R 23 REDONDA

R 23

REDONDA FOREST

E. W. BASSETT

1927

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B319A

B.C. FOREST SERVICE

VICTORIA, B.C.

FOREST SURVEYS

SURVEY AND PRELIMINARY PLAN OF MANAGEMENT

of

WEST REDONDA IS. PROVINCIAL FOREST

and

EAST REDONDA ISLAND

(Proposed Provincial Forest)

Vancouver Forest District.

by

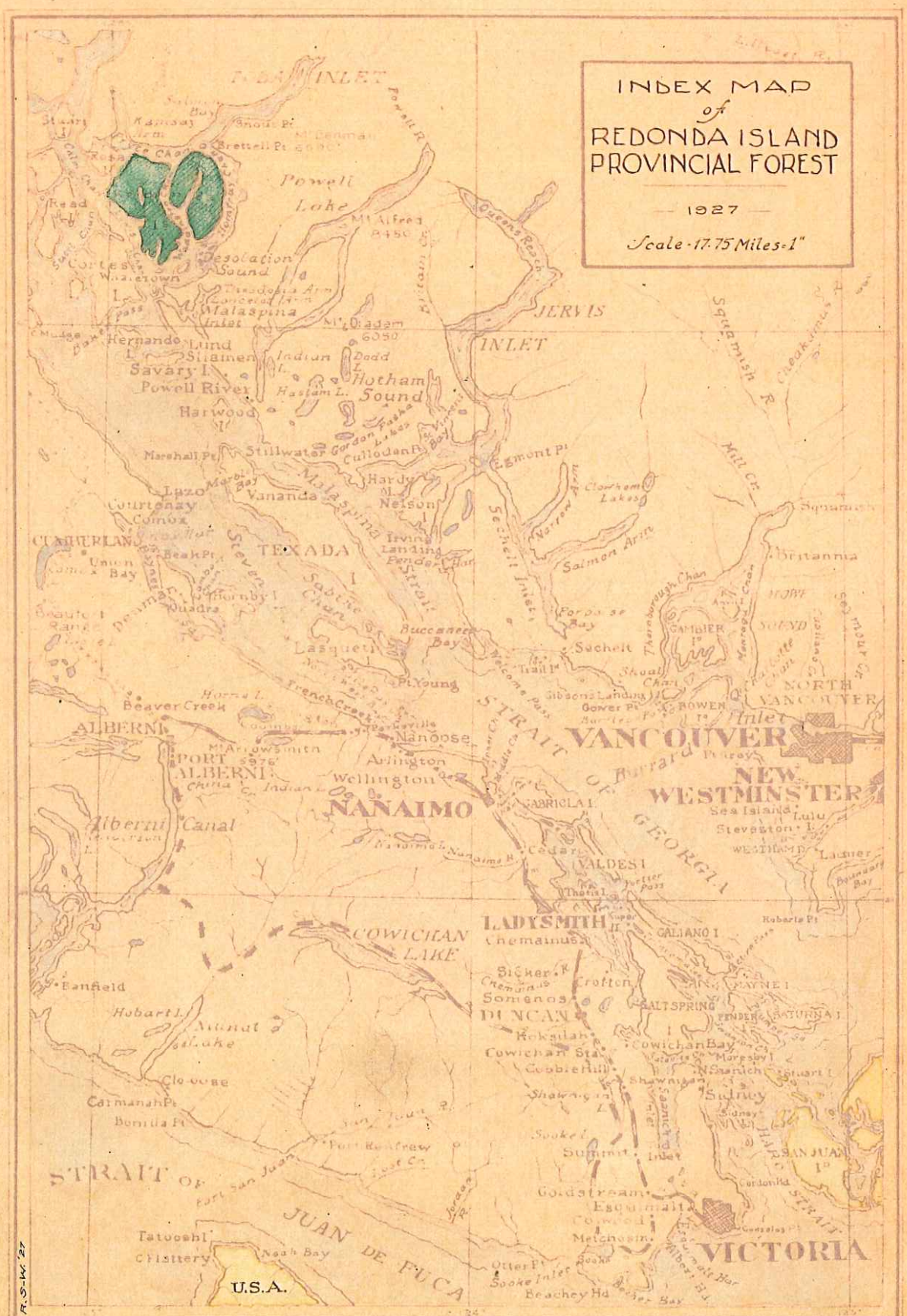
E.W. BASSETT

1927

Maps accompanying report:-

3 Cover Maps, 20 chs. to 1 inch.
3 Type Maps, 20 chs. to 1 inch.
1 Key Plan, 1 mile to 1 inch.

Forest Survey No. R.23.
Correspondence File, 058970.


INDEX MAP
of
REDONDA ISLAND
PROVINCIAL FOREST
— 1927 —
Scale - 17.75 Miles = 1"
Powell Lake
Desolation Sound
Malaspina Inlet
Hotham Sound
Powell River
Savary I.
Harwood
Stillwater
Vananda
Lasqueti
Texada
Courtenay
Comox
Cortes I.
Hernando I.
Lund
Stillwater
Hardy I.
Nelson I.
Irving Landing
Pt. Young
Beaver Creek
ALBERNI
PORT ALBERNI
Alberni Canal
Nanoose
Arrowsmith
Wellington
NANAIMO
Cedar
VALDES I.
LADYSMITH
Chemainus
COWICHAN LAKE
Duncan
Somenos
Cowichan Bay
Sidney
Saltspring
Galiano I.
Mayne I.
Saturna I.
Pender
Sechelt
Gibsons Landing
Gower Pt.
Bowen I.
Squamish
Britannia
North Vancouver
VANCOUVER
NEW WESTMINSTER
Burrard Inlet
STRAIT OF GEORGIA
JERVIS INLET
Sechelt Inlet
Salmon Arm
Squamish R.
Mill Cr.
Jordan R.
Sooke
Sooke Inlet
Beachey Hd.
Otter Pt.
Port Renfrew
Port San Juan
Jordan R.
Carmanah Pt.
Bonilla Pt.
Clo-oose
Hobart L.
Mount Lake
Banfield
Tatoosh I.
Chatterry
Neah Bay
U.S.A.
STRAIT OF JUAN DE FUCA
Goldstream
Esquimalt
Colwood
Metchosin
VICTORIA
Cordova Bay
Saanich
Shawnigan
Cowichan Sta.
Cobble Hill
Lake Cowichan
Sooke Inlet
Summit Inlet
Gordon Hd.
Albert Hd.
Albert Bay
Beacon Bay
Roberts Pt.
Lulu I.
Sea Islands
Stevenston I.
Lasqueti I.
Texada I.
Hornby I.
Denman I.
Quadra
Cortes I.
Read I.
Savary I.
Hernando I.
Lund
Stillwater
Malaspina Inlet
Theodosia Arm
Lancelot Inlet
Mt. Diadem 6050
Mt. Alfred 8450
Mt. Denman
Brettell Pt.
Kamsay Arm
Salmon Bay
Knout Pt.
Powell R.
Queens Reach
Squamish R.
Cheakamus R.
Mill Cr.
Salmon Arm
Clowhom Lakes
Narrow Arm
Egmont Pt.
Sechelt Inlet
Welcome Pass
Trail Pt.
Shoal Channel
Thornborough Chan.
Gambier I.
Howe Sound
Porpoise Bay
Buccaneer Bay
Pender Harbour
Malaspina Strait
Sabine Chan.
Strait of Georgia
Fabricla I.
Galiano I.
Thetis I.
Porter Pass
Nanaimo R.
Nanaimo Harbour
Chemainus R.
Crofton
Salt Spring
Fulford Harbour
Cowichan Bay
Moresby I.
Saanich
Stuart I.
Sidney
Shawnigan
Sooke
San Juan I.
Cordova Bay
Gordon Hd.
Esquimalt Harbour
Victoria Harbour
Albert Hd.
Albert Bay
Beacon Bay
Sooke Inlet
Otter Pt.
Port Renfrew
Port San Juan
Jordan R.
Carmanah Pt.
Bonilla Pt.
Clo-oose
Hobart L.
Mount Lake
Banfield
Tatoosh I.
Chatterry
Neah Bay
U.S.A.
Courtenay
Comox
Union
Comox Bay
Beak Pt.
Hornby I.
Denman I.
Quadra
Beaver Creek
Horne L.
French Creek
Parksville
Qualicum
Arrowsmith
Indian L.
China Cr.
Nanoose
Arrington
Wellington
Nanaimo
Cedar
Thetis I.
Porter Pass
Fabricla I.
Galiano I.
Roberts Pt.
Lulu I.
Sea Islands
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Tatoosh I.
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U.S.A.
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SUMMARY OF AREAS.

