PROPOSED TIMBER SALE[1]

DRY FORK CLEAR CREEK

Application
Of

SUMPTER TIMBER & LUMBER COMPANY,

Whitman National Forest,

September, 1911.

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Whitman – Sales

Sumpter Timber & Lumber Co.

Sept. 14, 1911.

REPORT ON INSPECTION.

September, 1911

Foreword.

The tract under consideration was cruised and mapped by an intensive reconnaissance crew of students from eastern forest schools, who were employed on the Forest during the season of 1911. On tentative application, the area was inspected by Assistant District Forester Ames and Lumberman Andrews. The result obtained from volume computation of the reconnaissance crew's field data was not considered entirely satisfactory by the inspectors; therefore a hasty check of thirty-four acre-estimate-lines was made, with the result that it was decided that an increase in the volume of the yellow pine should be made of twelve per cent, and a reduction in volume of other species of fourteen per cent.

The estimate as given by section and forty-acre tracts is as taken from the reconnaissance crew's data, which is in conformity with District Instructions for Cruising East of the Cascade Mountains. Since these data are incomplete as to the amount of timber to be cut and the amount to be left, and since it is estimated on an examination of 27,000 acres of similarly forested land on the headwatershed Middle Fork John Day River that the amount in volume above 12 inches in diameter to be reserved amounts to approximately 18 per cent of the stand, a corresponding reduction has been made from the total estimate.

1. Description of Tract.

The area applied for embraces that part of Clear Creek drainage locally known as the Dry Fork Clear Creek. It is approximately eleven miles long north and south, and varies in width from one and one-half to three miles.

It comprises part of Section 34, T 11 S, R 35 E.; portions of 2, 3, 10, 11, 12, 14, 23, 26 and 35; all of Sections 13, 24 and 25, T 12 S, R 35 E, surveyed; portions of Sections 9, 16, 21, 22, 27 and 34, all Sections 28 and 23, T 12 S, R 35½ E, unsurveyed; and portions of Sections 2, 3, 4, and 11, T 13 S, R 35½ E, unsurveyed; a total area of about 9100 acres, of which there is approximately 4750 acres of merchantable timbered area.

It is bounded on the north by the Forest boundary; the northern part of the east side is the Forest boundary, the major portion of the east boundary being the divide between this drainage and Squan Creek, which divide is part of the western boundary of the Wm. Eccles and Company Sale of 12/22/10; on the south by the divide between the Middle Fork John Day and the South Fork of Burnt River, which is the boundary line of Baker and Grant Counties; on the west by the divide separating the drainage of Dry Fork and the Main Fork of Clear Creek.

2. Private Interests

The Wallowa Timber Company, of Warren, Pennsylvania, Mr. Edw. D. Wetmore, president, owns the NE ¼ and S ½ of SE ¼, and SE ¼ of SW ¼ of Section 12, T 12 S, R 35 E. This 160-acre tract is heavily timbered with yellow pine. Section 36, T 12 S, R 35 E, is school land, and contains but little merchantable timber. These areas lie in the drainage but are not covered in the sale area description. There is no record of any other private holdings within the sale area.

The logging road must pass through land owned outside the Forest by the Oregon Lumber Company, Wallowa Timber Company and Inland Timber Company. It is not believed that any handicap will be placed upon the purchaser concerning a right-of-way from these timber companies.

3. Old Cuttings.

Except for the cutting of a few trees and poles in several places throughout the tract for the purposes of sheep corral constructions, there are no old cuttings on or very near the area.

4. Topography

The area is drained by what is known locally as the Dry Fork of Clear Creek, flowing northwesterly, joining just inside the Forest boundary the Main Fork of Clear Creek, which in turn empties into the Middle Fork John Day River. As the name implies, the stream is dry during the summer months. The stream has for tributaries numerous small gulches, most of which drain the slope on the west. The slopes of this drainage area for the most part rise abruptly, although uniformity of steepness is not the rule. The surface of the extreme lower portion of the drainage is undulating, with short steep slopes to the creek, covered with medium to fine trap rock, with here and there small ledges and blowouts. Such surfaces and steep rocky slopes increase somewhat the logging costs over that on less rocky areas. If logging is done by steam, cable cost is high; if by animal power, depreciation is rapid; also the item of woods tools is increased somewhat. However, on this tract, taken as a whole, logging is not out of the ordinary for National Forest land in this locality. The central portion is composed of steep rocky slopes, while on the upper part the slopes are more moderate and less rocky. The timber lying around Frosty Meadows in Sections 25 and 26, is the most costly logging on the tract, by reason of the necessity of a logging road about two miles through a comparatively non-merchantable timber area.

