S D–6,

Timber surveys – Wallowa,

Swamp Creek. March 6, 1918

The Forester,

Washington, D.C.

Dear Sir:

Under separate cover there is being sent to you a set of the type maps and estimate sheets of Ts. 2, 3, and 4 N., R. 45 E., covering the Swamp Creek timber survey project, Wallowa National Forest, and there is enclosed the descriptive and cost reports of the project by the party chief, Forest Examiner A. A. Griffin. It is considered that this is a very satisfactory and useful piece of timber surveys.

The cost ran somewhat higher than on the Powder River project, sent you recently, but the reasons for this were unavoidable, as the cost report indicates.

The East Oregon Lumber Co. has lately expressed a desire to get into Swamp Creek with their operations this coming summer, and have urged its early appraisal. It is our hope now to make the appraisal in the next six weeks.

Very truly yours,

GEO. H. CECIL, District Forester,
By C. J. Buck Acting

Enclosures.

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Timber Surveys – Wallowa

Portland, Oregon,
February 25, 1918

Descriptive Report

Of the

SWAMP CREEK TIMBER SURVEY PROJECT

Wallowa National Forest

1917

Alfred A. Griffin,
Chief of Party.

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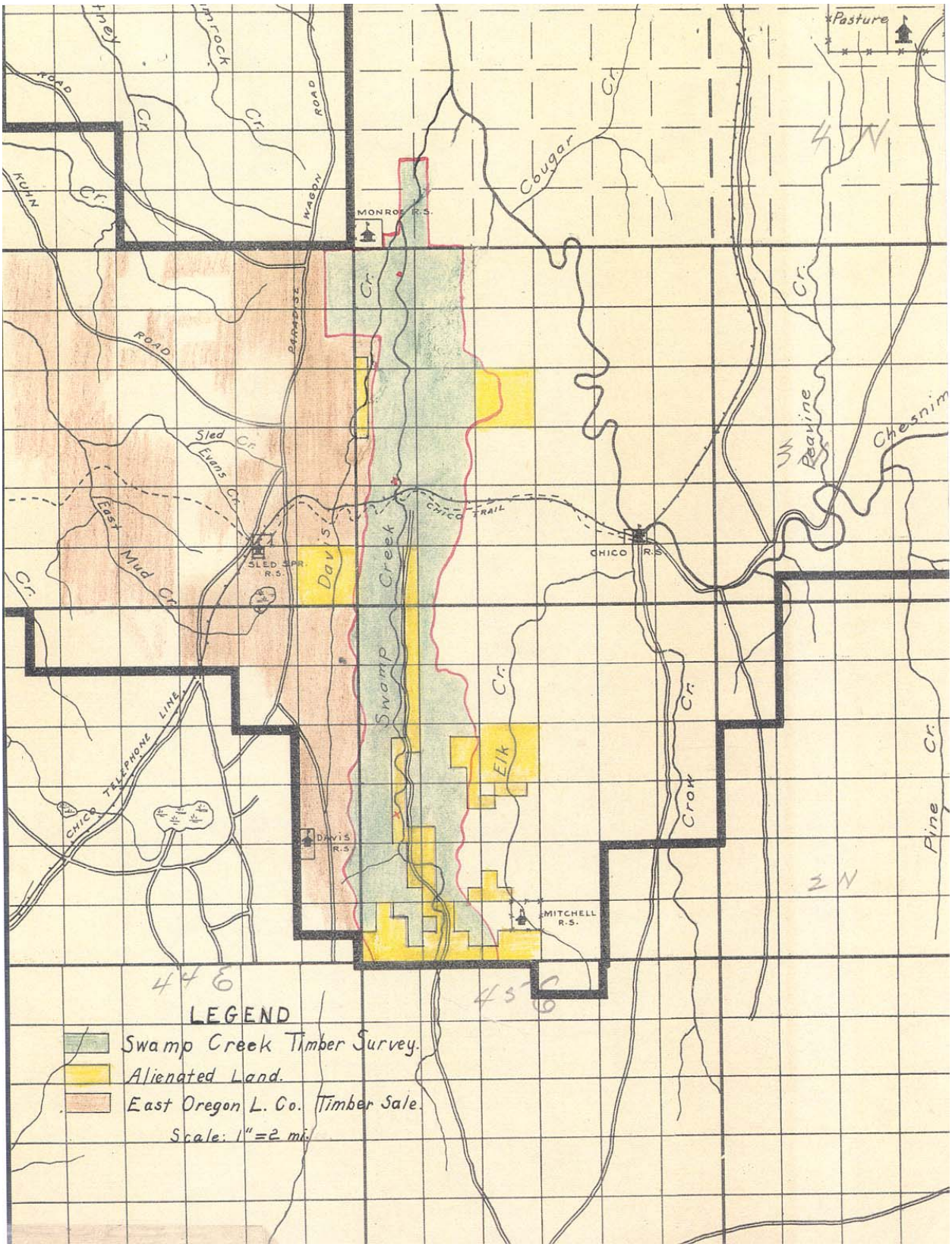