AREA	Merchantable Timber		Immature Timber		Forest Land Unsat. Stocked		Total Produc. Forest Land		Total Non-Produc. Land		Lakes	GRAND TOTAL
	V.C.L.	AL.	V.C.L.	AL.	V.C.L.	AL.	V.C.L.	AL.	V.C.L.	AL.		
West Redonda Island Forest	5896	6194	2405	1319	2393	2111	10694	9624	15794 20503	4709	1796	42617
East Redonda Island	1911	610	5193	782	1343	188	8447	1580	15053	408	104	25592
TOTALS	7807	6804	7598	2101	3736	2299	19141	11204	30847	5117	1900	68209

30345

NOTE:-

"AL." above includes T.L's, C.G's & P.R's in good standing at date of survey. All figures represent acres and cover the whole island in each case.

Proportion of Species

	F	C	H	PW	PL	CY	Total
East Redonda	10,800	7,500	2,200	200	600	200	21,500

ESTIMATED MERCHANTABLE TIMBER.			
AREA	V.C.L.	Alien	Totals.
W.Redonda Is.Forest	73045M	108068M	181113M
E. Redonda Is.	15480M	6030M	21510M
Totals	88525M	114098M	202623M

Proportion of species as estimated in Reconnaissance Inventory

F.	C	H.	D.	
82000	52000	28000	19100	= 181,100
45%	28.7%	15.7%	10.5%	

SUMMARY OF AREAS OF IMMATURE TIMBER

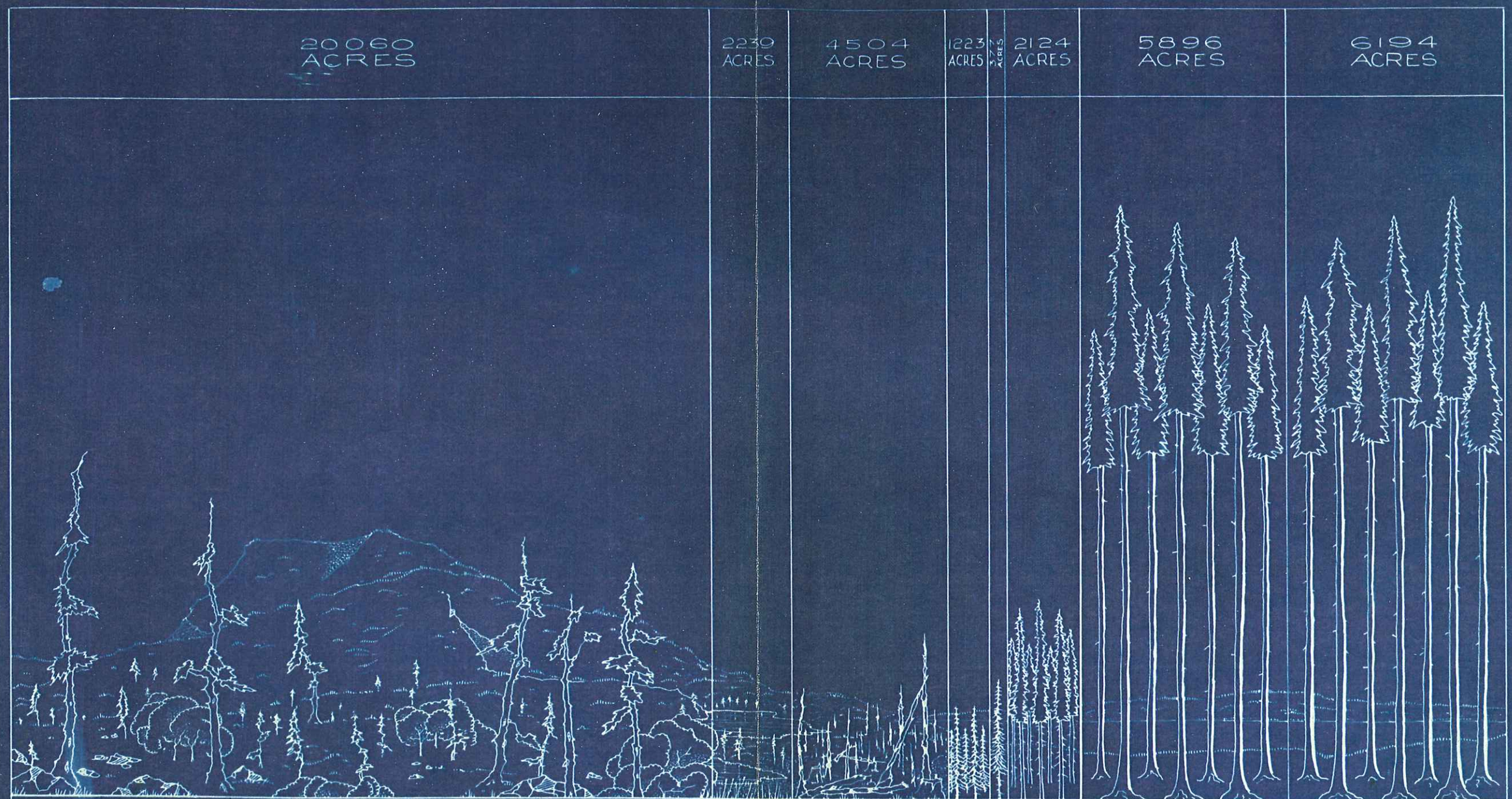
AND PRODUCTIVE LAND NOT YET RESTOCKED.

WEST REDONDA ISLAND FOREST.

AREA	Satisfactorily Stocked			Not Satis. Stocked	TOTAL
	1-20	21-40	41-60		
V.C.L.	653	340	1412	2393	4798
Alien	570	37	712	2111	3430
Totals	1223	377	2124	4504 {1090 L.B. / 3414 L}	8228

EAST REDONDA ISLAND.

AREA	Satisfactorily Stocked			Not Satis. Stocked	TOTAL
	1-20	21-40	41-60		
V.C.L.	675	2250	2268	1343	6536
Alien	164	534	84	188	970
Totals	839	2784	2352	1531	7506



WEST REDONDA ISLAND PROVINCIAL FOREST in 1927 - Vancouver Forest Dist.

WEST REDONDA ISLAND

Location and Boundaries.

This island is situated in New Westminster Land District, bounded on the southeast and northwest by Lewis Channel and Deer Passage respectively, on the north by Pryce Channel, on the east by Waddington Channel and on the southeast by Desolation Sound.

General Topography.

(a) Mountains.

Speaking of the island as a whole, it may be classed as rugged, broken and mountainous. Centrally located along its north shore and divided only by a steep narrow draw, Mt. Gloucester and Mt. Winston rise abruptly from Pryce Channel to elevations approximating 3200 feet. Northwest and east of them at Connis Point and Dean Point are rises of 1700 feet and 1200 feet respectively--the former especially prominent due to its peculiar conical shape, being somewhat of a landmark for the region. Due south of Mt. Winston and some 2¾ miles east of Redonda Bay is located Mt. Perritt with an elevation of 3600 feet, being joined

to Mt. Gloucester on the northeast by a 2400 foot saddle. Southeast of Mt. Gloucester and west of Doctor Bay lies another eminence of 2500 foot elevation at its highest point and which, together with a rise of 2000 feet to the south of it and the intervening saddle of 1000 foot elevation forms the eastern wall of the basin in which lie Jack Lake and Ellis Lake.

The area lying between Ellis Lake and Lewis Channel and southeast of Redonda Bay is practically all high and mountainous and averages for the most part over 1500 feet above sea level. Notable in this area are peaks of 3000 foot elevation, centrally located and Nipple Summit, which is situated in the southwest, rising steeply from Teakerne Arm to an elevation of 2800 feet.

That portion of the island south of Teakerne Arm and Arrawac Lake is noticeably lower than the northern parts just described, although it still retains the characteristic broken and rugged features to a somewhat lesser degree. Mt. Llanover, situated due east of the head of Teakerne Arm is the highest point on this area, having an elevation of 2200 feet. The only remaining notably higher eminence

is a rise of 1800 feet located west of Mt. Llanover and bordering on the south shore of Teakerne Arm. Other hills are scattered throughout but none of these exceed an elevation of 900 feet.

(b) Lakes

Lakes on the island comprise some 2089 acres or roughly one-twentieth of the total land area. Ellis Lake, located centrally in that portion of the island north of Teakerne Arm, is the largest all fresh water body, having an area of 480 acres. It lies in a north and south direction, is approximately 1 mile and 60 chains in length, with an extreme width of 60 chains and drains southeasterly to Cassel Lake. Its elevation is between 200 and 300 feet above sea level. The Redonda Isd. Logging Company, who operated along the shores of the lake have constructed a dam at its southern extremity and used the lake for towing purposes. An inclined railway conveyed the logs from this dam to Cassel Lake. At the present time, although this company is no longer operating they have left a small launch and rowboat on the lake, both of which are in fair repair.

