forecon survey, a matter not addressed in its claim letter. In addition, appellant introduces a new argument which claims the CO failed to follow prior ANF practices for converting scaling information and as such

should be held to that prior practice. Specifically, appellant references the Chappel Blowdown sale, where in a note on a daily log, the FS agreed to convert timber, for billing purposes, from Doyle to International scale. Mr. Durner was listed as the CO on that sale; the daily log cited by appellant was dated May 16, 2005. Appellant's Supplement, Exhibit 10, Attachment C.

52. The FS attached to its briefing a declaration from Mr. Van Dyck. Attached to the declaration were attachments as to the Forecon report and information on log scaling and cubic measure. Appellant challenged Mr. Van Dyck's declaration, asking that portions of it be stricken. That has been addressed in a separate portion of this opinion, which follows. There, we strike portions of the affidavit dealing specifically with calculations as to the Forecon report and allow the remainder, including Mr. Van Dyck's review of the CO's decision. In his review of the CO's decision, Mr. Van Dyck made a number of observations. He stated that he reviewed the methodology the CO used to convert appellant's volume information from the harvest (in Doyle log scale) to ccf and found the CO's conversion to be appropriate. He said a conversion from appellant's figure to ccf was necessary before a valid comparison could be made to the contract estimate. He further concluded that the CO's analysis displayed in tables 2 and 3 of the CO's decision, based upon the harvested volume provided by claimant, was the best available information, comparing the contract volume estimate with harvested volume. Appeal File, Exhibits 704-05; Van Dyck Declaration ¶¶ 20-27.

53. Attachment C to the declaration of Mr. Van Dyck was titled "Timber Volume Conversions." In its opening sentence, it states, "In order to understand why it is very difficult to convert between the different units of timber volume, it is important to understand what is being represented by each of the units of measure." The attachment describes cubic foot volume as the equivalent of a piece of wood 12 inches by 12 inches by 12 inches, or 1728 cubic inches. The cubic foot volume of a log is a measure of all of the wood material it contains. It does not include any bark or air space, but only solid wood. The attachment shows three illustrations, each of one cubic foot of wood. The first is 12 inches by 12 inches by 12 inches. The second is 6 inches by 12 inches by 24 inches. The last, which shows a one-foot long section of log from which the bark has been removed, is shown as a cylinder with a diameter of 13.5 inches and length of 12 inches. The attachment also shows board foot volume illustrations describing a board foot as 1 inch by 12 inches by 12 inches and then includes illustrations of board foot variations. The attachment also addresses conversions between different units. There it provides that there is no simple mathematical conversion from one unit of measure to another, because the different units measure different things. Cubic foot volume includes only solid wood. Board foot volume is only solid wood that can be made into boards. In explaining the relationship of cubic feet to board feet in measures, the attachment states, "Board foot volume is only calculated for larger diameter materials. It

seems like there should be 12 board feet per cubic foot, but remember that part of the cubic foot volume is lost in slabs and sawdust and possibly trim from the end of logs.” The article continues, pointing out that a “ballpark figure” for an average size log is about 6 board feet to the cubic foot using the International scale and about 4.8 board feet using the Doyle scale. It continues, adding, as noted earlier, that the ratios vary greatly with the diameter of the logs, with smaller logs having a higher proportion of their volume lost as slabs, so that the ratio of board feet to cubic feet is lower for small logs and higher for large logs. Van Dyck Declaration ¶¶ 22, Attachment C.

54. The FS answers to interrogatories address scaling and the various rules. The FS cited the publication “A Collection of Log Rules - General Technical Report - USDA Forest Service” (undated) by Frank Freese, a statistician with the Forest Products Laboratory in Madison, Wisconsin. The following is from that publication and was provided by the FS in its answer:

International 1/4-Inch Rule - “It is based on a very carefully reasoned analysis of the losses incurred during the conversion of sawlogs to lumber and is one of the few rules incorporating a basis for dealing with log taper.” This document used the International 1/4-inch rule as the standard against which all other log rules are compared.