DESCRIPTIVE REPORT

I. INTRODUCTION

The Swamp Creek Timber Survey Project results from the interest taken in the area by the Eastern Oregon Lumber Co., purchaser of the timber on the adjoining area to the west. The crew commenced work May 22, and finished on June 26. Seven men were on the job practically the entire period: Field Assistants E. H. Chapman, H. W. Elofson, C. W. Boyce, S. R. Augspurger, Earl Mason, and W. C. Hughes, Forest Assistant N. L. Cary, beside W. M. Griffith, the cook, and G. A. Griffin, Chief of Party.

The project lies in a trough 2 miles by 14 miles in extent on the north end of the Wallowa horseshoe, from 12 to 25 miles due north of Enterprise, Oregon. The elevation varies from 4,700 feet on the side of Elk Mountain, on the south boundary, to 2,850 on lower Swamp Creek. The largest flat is the Swamp Creek bottom, less than 400 yards across. Parts of Townships 2 and 3 N, Ranges 44 and 45 E, are included, together with the southwest corner of unsurveyed T. 4 N., R. 45 E. This includes all of the good to fair National Forest timber on Swamp Creek, and all of the unsold timber on Davis Creek, its chief tributary. The Government land included amounts to 12,444 acres, with 71,636 M. ft. B.M. of timber, which is nearly all yellow pine.

The estimates were computed by Forest Examiner G. A. Bright of the District Office, and the tracings made by Forest Assistant C. J. Conover. District Ranger Carpenter added to the efficiency of the field work.

II. STATUS AND OWNERSHIP

In this project most of the alienated land lies at the edge of the Forest or in a string of forties along Swamp Creek. It, of course, forms an important factor in any scheme of logging, and options, or title, to a considerable part of it have already been obtained by the East Oregon Lumber Co. About 1,160 acres were originally homesteads, and 1,255 timber claims. So far as is known, there are no pending claims or other private interests, excepting those of the cattle association which has built a cabin and drift fence on the lower creek.

There are old roads reaching across Swamp Creek and nine miles to the north, until it becomes but a poor trail. Most of the creek crossings are in bad condition. The Chico trail and telephone line also extend across the lower valley or canyon. A stock driveway crosses the upper valley.

Monroe Ranger Station, near the north end of the project, is unused, but has some old improvements. There are no ranches or irrigation ditches.

III. SILVICAL DESCRIPTION

Conditions on the upper, or south part of the project are typical of many Blue Mountain forest areas with medium slopes and good soil, excepting on the open hilltops. The proportion of yellow pine is quite large. In the lower valley the slopes are rocky, as well as steep, and so dry that the northerly slopes contain much more timber than do those facing toward the south.

Yellow Pine Type

The mature yellow pine type includes 6,008 acres, practically half of the project. The trees are of four to seven–log height, with one and two clear logs in the larger trees. The timber on the bottomland and lower slopes is much better than that near the tops of the ridges, or in the open groups on the north end. There is twice the percentage of clear and shop logs in T. 2 N. than there is in T. 3 N. Deductions for defect and breakage in normal trees average 11% for yellow pine and 10% for Douglas fir.