Next in size and importance to Ellis Lake is Cassel Lake. It is situated southeast of the former and adjacent to the north shore of Teakerne Arm, its southern shore being only a few chains from the salt water. It covers an area of 316 acres, being approximately 1½ miles long in an east and west direction, and 70 chains at its widest part. It has, similar to Ellis Lake, had its level raised by a dam at its outlet and been used for log transportation. A short flume, worked in conjunction with a gate in the dam carried the logs to the salt water where they were boomed. A feature of this lake is its outlet, which takes the form of falls, plunging some 60 feet over a steep bluff to the sea. The logging company has likewise also left a boat on this lake.

Jack Lake, situated roughly 40 chains due north of Ellis Lake, has its outlet to that lake. It is a smaller body of water--some 123 acres in all--and lies at an elevation of between 300 and 400 feet, being fed from Joe Lake, a small swampy lake 80 chains to the west . West of Jack Lake 110 chains is Tom Lake, covering 53 acres and having an elevation of approximately 550 feet but draining in a northwesterly direction by Lillian Russell Creek to Redonda Bay. This creek, and

incidentally the water from Tom Lake, forms the source of power for the Redonda Bay Cannery.

Fifteen chains east of Cassel Lake lies Arrawac Lake. It covers 116 acres, has an elevation between 200 and 300 feet and finds its outlet southwesterly to Ted Lake, 25 acres in size, and thence through several small sloughs to the head of Teakerne Arm.

There are several other smaller lakes in the northern part of the island, chief of which is Fred Lake. It lies roughly 40 chains west of Doctor Bay, covers 24 acres and drains in a southwesterly direction to that Bay. ?Eastwesterly

In that portion of the island south of Teakerne Arm, the largest body of water is Refuge Lagoon covering 595 acres. This area of water, although in the strict sense of the word is a lagoon, that is, tidal waters enter it at certain times, may be mentioned here under lakes, due to its extended size and the fact that it requires an 11½ foot tide before any salt water enters it. The tidal entrance is very narrow and since the highest tide in the region is rarely above 13½ feet with an average around 10 feet, the salt water content of the lagoon may be said to be comparatively small, although, it is true, enough enters to make the water to a certain extent brackish. Most of the shore of the

lagoon has been logged off and the lagoon used as a means of transportation for the logs. A short channel has been blasted to act in conjunction with a sluice gate as a flume to carry the logs to tidal water at Refuge Cove. Several boats are to be found near the southern end of the lagoon, most of them being the property of residents of the Cove. On the higher tides the above mentioned channel permits of a fair sized rowboat being taken up to the lagoon.

Approximately 1¾ miles southeast of the head of Teakerne Arm and 15 chains due west of Salt Lagoon is situated Black Lake. It lies in an east and west direction, being roughly 1½ miles in length with a maximum width of 40 chains and having an elevation of about 40 feet above sea level. Its area is some 252 acres, draining by a small creek to Salt Lagoon.

The only remaining lake worthy of mention on this part of the island is Thompson Lake. It is a small lake of 45 acres extent and situated centrally in the peninsula formed between Refuge Cove, Refuge Lagoon and Lewis Channel. Lying in an east and west direction it is roughly 40 chains in length and has an elevation of between 100 and 200 feet above sea level. Its outlet is westward to Lewis Channel.

(c) Harbours and Surrounding Waters.

The best harbours to be found on the island are situated on its eastern coast and on the southern half of its western coast. Walsh Cove and Doctor Bay, located 1 mile and 3 miles south of Dean Point in Waddington Channel respectively, present excellent anchorage in 10 to 25 fathoms of water and good shelter. The former, although perhaps somewhat more difficult as far as entrance is concerned, no doubt offers the best shelter of the two in a blow, for Doctor Bay in certain winds--notably a southeaster--is to a certain extent exposed.

Following this shore of the island south down Waddington Channel, the next harbours that present themselves are back of Prussian Island and Salt Lagoon, located due west of the mouth of Pendrell Sound and of Horace Point respectively. The former is a small cove between the above mentioned island and the main island and must be approached from the north due to shoal water at its southern entrance. It offers complete protection for average size small boats in any weather. Salt Lagoon likewise offers shelter regardless of weather but has the disadvantage of entrance being only possible to boats of more than 3 foot draft at certain tides. This drawback is due to a bar which crosses the channel near the entrance to the lagoon and which at low water is

covered only some two feet. Once inside this bar, however, a large basin opens up with sufficient room for a number of craft or several booms of logs.

On the western coast of the island the first harbour that presents itself is Refuge Cove. This place is a point of call for the Union Steamship Company's boat and offers a float and a store and post-office besides excellent anchorage for small boats at the extreme head of the cove.

Teakerne Arm, a large indentation on this shore of the island is probably, considering everything, the best all round shelter on the island. It is roomy, has plenty of depth and likewise offers a float at Cassel Falls where is located the headquarters camp of the Redonda Isl'd Logging Company.

The only remaining harbour worthy of mention is Redonda Bay--sometimes referred to as Deceit Bay. It is located on the Deer Passage side of the island and is also a point of call for the U.S.S.Co. It boasts a wharf and float, a cannery, a machine shop and a store and post-office. In a southeaster this bay offers excellent protection for small boats, but in a westerly is quite exposed and the swell which is thrown into the bay makes riding at the float very hazardous and uncomfortable.

The waters surrounding the island are, for

the most part, sheltered channels which may be navigated at any time barring in an extreme blow. The southern part of Lewis Channel is perhaps the most to be feared. With a southeasterly wind it presents a long straight sweep and in a short time throws up a bad sea. Pryce Channel also offers a straight sweep to a westerly and becomes quite hazardous to smaller craft when a wind prevails from that point.

Tidal currents in the waters adjacent to the island may be considered practically negligible--the current at no place, either on ebb or flood, exceeding 1 to 1½ knots.

CLIMATE.

The climate may be classed as a moderate coastal climate with an average fire season.

Following are the precipitations and mean temperatures over the last four years as recorded at the nearest rain stations and temperature stations conducted by the Department of Agriculture.

YEAR	PRECIPITATION(inches)		MEAN TEMP.(Degrees F.)	
	Savary Is.	Thurston B.	Vananda	Thurston B.
1923	33.75	78.42	49.00	49.27
1924	31.72	77.50	49.00	48.00
1925	34.22	49.22	50.00	50.00
1926	40.90	72.2(app.	51.00	51.27

An idea of the extent to which the above figures apply to Redonda Island may be gained from the fact that Thurston Bay lies approximately 17 miles to the northwest of it, while Savary Island and Vananda are located 10½ and 28½ miles to the south and southeast respectively.

INDUSTRIES.

This island, as is the case with the majority of the coastal islands, offers but a poor chance from an agricultural viewpoint and its essential use may be said to be that of producing a forest. Clearing costs are excessive and almost prohibitive and those attempts at agriculture that have been made were all on pre-emptions located in that portion of the island south of Teakerne Arm. The majority of these are adjacent to Refuge Lagoon where several were proved up and since vacated. Small garden truck, berries and fruits were raised--the latter seeming to thrive especially well in the region. One settler has recently located at the head of Salt Lagoon and is making a trial with sheep and goats on his pre-emption.

From a mining standpoint very little interest seems to be manifested in the island at the present time, although some seven or eight claims

have been surveyed adjacent to Refuge Cove. Also, on the north shore of the island on Pryce Channel several quarry leases have been surveyed and one of these operated for a short time, shipping limestone for use in the acid towers of the pulp mill at Woodfibre, B. C. The general opinion seems to be that prospects are fair but until low grade ores may be smelted in B. C. and consequently shipped at a profit, conditions do not warrant any present activity along mining lines.

At the head of Teakerne Arm some 150 acres have recently been purchased for the purpose of a fur farm. The area includes several small sloughs and swamps which the owner intends fencing and stocking with muskrats this coming spring. Already a sizeable dwelling and outhouses have been erected and eventually it is proposed to raise greens and root crops on the area for feeding purposes. The market catered to will be the pedigreed stock rather than the open pelt market.

At the present time there is no power logging taking place on the island. The last to operate was the Redonda Is'd. Logging Co. at Ellis and Cassel Lakes, but this company has now gone into insol-

vency. There are, however, one or two handloggers operating along the shores of the island--their operations being for the most part very intermittent.

The only remaining industries are located at Redonda Bay in the form of a machine shop, a cannery and a small shingle mill. The latter has not operated for some years now but a certain amount of the machinery etc. is still intact. The cannery is owned by the Russell interests of Vancouver, B. C., and operated as a secondary unit, that is, running only those seasons when the fish are especially abundant. An ice plant, a part of the cannery equipment, is however, run every season for convenience of packers plying the adjacent waters. The machine shop, mentioned above, is privately owned, well equipped and caters chiefly to the local gasboat trade. All three of these enterprises are operated in part or whole by water power from Lillian Russell Creek.