5. Soil

Since a description of soil from surface indications means but little, if anything, in a silvical way, and since it is not the practice in examinations of this kind to investigate by test holes, only assumption can be used in describing soil composition.

On the lower one-third of the tract, the surface is, for the most part, covered more or less with medium to fine trap rock, with no humus, and here and there small ledges and blowouts. Taking the forest growth as a soil indicator, it appears that usually bed rock lies close to the surface, the thin layer of soil drying out quickly, therefore producing a relatively stunted tree growth. On the major portion of the balance of the tract, there is less surface rock, and ordinarily a strikingly better tree growth. The above applies in general to the yellow pine type of forest. In the stream and gulch bottoms the soil is apparently deep, fairly moist and fertile. In these situations western larch and lodgepole are the predominating species. Upon the north slopes, the soil is apparently deeper, moister and contains much more humus. These situations are conducible to the growth defined as the north slope type.

There are no areas in the whole tract suitable for agriculture.

6. Reproduction

Throughout the major portion of the yellow pine type reproduction is on the average fairly satisfactory. Usually upon the rocky openings and slopes unsatisfactory conditions prevail, although where such areas are light or sparsely timbered, reproduction in the several stages is fairly well established. It may be expected that destruction of the present stand of seedlings, saplings, and poles will be considerable upon the steep rocky slopes where logging will have to be done, in some instances, by rolling the logs.

Generally, the problem of securing satisfactory regeneration of yellow pine on areas on which this species predominates requires no very technical forest treatment. Upon areas where yellow pine is in admixture on north slope subtypes or on north slope types in general, the problem of transposition to other desirable species is the real forest problem.

7. Character and Condition of Forest.

Since technical description of forest composition in this locality under this caption has been treated somewhat in detail in a report on the Headwatershed Middle Fork John Day River (December 1910), lying adjacent on the east of the area under consideration, and since it is not very unlike either in character or condition, no lengthy discussion is deemed necessary.

There are three more or less distinct types of forest, viz: - yellow pine, north slope and lodgepole.

Yellow Pine Type.

On the lower part of the tract, comprising approximately all of the area in Section 34, T 11 S, R 35 E, included in the application (about 500 acres), the yellow pine is of medium to poor quality. The topography is undulating to flat-like in character. The surface is covered with medium to fine trap rock, with here and there small ledges and blowouts. From general observation it appears that bed-rock is close to the surface.

The trees are short and limby and many pin knotty. The quality as compared to the major portion of the balance of the tract is about as follows: 60 per cent and 80 per cent, respectively, of the trees will cut some clear. While there is in the northeast corner of this section a small area of the average quality of the balance of the tract, and there are small areas similar in character to Section 34 in other parts of the tract, this section embraces the largest area of the low quality timber.

Upon the major portion of the balance of the tract the quality of the pine averages well with other National Forest timber in the locality, the best development and heaviest stands occurring on the moderate, west and southwest slopes.

Repeated fires have scarred nearly all of the trees more or less.

Insect infestation is not more that normal.

North Slope Type.

This type comprises almost one-half of the sale area, much of it containing little or no merchantable timber. The species consist of Douglas fir, larch, lodgepole pine, and white fir, desirable in the order named.

The Douglas fir is short, limby, knotty and hard. This species occurs throughout the entire tract, the largest amount being present in this type of forest.

Larch represents the largest volume in board feet. The best development of this species occurs along the creek bottoms. In these situations the trees are large, many of them having clear lengths. Most of the large trees have badly swelled butts, which is evidence of seams and shakes. On the slopes, the larger portion of the trees are small or of the pole type. It appears that when a diameter growth of about 16 to 18 inches is reached, the trees die. The cause has not been investigated. Lumber from this species is heavy, hard and seamy.

There is a very small amount of lodgepole of merchantable size. Usually operators mix lumber from this species with yellow pine in marketing. The principal amount will be used for ties for logging road construction.

While there are a large number of white fir trees, they are extremely defective; probably not more than 10 per cent of the volume being merchantable, this amount being confined to the smaller trees. Practically all of the large trees are worthless, due to heart rot, except for a top cut in a few cases.

There occurs here and there on the higher elevations a few small groups of Engelmann spruce trees of no commercial importance.

Yellow pine grows sparingly in singles and small groups throughout this type, and is usually high in quality.

Lodgepole Pine Type.

This type of forest occurs upon the high plateaus and divides and to some extent along the creek bottoms. Scarcely any merchantable saw timber is found. In some instances on the high plateaus this species occurs in pure stands, the trees ranging in size from two to ten inches in diameter, and in density from two thousand to ten thousand in number per acres.

Fires have occurred from time to time in this type, giving the lodgepole ample opportunity to encroach upon the other species.