The only yellow pine area which can be included in the immature types is that along the Davis Creek divide included in the timber sale there. On this area of about 44 acres, the reproduction and seed trees appear to be healthy and strong. The seedlings both here and under the mature timber are about 55% yellow pine and 35% Douglas fir. The remaining 10% is principally western larch, with a little lodgepole and white fir.

Plate 1

Looking northwest down lower Swamp Creek; timber in the bottom and on the farther slopes of the side ridges.

June 21, 1917

Plate 2

Looking southeast on Lower Swamp Creek. Timber lies in the bottom and on the northerly slopes.
(Photo by Boyce)

Plate 3

Typical yellow pine type with some lodgepole pine, in Sec. 19, T. 2 S., R.45 E.
(Photo by Boyce)

Table 1

The Number of Trees per Acre by Diameter Classes

in

Representative Western Yellow Pine Type

(Averaged from three selected four–acre tally sheets)

D.B.H. Inches	W.Y.P.	D.F.	W.L.
4–7	7	3	1
8–11	4	4	1
12	2	1	–
14	1	1	–
16	1	1	–
18	1	–	1
20	2	1	–
22	1	–	–
24	2	–	–
26	1	1	–
28	1	–	–
30	–	–	–
32	1	–	–
Total trees	24	12	3
Vol. Ft. b.m.	5,775	1,390	310

Under the mature timber an average of 19% of the area is fully stocked with seedlings (on the basis of 700 per acre between one and six feet in height); 20% is two–thirds stocked; 28% is one–third stocked, and 33% has less than that proportion of seedlings. The reproduction under the old stand is almost twice as abundant on the south end of the project as on the north end.

Larch–Fir Type

Practically the entire 995 acres of larch–Douglas fir type on this project lies in the narrow strips along Swamp Creek and its branches. There is not a single forty of solid larch–fir. Larch in large sizes is the chief characteristic of the south end, and Douglas fir on the north end. There are patches of lodgepole throughout the south half.

Reproduction is good of the three species, but principally Douglas fir. One some of the north slopes of the canyon sides there are dense patches of Douglas fir saplings and seedlings under scattered old growth of yellow pine, and spreading into the grassland.

Grassland

The last of the three types and the next most important to yellow pine is grassland, with an area of 5,397 acres. Bunch grass, lupine, arnica, pine grass, sedges, and weeds are the important varieties of cover.

Damage

Fires have burned over all of this area repeatedly at varying intervals, resulting in a large amount of accumulated damage in fire–scarred butts, fungus and insect infestation. The burns are old except for a small 1916 fire on Davis Creek near its mouth. The repeated damage, however, is so great that over 25% of the trees show signs of firescar. No estimate was made of the trees fallen by fire. As a result of the protection given in recent years, underbrush and reproduction are coming in more freely than was formerly the case.

Insect infestations in yellow pine are quite common, but small and mostly old. The larger lodgepole was killed out several years ago, but most of the saplings are still alive.

Fungus damage is less than normal, due to the small proportion of white fir. Yellow pine too is generally quite sound. Most of the defective trees are found on the ridges or upper slopes.

Mistletoe is a serious danger to the yellow pine reproduction, to larch, and to Douglas fir, and needs painstaking attention in any future timber sale marking.

Cuttings are practically confined to private land except on the adjoining timber sale previously mentioned.

IV. LOGGING DATA

Undergrowth

Undergrowth is generally light. There are small areas of dense reproduction, but usually without much timber. There is the usual litter and reproduction in the larch–fir type, but the area is comparatively small.

Windfall

Windfall is moderate except in the small areas of dead lodgepole. In the timber sale marking windfall must be guarded against, especially on the creek bottom.

Rock Outcrops

These occur on only the higher bare points and on small areas only. Loose rocks are common. There is practically no slide rock, except on the high bare slopes to the north.

Railroad Locations

Railroad locations will probably be confined to the creek bottom, with one or two short spurs up the largest draws. The grade can be brought from Davis Creek across a low divide just south of the Forest boundary and into Swamp Creek by either switchbacks or incline. Construction for the first six and eight miles down the creek will require only light grading and short bridges;

beyond there will be more bridges and some rock work. The soil is a fine black silt which does not make a good track ballast.