Doyle Rule - “This is one of the most widely used and roundly cursed log rules in existence.” “It is not so widely used where timber is large or where Federally owned timber is involved. . . .” “Its primary characteristic and the main reason for its popularity, at least with buyers, is that it gives a very large overrun on small logs.” “The primary weakness of the Doyle Rule is that the allowance for slabs and edgings (4 inches) is far too large for small logs and too small for large logs.” In other words, the Doyle Rule greatly under-estimates the volume of small logs, including the upper logs of large trees, and it slightly over-estimates the volume of large logs.

Cubic Foot (Ccf) - Cubic feet (Ccf constitutes 100 cubic feet) is a measure of wood fiber content of a tree based on diameter and height measurement, and also includes taper adjustments. Cubic foot volumes are an estimate of the total amount of solid wood in the logs.

Appellant’s Supplement, Exhibit 6, ¶ 21.

Default /Suspension

55. Because the parties briefed the matters surrounding Carr's non-payment of the FS invoice and FS actions associated with collecting that invoice, we will briefly review those facts to better set the context of the overall dispute. Carr, as part of its contract obligation (BT9.1), submitted a personal performance bond, backed by a letter of credit dated September 13, 2005, from Northwest Savings Bank for \$71,000 to secure performance of the contract. The letter of credit, secured by Gerry Carr's personal guarantee and personal business assets, was scheduled to lapse on September 30, 2007. Carr also submitted a payment bond, secured by a letter of credit for \$100,000, from the same bank. That was valid until September 22, 2006, subject to some renewal provisions. In addition, Carr states that it had provided a down payment of \$74,500 for the sale. Appeal File, Exhibits 444-46, 509-10; Appellant's Supplement, Exhibit 1, ¶ 17.

56. On February 3, 2006, Carr was billed \$99,692.68 by the FS for timber cut and removed. Payment was due on February 18, 2006. When Carr failed to make payment, the FS, by letter of March 2, asserted that Carr was in breach and gave it thirty days to remedy the situation. In a letter dated April 14, 2006, which reiterated Carr's failure to pay, the FS stated, "At this time operations are suspended." Appeal File, Exhibits 515, 518-19, 570-72; Appellant's Supplement, Exhibit 1, ¶ 21. Carr has charged that the suspension was never withdrawn. Appellant's Supplement, Exhibit 1, ¶ 23. The CO states that after the bill of collection was satisfied, Carr could have continued to operate the sale, provided that Carr submitted a new annual operating plan, which Carr did not. Appeal File, Exhibit 631; Durner Declaration 2 ¶¶ 11-12.

57. By letter dated August 2, 2006, the FS notified Carr of the impending September 30, 2006, termination of the sale and told Carr it would collect the outstanding \$99,692.68 through collection action against the payment bond. In its letter of August 13, 2006, the FS advised Carr that he had been granted a conditional extension of the contract to December 29, 2006. In that same letter, the FS said that there had been no written request for a contract term adjustment or contract term extension and no work or activity was taking place on the sale. The FS further said that Carr was liable for damages owed to the United States for non-completion of the contract, which the FS estimated to be \$141,314.71 plus applicable costs. That sum reflected the difference in value between the current contract value and the value of timber in the market, as of the date of the letter (the scope of damages set on the performance bond). The sum and a demand for that sum was not formalized and not formally submitted to Carr until September 2007. Appeal File, Exhibits 496, 581-85; Durner Declaration 2 ¶¶ 11-12.

58. By letter of September 28, 2006, the CO responded to Carr's claim and extended the contract for ninety days in order to give the CO time to consider the claim and in order to preserve the ability of the FS, should a final decision on the claim favor Carr, to refund any money through the timber sale account. The letter did specify that no harvesting of timber should occur without the written consent of the CO or acting CO. Carr never returned to the site. Appeal File, Exhibit 631.

Appellant's Claimed Damages

59. In its complaint, appellant alleges that it is entitled to \$86,286 under provision BT2.43 as a contract adjustment due to agency errors in the measuring and inputting of data dealing with tree heights, diameters, and overall sampling. Alternatively Carr alleges breach damages of \$199,288.66. Mr. Carr addressed the breach damages in more detail at paragraph 11 of his affidavit. Appellant's Supplement, Exhibit 1, ¶ 11.

Discussion

Motion Re: Van Dyke Declaration

On November 16, 2007, appellant filed a motion to strike paragraphs 12, 13, 20, and 21 through 27 from the declaration of Mr. Van Dyck.