It is estimated that the tract contains the following volumes to be cut:

Yellow Pine,	44,129 M bd. ft.
Western Larch,	8,337 M bd. ft.
Douglas Fir,	5,581 M bd. ft.
White Fir,	750 M bd. ft.
Lodgepole Pine,	544 M bd. ft.
Total	59,341 M bd. ft.

For comment upon the estimate, reference is suggested to “Foreword”, page 1.

For more detail estimate reference is suggested to back of this report.

8. Accessibility

The outlet terminal, or the point where the timber will be sawed in the rough, will probably be located near the Sumpter Valley Railway about one mile south of Austin, Oregon. This is contingent, however, upon the outcome of the present agitation of the prospective purchasers of timber in the John Day and Burnt River watersheds, through the Chamber of Commerce of Baker, Oregon, for a reasonable freight rate and fair service on the Sumpter Valley Railway, and especially a tariff on logs that will permit operators who desire to do so to manufacture lumber at Baker, Oregon. If a satisfactory rate on logs can be obtained, the purchaser will build it's sawmill in connection with the finishing mill at Baker.

The railway company at present publishes but one rate, which rate applies only between Whitney and Baker, Oregon, a distance of forty-five miles, at the rate of $2.50 per M. feet B.M. The rate on lumber is the same as for logs.

It would be especially satisfactory to purchasers of timber accessible to the railway line, were it possible to obtain a reasonable rate on logs to Baker. This would permit the establishment of the manufacturing plant under one administrative unit where it should be. It would lower the cost of administration, eliminate the item of freight rate on supplies, and lower the cost of placing the green lumber on the yard for seasoning. The saving in the freight on the overrun, and the ready sale for mill refuse are items of importance. Also it is possible to obtain and hold a better crew of men in a city than in isolated districts.

As has been set out in previous reports, the Sumpter Valley Railway maintains tariffs and fares and gives a service inconsistent with other short-haul lines. To describe the dissatisfactory conditions that prevail, the promises of subordinate officials, and the subsequent cancellation of such promises by Mr. David Eccles, president of the road, and the chaos in general prevailing, would be tiresome and of no avail.

The Sumpter Valley Railway, narrow gauge, extends from Baker, Oregon, in a southwesterly direction, terminating at Prairie City, Oregon, a distance of 82 miles. The haul of the lumber or logs, under consideration, would be a distance of 62 miles. The present freight rate on lumber for this haul is seven cents per hundred pounds, which would make the rate per thousand feet board measure approximately $2.75.

Because of the much shorter time required for lumber to air-season at this point, the damage in transferring finished lumber, the fire hazard at Austin, and the transportation dispatch, the finishing mill will be located at Baker, Oregon.

From a point on the Sumpter Valley Railway, up Dry Fork Clear Creek, to the Forest boundary, it is 1.25 miles. From this point the timbered area extends southward for eleven miles. It is estimated that it will require approximately 12 miles of permanent way and about 5 ½ miles of spur to complete the entire operation. Construction of roads will not entail excessive costs. The gradients are light with the exception of the spurs, and grading is not difficult.

Estimated Cost of Railroad per Mile.

Permanent way,	$4,250.00
Spurs,	3,150.00

Initial Investment.

Band Mill at Austin,	$22,500
Planning Mill and Box Factory, Baker,	15,000
Railroad and Mill Sidings, Switches, etc.	13,600
1 30-ton Locomotive (geared),	6,500
6 Logging Trucks,	3,600
1 Donkey Engine and equipment,	3,150
1 Loading Engine,	1,000
2 Teams, Horses and equipment,	1,200
Cable,	600.
Woods Tools,	300.
Track Tools,	150.
Shop and Tools,	1,500.
Camps,	2,000.
	$71,100.
Working capital and freight,	22,000.
	93,100.

The above represents the investment necessary to place the project on a working basis.

Logging Plant

Investment First Year.	
Logging Equipment,	$32,600
Investment Second Year.	
2 miles main line,	8,500
1½ miles spur,	4,725
	$13,225
Investment Third Year.	
1½ miles main line, complete,	6,375
1½ miles main line, under rails,	2,550
	$ 8,925
Investment Fourth Year.	
1½ miles main line, complete,	$6,375
2 teams horses,	1,000
	$7,375
Investment Fifth Year.	
2 miles main line complete,	$8,500
Investment Sixth Year.	
1½ miles main line, complete,	$6,375
Investment Seventh Year.	
2 miles spur under rails,	$2,250
Total Permanent Investment,	$79,250
Total Residual Value,	$28,080
Total Expense,	$77,320
Cost per thousand feet B. M.,	$1.29

The estimate is bases on the assumption of road construction, with 35-pound rail and all equipment first class.