V. RECOMMENDATIONS FOR MANAGEMENT

Local Needs

Local needs for timber have not developed to an extent which will require the reservation of free use areas. Recreational use is also nearly nothing, and no great increase can be anticipated for many years.

Timber Sale Policy

Timber sale policy requires that all of the timber on Swamp Creek for some distance below Davis Creek and up Davis Creek to the boundary of the present timber sale be included in one block. This will provide for the sale of all timber which should naturally be logged up Swamp Creek. Some small bodies, left in the lower canyon, will be fairly close to the Chesnimnus when that stream is logged. In addition, the NW ¼ NW ¼ of Sec. 21, sloping to Elk Creek on the east, can be included when the alienated lands which surround it are to be logged. Other Government stumpage on Elk Creek can be held in a separate block or with the timber on upper Chesnimnus Creek.

Marking Rules

The standard marking rules for District 6, East Side, can be applied here. Because of the reproduction and poles already on the ground, a large proportion of the present stand can be marked, especially on the bottoms, where loose soil increases the danger of windthrow. All conky, fire–scarred, and mistletoe infected trees should be cut if the logging railroad can be converted into a common carrier, or if the Wallowa valley cordwood market can be reached in some other way.

Brush Disposal

Best results will require a combination of piling and burning on moist sites, in fire lines, and in places of danger, and lopping and scattering on the dry ridges and park openings to increase soil moisture and humus. This will add to the stand of both forage plants and reproduction.

Grazing

The grazing on this area is of considerable value, as the range is used for both early and late range by a considerable number of cattle. Sheep are no longer ranged on this area. Only one spring, and no salting grounds have yet been improved, though a good cabin has been built for the use of a temporary range rider.

Watershed Protection

The forest serves to prevent erosion and to conserve water, which is available and partially used for irrigation. Planting up the open spaces would not be advised, however, because of their present grazing value and the difficulty in their forestation. Gradual natural seeding is taking place at a moderate rate on these open spaces.

VI. STATISTICAL SUMMARY

In computing the timber estimates of this project, the Blue Mountain Volume Table was used for yellow pine. For other species special height class tables were constructed from height measurements and curves made during the progress of the work and applied to the existing volume tables for the District 6 East Side species.

The following tabulations summarize the estimates, by sections and townships, of the timber and number of snags. The areas of the different types are given by townships. Logging chances can be made up as desired from the tables of section estimates.

Table 2

Stand of Timber by Sections and Species, M ft. b.m.
(National Forest Land)

T. 2 N., R. 45 E.

No. of Sec.	Yellow Pine	Douglas fir	Western Larch	White Fir	Lodgepole pine	Engelmann Spruce	Total M. Ft. All species
5	1,242	123	–	–	6	–	1,371
6	2,505	504	284	–	1	–	3,294
7	3,958	673	319	–	–	–	4,950
8	3,636	359	173	–	–	–	4,168
17	2,242	216	17	–	–	–	2,475
18	2,234	292	303	–	3	–	2,832
19	3,718	472	441	62	–	8	4,701
20	3,328	382	177	–	–	–	3,887
29	1,825	77	142	–	3	–	2,047
30	3,166	681	447	10	3	–	4,307
31	1,390	461	120	5	–	–	1,976
32	1,171	334	45	8	–	–	1,558
33	0	0	0	0	–	–	0
Totals	30,415	4,574	2,468	85	16	8	37,566

Table 3

Stand of Timber by Sections and Species, M ft. b.m.

T. 3 N., R. 45 E.

No. of Section	Yellow Pine	Douglas Fir	Western Larch	White Fir	Lodgepole Pine	Total M ft. All species
5	522	161	–	–	–	683
6	1,613	499	410	875	–	3,397
7	1,590	364	335	711	–	3,000
8	676	116	–	–	–	792
17	1,275	168	142	–	–	1,585
18	1,821	941	478	–	–	3,240
19	1,578	460	190	–	–	2,228
20	1,478	178	60	–	–	1,716
29	1,427	129	67	–	–	1,623
30	3,649	669	325	–	–	4,643
31	2,627	456	340	–	–	3,423
32	1,119	171	32	–	–	1,322
Totals	19,375	4,312	2,379	1,586	–	27,652

Table 4

Stand of Timber by Sections and Species, M ft. b.m.