Game is abundant in all parts of the island and fish are easily obtainable in the majority of the lakes--notably those lakes to the north.

Summing up, it may be said, the only really practical use for the island in its entirety is that of applied forestry.

DESCRIPTION OF THE FOREST

(1) Types Represented.

The type represented throughout the island is the coastal Fir-Hemlock-Cedar type with occasional White Pine, Yellow Cedar and Mountain Hemlock on the higher elevations. Stunted Lodgepole Pine is prominent on the majority of the rocky bluffs along the shores, while scattered Spruce is occasionally found in depressions.

The larger stands--those in the interior of the northern part of the island--appear for the most part healthy and thrifty with conk, etc. appearing only in average coast extent. Much of the timber adjacent to the shores however shows at the best a very slow growth, being extremely hard and close grained, due to poor site and is, in most cases, badly infected with "blind" conk. Handloggers of the region claim that even after selecting their trees presumably free from this disease, having felled them some 10% or better are found to be infected and practically worthless. Mistletoe was noticed quite frequently on Hemlock especially in the poorer sites, but the White Pine, where found, seems to be almost entirely free from rust which is attacking so many of this species some 20-

30 miles north of Redonda Island.

(2). Age Classes and Their Distribution.

This portion of the report will deal only with areas of immature timber and areas which are productive sites although not yet restocked. The former, for convenience of summarizing has been divided into three main age classes--namely 1-20 years, 21-40 years and 41-60 years. "Types" referred to are shown and numbered on maps accompanying this report.

(a) 1-20 Year Class--1223 acres.

The largest separate area falling under this age class is Type 6. This is a previously logged and burned area of some 285 acres lying along the southern shores of Refuge Cove and Refuge Lagoon. The present stand is in the seedling stage and averages 4500 seedlings per acre Fir, Hemlock and Cedar in the rough percentages of 65%, 22%, and 13% respectively. The former stand on this area was likewise chiefly Fir and for the most part of piling size or a little better--close grained and hard.

Type 59, an area of 270 acres, lying adjacent to the north shore and the west end of Black Lake was

also previously logged and burned. Here the present stand is now approximately 10 years of age and runs around 10,000 trees per acre of average height 9 feet. The species represented are Fir, Cedar and Hemlock with the former representing roughly 63% of the stand and Cedar about 22%. The former stand was largely Cedar.

Types 19 and 23, bordering the western shore and north end of Refuge Lagoon also fall under this age class. These areas together total some 300 acres and the present immature stand has followed logging and slash burn. This stand now averages approximately 7000 trees per acre of Hemlock, Fir and Cedar. The Hemlock and Fir average roughly 5.5 feet in height and are 7 to 8 years of age throughout. The Cedar, however, is almost entirely in the seedling stage. The former stand was largely hard, close grained, medium sized timber due no doubt to the nature of the area which is generally rocky with a gravelly soil.

Type 73, an area of about 100 acres lying between Refuge Lagoon and Black Lake represents a 7 year old stand of Fir, Cedar and Hemlock. The Fir

averages 5.7 feet in height and forms practically 85% of the stand which runs approximately 2250 trees per acre. Much of the Cedar and Hemlock in this stand is in the seedling stage. The area was previously logged and burned.

The remaining types which fall under this age class are individually of comparatively small acreage--less than 50 acres each in size. They practically all represent stands under 10 years of age on small power logged shows. In every case stocking is entirely satisfactory.

(b) 21-40 Year Class--377 acres.

Two main types go to make up practically all of this age class of the immature stands on the island. The largest of these is Type 57, lying just south of Teakerne Arm near its head. This area is some 250 acres in extent and lies on a steep rocky piece of country. The stand is really "many aged"--that is, although the main body is from 21-40 years old there is also scattered throughout numerous trees of ages which fall both below and above the age class. The stand no doubt is the result of very old repeated fires which have overlapped or jumped in spot-fire

form throughout the area. The site is, in general, a poor one and will be a hard chance as far as logging is concerned when maturity is reached.

The other area in this group is Type 8, which is an 84 acre stand on an old selectively logged area on the eastern shore of Refuge Lagoon. No plot was obtained in this stand but from occular estimate the area should run approximately 2500 trees per acre and average 21 to 25 years of age. Hemlock is the predominant species.

(c) 41-60 Year Class--2124 acres.

Type 53 is the chief area falling under this class of immature timber. It represents an area of approximately 470 acres situated roughly 40 chains north of Black Lake. The area has not been previously logged and the present stand appears to be the aftermath of a former old burn over the area. Two representative plots taken in the stand show a stocking of 1380 trees per acre of Cedar, Hemlock and Fir in the proportions of 60%, 25% and 15% respectively. The stand averages 41 to 42 years of age and has an average D.B.H. for all species of about 3.3 inches. The

following average total heights were indicated: Cedar, 31 feet, Hemlock 46 feet, and Fir 57 feet. A few scattered White Pine--roughly 25 per acre--were also noted on this area.

Type 84, 215 acres lying along the shore of Waddington Channel west of Prussian Island also falls under the 41-60 year class. Much of this area has been previously selectively handlogged--especially that part of it directly adjacent to the shore. The present stand shows a stocking of 1940 trees per acre, 54% Hemlock, 39% Cedar and 7% Fir. The average D.B.H. for all species is about 3.3 inches and the average height of the stand around 41 feet.

Types 51, 72 and 131, together totalling some 1,100 acres, are next in importance under this heading. These stands, as was the case with Type 51 in the 21-40 year class, appear to represent a wide range of ages with the main body falling under the 41-60 year class. They no doubt are also the direct result of old repeated and overlapping burns. For this reason it was difficult to obtain true representative

plots and the best that could be done was to take increment borings at different points along the strip, selecting as closely as possible trees that appeared to be average dominant. In this manner, the stand was allotted to its age class. It was also noticed that a considerable number of smaller areas within the boundaries of the main stands appeared overstocked and indicated poor site qualities.

The remaining areas in this class are of comparatively small acreage.

(d) Forest Land Not Yet Restocking-4504 acres.

Of the total area which falls under this heading on the island some 2000 acres represent power logging operations. Notable among these are the operations of the Redonda Bay Logging Company at Redonda Bay and the Cassel Falls Company's workings adjacent to and south of Ellis Lake. The former of these is represented by Type 133, an area of 798 acres east of Redonda Bay. The area has been logged and burned but has an excellent forest fringe on all sides and should readily restock, given a sufficient inter-

val. The Cassel Falls operations are represented by Types 81, 89, 93, 148, 149, 160 and 161, totalling in all about 450 acres. These areas are all freshly logged (1924 to 1926), at present unburned and covered with a fairly heavy slash and all have the best possible chances of fully restocking by natural means from the adjacent forest fringe. Type 119, 114 acres logged and burned, Type 2, 60 acres logged and burned, Type 4, 118 acres logged and burned and Type 5, 191 acres, partly power logged and part handlogged go to make up the majority of the remaining acreage power logged on the island. In all cases, the areas should restock fully by natural means.

The remaining acreage of productive land not yet restocked for the most part represents handlogged areas along the shores. This is practically selective logging and as a consequence should readily restock.

UTILIZATION

(1) Present Utilization and Markets.

Up to the present time there have been some 6500 acres of the island logged off. The majority of this of course represents power operations, for although considerable handlogging has been done, the acreage represented by it is comparatively small.

At the time of writing the only logging operations on the island are those of handloggers' working on the north shore of Teakerne Arm just west of Cassel Falls. They are cutting Fir, Cedar and Hemlock--varying the species by the existing market requirements. Their market is the open log market at Vancouver, with a chance of intermittent sales of swifters to adjacent logging outfits. Utilization on such operations in the region is of necessity not of the closest, for the nature of the shore topography--that is, benches with steep rock bluffs intervening--makes the breakage factor very heavy. At some places on the island such operations have gone as far as 20 chains back from the shore and, from an elevation of 1200 feet, run the trees to salt water below. The utilized portion of trees

felled under such conditions is of a consequence, small--the logger in many cases being fortunate if he obtains one sound log for his endeavors. Although such methods appear wasteful, they are, no doubt, justifiable, for the timber in such locations, unless attempted by handloggers of to-day, will undoubtedly become decadent before any practical economic power scheme is devised to supersede present handlogging practice.

(2) Difficulties in Way of Complete Utilization of the Forest.