The larger portion of the tract could well be logged with horses, but since this method is not adapted to the entire area, it is believed that steam power is the most logical. However, it is necessary where close utilization is required, to use horses for handling very scattered timber and small logs.

Woods Operation

Felling and bucking,	$.65
Brush disposal,	.35
Yarding,	.90
Landings and loading,	.20
Cable and chokers,	.27
Tool charge,	.07
Administration,	.20
Incidental labor,	.12
Snag felling,	.03
Total	$2.79

The charges cover proper utilization and brush disposal in compliance with the terms of the agreement and the agreement is drawn with the view that it will be closely and practically administrated.

Summary

Railroad, Railroad Equipment, and Logging Equipment,	$1.29
Repairs and contingencies,	.25
Woods operation,	2.79
Transportation,	.25
Railroad maintenance,	.10
Tax and Employer's Liability,	.03
Cost of logs at mill,	$4.71
Logging costs,	4.71
Sawing in rough, f.o.b. mill,	2.10
Freight to Baker,	2.75
Finishing mill and selling,	2.90
	$12.46

Average selling price, yellow pine, f.o.b. mill,		$18.50
Logging and milling costs,	$12.46	
Stumpage,	2.25	14.71
Profit		$ 3.79

Stumpage Prices.

Since there is no log market in this locality, all manufacturers doing their own logging, stumpage values must be based upon the market value of the manufactured product. In the foregoing cost and value estimate, the selling value of yellow pine is based upon assumed normal market conditions. The market value and the market conditions are governed by the inexorable law of supply and demand. Attempting to define closely and fairly stumpage value upon a lumber market located from one thousand to three thousand miles away without being in reasonably close touch with the conditions prevailing there, is by no means a safe method. Manufactures of lumber have representatives, or salesmen, constantly covering the consuming territory and are in close touch with the market conditions. It is obvious that information of this kind cannot be secured from them, nor should it be asked of them to divulge their business secrets. The Government, in handling its forests, has a commodity to sell and it should know the value thereof. In sales of timber frequently involving from one hundred to two hundred thousand dollars, it is believed that first-hand data should be available. It seems advisable that the Government should secure such data by having a representative able to give and secure reliable information on the lumber industry, cover annually the consuming territory. These data would be valuable for the several northwest forestry districts.

In the case under consideration, the stumpage value of yellow pine has been placed at $2.25 for a cutting period of about three years, during which period a total maximum cut of all species of 25,000,000 feet; approximately 18,000,000 feet of yellow pine and 7,000,000 feet of other species, is provided for. While it is not anticipated that the applicant could or would care to handle a greater amount during this period, in all probability there will be another bidder or bidders who might, in case of being successful, be in a position to and would exceed this cut. The maximum cut is fixed for the sole purpose of regulating the stumpage value and not the annual cut. The actual cutting period up to the time of the first provisional rise in price, will approximate 2 ½ years, at which time the stumpage price should be increased 25 cents per M, with no conditions attached.

It appears that the proposition will not warrant a price of $2.50, while it is believed $2.25 is not all that it will bear. Therefore, since the lower end of the tract contains the poorest quality of timber and the logging cost of this area about equals that of the timber which requires a much greater investment in roads, and a longer haul, a beginning price of $2.25 will equalize the situation. The quality of the timber increases and the percentage of inferior species lessen as logging progresses. Provision is made for a definite increase of 25 cents three years from date of execution of contract, with optional increase of 50 cents and 75 cents. At the expiration of the time limit on the beginning price, the quality of the timber alone will warrant an increase in the price of 25 cents per. M.

It is assumed that a purchaser would begin operations on the nearest timber. The lower stumpage is meant to cover this timber, since the quality is lower and the percentage of inferior species greater than the upper part of the tract. However, should the purchaser elect to begin operations on any part of the tract, there should be no objection, since it is obvious that road construction directly through the lower portion of the tract, and a bond will be sufficient protection against loss to the Government.

The stumpage value of western larch, Douglas fir, white fir, and lodgepole is stated at $1.00. On the present market there is a considerable loss to the operator in handling these species. At the

time this stumpage rate was first made in this locality, it was possible for an operator to make a small profit, but since that time the Pacific coast Douglas fir market has become so stagnated and prices fallen so low that these manufacturers have invaded the territory with prices below that which the yellow pine operators can afford to sell their lumber from the inferior species. The cost of production and profit as set out in this report is for yellow pine and does not cover the loss entailed in handling the inferior species. It is assumed that the time is not far distant when these species may again be handled at a profit.

Time Limit.

The applicant does not desire to nor will he be equipped to ordinarily handle more than 8,000,000 feet annually. Whoever may be the successful bidder, there will need be made an allowance made of about six months for mill and road construction before operations can begin. Since the quantity of timber is estimated to be about 61,000,000 feet B. M., it is believed that eight years should be allowed for completion of contract.