Paragraphs 12 and 13 discuss diameter data from the first and check cruises and the FS decision not to re-measure diameters. Appellant says that Mr. Van Dyck's statements are based on documents provided to him for purposes of his giving an expert opinion and that based on his deposition testimony, he had not seen the documents or discussed them with the CO during the sale. The FS responds that Mr. Van Dyck is the regional measurement specialist and as such is responsible for "interpreting national and regional policy in terms of timber cruising [and] timber evaluation and . . . aid[ing] people in the development of crew's [sic] plans, things involved in determining the volume of trees in a timber sale." Van Dyck Declaration ¶ 9. Additionally, he was involved in development of sample methodology and reviewed information on this sale as to sampling and cruising. Appeal File, Exhibit 44; Van Dyck Declaration ¶¶ 15, 17-18. Moreover, as stated at paragraph 9 of his affidavit, he reviewed general cruise design to be implemented in Windy City and other sales, and as stated in paragraph 11 of that document, he was contacted after the first cruise and check cruise were completed for guidance and advice, including guidance as to tree diameter measurements. Finally, his role in the preparation of the cruise plan, prospectus, and contract were all specifically identified in the FS's answer to appellant's interrogatories. Appellant's Supplement, Exhibit 6, ¶¶ 1-3, 10, 12. An affidavit from Mr. Van Dyck should not have been a surprise to appellant.

Paragraph 20 addresses the Forecon report, including calculations and tables prepared by Mr. Van Dyck (converting the FS volume estimate to Doyle scale so as to compare it to Forecon's data), but not seen by appellant until filed with the FS brief. Appellant says that it asked for expert reports in its request for documents and asserts that the Van Dyck analysis is not comprehensible without backup calculations, which would require further discovery. The FS asserts that appellant was or should have been aware of the data conversion issue when it produced the Forecon information during discovery and further that the same issue (Doyle versus the FS scale) was comprehensively addressed in the CO's decision. The FS is correct to a point. Differences in scaling were discussed in the CO's decision; however, the decision addressed the matter in the context of timber that appellant had already harvested.

Paragraphs 21 through 27, according to appellant, are mere commentary and argument concerning the CO's decision and not statements of fact appropriate for an affidavit.

We do not strike paragraphs 12 or 13. The statements as to the tolerance fall within Mr. Van Dyck's overall duties and involvement in this sale. Appellant's arguments go to the weight of the evidence. Based on the information provided, we do strike that portion of paragraph 20 which deals directly with the result of calculations from the Van Dyck-attached report. Appellant states it asked for all expert reports, and this is clearly one. The FS does not deny that allegation. Appellant makes a valid argument that without additional discovery, it is not in a position to mount an appropriate challenge to the contents of a report that it was unaware of. As to the FS's contention that appellant should have expected a comparison of Forecon, we agree in principle; however, the FS filed the analysis (report) with its brief and as such, the document existed prior to the filing and should have been shared. For the above reasons, we strike as noted above and therefore do not rely on the Van Dyck comparison calculations as to the Forecon report for our conclusions in this decision.

As to statements Mr. Van Dyck made in the questioned paragraphs regarding general comparisons and facts as to operation of Doyle, International, and ccf measurements, we allow that information to stand. As to appellant's attempt to support the strike on the basis that the report ignores conclusions of Forecon, we note that appellant's argument goes to the weight, believability, and applicability of the Forecon report. As noted in our decision below, the Forecon report creates its own inconsistencies, independent of any conclusions Mr. Van Dyck drew.

Finally, we do not strike paragraphs 21 through 27. The information provided is in line with Mr. Van Dyck's position with the FS and involvement in the project.

Merits

Appellant contends that because the FS failed to comply with Handbook procedures in cruising the timber on this sale, the FS over-estimated the volume to be harvested and sold on the sale. This materially increased the amount appellant paid for the sale, money which appellant could not recoup because of insufficient timber. Appellant identifies the failure to follow procedures as a breach of a contractual duty or breach of the duty of fair dealing. Appellant further charges that the actions of the FS resulted in a negligent estimate, identifying a number of claimed failures or deviations in the FS's conduct of the cruising. Additionally, appellant seeks relief under clause BT2.43, a provision which allows adjustment to the bid quantities when an incorrect estimated quantity is caused by an error by the FS in calculations, area determination, or computer input. Finally, appellant claims mutual mistake.