As is the case with the majority of the coastal islands, the chief obstacle to complete utilization of the forest on West Redonda Island is its general topography. The rugged and broken nature of the country makes many of the smaller areas of good timber practically inaccessible as far as the resources of the average logging outfit of the region are concerned . It likewise, in the larger stands, makes logging road building costs and actual roading costs excessive and in many cases prohibitive. The operation of the Redonda I'd. Logging Company, when logging on Ellis Lake is a typical example of the resources necessary to a large outfit for the region. This operation was such that

it required handling of the logs some eight times before they were finally ready for towing to market. The company became financially embarrassed six times during its operations and were finally obliged to definitely suspend work with its holdings practically only half logged.

Another negative feature in the matter of complete utilization of the forest is the lack of large booming grounds. There are only three shore indentations on the island of sufficient size for very large facilities--namely Salt Lagoon, Redonda Bay and Teakerne Arm. The former, as previously mentioned, has the disadvantage of shoal water at its entrance, while Redonda Bay is wide open to a westerly and will, no doubt, present difficulties when a wind prevails from that direction. Teakerne Arm is, however, well suited in practically every respect. There are, of course, numerous small coves and dips along the shores that are sufficiently large to accomodate small booms such as handloggers, etc., but many of these are likewise exposed--especially those on the southern, western and northern shores of the island.

(3) Development Possibilities for Next Few Years Under Present Conditions.

The timber available for development purposes under present conditions during the next few years may be divided--speaking of the larger areas only--into four main blocks.

(a) Timber lying between Tom Lake, Jack Lake and Ellis Lake. Following is an extract from the preliminary cruise report as submitted to the Redonda Island Logging Company by Messrs. Porteous & Co., Seattle, Washington, commercial cruisers who cruised the area in question for this company.

"On lot 2098 a stand of excellent Fir and Cedar of large size was found. The lower 630 acres of this lease was carefully cruised and found to run 39 M. feet per acre, with a total of 34,450 M. feet, or just twice the amount shown on the former cruise. On the upper portion, containing 1,340 acres, a run of 65 chains near the easterly boundary, where some swamp was encountered, yielded 28 M. feet for 1,340 acres. Have no doubt but that a close cruise would increase this amount considerably.

T. L. 2581, containing 560 acres,

has been more recently cruised than the leases and shows 11,430 M. feet on about half its area or 280 acres, which makes an average of 41 M. feet per acre.

On the vacant land lying north of Ellis Lake there are three or four forties known to be good and several more that might be. As a conservative estimate,4000 M. feet should be readily accessible.

Lease 2099 has an area of 284 acres about 120 acres of which will yield 4000 M. feet."

Since the above examination was made, the company, before suspending operations, logged some 67 acres on Lot 2098 along the shores of Ellis Lake. The remainder of the area described above is, however, as yet untouched, barring a few poles felled just east of Tom Lake. This timber must of necessity come out either to Redonda Bay or Cassel Falls. The former route would mean replacement of an incline, several miles of railway--including switchbacks--now burned out, and additional grade and rails being laid. The latter means reconditioning the equipment now lying in the woods on the Cassel Falls operation and then, as previously mentioned in this report, handling of the logs some

eight times. A proposition laid out for either route would entail very heavy expenditure and months of work before any logs could be shipped, and it is a certainty that the average logging company looking around for a suitable proposition, is going to do considerable investigation in the matter of a better location before assuming an undertaking of this type. A special inducement, such as reduced stumpage rates, etc., might possibly influence such a company and seems perhaps the best means of creating interest in this body of timber at the present time.

(b) Timbered area south from Ellis Lake to Teakerne Arm and from the head of that Arm northeast to Waddington Channel. This stand is likewise described in the previously mentioned report as follows:

"Lot 2714, near Cassel Falls, is lightly timbered, the former cruise of 6802 M. feet, or 10.7 M. feet per acre being a fair estimate.

T. L. 745P. has been partly logged, some 3000 M. feet having been removed, while there still remains some 6500 M. feet.

T. L. 744P. also has been partially logged, but there still remains some 6000 M. feet.

T. L. 2715 has a small portion logged

but from a careful examination there is still 5000 M. feet standing, 85% of which is Fir."

On the above mentioned four lots there is generally less soil than on those lots treated in paragraph (a), and which lie to the northward of Ellis Lake. The country in fact is quite rocky, and the timber in consequence is not up to the standard of that on the northern area. The Fir is close grained and hard; the Cedar fair but short. The breakage factor likewise will be greater than that of the stand to the north of the lake.

Taking an approximate average over this timber and that covered in paragraph (a), it is estimated the percentage of grades is as follows:

SPECIES	GRADES PERCENT		
	No. 1.	No. 2.	No. 3.
Fir	8%	80%	12%
Cedar	10%	80%	10%
Hemlock	-	30%	70%

This stand, barring that part of it lying to the east of Arrawac Lake--the majority of which is very lightly timbered and altogether poor stuff--will come out to Teakerne Arm. That portion of it northwest of and adjacent to the shores of Cassel Lake will no doubt come via that lake. The stand east of Arrawac Lake will have to go to Waddington Channel.

(c) Timber located north and northeast of the northern half of Refuge Lagoon. This body, according to compilation of a private cruise on the area comprises some 39,000 M. feet of merchantable timber--small parcels in some parts of the area running as high as 60 M. feet per acre. Much of this is, however, inaccessible, due to steep bluffs, rock slides, etc. The timber is, moreover, growing on a poor site with generally thin soil and frequent rock outcrops and the greater part of it is, in consequence, hard and close grained. Originally the stand continued to the shore of Refuge Lagoon, but that adjacent to the water has since been logged off for some 20 to 30 chains back, going out via the Lagoon to Refuge Cove. The present stand will have to come out two ways, part to Refuge Lagoon and thence to Refuge Cove, and that in the north to Teakerne Arm at Talbot Cove and just east of that Cove.

The draw of a creek flowing from the centre of T. L. 45042 northwest to Teakerne Arm probably offers the best route for this latter portion. The area as a whole is, however, from a topographical standpoint, steep and abrupt and irrespective of the route chosen will be a hard and costly show.

(d) Timber situated in the southern tip of the island between the south end of Refuge Lagoon and Desolation Sound. This stand covers some 700 acres and totals approximately 7000 M. feet --chiefly Fir. Practically the whole stand is represented by trees of piling size and which, as is the case in the blocks previously mentioned, growing on rocky ground, are fairly hard and close grained. When logged, the area will divide itself and the timber come out partly to Refuge Cove or Refuge Lagoon and part southeasterly to Desolation Sound.

Several smaller stands not included in the preceding paragraphs are to be found in the northern portion of the island. On X.45 there is roughly 400 acres of merchantable timber running around 15 M. feet per acre. Hemlock is the chief species with Fir and Cedar secondary. The stand is essentially a pulp proposition under present economic conditions.

South of George Point and following the bottom of the draw of the creek flowing to the bay just east of that Point, is a stand of fair Cedar and Fir running from 5 M. to 20 M. feet per acre. Very little is to be found out of the actual draw, however, and the stand forms two long narrow strips up the branches of the creek.

North of Salt Lagoon some 40 or 50 chains are two more small stands separated only a few chains. Together they cover some 300 acres and total approximately 4000 M. feet of Fir, Cedar and Hemlock. This timber might make a good truck or tractor proposition, coming out over a fairly short route by way of a draw to Salt Lagoon at a point about 5 or 10 chains east of Lot 4972.

MANAGEMENT.

(1) Main Objects.

This island, from a management point of view for the future years, similar to those islands to the north of it on which stocktaking surveys have been made, need not be considered as a unit for the specific purpose of filling the timber requirements of any one market in perpetuity. It should rather be classed with them as a portion of our gen-

eral coastal timber assets and, as such, managed in conjunction with those general assets for the sustained supply of the coast timber industries. Consequently, again, as was recommended in the case of the Provincial Forests to the north, it would not be advisable to attempt to formulate and carry out any definite plan to apply to this island alone.

(2) Silvicultural Treatment.

As regards the silvicultural treatment of the island the same policy as recommended in 1926 for the Provincial Forests to the north might again very well apply here. This is as follows:

Our coastal timber, as a whole, represents a very uneven aged stand. An extensive selection system might be applied to this whereby successive areas would be logged and all trees removed down to a specified minimum D. B. H. When the whole area has been cut over in this way, the area first cut would be ready for a re-cut and the process repeat itself. In time the whole stand would become one of even aged groups on separate areas. West Redonda Island, classed as a working portion of this whole, might well be utilized as one of these successive areas and as such would eventually represent an even aged group.

Determination of Sustained Yield.

Following are figures which have been supplied by the Research Division to represent rough average yields that may be expected per acre in this region.

Rotation	Av. Yield/Acre Saw Material.
80	21,430 Bd. ft.
100	27,270 " "
120	31,910 " "
140	36,210 " "
160	39,884 " "

In the above tabulated yields the species represented are approximately 50%, 30%, and 20% of Fir, Hemlock and Cedar respectively.