9. Additional Information

Application has been made by the Sumpter Timber and Lumber Company, of Baker, Oregon. The officers of the company are Mr. Dobbins, president, Mr. J. J. Wade, vice-president and manager, and Mr. Hurley. Messrs. Lindsay and Bodinson of the Citizens National Bank of Baker, Oregon, are stockholders. None of the officials or stockholders appears to have a very wide experience in the lumber business. They have not as yet made a very close inspection of the proposition, seemingly being content to rely upon the Government's data. This company owns a circular sawmill now located at Sumpter, Oregon, together with a small amount of steel rails and some logging equipment. The sawmill is not now operated nor has it been for more than a year, owing to there being no timber accessible. The company also owns and operates a small planing mill and box factory at Baker. Both the sawmill and the finishing mill have to be considerably remodeled in order to handle the contract.

A bond of $8,000 is sufficient.

No special uses are required.

While both winter and summer logging and milling are common in this region, it is generally conceded that it is not advisable to count on more than nine or ten months' operation.

The labor problem does not present any difficulties. The laborers are mostly Americans, and operators who are disposed to pay a fair wage and are equipped to provide the comforts that intelligent woodsmen have good reason to expect, have no trouble in securing and holding the required number of men. The wages of unskilled laborers are from $2.50 to $3.00 per day.

10. Marking Timber and Handling Sale.

Since there is rather an exhaustive and excellent treatment of this subject on another sale on this Forest, and since the area under consideration will not require different treatment, repetition of rules already laid down is not considered necessary.

Yellow Pine Type.

The very best that can be done in laying down on paper rules for marking is a very general outline. It appears that there is a divergence of opinion even in outlining marking rules. While it is believed that the seed tree theory has but few advocates, still there is not that desirable close meeting of minds on what constitutes the most feasible method of forestal management. The insuring of a second crop is not a difficult matter. But the question of when and how, and how much latitude can be taken in reserving a storage of timber, to place an approximate time for the next cutting cycle is the desideratum. The purchaser's side of the question can not, of course, be lost sight of. It is believed that the best plan is to have in mind the leaving of a sufficient amount of trees to insure about one-half the volume of the present stand being harvested in sixty years. In applying this plan there should be kept in mind only working circles, blocks and large compartments, and distinctly not small areas or heavy groups of trees. With this idea firmly fixed in mind, the application may be left to the forester on the grounds. It would be superfluous to recite what to leave and what not to leave in order to attain the desired end.

North Slope Type. Yellow Pine in Mixture.

In this type no such plan as outlined under yellow pine type can be followed. In these situations yellow pine usually grows tall and has scanty crowns, ordinarily precluding retention for seed trees even, owing to their undesirability for this purpose and susceptibility to windthrow. Therefore ordinarily, only such trees should be left as have good seed crowns and those which are not liable to windfall. Where there are an insufficient number of trees left to insure reseeding, artificial seeding should be done in the roads over which logs have been skidded. The soil in these places having been well disturbed, makes an excellent seed bed. By this means a nucleus stand may be had. Douglas fir in these situations should be considered the next desirable species. Thrifty trees of this kind 20 inches in diameter and under should be left. Western larch in such situations, unless growing in gulches or moist places, does not ordinarily attain a diameter greater than 18 or 20 inches before dying. The cause of this is unknown, but probably due to moisture conditions. Since this condition prevails in general where there is a sufficient amount of other species to warrant logging, it would be well to mark larch to as low a diameter as is practical for an operator to handle. White fir is usually totally worthless except for a few of the young trees. All that it is practical to handle should be removed.

North Slope Type

This type of forest is, for the most part, un-merchantable. At the present time it cannot be expected that any great amount of this type can be exploited. Since by the time the next cutting cycle is here the predominant species in this and the preceding type will be of value sufficient to warrant extensive exploitation, it is not believed to be good policy to sacrifice this timber, especially when it must be handled at a very small profit or in most cases at a loss.

Lying contiguous to the area under consideration are sales, consummated, pending and under application, involving upwards of 220,000,000 feet, requiring an approximate daily output of 160,000. These, together with this sale, the daily output would be about 200,000 feet. A supervisor of marking and one assistant should be able to take care of it all. One scaler will be required for the sale under consideration.

A sketch in colors on a Proclamation Map is next attached, showing the areas under sale, pending, and under application, and one, Summit Creek, examined only. A sample application is part of this report.