On lump sum timber sales, such as Windy City, the FS provides a volume estimate (here in AT2) for the purpose of pricing the sale. Unlike a scaled or measured sale, where the price paid is based on what is harvested, the price paid on a lump sum sale is established based on the estimate. The sale price remains the same, notwithstanding that the purchaser might harvest more or less volume than advertised. Lump sum sales virtually always include standard disclaimer language and clauses that warn bidders not to fully rely on the estimate. The clauses specify that the volume estimate is not a guarantee. In that regard, BT2.4, Quantity Estimate, provides, “[T]he estimated quantities stated in AT2 are not to be construed as guarantees or limitations of the timber quantities to be designed for cutting under the terms of this contract.” BT2.43, Adjustment for Quantity Errors, provides that no adjustments in quantity shall be made for variations in accuracy resulting from planned sampling and measuring methods or judgment of timber quantity or defect. Disclaimer clauses such as the two noted above have been regularly enforced. *D & L Construction Co.*, AGBCA 96-207-1, 00-2 BCA ¶ 30,926, at 152,655 (1999). As the court explained in *Summit Contractors v. United States*, 21 Cl. Ct. 767, 776 (1990):

A government timber volume estimate generally represents an “honest and informed conclusion” based on “all relevant information that is reasonably available.” *Cedar Lumber, Inc. v. United States*, 5 Cl. Ct. 539, 545-46 (1984), quoting *Womack v. United States*, 182 Ct. Cl. 399, 412-13, 389 F.2d 793, 801 (1968). A timber contract estimate may convey a strict warranty of accuracy if the estimate forms the basis of the bargain between the parties, *Everett Plywood and Door Corp. v. United States*, 190 Ct. Cl. 80, 90-91, 419 F.2d 425, 430-31 (1969), or the estimate may alternatively create a warranty of “reasonable accuracy” under which “a purchaser acting prudently is entitled to rely but which permits some flexibility for error before it gives rise to a breach of contract.” *Cedar Lumber, Inc.*, 5 Cl. Ct. at 546 [citations omitted]. Either

warranty may be disclaimed by clear and unequivocal contract language or by a strong government warning to potential bidders to rely on their own information when calculating their bids, not the information contained in the government estimate. *Gregory Lumber, Co. v. United States*, 230 Ct. Cl. 1041, 1043 (1982); *Deal v. United States*, 3 Cl. Ct. 151 (1983). However, the government is not insulated from a breach of contract action by an otherwise unequivocal warranty disclaimer if the government estimate is grossly erroneous or negligently prepared. *Timber Investors Inc. v. United States*, 218 Ct. Cl. 408, 587 F.2d 472 (1978).

Relying on the enforceability of the disclaimer language, the FS contends that even if its estimate was inaccurate (which it denies), the FS cannot be held financially responsible for the claimed underrun.

When disclaimer clauses are enforced, there are three principal means through which one can pierce or override those clauses. The first is where a purchaser can show that the FS breached a material contractual or regulatory duty in preparing the estimate, and as a result of the breach, the purchaser was damaged. The second allows relief where a purchaser can show that the volume was misstated as a result of the FS negligently conducting or quantifying the estimate. The third vehicle for relief is set out in BT2.43, which, in addition to including disclaimer language, provides that quantities can be revised where the estimate was mistaken due to an error in calculations, area determination, or computer input. *Cleereman Forest Products*, AGBCA 2000-101-1, 02-1 BCA ¶ 31,664 (2001). In many respects, the breach of duty and negligent estimate analyses involve looking at many of the same factual issues.

