

Inspection.--Lewis and Clark (S) National Forest
Redington--May 8, 1908

SECTION I

Timber Sale

Big Blackfoot Milling Co.
May 24, 1907.

The complaint of the Big Blackfoot Milling Company to the effect that the Service scale of the timber cut during the first year of this contract exceeds their own total scale by approximately a million feet is not entitled to serious consideration for the following reasons:

1. The method of scaling employed by the Big Blackfoot Milling Co. was not in accordance with the terms of the contract, and since the officials of the Service performed their work as specified in the contract, there can be no comparative scale.

2. The Big Blackfoot Milling Co. through its officials, although given ample opportunity to present figures on which to base their contentions that the scale of the Government was unjust, have as yet failed to present any such figures, and, therefore, it is impossible even to know the number of pieces which have been scaled by them or the total scale of the year in board feet.

3. Even had all the timber culled as worthless by the company, been thrown cut by the Forest officers, its total

amount would fall far short of the claimed discrepancy of 1,000,000 feet B. M. The large discrepancy could, however, have resulted because of the difference in methods of scaling.

A complaint to the effect that an over scale had been put in against his company was made by the General Manager, Kenneth Ross, to Supervisor Bunker, on January 23, 1908, when Ross demanded a check scale. I attach a copy of a letter which will explain Bunker's attitude at that time. (Marked Exhibit A). Forest Assistant R. M. McMurray was detailed in March to make a check scale on the local men. I understand that, probably on account of his inexperience in this work, no reliable figures were obtained, although he submitted a general report which discussed the important phases of the work.

In August, 1907, at the time work started on this sale, Lumberman A. J. Norton was assigned to take charge of all of the work under the direction of Supervisor Bunker. The latter, not having had much practical experience in timber sale work, rightly turned over the conduct of the sale to Norton, who had had considerable practical training back of him, and who was well versed in the methods of the Service. That Norton thoroughly knows the timber business, no one who has been out with him can deny. That he is a careful and painstaking man, with the interests of the Service at heart, but also with the strongest kind of a desire to avoid anything that smacks of partiality, must also be admitted by those who have talked with him and seen his work. He is an economist in his theories, scales very

closely, and believes in a strict construction of a contract. He has avoided controversy with any of the officials of the company, and is quiet and unofficious in his manner. That he has devoted a great deal of time to instructing the men under him, in scaling work and all of the problems which arise in connection with a large sale of timber, is admitted by the men themselves, and shows in their work. They all speak very highly of Norton. That Norton has been in charge of the work in this sale, with authority to decide the ordinary questions which would arise for dispute, has evidently not been fully understood by the company, and in this Supervisor Bunker is to blame. It should have been indicated to the officials of the company that Norton was there on the work to check scale the regular scalers, and that provided the company had any specific grievance regarding the scale, the matter should have been taken up with Norton. In the case under discussion, of course, the grievance was not a specific one, but a general complaint, and even if taken to Norton, could have received but little consideration from him. He might have had the opportunity of pointing out to the company just where the large discrepancy could be accounted for.

The complaint of the company is based on the contention that a vast amount of unmerchantable timber has been scaled up by the Government officials, and it is to be inferred from this that the company wants to explain the discrepancy as arising only from this source. It is aimed in this report to show

that the total amount of worthless or debatable timber cut in this sale, as based on a careful measurement of 248 logs scattered at random throughout the sale area, could by no process of figuring amount to one million feet B. M. It is further proposed to show that a discrepancy in favor of the Government of 750,000 feet B. M. would exist as a result of the inferior and careless methods of scaling employed by the company officials.

On April 26, the day before I left for Seely Lake to make this investigation, I wrote Mr. Kenneth Ross, of the Big Blackfoot Milling Co., informing him that I should be glad to have him or his representative be at the Lake sometime during my visit. I also requested him to furnish the names of the men who scaled for the company, with their figures. A copy of this letter is attached and marked Exhibit B. On May 1, a Mr. Fox, the head scaler and timber cruiser for the Big Blackfoot Milling Co., met me at the headquarters camp at the foot of Seely Lake and we spent the morning together in the woods and at the sluice-way. Mr. Fox brought no figures with him, was unable to inform me as to the total number of pieces scaled by the company, or the total scale in board feet. He admitted that Harrison, the scaler first employed by the company, had not done satisfactory work and was let out after a three months' trial. He admitted that he had never seen a copy of the contract in this sale, and he simply met me on the ground to protest against the scaling of worthless timber. In this connection it may be said that Lumberman Norton and the scalers