The determination as follows of sustained annual yield for this island will be based on a rotation of 120 years using the corresponding yield of 31,910 board feet per acre.

The mean annual increment over the 120 years --figured from the given yield of 31,910 board feet per acre--amounts to 266 board feet per acre. The total area of land available to young stands (that is, areas

already under reproduction, together with those suitable but as yet not restocking) is 8228 acres. We may therefore expect from these lands a total mean annual increment of about 2,188,000 board feet.

The present stand of merchantable timber on the island amounts to 181,113,000 board feet.

Using E. J. Hanzlik's sustained yield formula:-

$$Y = \frac{Vm}{r} + I$$

where "Y" is the sustained annual yield, "Vm" the volume of mature above rotation age, "r" the rotation and "I" the mean annual increment of the immature timber we arrive at a sustained annual yield of approximately 3,697,000 board feet. (W. Rakonda Forest)

Requires adjustment for S.Y. = 2,500,000 fbm

The Von Mantel formula, $Y = \frac{Vm}{\frac{1}{2}r}$, used in the U.S. National Forests, although admittedly not as accurate as Hanzlik's, yet serves as a very good check and would indicate a sustained annual yield of approximately 3,019,000 board feet for the island--a difference of 678,000 board feet as compared with Hanzlik's.

PROTECTION.

(1) Fire Damage in Last Few Years.

Over a period of the last eight years, the area of the island burned over, comparative with the total area, is but small. There have been only nine fires in that time worthy of mention here - some of these covering only a small acreage. The largest is located in the northwest portion of the island, east of Redonda Bay and north along the shore to Connis Point. It covers some 2000 acres and is the result of fires occurring in 1923 and 1924. Much of the area covered - notably along the shore north of the Bay and at Connis Point is rocky and non-productive. That part of it on the Redonda Bay Logging Company's operations, although at present showing but few indications of reproduction, will, without doubt, given a sufficient interval without additional fires, restock satisfactorily from the adjacent forest fringe.

Next in importance as far as size of block burned over is concerned, is an area situated adjacent to Walsh Cove in Waddington Channel. Here the amount burned approximates 700 acres, the fire occurring in 1925. Practically this whole area - barring a small portion previously logged and which

formed the origin of the fire - is over a rough, broken and non-productive stretch of land.

The remaining fires are all of small acreage and all in the southern half of the island. They are located adjacent to Refuge Lagoon, near the west end of Black Lake and on the western shore of the island just north of Refuge Cove. No appreciable damage was done in any case.

(2) Recommendations for Improved Protection.

The following recommendations are submitted for due consideration. It is recommended:

(a) That West Redonda Island be set aside as a Provincial Forest and that, in conjunction with those islands to the north of it already gazetted as such, it be given special protection and legislation as the Department may see fit.

(b) That where possible the Department obtain alienated timber on the island in exchange for Crown timber without the Forest.

(c) That where logging operations are to be carried out on the Island under departmental supervision, no highlead or skyline systems be permitted. Ground lead or modified lead might be supplemented for these more usual practices. In

this way dangerous dry slash hazards will be largely avoided and likewise the younger growth present in the stand will, to a far greater extent, be left undamaged.

If found impractical to exchange areas as recommended above (see b) private owners of timber should be encouraged to log in a way compatible with the objects and aims of the Forest.

(d) That in future, logging of areas should, where practical, be so planned that all timber tributary to any one booming ground or particular route of access will be taken out by one continuous operation, thereby avoiding the necessity of using roads through areas previously logged and which may contain excellent stands of reproduction.

(e) That protective restrictions be placed upon all campers, fishermen, hunters, trappers or prospectors travelling the island and, if necessary, special permits be required to cover these activities.

(f) That all such restrictions, rules, proclamations, etc. be prominently displayed where most likely to be seen by persons implied in those regulations and all local residents and transients be especially educated to such restrictions.

(g) That no attempt be made at artificial

reforestation on the island.

(h) That industry in any form - including pre-emption - at present existant or in future proposed for the island be encouraged by the Department, inasmuch as such coincide with the protective policy of the Forest. By so doing the danger of antagonizing public opinion to disfavor the Forest will be largely avoided.

(i) That the following old grades and trails be opened up for the purpose of easy access to the interior of the island in case of fire danger.

(i) The abandoned grade connecting Cassel and Ellis Lakes.

(ii) An old trail, now overgrown and disused, running from the north end of Ellis Lake northwest to a poing near the southeast corner of Lot 698.

(iii) Abandoned grades running from Redonda Bay to just south of Tom Lake.

In the event of danger to standing timber in this region from fire in the adjacent logging slash, the above three roads, kept open and worked in conjunction with boats already on Cassel and Ellis Lakes would offer a ready route for a fine fighting crew from either the Redonda Bay or Teakerne Arm end.

EAST REDONDA ISLAND

Location and Boundaries.

This island, sometimes referred to as Little Redonda Island, is situated in New Westminster Land District, bounded on the southwest and west by Waddington Channel, on the east and northeast by Homfray Channel and on the northwest by Pryce Channel.

General Topography.

(a) Mountains.

The whole island may be considered as comprising two main mountain ranges which form central hogbacks for the eastern and western halves of the island-(the island being almost divided north and south by Pendrell Sound.) The western hogback reaches its summit in Mt. Bunsen, located centrally in the north and having an elevation approximating 4300 feet. After the first 1000 feet it rises almost in precipice form on its eastern side but its western slope is somewhat more regular although steep on the average. Mt. Addenbroke forms the crest of the range on the eastern half of the island and is about 5200 feet in elevation. An idea of its slope may be gained from

the fact that the island at this point is approximately only 4 miles in width--giving an average rise of roughly 32 feet to the chain or approximately a 50% slope. Speaking for the remainder of the island, it may be said to be generally steep, rugged and broken rocky country rising abruptly from the shores. Only one small portion forms an exception to this--namely an area at the extreme northern tip where the average elevation is considerably lower and the divide between Pryce Channel and Pendrell Sound only some 300 to 400 feet above sea level.

(b) Lakes and Streams.

Two small lakes are to be found on the island. They are located near one another in the south portion of the western half of the island. The larger of these, Cloud Lake, lies at an elevation of approximately 1400 feet above sea level, and about 60 chains from the shore. It covers some 88 acres. The smaller is located about 15 chains southeast of Cloud Lake and is more or less of a slough, covering only around 20 acres. Both lakes drain southerly to Waddington Channel.

There are numerous small streams on the island, most of them fed from the high mountain

draws and snow which lies on the higher elevations as a rule till well on in July. As a consequence the supply of the majority of them is not to be depended upon-- any of them being most likely to go dry with an exceptionally dry summer or small snowfall the previous winter. There is however, at practically any time, sufficient water to be found for camping purposes, gasboat requirements etc. although a logging operation in certain localities might at times find difficulty in obtaining a supply regular enough for machine purposes.

(c) Harbours and Surrounding Waters.

The island offers but one large harbour --namely Pendrell Sound. This stretch of water is well protected from practically all directions and but rarely affected to any great extent by winds. Near its head it offers excellent anchorage and shelter for average small boats of the region.

The only other anchorage worthy of note here is a small cove, sometimes referred to as Bachelor Bay and located roughly 1½ miles east along the shore from Horace Point. It will accomo-

date small boats only but offers excellent shelter with fresh water etc. readily accessible.

Other small dips and coves present themselves along the shores but in the event of a blow all of them must be quitted and shelter sought elsewhere. Atwood Bay, Forbes Bay or Lloyd Point, on the mainland east of the island, or Salt Lagoon, Doctor Bay and Walsh Cove on West Redonda Island are the next best and nearest alternative shelters in such a case.

The surrounding waters of the island have all been previously described with one exception--namely Homfray Channel. This stretch of water, although not directly exposed over its entire length, still, offers a considerable sweep to southerly winds and at times becomes quite hazardous to small craft.

Tidal currents adjacent to the island, as was the case with West Redonda Island, may be considered practically negligible--the greatest set at any place, either on ebb or flood, being only 1½ knots and this in Homfray Channel opposite Forbes Bay.

CLIMATE

As previously described for West Redonda Island. (See page 13 of this report.)

INDUSTRIES.

Industry on this island at the present time is confined to pre-emption settlement and handlogging. The greater part of the island offers but a very poor chance from an agricultural viewpoint and as a consequence the number of the former is small--only three being in residence at this date. Two of these are raising small garden truck and one, in addition, fruit. Both have only small areas suitable for these purposes, however, and must needs turn to handlogging as a means of support. This latter they are carrying out on claims adjacent to their pre-emptions.