The *Cleereman* decision provided that notwithstanding clear disclaimers, such as those in the Windy City contract, the contract volume estimate was not absolutely shielded. In first addressing the Government's argument claiming a lack of reliance on the estimate by Cleereman, the board said, "The disclaimers by the Government and affirmative statements by the purchaser do not act as bar to relief, which is dictated both by the Adjustment in Volume clause (which requires correction without regard to purchaser reliance) and by breach of contract (because the Government failed to comply with contract provisions)." *Id.* at 156,449. The board continued, "The contract does not place upon the purchaser the risk of having the Government conduct the sale without regard to the dictates of the handbook, with which, the contract specifies, the Government's actions are to comply." *Id.*

Under the facts developed in *Cleereman*, the board concluded that the Government had used incorrect and unsupported tree counts and sample tree data in generating the volume estimate and that it did so contrary to Handbook requirements as to cruising. The board

stated, “The erroneous detailed cruise data resulted in computer input errors and calculation errors in determining the volume estimates.” 02-1 BCA at 156,449. The board continued, noting that in addition to having identified errors under the Adjustment clause of the contract (the same BT2.43 as in Carr’s contract), the purchaser had also established a basis for broader relief, that being breach of contract. Specifically, the board found that CT6.8 of the Cleereman contract specified that the estimated quantity of timber which was advertised had been determined by the standard procedures described in the Forest Service Timber Cruising Handbook. The board found that the Government had failed to follow a number of critical procedures set out therein and as such failed to abide by the contractually described procedures in accumulating the detailed cruise data. The board described the deviations from the handbook as “numerous and substantive, with a material impact on the volume estimates utilized in the contract.” *Id.* In *Cleereman*, CT6.8 specifically stated that the volume would be determined by using the Handbook. The Carr contract has no such clause.

To understand *Cleereman*, it needs to be emphasized that the board found that the Government provided no support for the credibility of its figures, that its volume estimates were based upon inaccurate tree counts, that tally cards could not be traced to trees, and that none of the check cruise data (although more accurate than the initial cruise) were used in determining volume estimates. These were not errors in judgment or errors due to a selection of a particular cruising procedure. In *Cleereman*, the Government simply did not do it right. The circumstances in *Cleereman*, at least in some respects, were so egregious that the board had no problem in deciding that the FS’s actions crossed a bright line that allowed the board to distinguish between denying breach relief for errors in judgment or choice of procedure and allowing relief where the errors stemmed from lack of due care or proper diligence.

As noted above, the Windy City sale contract did not contain CT6.8. As such, the Carr sale contract does not specify, as did the contract in *Cleereman*, that the volume estimate was being determined by following and complying with the Handbook. Therefore, at least as to the claim for breach due to failure to follow the contract, Carr’s claim must fail.

However, as an alternative or companion to failing to meet a contract provision, one can establish breach by showing that the FS failed to comply with a regulation or mandatory procedure. The issue of the enforceability of the FS Handbook has been examined in that context. In *Rich Macauley*, AGBCA 2000-155-3, 01-1 BCA ¶ 31,350, the board addressed non-compliance of the Government with policies and procedures, finding that the FS clearly failed on the Macauley contract to operate in compliance with provisions in the FS Handbook. Nevertheless, the board stated,

As counsel for the FS correctly sets forth, in order for the provisions cited by Appellant to be subject to judicial enforcement against the Government, the

pronouncements must first be shown to have the force and effect of law. If the policies and procedures are interpretive or general rules of practice, they will not be enforceable against the Government. That is well established law.

Id. at 154,813.

The *Macauley* decision held that notwithstanding noncompliance with the Handbook, McCauley was not entitled to relief. That also applies here as to breach on the basis of failure to comply with Handbook procedures.

As noted above, even if one fails to establish the breach of either a contractual or regulatory duty, a purchaser may still be able to recover on the basis of a negligent estimate. That, however, is not necessarily a simple task. In order to recover, a claimant has to prove that the FS's actions were so unreasonable in performing the cruise so as constitute negligence. Failure to comply with the Handbook will not alone support a finding of negligence. Negligence very much depends on the materiality of the deviations and a showing of how the alleged negligent acts, omissions, or deviations actually caused the estimate to be inaccurate and in error. Furthermore, much of appellant's challenge goes to FS actions which appear to be choices and decisions as to methodology and procedure, rather than the failure to properly carry out ministerial acts. The former is not normally a basis for establishing negligence, absent a showing that the choices or decisions had no reasonable basis and that one using those procedures should have anticipated unacceptable errors. *Lance Logging Co.*, AGBCA 98-140-1, et. al., 01-1 BCA ¶ 31,356, at 154,848, *aff'd*, 30 F. App'x 998 (Fed. Cir. 2002); *Doug Jones Sawmill*, AGBCA 94-193-1, 96-1 BCA ¶ 28,176, at 140,655.