working under him had scaled some comparatively few worthless logs, but it had all along been Norton's intention on a final inspection of the sale area to cull such worthless timber and to make proper allowance in the total year's scale. This the company had not understood, and as soon as I had explained it to Mr. Fox and assured him that it was not intended to scale anything considered unmerchantable or absolutely worthless under the contract, he did not see the use of further contention or argument. We examined a number of logs and the admission was made by him that a great deal of the timber culled by the company as worthless should clearly be taken under the terms of the contract. We then proceeded to the sluice-way and watched the men put through perhaps 1,000 logs, watching carefully all the time to ascertain what percentage of worthless timber might have been included in the drive. The conclusion was reached that the percentage was so small as to be immaterial.

On May 4, to further satisfy myself that the company's contentions concerning the large percentage of rotten timber were not founded on fact, I went over fully 1/3 of the sale area with Forest Guard Taylor, and scaled 248 logs which had been classed as culls by the company officials and had been left along the skid-roads and in the woods. Of these 248 logs, 124, or 50 per cent, contained so much sound timber that by no construction of the contract could they be classed as unmerchantable. 67 Sixty-seven of the logs contained from 25 per cent to 50 per cent sound timber, and the balance, or 57 logs, were classed as

absolute culls. I was informed by the Forest officials that I had picked up practically all of the bad logs left in the woods, but that in any event the number which the company had culled could not exceed three times the amount which I had scaled, and this I believe to be correct as judged from my own observations, since I went over at different times the whole area of the sale. Figuring that $1/3$ of the sale area was completely gone over, it will be seen that the number of logs left in the woods cannot reasonably exceed 750. In justice to the company, however, the number is placed at the extreme limit of 1,000 logs. Classing 50 per cent, or 500, of these as merchantable according to the scale made, there remained in the woods 500 logs which even figuring on merchantable pieces and assigning an average value of 7 logs to the thousand feet,--(which is the average run for the season's cut but low for the cull timber),--the total scale of the logs so left could not exceed 71,000 feet of timber. This result it should be remembered is arrived at after fully talking the matter of rotten timber over with the company's representative on the ground, and the classification of the timber as figured here was based on the verbal agreement which we both arrived at concerning merchantable timber under the contract. It is, therefore, very difficult to understand whereby any manipulation of figures a total difference of one million feet B.M. in the scale can possibly be obtained as a result alone of the scaling of all of the worthless timber cut in the sale.

It is at the present time too late to entertain the complaint of the company that a large number of worthless logs

were included in those hauled to the landings and broken into the lake. Since the logs had been in the water two weeks prior to my arrival there was no satisfactory chance to observe them except at the sluice-way, and as stated previously, by observation at this point did not justify in any sense the contention of the company, and in any event, if the logs had been so worthless as to have been classed as unmerchantable, they should have been left in the woods by the company, where they would have been subjected to a final inspection by the government scalers. Any logs shipped to the landing must necessarily have contained a sufficient amount of merchantable timber to have made their removal a profitable one.

The contract in this sale provides as follows:

"Clause 10. All timber should be scaled using the Scribner rule (Decimal C) except 8-foot hewn railroad ties.

Clause 11. The Maximum scaling length of all logs shall be 16 feet. Greater lengths shall be scaled as two or more logs. On logs 24 inches or less in diameter 2 inches additional length, and on logs over 24 inches in diameter, 3 inches additional length, shall be allowed for trimming. Logs over-running these specified lengths shall be scaled as if 2 feet longer.

Clause 15. All merchantable timber used for construction in connection with the logging shall be scaled and paid for at the stumpage rate fixed in the contract."

The government scalers under Norton's direction have according to the contract used the scale prescribed in a fair

manner so far as I can judge. No reliable check scale was possible, since the bulk of the timber was in the water, and the numbers badly obliterated on the majority of logs left in the woods. The officers have scaled logs over 16 feet in length as 2 logs and they have penalized the company for overrun of the trimming allowance, and have scaled up against the company such timber as has been put into bridges and camps and used for firewood. In other words, the contract covering the scaling work has been closely observed by the Government scalers. The scaling has been continuous and performed in a systematic manner, each log having been numbered in serial order on the end with black chalk.