T. 4 N., R. 45 E.

No. of Section	Yellow Pine	Douglas Fir	Western Larch	White Fir	Lodgepole Pine	Total M ft. All species
29	6	42	–	–	–	48
30	369	341	10	–	–	720
31	494	655	80	2	–	1,231
32	461	136	–	–	–	597
Totals	1,330	1,174	90	2	–	2,596

Table 5

Stand of Timber by Sections and Species, M ft. b.m.
(National Forest Land)

T. 2 N., R. 44 E.

No. of Section	Yellow Pine	Douglas Fir	Western Larch	White Fir	Lodgepole Pine	Total M ft. All species
1	185	13	8	–	–	206
12	116	33	1	–	–	150
13	132	18	19	–	–	169
24	674	109	14	–	6	803
25	617	45	80	359	–	1,101
36	212	17	–	–	–	229
Totals	1,936	235	122	359	6	2,658

Table 6

Stand of Timber by Sections and Species, M ft. b.m.
(National Forest Land)

T. 3 N., R. 44 E.

No. of Section	Yellow Pine	Douglas Fir	Western Larch	White Fir	Lodgepole Pine	Total M ft. All species
1	542	52	19	–	–	613
12	428	111	12	–	–	551
Totals	970	163	31	–	–	1,164

Table 7

Stand of Timber by Townships and Species, M ft. b.m.
(National Forest Land)

Project Summary

T & R	Yellow Pine	Douglas Fir	Western Larch	White Fir	Lodgepole Pine	Engelmann Spruce	Total M ft. All Species
2–44	1,396	235	122	359	6	–	2,658
2–45	30,415	4,574	2,468	85	16	8	37,566
3–44	970	163	31	–	–	–	1,164
3–45	19,375	4,312	2,379	1,586	–	–	27,652
4–45	1,330	1,174	90	2	–	–	2,596
Totals	54,026	10,458	5,090	2,032	22	8	71,636

Table 8

Summary of Types by Townships
Swamp Creek
Timber Survey Project

Area in Acres

T&R	Y.P. Mature	Y.P. Poles	Larch D. Fir	Grassland	Total N.F. Land	Alienated Land
2 N, 44 E	198	20	11	68	297	0
2 – 45	3,064	2	445	1,294	4,805	2,090
3 – 44	154	22	–	318	494	0
3 – 45	2,455	–	390	3,483	6,328	325
4 – 45	137	–	149	234	520	0
Total	6,008	44	995	5,397	12,444	2,415

Table 9

No. of snags over 16 ft. tall per section

Sec.	16–20"	21–30"	Over 30"	Total	16–20"	21–30"	Over 30"	Total
		T 2 N, R 45 E				T 3 N, R 45 E		
5	60	50	–	110	50	30	10	90
6	160	100	70	330	180	120	120	420
7	140	280	80	500	190	150	50	390
8	120	200	50	370	40	10	–	50
17	40	120	80	240	40	50	60	150
18	190	110	90	390	100	180	70	350
19	230	240	60	530	190	170	130	490
20	50	130	–	180	100	20	40	160
29	160	100	30	290	40	50	50	140
30	280	240	70	590	320	100	60	480
31	170	170	40	380	100	160	40	300
32	30	30	–	60	10	60	10	80
Total	1,630	1,770	570	3,970	1,360	1,100	640	3,100
Av.	136	148	47	331	114	92	53	259

Sec.	16–20"	21–30"	Over 30"	Total	Sec.	16–20"	21–30"	Over 30"	Total
	T 3 N, R 44 E					T 4 N, R 45 E			
1	30	40	–	70	29	30	50	–	80
12	–	–	–	–	30	90	60	–	150
					31	70	60	20	150
					32	10	10	–	20
Totals	30	40		70		200	180	20	400

VII. CONCLUSION

The Swamp Creek basin contains 12,444 acres of Government land, half of which is covered with mature yellow pine of very good quality. The bottomland is practically all alienated. On the north half the slopes are steep and remarkable for the contrast in timber cover between the northerly and southerly exposures.