Before proceeding further, we note that a purchaser can also secure relief where it can show under BT2.43 that there is an error in quantity due to an input or calculation error by the FS in arriving at the estimate. From our perspective, both parties have oversimplified the meaning and scope of this clause. The FS is correct that an error in computer input would require that the recorded data being incorrectly put into the calculation is a transposition of numbers or failure to include data that was on the source documents, but somehow omitted during the transfer. Input errors do not involve issues surrounding the reasonableness or appropriateness of numbers reached through judgmental or procedural decisions. The FS, however, errs when it contends that the clause would not cover significantly inaccurate measurement, be it a failure to properly read a tape or failure to use a proper formula. Those are errors in calculation. That said, an error in calculation needs to involve misreading or some form of error as to addition, subtraction, or the like. Errors in calculation, however, are not errors claimed in choosing one formula over another. To the extent that one would have a case on the basis of challenging choices in FS procedure, that case would have to rely on proving negligence. It would not be appropriate under clause BT2.43. As a general rule of

thumb, where numbers are arrived at through discretion or a judgment decision, the clause is not appropriate or applicable.

Above is the basic legal framework a purchaser needs to establish to justify amending an estimate so as to allow recovery. In this appeal, however, we do not have to analyze whether FS actions on this sale would otherwise allow Carr to qualify for relief under either negligence or clause BT2.43. That is because appellant cannot recover, absent establishing that the estimate provided by the FS was understated and not in line with the timber available for harvest. As a matter of law, appellant had no legal right to more timber than what was advertised. If the available timber was in line with the estimate, appellant cannot prevail; and that is so even if the FS erred its reaching a correct estimate. In this dispute, we conclude that appellant has failed to establish that the estimate was in error -- and in fact, we find that the evidence shows that the estimate was in line with what was likely available.

This sale was advertised in ccf and not in board feet. The information as to board feet was provided only as part of the prospectus, and even then, it was cited as being for information purposes only. The prospectus states in unequivocal terms that it is not the contract. Nevertheless, in analyzing whether the estimated volume was reasonably accurate, we have decided to look at the board foot information provided by the FS in the prospectus. We do that because we see our responsibility in this case as being to determine whether or not the estimated quantity was in line with what was actually available, and we find the information in the prospectus to be relevant in helping us make that determination. That said, our consideration of the board foot quantity from the prospectus should not be taken to imply that we find the prospectus to be contractual.

The FS sets out as a major component of its defense the proposition that appellant, in comparing what was advertised and what was harvested, miscalculated the difference, by both understating Carr's claimed harvest volume and overstating the FS estimate as to volume. It is undisputed that appellant applied one board foot measure scale to its harvest and then compared that result to the board foot volume in the prospectus, the volume in the prospectus having been calculated using a different scale of measurement. Additionally, the FS charges that appellant compounded the error by comparing net board feet to gross board feet, and then taking the claimed underrun (in board feet) and improperly converting that number to cubic feet. Finally, the FS charges appellant may have further skewed its volume comparison by failing to include in its calculations timber that was not harvested but was merchantable under the contract (thereby understating what was available). While we have no hard evidence to support this as to the harvested timber, we do note that the Forecon report does indicate a divergent view from that of the FS as to what grade of timber was included in the cruise and contract estimate.

It is undisputed that in the harvest versus estimate comparison calculated by appellant and sent to the CO in June 2006, the appellant used the Doyle scale to quantify its harvested timber in board feet. It is also undisputed that the board foot volumes set out in the prospectus (at UC5) were derived by using the International 1/4-inch rule. Both scales are used for measurement in the timber industry. Appellant, like many loggers, typically uses the Doyle scale for measuring timber harvest. There is no evidence that appellant selected the Doyle scale for purposes of skewing numbers. However, the two scales clearly are not the same and one cannot make a valid one-to-one comparison when using both.