The clauses of the contract above cited have not been observed by the company scalers, and for the very reason that their methods differed from that employed by the Government scalers, a very large discrepancy was bound to result. The company scalers, so far as I could learn, were not men of great experience in this kind of work. Two of them were clerks in the commissary at the headquarters camp, and as previously noted, one of them, Harrison, the first scaler, was careless in his work and was let off after a three months' trial. At no time were more than two scalers employed by the company on the entire job, and it is preposterous to suppose that this insufficient force could possibly keep up with the four to five men constantly scaling for the Government and do the same careful work. During the first three days of the scaling work, Harrison,

the company scaler, worked alongside of Taylor, one of the Government men. At the end of the third day he left, stating that he had to go to Bonner, 60 miles away, and asked the skidders to keep track of the number of logs that were hauled from the skidways to the landings. These skidders, according to Taylor's statement made verbally to me, soon tired of counting and after they had reached the 500 mark they dropped the count and so informed Taylor. Harrison did not return until two days after this, and it is probable that over 1,000 logs went from the skidways into the lake without actually having been seen by any scaler of the company. While as I say the probability is that 1,000 logs went into the lake,--for the sake of giving the company the full benefit of the doubt, I have placed this number of logs which escaped the notice of the company at the minimum figure of 500. These logs,--averaging them as 7 logs to the thousand feet B. M.,--would amount to 71,000 feet, which may be called discrepancy No. 1 in favor of the Government.

The company officials used the Scribner C log rule but did not scale logs of over 16 feet in length as two or more logs, the rule which they used reading for logs over 16 feet in length as one log, while, of course, the rule used by the Service does not. By a comparison of these rules it was noted that the Government in scaling an 18 or 20 foot medium-sized log as two logs would gain from 10 to 20 feet over the figures given to that same log by the company. The Forest officers estimated that in every 40 logs one log would exceed 16 feet in length,

and, therefore, in a cut of 106,600 logs 2,665 would be longer than 16 feet, and giving to each of these a minimum allowance of 10 board feet, the government would gain over the company 26,650 feet, which is discrepancy No. 2 in favor of the Government.

A very large number of logs cut by the company in this sale exceed beyond even a reasonable figure the length allowed for trimming. Lumberman Norton, in accordance with the instructions of Supervisor Bunker, during the first of April accurately measured the length of 450 logs of various diameters taken at random on the various landings. These figures, which I have seen, show that 54 per cent of the logs widely overran the trimming allowance. The full penalty of 2 feet additional length was not placed on all these logs, but to show how Norton managed the scale I will quote from a letter written by him on April 16 to Supervisor Bunker: "In the woods it is almost impossible to run saws at exact right angles with the axis of the tree, therefore, a log is liable to be longer on one side than on the other. When the variation was small I instructed scalers to make the scale somewhat larger to include the actual amount only; when very pronounced to make the 2 feet additional. Thus a full scale has been secured and in my judgment the spirit of the contract observed." It may be thus inferred that Norton construed the contract in this case in a liberal manner, but the smallest penalty which he could have possibly made would have been 10 board feet per piece. His measurements show 54 per cent

of the pieces measured overran the trimming allowance, but for the purpose of figuring and to be just to the company, this per cent is reduced to 50. Therefore, in the total season's cut 53,300 pieces were given the slightly higher scale of 10 feet because of the overrun of the trimming allowance, and this would amount to 533,000 feet B. M., which is discrepancy No. 3 in favor of the Government.

To the certain knowledge of the Forest officers, the company has not scaled up the timber used in the bridges and the logging roads, as should have been done under the contract. These pieces, of course, were included in the maximum scale, and it is estimated that 20,000 feet of timber were used for this purpose. This may be called discrepancy No. 4.

At camp No. 2, which ran for six months, the wood used for fuel was cut from saw timber which the Forest officers had scaled up in the woods adjacent to the camp during the first part of the cutting. It is conservatively estimated that a cord of wood was used each day in the cook house, the bunk house and the blacksmith shop, which in six months would total 180 cords, or approximately 100,000 feet of timber. No account of this timber was taken by the company officials and this may be called the 5th and last tangible discrepancy in favor of the Government.

Totaling the figures which I have given previously in the five instances in which it was possible to pin down discrepancies in the scale, a figure of 750,650 feet is arrived at, and

it must be remembered that in reaching this amount only minimum figures for allowances and penalties have been considered.