The timber on the block can be sold in one unit without special reservations or regulations beyond those customary in the timber sales of eastern Oregon.

/s/ Alfred A. Griffin

Forest Examiner

S
Timber surveys
Wallowa
Swamp Creek. February 1, 1918

COST REPORT

SWAMP CREEK TIMBER SURVEY

Wallowa National Forest

1917

Alfred A. Griffin

Chief of Party

Summarized Costs

of the

Swamp Creek Timber Survey Project

I. Statement of Conditions

The project lies in a region sufficiently developed so that both of the main camps could be reached by wagon, and the one side camp by a good trail. Supplies were partly brought in from Enterprise, but mainly purchased from the Eastern Oregon Lumber Co. store on the timber sale adjoining this area.

A little over one–half of the area is covered with yellow pine timber, while most of the remainder is steep rocky grassland. The north end of the project especially is so open that much if it was cruised on a 5% basis. The party consisted of six field assistants, one of whom had done reconnaissance work before, and two yearlong men. The transfer to other work of two or three of the most experienced men in the crew was necessary before the compilation was complete.

Acreage and Mileage

1. Government land mapped	12,444 acres
Included alienated land	2,415 acres
Total area	12,859 acres
2. Area covered by 10% cruise	8,357 acres
Area covered by 5% cruise	6,202 acres
Area covered less intensively	300 acres
3. Miles of strip cruising	132 miles
Miles of control, chiefly section line retracements by compass, topographic tape, and double abney method	26.5 miles

II. Field Expenses

1. Subsistence supplies	$216.37
2. Cooks' wages	92.50
3. Hauling supplies, moving camp, etc., including $10 in time contributed by District Ranger	19.90
4. Travel expenses	79.67
5. Equipment and supplies	59.49
Total expenses	$467.93
6. Average daily expense per man	$1.727

III. Field Work Costs

1. Average size of crew (excepting the cook) (271 man days in 35 crew days)	7.8 men
2. Average individual monthly salary	$74.77

Control work	Man days		43
	Salary	$102.83	
	Expense prorated	74.50	
	Total	$177.33	
Strip cruising	Man days		112
	Salary	$221.67	
	Expenses prorated	193.60	
	Total	$415.27	
Camp computing & map compilation	Man days		23
	Salary	$ 68.25	
	Expenses prorated	39.80	
	Total	$108.05	
Supervision by Chief of Party	Man days		17
	Salary	$ 61.32	
	Expenses prorated	29.45	
	Total	$ 90.77	
Travel, establishing and moving camp	Man days		30
	Salary	$ 74.14	
	Expenses prorated	51.90	
	Total	$126.04	
Sundays, holidays and leave	Man days		46
	Salary	$ 93.67	
	Expenses prorated	78.68	
	Total	$172.35	
Total cost of field work	Man days		271
	Salary	$652.33	
	Expenses prorated	467.93	
	Total	$1,120.26	

IV. Office Work

The principal cost of the compilation of the completed maps and cruise estimates lies in the time of the technical men and two computing clerks. Other expenses are included to cover the total expenses for three sets of estimate sheets, working plan maps, descriptive and cost reports. Travel expenses are included with the field work.

Distribution

	Mapping	Computation	Reports	Total
Man days	31	41	14	86
Salaries	$93.67	$138.44	$50.55	$282.66
Blue pr. & Typwr.	7.00	7.00	8.00	22.00
Total cost	$100.67	$145.44	$58.55	$304.66

V. Cost of the Project

		Cost per acre
Field work	$1,120.26	$0.075
Office work	304.66	.021
Total	$1,424.92	$ .096

Costs per Acre and per M ft. B.M.

14,859 acres gross area	$0.096 per acre
12,444 acres net (Government)	0.114 per acre
71,636 M ft. B.M. estimated	0.020 per M

Alfred A. Griffin
Forest Examiner