Based on evidence from Mr. Van Dyck, including attachment C to his declaration, as well as information in the FS's answers to interrogatories, a measurement using the Doyle scale will yield a lesser result (harvest volume) than a similar measurement using the International scale. Further, the difference will be increased where the size of the measured trees is relatively small, with Doyle tending to underestimate the volume of small logs. The trees in this sale fall into the smaller category.

In attempting to quantify the difference between using the Doyle and International scales, the FS cited the publication attached to Mr. Van Dyck's declaration. It identified the difference between the Doyle and International scales as roughly 6 compared to 4.8, with the Doyle count yielding the lower number. But that does not tell the full story. As Mr. Van Dyck stated, a fair comparison involves more than simply comparing the difference between 6 and 4.8. The measures by Doyle and International scales are affected by additional factors, principal of which are the size of the tree being measured, the degree of defects, and on this sale, whether the parties are comparing net volume to net volume or net volume to gross volume.

As explained on attachment C to the declaration of Mr. Van Dyck and addressed in interrogatory answer 21a, the differential using the Doyle rather than International scale will increase as trees become smaller, with the Doyle scale underestimating the volume of small logs, including upper logs of large trees, and slightly overestimating the volume of large logs. Here, the FS asserted, and appellant has not rebutted, the trees in issue fell into the smaller range. Therefore, the differential of 6 to 4.8 would be expected to be even greater in a comparison such as the one presented here by appellant. Moreover, how much is harvested will also be affected by the number of defects encountered during harvest. In presenting its comparison, appellant chooses to compare its harvested quantity (which would reflect reduction for defects and be akin to a net volume) to the gross board foot column on UC5 (an estimate not reduced for defects). A comparison to net board feet would have been more appropriate, and again, the use of different standards skews the difference. Thus, fundamental differences in measure seriously undercut appellant's claim. Appellant has provided no significant or

convincing evidence which we find rebuts the FS evidence as to the differences between the Doyle and International scales and the differences as to gross and net values.

In addition, we not only find that appellant's comparison of board foot volumes to be not susceptible to a one-to-one comparison, but also conclude that even if it were, there are fundamental problems in accurately converting board feet to cubic feet by simply applying a formula. Certainly, one can come up with a rough number; however, the preferred approach is clearly to calculate appellant's harvest quantities in cubic feet, the volume standard set out in the contract. Normally, board foot volumes and cubic foot volumes are developed through separate calculations.

On this contract, the FS inputted data to arrive at an estimated quantity for the sale, including height, diameter, taper, and defects, and then with other elements ran a computer program to arrive at a estimated net ccf volume. So, when the FS set out the estimate for this sale in ccf, that measurement was derived from raw cruise data and was measured based on the size and configuration of the trees. When the CO made a comparison of appellant's harvest data, he followed the same procedure, and his conclusion was that the data showed the harvest was in line with the estimate. In contrast appellant took a measure of board feet, not what was specified in the contract, and compared that to an estimate of board feet in UC5 which was neither contractual or comparable. Given the choice, the FS evidence is considerably more convincing.

Appellant, in mounting a challenge to the CO conclusion that the harvest volume was in line, claims that the CO overstated the count by including in it trees that did not meet merchantability standards. Appellant is correct. However, the CO has conceded the point. Moreover, the CO filed a second declaration in response to appellant's opening brief, and there he stated that he conducted a new calculation, which took out the disputed trees. According to the CO, that calculation, while showing somewhat less of a harvest for appellant, still showed that the harvest and volume estimate in the contract were in line.

Taking into account the evidence presented, we have on one side of the ledger a volume comparison using a scale which understated timber in comparison to the scale used on the contract estimate. We have evidence that says that once scales are adjusted to the advertised measure, ccf, the harvest for that timber is in line with the estimate. More important and convincing, we have a calculation by the FS using appellant's tally sheets to calculate cubic feet for harvested timber and concluding from that exercise that there was no overall underrun for the harvested units, even once the incorrectly included trees were removed from the calculation. But for appellant's Doyle calculation, we have little on its side to support its claim as to the harvested area.

Furthermore, when we then look at the unharvested units, we find little there to convince us as to appellant's claim. We find the Forecon report unconvincing in establishing that the FS made a bad estimate. First, according to Mr. Van Dyck, Forecon used the Doyle scale, thus skewing any comparison with the FS numbers. Appellant has not denied that Forecon used the Doyle scale. Further, we do not know whether Forecon used net or gross volume. Even assuming it used net volume, we have earlier discussed the difficulties we see in the Doyle scale and with the fact that appellant is not comparing like standards.