Besides these discrepancies, both Norton and Bunker stated to me that the commencement of the scaling on the part of the company was not coincident with that of the Government, and a large number of logs scaled at that time by the Forest officers were not included in the scale of the company. The amount is variously estimated at from two to five hundred thousand feet, but I am unwilling to take this into account since it is not possible to arrive at any definite figure.

Returning again to the question of worthless timber, it will be noted that Clause 3 of the contract reads as follows:

"All marked trees and all dead timber sound enough for lumber of any merchantable grade or for mining timber or ties shall be cut. Unmarked living trees which are cut; marked trees left uncut; timber wasted in tops, stumps, and partially sound logs, and dead timber standing or down, which is merchantable in the judgment of the Forest officer in charge, according to the terms of this contract and which is not removed from the National Forest after logging on that portion of the cutting area on which they are found is completed, shall be scaled and paid for at double the agreed contract price."

The decision as to what is merchantable timber is left entirely to the judgment of the local officer in charge. The contract does not specify any per cent of rot that shall make a log un-

unmerchantable, neither does it say that a log shall not be taken simply because it will not yield the company a handsome profit over the cost of handling it. The question is left to the local officer and could not well be fixed otherwise. Even if the contract provided that logs containing more than 50 per cent of rot should not be taken, the query would undoubtedly be raised by the company --"How does your scaler know that 50 per cent of that log is sound?"--and we should be no farther toward a settlement of the question than we are at the present time. Competent men and of considerable experience must be placed in charge of just such work as the Seely Lake sale, and the question of just what is merchantable timber must be left to these men. Norton's work has been careful and painstaking and with one exception he has been reasonable in his construction of the contract. He has, however, failed to display any liberality in the matter of scaling unsound timber and on this score the company has reason to complain. I scaled, as stated before, 248 logs, in the woods which had been culled by the company. On perhaps 50 per cent of these logs the scale number was clear enough to allow me to record it in my book. A comparison between my figures and those of Norton's men show the following results:

<u>Merchantable</u>	<u>Debatable</u>	<u>Cull</u>
Inspector - Scaler	Inspector - Scaler	Inspector - Scaler
52 pieces	43 pieces	24 pieces
5490 -- 7590 ft. B. M.	2170 -- 4930 ft.	490 -- 1760 ft.
Loss by inspection	Loss by inspection	Loss by inspection
30.5 per cent	127 per cent	260 per cent

While because of the wide divergence of results on some of the individual longs scaled it is apparent that the identification figures could not have been read aright on account of weathering, I am forced to the conclusion that the above comparison is of some value as showing Norton's tendency to go the extreme limit in his valuation of a class of timber on which the Service should show a liberal spirit. My measurements were made after very carefully sizing up each log, while the previous scaling of these logs was done by the men while the logs were in the skid-ways. Guard Taylor, who accompanied me, told me that I gave rotten logs a far lower valuation than Norton. It is a significant fact that although all of the logs scaled with a very few exceptions were defective in some way, my figures on the logs which were classed as merchantable, are nearer the figures of Norton's men than in the other two classes, and the percentage of difference in the cull class--which included only logs that were so worthless that no reasonable man would look at them a second time--is so large that the company would be fully justified in protesting against the scale on defective

timber. Of course, the proportion of this class of timber to the season's cut is small, but that fact would not all justify the Service in assessing a heavy valuation on the defective timber. It is concerning these logs that a difference of opinion is bound to arise, and, so far as I know, the tendency of the Service on other sales has been to display a liberal spirit in scaling badly defective timber. The company officials have not complained of the scale given on this timber, because they did not know what it was, but simply on the ground that they were compelled to take so much bad timber. This latter complaint is not justified, since according to the judgment of the company's representative, a large amount of the timber culled by the company can not be considered otherwise than merchantable in the full sense of the word, but a complaint on the ground that the defective timber was being scaled at an unreasonably high figures would certainly have been justified had the company officials had access to the individual log-scale record. They do not understand that this privilege is theirs if they care to look over the scale book in the presence of a Supervisor or Inspector. They should be so informed before the commencement of next year's operations.