Summary of Estimate

	Merchant-able Area	Unmerchant-able Area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole	Total
			Volume	Large poles	Small poles					
	Acres		M feet	Number		Volume M Feet				
Surveyed portion	2,352	2,901	24,710	21,000	11,600	5,334	3,154	367	43	33,808
*Un-surveyed portion	2,359	1,445	24,541	19,500	9,500	4,161	3,336	970	590	33,598
Totals	4,711	4,346	49,251	40,500	21,100	9,695	6,490	1,337	633	67,406

	Per cent	Average stand Merchantable area	Average stand total area
Yellow pine	73.1	10,454	5,437
Larch	14.3	2,057	1,070
Douglas fir	9.7	1,377	716
White fir Lodgepole pine	2.9	418	217
	100.	14,306	7,440

*The unsurveyed portion could not be computed by 40-acre tracts owing to an error of one of the field parties in running lines on a wrong variation. It is not believed that this affects the total stand very materially.

*Note ---Small poles and large poles refer to yellow pine only.

Township 11 South, Range 35 East, Section 3

40-acre tract	Merchant-able area	Unmerchant-able Area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole pine	Total
			Volume	Small Poles	Large Poles					
No.	Acres		feet	No.	No.	Volume Feet				
1	40	..	416,400	170	50	254,900	19,200	..	..	690,500
2	40	..	431,620	250	210	594,950	118,800	..	1,200	1,146,570
3	40	..	603,200	280	170	279,200	..	..	..	882,400
4	24	..	364,380	77	24	215,376	10,080	..	12,192	602,030
5	12	..	170,840	6	6	..	..	4,200	..	175,040
6	40	..	629,200	160	140	163,900	17,600	..	1,800	814,500
7	40	..	303,650	20	50	..	..	..	..	303,650
8	40	..	393,700	170	100	400,700	225,600	..	..	1,020,000
9	40	..	402,600	250	260	16,800	12,000	..	..	431,400
10	40	..	282,900	210	90	..	..	..	..	282,900
11	36	..	360,810	171	90	9,450	15,120	..	..	385,380
12	2	..	25,500	4	7	8,910	1,820	..	280	36,530
14	24	..	334,980	150	36	38,740	1,490	..	..	375,210
15	40	..	675,300	240	230	15,700	56,500	..	..	747,520
16	39	1	564,420	244	215	1,170	11,210	..	..	576,810
Totals	467	1	5,959,500	2,402	1,678	2,001,801	489,422	4,200	15,472	8,470,420

Township 12 South, Range 35 East, Section 3

40-acre tract No.	Merchant-able area	Unmerchant-able area	Yellow pine Volume	Yellow pine Small poles	Yellow pine Large poles	Larch	Douglas fir	White fir	Lodge pole pine	Total
	Acres		Feet	Number		Volume Feet				
1	40	..	415,700	..	160	81,100	174,200	..	..	671,000
2	39	1	608,600	..	120	42,200	75,000	..	..	725,800
3	20	..	281,650	130	170	5,050	45,000	..	..	331,700
6	15	1	224,550	..	11	18,637	32,025	..	..	275,212
7	40	..	653,800	..	200	67,200	98,400	..	..	819,400
8	32	8	377,600	..	30	54,600	144,900	..	..	577,100
9	40	..	328,500	600	120	102,900	134,200	..	..	565,600
10	28	..	242,960	200	170	79,030	70,910	..	..	392,900
15	2	..	23,545	68	5	31,500	2,290	..	..	57,335
16	32	4	528,960	1,152	80	56,800	89,600	8,240	..	683,600
Totals	288	14	3,685,865	2,150	1,066	539,017	866,525	8,240	..	5,099,647

Township 12 South, Range 35 East, Section 10

40-acre tract No.	Merchant-able area	Unmerchant-able area	Yellow pine Volume	Yellow pine Small poles	Yellow pine Large poles	Larch	Douglas fir	White fir	Lodgepole pine	Total
	Acres		Feet	Number		Volume Feet				
1	28	..	319,760	14	..	64,750	67,410	4,130	..	456,050
8	16	..	123,720	189	40	18,720	32,720	312	..	175,512
Totals	44	..	443,480	203	40	83,510	100,130	4,442	..	631,562

Township 12 South, Range 35 East, Section 2

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole Pine	Total
			Volume	Small Poles	Large Poles					
No.	Acres		Feet	Number		Volume Feet				
3	40	..	409,900	1,000	270	345,300	57,400	..	..	812,800
4	40	..	319,700	300	110	139,100	65,300	..	..	724,100
5	40	..	756,000	..	70	149,500	87,200	..	..	992,700
6	40	..	260,600	..	200	239,300	50,900	..	..	560,800
11	40	..	176,000	..	190	345,300	96,100	..	..	617,400
12	39	1	488,183	390	87	73,125	63,765	..	..	625,073
13	12	28	53,425	270	9	375,300	19,620	..	..	448,345
14	32	8	236,320	896	32	76,304	64,000	320	..	376,944
Totals	283	37	2,900,128	3,356	968	1,743,429	504,285	320	..	5,148,162