This was a total sale, and what controlled is not what was on each block but what was on the entire sale. We do not know if the potential harvest of block 8B was over or under the estimate. It is noteworthy that when the CO calculated the harvested units, he found that 8A had a considerable overrun in favor of appellant. Without any volume for 8B, we are left to guess what 8B would have shown and how it would have affected the overall claim. We cannot assume that it would have necessarily been favorable to appellant. Further, we see no reason why data could not have been provided. Appellant could have had Forecon survey 8B and then combined its claimed harvest volume with that of 8A, so as to come up with a total for block 8. While there may have been problems with that data, it would have been better than the hole currently left before us.

Finally, Forecon's volume appears to be based on using grade 2 rather than grade 3 as the merchantability standard for comparing estimates. The FS made this point in its opening brief. Appellant has not challenged the point, and we find no basis not to accept the FS position. Forecon having made its comparison using a different merchantability criteria further lessens any reliance on its report. We cannot know for sure how many trees may have been involved, but in this case, it is up to appellant to establish the underrun. Forecon's report, because of the matters noted above, did not establish its case.

Accordingly, we find the FS evidence convincing that appellant's harvest as to black cherry was in line with the overall estimate, so that a breach for defective or negligent estimate is not available. Additionally, we do not find, relying on the FS conversion of the harvest, and the failures of the Forecon report (addressed earlier), that even if appellant could somehow find an input error, appellant has established for the overall sale that it would have had an underrun of greater than \$1000 or 10%, the threshold being necessary to qualify for an adjustment under the clause. We come to a similar conclusion as to the red maple, but there the dollar impact is minimal.

In reaching the above conclusion, we have considered various points made by appellant in challenging the CO process and conversion. We have already addressed the fact that the CO initially included some unmerchantable trees. As to the contention that the FS calculation failed to properly account for quality defects, appellant has provided us no hard evidence or

basis in support. Further, it has not provided us evidence to put a number on such a failure, even if one had occurred, other than the total claimed underrun. The parties chose to submit this appeal on the record. As such, to the extent that items are not more developed, that is a risk that was run. We will not decide this case in favor of appellant based on guesses and speculation. Appellant here has the burden of proving its claim. It has not met that burden.

We also have taken into account appellant's argument that we should not accept the CO's number as to appellant's harvest because the CO used a table to calculate the harvested volume in ccf that included the entire geometric volume of the logs, and not just the sawtimber portion of the logs. While appellant charges that such is an improper measure, the FS points out that it used the entire log in its measure when it set the contract sale estimate in ccf. Therefore, the FS was applying the same standard to appellant's harvested quantity as it was to its estimated quantity. Further, as reflected in the illustration on attachment C of the log cylinder, a ccf measure includes the entire cylinder and log, but for bark.

We now turn to appellant's claim that the FS must grant it relief because the FS has used a board-foot-to-board-foot calculation on other sales. The FS made such a one-to-one calculation on at least one other sale. That, however, does not obligate the FS to make such a calculation here. Appellant is entitled to establish that it experienced an underrun; however, the FS in response has a right to establish that the quantity advertised and available were in line with what was available for removal. The FS is entitled to do that by using the most accurate comparison approach available. Here, the evidence overwhelmingly shows that for purposes of comparing volumes, the FS evidence is far more compelling. On the arguments as to past practice, appellant has failed to establish either a legal course of dealing or trade practice, so as to sustain a right to the conversion it seeks.

As a last legal point, appellant has also claimed mutual mistake. Mutual mistake requires both parties being mistaken as to the same fact. Throughout the contract, the FS makes clear that it is not warranting the estimate and that it recognizes potential risks. Accordingly, even if the estimate was in error, appellant could not establish a necessary element. Here we find the estimate to be valid, and as such find for the FS.

Decision

The appeal is **DENIED**.

HOWARD A. POLLACK
Board Judge

We concur:

STEPHEN M. DANIELS
Board Judge

CATHERINE B. HYATT
Board Judge