It is recommended that the Big Blackfoot Milling Co. be informed that its complaint regarding an excessive scale can not be entertained, since the scaling by its officials was not done in accordance with the terms of the contract, and for this very reason, there was bound to be a minimum discrepancy of

750,000 feet of timber between its scale and that of the government officers whose scale conformed to the provisions of the contract. The company should be further informed that the entire amount of worthless timber cut in the sale could not account for over one-tenth of the excess claimed; that much timber has been culled as worthless which under the terms of the contract is clearly merchantable and must be taken or paid for at double the agreed contract price. The practical refusal of the company to present detailed figures to the investigating officer further makes a consideration of its case impossible. The company should be advised that the detailed scale books of the Service are open to its inspection and a complaint regarding a difference in scale will be investigated at any time after the Service is convinced that the company has closely followed the scaling procedure outlined in the contract, and when specific figures are given to substantiate specific charges of error. Otherwise a comparative scale is out of the question.

It is further recommended that Supervisor Bunker be informed of the conclusions reached in this investigation. He should be advised to see that the logs cut in the next year's operation are clearly marked with soft black crayon. While I am unwilling to make a definite statement in regard to the excessive scaling of rotten timber by Lumberman Norton, since not much reliability can be placed on the log figures which I obtained on account of their partial obliteration in many instances, I believe that too high a valuation was placed on this

class of timber, and the matter should be watched closely during the next season's work, to prevent any injustice to the company. If Norton remains in charge of the work on this sale, it would be distinctly advisable to have an inspector or another lumberman check scale the work of Norton's men, in the fall.

Norton's check scale on the work of the men under him differs sufficiently from their results in some instances, to justify a modification of the final figures submitted for this year's cutting. It was Supervisor Bunker's idea to have this done and the scheme is a good one, and will show the company that the Service intends to be entirely fair in the matter.

Of far more importance than the scaling controversy, is the question of the proper disposal of that portion of the tamarack trees cut in the sale, and claimed as unmerchantable by the company, but not so classed by the contract or by Lumberman Norton--I refer to the butt portion of the tree, which contains very heavy close-grained timber, and which is badly subject to shake. The contract referring to the stump height, reads as follows:

"Clause 7. Stumps shall be cut as low as possible and none higher than 18 inches, on the uphill side of the tree except in the case of the swell-butted larch, where in the discretion of the Forest officer stumps may be cut not higher than 30 inches to avoid swell and defects." The larch stumps have not, with but few exceptions, been cut higher than 30 inches, but after the tree has been felled, it has been the universal practice

of the sawyers to butt off from the first log a piece of timber varying from 3 to 8 feet in length. This has been done irrespective of whether the wood was shaky or not, and it has been done in the case of the smaller-sized trees (where the butt was not too heavy to float in the water) as well as in the case of the very large individuals, and a consequent large waste of valuable timber has resulted, which under the contract is properly chargeable, at double the agreed contract price.

In September, 1907, shortly after Norton took charge of the work on the sale, he wrote to Supervisor Bunker, stating that the question of just how much leeway the company should be allowed in the butting off of tamarack logs, was bound to arise, and asked for the latter's decision. He also asked in a personal letter the opinion of Lumberman E. S. Bruce on the subject. What the reply to this letter was, I do not know. Norton's letter to Bunker, dated September 22, 1907, reads in part as follows: "Being very much interested in camp building, the foreman has not paid quite so much attention to the cutting as he otherwise would have done, and some waste has necessarily resulted; but Mr. Ross, who was here a few days ago assures me of his desire to cooperate fully with the Department and I think we may expect fairly satisfactory work soon. They insist that the large tamarack butts are unmerchantable and are cutting off from four to ten feet to avoid the shake. I have cautioned them that all sound butts of any kind are liable to scale, and if left in the woods are chargeable at double price. I presume many of the tamarack butts are worthless for boards,

but I think some would make railroad ties; and all butts of other kinds with holes in the center and sound timber on the outside, should be scaled."