Several mining claims have been surveyed on the east side of Pendrell Sound and considerable developement work at one time done upon them. At present however, they are in an abandoned state. The general opinion with regard to the island from a mining standpoint seems to be that it is mineral bearing but economic conditions do not justify any present activity.

Game birds and deer,--especially the latter--are abundant and easily obtainable in practically all parts of the island. The deer are, however, generally of small size, as is usually the case where found on the coast islands.

DESCRIPTION OF THE FOREST.

The type represented is the coastal fir-cedar-hemlock type in the rough average proportions of 50%, 35% and 10% respectively with other species 5%. Among the latter are found White Pine, Lodgepole Pine and Yellow Cedar, growing for the most part on rocky knolls and spurs which are a feature of the island. Speaking generally it may be said that, above the 1500 foot contour the forest is represented almost entirely by a scrub second growth with a considerably heavier percentage of the last mentioned three species. This growth, in the majority of cases, will most likely never attain market size.

AGE CLASSES AND THEIR DISTRIBUTION.

(See introductory paragraph under this heading for West Redonda Island - Page 18 of this report.)

(a) 1-20 Year Class--839 acres.

Type 50, an area of 206 acres on Homfray Channel is the largest separate area falling under this age class on the island. It was previously logged and burned and is at present restocking with Hemlock, Cedar and Fir. The stand is for the most part in the seedling stage and runs approximately 3980 trees per acre. Hemlock forms about 62% of the stock and averages about 5 feet in height. The Cedar and Fir range from 2 inches to 12 inches in height and form 25% and 18% of the stand respectively. Stump measurements on the area showed the following growth in the previous stand: Fir, 47 inch stump diameter, 348 years; Cedar, 22 inch stump diameter, 150 years and Hemlock, 17 inches stump diameter 98 years.

Type 39, near Dean Point in Waddington Channel, represents an area of 157 acres of seedling reproduction on a logged unburned area. The stand is 1 to 3 years of age and runs about 4100 trees per acre of Cedar, Hemlock, Fir and a few scattered White Pine. Cedar forms 55% of the stand with Hemlock and Fir about 26% and 17% respectively. Scattered advance growth averaging 6 to 9 years of age is also on the area.

Seed trees are numerous and a good forest fringe is within 20 chains of any part of the area.

The next largest type in this class is Type 23, a long narrow strip lying adjacent to the western shore of Pendrell Sound near its mouth. This is an area of 125 acres, power logged and unburned and restocking to Hemlock, Fir, Cedar and scattered White Pine and Lodgepole Pine--approximately 12,000 trees per acre. Hemlock forms 92% of the stand at present and is somewhat more advanced in size and age. The majority of the remaining species appear in the seedling stage.

Type 10, 89 acres on Pendrell Sound near its head is a previously power logged and burned area. The present stand shows a stocking of about 7950 trees per acre of which Hemlock represents 91% of the total. This species and the Fir average roughly 5.5 feet in height and from 5 to 6 years of age on the area while practically all the Cedar tallied was in the seedling stage.

The remaining areas under this age class--namely Types 1, 2, 4, 5, 7, 41 and 48--are of comparatively small size but all represent fair sites and should, from present indications, eventually yield

mature stands of good quality.

(b) 21-40 Year Class--2784 acres.

The largest separate acreage under this division of the immature timber on the island is Type 55. This is an area of 1497 acres on Homfray Channel showing a stocking of approximately 1700 trees per acre of Cedar, Hemlock and Fir in the rough percentage of 60%, 31% and 9% respectively. The stand averages 36 years of age and also shows a fair sprinkling of Cedar poles scattered throughout. The site, however, is a poor one and accessibility unfavorable. The area has not been previously logged.

Type 64, representing 609 acres just north of Horace Point is the next largest area. Here the stand is roughly 38 years of age and runs about 2250 trees per acre of Hemlock, Cedar and Fir, the former making up 47% of the stand with the Cedar and Fir forming 32% and 21% respectively. An average for all species shows a total height of roughly 35 feet and a D.B.H. of about 2.5 inches.

Type 63 is a previously logged area of 222 acres now restocked with Cedar, Hemlock and Fir running 1790 trees per acre. The stand averages 37 years of

age and shows an average total height growth for all species of about 38 feet. Some good sized Cedar and Fir was taken out of the former stand on this area.

Type 67 is a stand on an old selectively logged area of 291 acres in extent on Pendrell Sound. The stand runs 4800 trees per acre of Hemlock and Cedar, the former representing about 68% of the stand. The average age of the stand is around 33 years. Considerable of the mature cedar still remaining on this area was noticed to be wormy and conky.

The remaining area under this age class is Type 59, an area of 165 acres, previously logged to Homfray Channel. Here, present stocking shows roughly 1480 trees per acre of Hemlock, Cedar and Fir in the proportions of 41%, 30% and 29% respectively. The average age of the stand is about 35 years and a rough average total height for all species is 40 feet. The area is a fairly steep side-hill proposition.

(c) 41-60 Year Class--2352 acres.

Type 69, 1758 acres in extent and lying on the eastern side of Pendrell Sound is the largest area under this division of the immature timber. It is a stand of Hemlock and Cedar of about 45 years of age

and running roughly 1400 trees per acre. The area has not been previously logged and the stand has probably followed an old burn. The whole area is comparatively steep side-hill and altogether offers a poor site although no doubt fair timber will develop in many places.

Type 36, on Waddington Channel represents 435 acres of immature stand on a fairly steep site. The stand has probably followed an old burn. In the previous stand some pockets of large Fir were handlogged from this area and when the present stand matures it will no doubt develop in pocket form at the base of bluffs etc. and present at best a handlogging proposition.

Types 8 and 20, both of considerably smaller acreage than the preceding two, go to make up the remaining acreage in this age class. The present stands of 2360 and 840 trees per acre respectively, are chiefly Hemlock and Cedar. The former presents the better site, Type 20 being on fairly steep ground and at a much higher elevation.

(d) Forest Land Not Yet Restocking--1531 acres.

Of the total acreage falling under this division on the island some 375 acres represent comparatively freshly power logged areas. The remaining acreage is

divided between handlogged areas--along the shores--and a few burns. Practically all the areas that go to make up the total are of small extent and as a consequence exhibit the best possible chances of reproducing by natural means from their adjacent forest fringes.

UTILIZATION.

(1) Present Utilization & Markets.

To date, the area logged upon this island represents some 2000 acres. Of this, practically 1400 acres has been logged off by small power operations. At present, only one such outfit is in activity. This is a one donkey, four man crew proposition that has recently begun operations on X 9404 on the west side of Pendrell Sound. They have approximately 200 M. feet of fir, cedar and hemlock to take off and will probably be engaged some time in the undertaking due to the small size of the crew.

Three handloggers are carrying out operations on different sales along the shores of the island. Two of these are located along the northern part of Pendrell Sound and the third on the Homfray Channel side of the

island. These operations are, however, very intermittent and the extent of the work is as a rule dependent largely upon the season and upon the existing market. Actual utilization may be described as average handlogging practice--that is, as close as may be expected and consistent with the steep, broken and rocky nature of the shore topography.

The market employed by all the above-mentioned operators is the open log market at Vancouver.

(2) Difficulties in Way of Complete Utilization of the Forest.

As is the usual case with the coast islands the general topography is the major factor to be considered in the complete utilization of the forest on this island. Being such as it is, almost entirely mountainous with maximum elevations of 4300 feet and 5200 feet on the west and east peninsulas respectively and coupling with this the comparatively narrow width of those peninsulas an idea of the average timber accessibility may readily be gained. It practically precludes all timber other than that directly adjacent to the shores and in many cases even this is more or

less inaccessible due to steep bluffs etc., which intervene. Again, over most of the island, the possibility of suitable grades for logging roads is but poor and logging of such areas, when carried out, will without doubt be a very costly and in many cases wasteful undertaking.

A further negative feature is that of the lack of booming facilities. Other than Pendrell Sound it may be said that no booming grounds of any comparative size present themselves whatsoever on the island. This means that any large operation on the western, northern or eastern shores of the island would be without this most necessary facility and forced to tow their logs in small quantities some distance for the purpose of booming them for shipment. Such a case is distinctly an appreciable drawback in the issue of complete utilization.

(3) Development Possibilities.

Timber available on this island for development under present economic conditions may be said to be almost a negligible quantity. Stands in merchantable quantities, it is true, are present but are so situated

that accessibility under present methods is extremely doubtful. The best of such stands are enumerated below:

(a) A stand bordering the western shore of Pendrell Sound, extending on the average some 50 chains back from the water and, opposite the lagoon south of Lot 4177 swinging northwest to Pryce and Waddington Channel. It covers some 1700 acres and averages 5 M. to 10 M. feet per acre over the whole. The area is very rough and steep with bluffs and rock outcrops covering approximately 75% of the surface. Small patches in this area directly adjacent to the Sound have already been logged off up to an average elevation of 800 feet above sea level some 20 chains or less from the shore and these probably represented the easiest and best shows, so that an idea of the general accessibility of the remaining stand may readily be gained.