Township 12 south, Range 35 East, Section 11

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	28	12	616,700	880	250	10,600	25,300	..	3,600	656,200
2	32	8	1,069,410	280	150	191,400	37,400	13,990	10,500	1,322,700
3	28	12	274,820	30	30	81,315	87,900	20,850	600	465,485
4	20	20	165,300	90	20	31,000	32,000	11,720	..	240,020
5	8	32	22,600	..	20	60,400	34,800	16,400	..	134,200
6	6	34	39,700	500	330	..	..	5,600	..	45,300
7	36	4	130,100	400	320	29,400	45,400	6,100	600	211,600
8	28	12	162,100	150	70	76,500	18,400	..	2,400	259,400
9	14	16	173,900	150	110	7,100	15,800	..	900	197,700
10	10	30	..	77	7	..	..	1,260	..	1,260
11	3	37	Fire-killed Area							
12	12	16	40,320	..	..	5,740	33,040	..	..	79,100
13	..	8	Un-merchantable							
14	..	37	Un-merchantable							
15	..	40	Un-merchantable							
16	..	40	Un-merchantable							
Totals	225	358	2,694,959	2,557	1,307	493,455	330,040	75,920	18,600	3,612,965

Township 12 South, Range 35 East, Section 12

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				Total
4	24	..	78,810	216	88	3,780	2,280	..	..	84,870
5	40	..	187,800	50	90	106,600	55,100	..	..	349,500
6	32	..	132,240	320	160	..	49,200	..	..	181,440
7	20	..	5,900	50	25	..	1,550	..	..	7,450
8	7	..	..	..	..	..	..	..	..	..
10	40	..	126,200	200	100	31,800	40,600	15,100	..	213,700
11	40	..	265,000	400	300	16,400	30,200	6,100	..	317,700
12	32	8	296,600	450	250	..	1,500	..	..	298,100
13	12	28	56,600	300	300	15,700	..	..	..	72,300
Totals	247	36	1,149,150	1,986	1,313	174,280	180,430	21,200	..	1,525,060

Township 12 South, Range 35 East,
Section 14

North Slope Type

Unmerchantable area - 472 acres

Township 12 South, Range 35 East, Section 13

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume feet				
1	40	..	277,300	450	210	52,300	17,000	6,300	..	352,900
2	40	..	321,700	1,000	600	5,500	18,600	6,500	..	352,300
3	32	8	199,600	800	400	..	4,700	..	..	204,300
4	2	38	..	..	..	..	..	..	..	..
5	..	40	..	..	..	..	..	..	..	..
6	1	39	..	..	..	..	..	..	..	..
7	32	8	295,500	550	350	..	..	..	..	295,500
8	40	..	353,400	500	250	1,900	25,900	..	..	381,200
9	34	6	295,000	450	270	..	7,300	..	..	302,300
10	4	36	18,700	100	50	..	..	..	..	18,700
11	..	40	..	..	..	..	..	..	..	..
12	..	40	..	..	..	..	..	..	..	..
13	..	40	..	..	..	..	..	..	..	..
14	..	40	..	..	..	..	..	..	..	..
15	..	40	..	..	..	..	..	..	..	..
16	..	38	..	..	..	..	..	..	..	..
Totals	227	413	1,761,200	3,950	2,130	59,700	73,500	12,800	..	1,907,200

Township 12 South, Range 35 East, Section 23

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow Pine			Larch	Douglas fir	White fir	Lodge pole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	..	40	..	..	..	..	..	..	..	..
2	..	40	..	..	..	..	..	..	..	..
3	..	40	..	..	..	..	..	..	..	..
4	2	14	6,260	4	18	2,450	3,190	1,250	480	13,630
5	3	7	44,829	39	12	1,260	6,879	519	..	53,487
6	4	36	40,000	..	..	10,000	10,000	..	..	60,000
7	2	38	6,415	..	..	624	1,360	..	..	8,399
8	8	32	25,656	..	..	2,496	5,120	..	..	33,272
9	40	..	138,300	440	180	12,500	25,700	19,500	..	196,000
10	40	..	78,100	60	10	2,400	29,600	28,200	..	138,300
11	32	..	400,384	166	118	12,880	26,800	12,880	480	453,424
14	8	..	148,736	96	44	3,420	12,880	4,240	..	169,276
15	40	..	549,350	416	180	91,780	49,680	21,000	2,100	713,910
16	40	..	38,500	160	110	39,800	2,900	..	1,200	82,400
Totals	219	244	1,476,530	1,381	642	179,610	174,109	87,589	4,260	1,922,098