On October 6, 1907, Norton wrote again to Bunker, in part as follows: "I believe, however, that the big larch trees should not be butted or shortened, because much is thereby wasted which could be sawn into railroad ties and treated with creosote or other preparations or banded with iron to prevent splitting, thus saving a considerable per cent of valuable timber, which should not be altogether wasted." On October 10, 1907, Bunker wrote to Norton, in part as follows:

"In our conversation I believe it was understood that you were to have exclusive and sole charge of the local management of this sale. If this has not been clearly understood, let this letter be evidence of your authority to direct all of the local affairs in this sale in so far as they are within the province of the Forest Service.-----It is my desire to hamper you as little as possible with long-range suggestions.-----I note your remarks on the possible waste that may occur in connection with this sale. I quite agree with you that all sound marketable material should be scaled. With reference to the shaky butts of the larch, I am not quite certain as to what extent such material might be used for ties. If it has been your experience that larch which is too shaky for lumber will make good ties, it seems to me that such material should be scaled. My own experience in railroading

however, has been to the effect that it takes a fairly sound piece of timber to hold spikes against the vibration of rail traffic. All of these subjects, however, we will talk over as soon as I reach Seely Lake."

From this correspondence, the conclusion may be drawn that the seriousness of the matter was realized by both Bunker and Norton; that neither one cared to definitely decide on what should be done, but that Norton was, however, given the necessary authority to settle the question. The latter stated to me that at no time had he felt that the company would accept a final decision from him. Mr. Cox and Mr. Bunker visited the sale area in December, but I do not know what decision they came to at that time. It is apparent that the matter was left in abeyance, since it is still hanging fire.

Logs that are considerably affected by shake can not be considered merchantable, since boards, ties, or heavy construction timbers manufactured from them would not hang together unless banded with iron as Norton suggested, which, however, is not practicable under present methods of manufacture. Such logs or butts the company in reason can not be expected to take. Again, the heavy butts of the tamarack, even though free from shake, are not considered merchantable by the company, since they will sink in the water and can not be driven. But this is not true of all tamarack butts, since I saw a good many close-butted logs floating in the lake, and in Clearwater River. It is, of course, a difficult matter to determine, at the time

of cutting, just what what logs will float, but I believe the whole matter may be satisfactorily adjusted by allowing all butt logs of the tamaracks to lie in the woods or on skid-ways, to season until about the close of the sale, when they may be removed. By partially peeling the bark off these logs, the seasoning process may be hastened. The very large logs might be split up with black powder, in order to hasten the seasoning process and make them easier to handle. Some step must be taken to utilize the valuable timber previously wasted in the butts of this species, and I think it is up to the company to meet the Government half way in the matter and try the method suggested above. At any rate the wholesale waste which has been going on must be avoided in next year's operations, and the company should be notified that sound tamarack butts (not affected with shake) are considered merchantable under the contract, and if not taken from the area at the expiration of the contract will be scaled at double the stumpage price. The butted pieces lying at present in the woods are being scaled up by the Forest officers and Norton should be directed through Bunker, that he will be justified in placing the double rate on such pieces as are in his estimation sufficiently free from shake to place them in the merchantable class. In the majority of cases, the butt pieces have been cut unreasonably long and the company should be penalized. If this recommendation is not approved, I would make the further recommendation that the unmerchantable butt piece be left on the stump, which would necessitate a modification of Clause 7, as to height of stumps.

Fox, the company's representative, stated to me that this method would be preferred by the company, since it does away with one cut, and the sawyers would be perfectly willing to use spring boards to make the high cut necessary. If this method of cutting was adopted, it would keep the ground clear of the unsightly butt pieces. This second recommendation proposes a weak alternative, which should not be considered at all if the first is approved.

The sawyers of the company have been extremely careless in felling timber, and as a consequence, much damage has been done, to the trees of the remaining stand. This fact should be put squarely up to the company, with the statement that it is responsible under Clause 4 of the contract, for all such timber damaged, and that double scale will be assessed for the unmarked trees destroyed. Because of the additional thinning resulting from this source, Norton rightfully intends to offset it in next year's work, by marking less timber for cutting. In a few cases it was noted that large trees had been felled by the sawyers, who, however, going on the assumption that they were unsound, did not saw into them, thus making it necessary for the Forest officers to do extra work to find out the real condition of the logs. A repetition of this the company should be warned against in the future. Any trees that are felled should be sawn up into log lengths.

The condition of the sale area taken as a whole after the cutting is excellent, and the marking in but few isolated instances, has been very judiciously done. The brush piling is the best work of its kind that I have seen, and the low stumps are good to look at. Norton deserves commendation for the good results he has obtained in these branches of the work.

(Signed) PAUL G. REDINGTON,

Inspector.

(Approved)

(Signed) F. A. SILCOX,

Act. Chief Inspector.

May 11, 1908.