Township 12 South, Range 35 East, Section 24

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow Pine			Larch	Douglas fir	White Fir	Lodgepole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	..	40	..	..	..	..		..	..	..
2	..	40	..	..	..	..		..	..	..
3	..	40	..	..	..	..		..	..	..
4	..	40	..	..	..	..		..	..	..
5	..	40	..	..	..	..		..	..	..
6	..	40	..	..	..	..		..	..	..
7	..	40	..	..	..	..		..	..	..
8	..	40	..	..	..	..		..	..	..
9	22	18	8,800	..	..	20,000	22,600	..	..	51,400
10	22	18	96,800	50	50	..	5,900	3,000	..	105,700
11	30	10	..	..	..	..	..	..	..	..
12	36	4	404,900	700	350	17,700	3,900	7,400	..	433,900
13	38	2	449,500	600	700	18,900	60,700	13,900	..	543,000
14	4	36	7,800	..	..	5,100	18,000	11,000	..	41,900
15	2	38	..	..	..	..	..	..	..	..
16	..	40	..	..	..	..	..	..	..	..
Totals	154	486	967,800	1,350	1,100	61,700	111,100	35,300	..	1,175,900

Township 12 South, Range 35 East, Section 25

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	..	40	660,220	..	..	..	..	..	..	..
2	32	8	881,400	410	420	11,000	23,590	36,690	..	731,500
3	32	8	1,277,500	700	650	14,500	56,000	39,700	600	992,200
4	40	..	..	210	170	..	78,300	29,100	1,200	1,386,100
5	..	40	..	..	..	..	..	..	..	..
6	..	40	..	..	..	..	..	..	..	..
7	..	40	..	..	..	..	..	..	..	..
8	..	40	..	..	..	..	..	..	..	..
9	..	40	..	..	..	..	..	..	..	..
10	..	40	..	..	..	..	..	..	..	..
11	..	40	..	..	..	..	..	..	..	..
12	..	40	..	..	..	..	..	..	..	..
13	..	40	..	..	..	..	..	..	..	..
14	..	40	..	..	..	..	..	..	..	..
15	..	40	..	..	..	..	..	..	..	..
16	..	40	..	..	..	..	..	..	..	..
Totals	104	536	2,819,120	1,320	1,240	25,500	157,890	105,490	1,800	3,109,800

Township 12 South, Range 35 East, Section 26

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodgepole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	14	26	120,700	100	50	42,500	..	1,200	3,000	167,400
2	12	28	96,985	..	20	10,370	12,070	1,190	..	120,615
3	..	4	..	..	..	..	..	..	..	..
6	..	24	..	..	..	..	..	..	..	..
7	..	40	..	..	..	..	..	..	..	..
8	..	40	..	..	..	..	..	..	..	..
9	24	16	180,000	..	..	90,000	90,000	..	..	360,000
10	12	26	36,000	..	..	18,000	18,000	..	..	72,000
11	2	1	3,000	..	..	..	145	..	..	3,145
14	3	1	30,330	5	28	..	3,622	427	..	34,379
15	9	31	63,000	..	..	..	7,936	..	..	70,936
16	..	40	..	..	..	..	..	..	..	..
Totals	76	277	530,015	105	98	160,870	131,773	2,817	3,000	828,475

Township 12 South, Range 35 East, Section 35

40-acre tract	Merchant-able area	Unmerchant-able area	Yellow pine			Larch	Douglas fir	White fir	Lodge pole pine	Total
			Volume	Small poles	Large poles					
No.	Acres		Feet	Number		Volume Feet				
1	12	20	298,880	160	32	10,240	25,600	4,800	..	339,520
2	4	..	10,520	..	..	..	6,320	920	..	17,760
8	2	8	12,900	..	..	480	2,680	2,960	..	19,020
Totals	18	28	322,300	160	32	10,720	34,600	8,680	..	376,300

APPENDIX

Main Fork Clear Creek.

Lying contiguous to the sale area on the west is the Main Fork Clear Creek, draining about 5,500 acres, and containing approximately a total of 50 million feet B. M., or an amount to be cut of 40 million feet. The area is a distinct logging unit, although the outlet is the same as for the Dry Fork. Combined with the Dry Fork unit, the volume was considered, both by the Government and the applicant, more than advisable to cover by one sale.

The quality of the timber and the percentages of species conforms closely to the area covered by the application.

The topography and surface of the area and railroad construction are of a nature that will make logging more costly than that on the Dry Fork. Because of these conditions, it is believed that the present stumpage value is 50 cents per M. below that covered in the application. There is no fear but that a sale can be made of the timber a few years hence, as the area is tributary to an outlet terminal, on the Sumpter Valley Railway, of considerable importance.

W. T. Andrews

Lumberman.