(b) Three small areas in the south of the western peninsula of the island--one adjacent to the south end of Cloud Lake and the remaining two in the draws of the creeks draining that lake and the smaller lake to the southeast. The former is some 36 acres and runs around

5 M. feet per acre. The latter two represent together approximately 90 acres running 10M to 15M feet per acre. They are, however, in narrow draws and form long strips of timber in the draw only--practically no timber being available once out of the creek depression. Both creeks also have steep drops over the last 20 chains of their course to the sea. It is doubtful if the amount of timber available warrants any operation on these areas at present.

(c) An area of mixed fir and cedar located northwest of Lot 5018 on the Homfray Channel side of the island. This comprises some 140 acres and averages 20 M. to 25 M. feet per acre. The stand is on benches of minimum elevation 500 feet and maximum elevation 1500 feet. The lower 500 feet to the sea is quite steep and broken but a possible route for the timber is the grade of a creek which flows through the area and thence centrally through Lot 5018 to Homfray Channel. The area would require considerable work such as chutes etc. before an operation might be commenced and the initial outlay thus entailed would probably make the proposition prohibitive as far as the average small operator is concerned.

(d) An area lying due north of Lot 5018 and extending as far as Lots 5019 and 3628 which offers a stand of some 2500 cedar poles. The stand is spread over 238 acres and averages roughly 450 lineal feet to the acre. The poles appear of good quality, clean and straight and size in general 8 inches by 45 feet. Coarse gravelly soil, frequent rock outcrops and rock bluffs are a feature of the area. When logged the stand will present a fairly hard show and will entail considerable preparatory work before the actual operations are begun. Probably the most feasible method to apply would be yarding on the benches and chute to tidewater. Breakage will be heavy, but a poor booming ground is available and altogether the operations will be extremely expensive.

PROTECTION.

(1) Fire Damage in Last Few Years.

In past years several large portions of the island were burned over but the boundaries of these fires are now so indistinct and since the areas swept over are, almost without exception, high and barren, no detailed description seems necessary here. Sufficient to say probably the largest of these occurred in

the southeast part of the eastern peninsula of the island and extended up to a rough elevation of 4000 feet above sea level.

Of the more recent burns, an area of some 2600 acres situated in the northeast portion of the island adjacent to Homfray Channel represents the largest. This fire occurred in 1919 and extends for the greater part over fairly high rocky country having swept from the shore to the crest of the divide between Pendrell Sound and Homfray Channel. Approximately 1100 acres of this area is burned to bare rock and is now absolutely barren. Another part of this burn, inand adjacent to an old logging slash, is reproducing satisfactorily.

In the south of the western peninsula of the island there is a burn of 300 acres extent over rocky and scrub covered country. This occurred, according to all indications fifteen or more years ago and did but very little damage from a forestry standpoint due to the poor nature of the area covered.

(2) Recommendations.

The following recommendations are submitted for due consideration. It is recommended:

(a) That East Redonda Island be not gazetted as a Provincial Forest.

Due to the fact that such a heavy percentage of the total area of the island shows as high and mountainous non-productive land and generally speaking only scattered handlogging chances are available in the way of productive sites, it does not seem advisable under present day economic conditions to make any increased expenditure for additional protection etc. as would be the case in the event of creating the area a Provincial Forest. Additional to this is the fact that a considerable number of the islands to the north (i.e. Cracroft, Gilford, Broughton, Turnour, etc.) present far more peresquisite features as regards a Forest's requirements and it seems only practical that any move of the Department should first be directed towards areas that offer the greater possibilities for the purpose in view. After all such available areas are in reserve, then, such as East Redonda Island might very well be considered.

(b) That, due to its proximity to West Redonda Island Forest, the island be placed, to a somewhat lesser degree, under the same restrictions with regard to protection as those applying to the Forest.

(c) That all such restrictions, rules, proclamations etc. be prominently displayed where most likely to be seen by persons implied in those regulations and all local residents and transients be especially educated to such restrictions.

APPENDIX

Date of Survey, Personnel, Etc.

This survey was carried out between May 29th and September 29th, 1927. The launch "Saraband" was chartered for the project and used throughout the season both for transportation and for living accomodation. Squirrel Cove P. O., on Cortes Island served as headquarters for supplies, mail, etc.

Following is the personnel of the party:

E. W. Bassett.....Estimator & Chief of Party.
J. A. McMillan.....Compassman.
E. A. Munn.....Junior.
F. W. Allan.....Engineer-Cook.

METHODS ADOPTED.

Traverses and Strip Lines.

A 20 chain to the inch map of the islands upon which had been plotted all information available from commercial cruise maps covering alienated timber, etc. was used as a basis for the work throughout.

The method employed in examination was that of box compass traverses and strip lines, supplemented by careful observation from known points of eminence. These examination lines were located, where possible, from established survey posts, but otherwise from some definite shore indentation, creek mouth, or

other feature of the area established by previous survey. Strips, as closely as topography allowed, were run in cardinal directions and generally at 40 chain intervals. All distance was measured by 200 link steel tape and elevations carried by aneroid barometer with control established from sea level.

Stocktaking Methods.

In immature stands, sample plots were located in each type encountered - either by tallying a strip along the chain or measuring off a small rectangular area. No regular interval could be laid down for these plots as they were chosen in order to fairly represent each "type" of young growth. (In this connection "type" includes variation in age-class.) Plots were not blazed nor posted but their location merely shown on the compass map and later plotted upon the field map. The size of the plot taken likewise was variable with the density of the stand, the estimator endeavoring where possible to include roughly a minimum of 200 trees to the plot. All trees forming the main body of the stand were tallied individually in inch classes, using a diameter tape

occasionally to check the eye. Then knowing the area of the plot, by totalling the complete tally, an estimate of the number of trees per acre was readily obtainable.

Several representative trees of each species on each plot were felled and measured for age, total height and D. B. H. - this data being recorded in the space provided on the back of the tally sheet. Where the stand was of a size such that felling the sample trees became impractical, the increment borer and Abney clinometer were used for determination of age and height respectively. In every case, as closely as was possible, these "representative" trees chosen were average dominant trees. In logged areas occasional stumps were measured for D. B. H. and annual rings counted for age determination as a rough indication of the site quality.

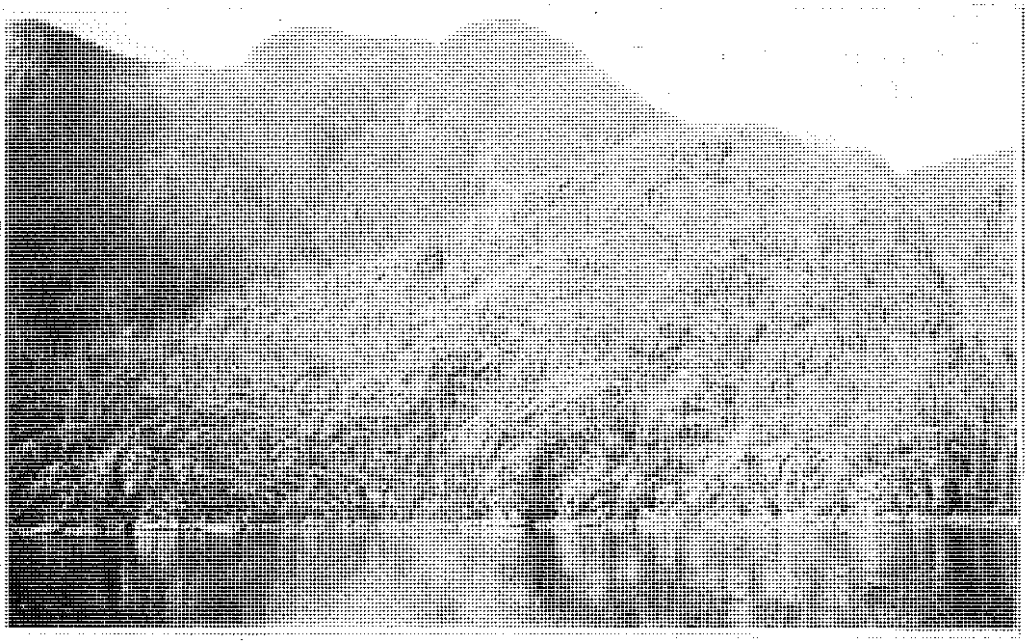
No plot studies were made in reproduction under virgin timber, practically all plots being taken in young growth in logged or logged and burned areas.

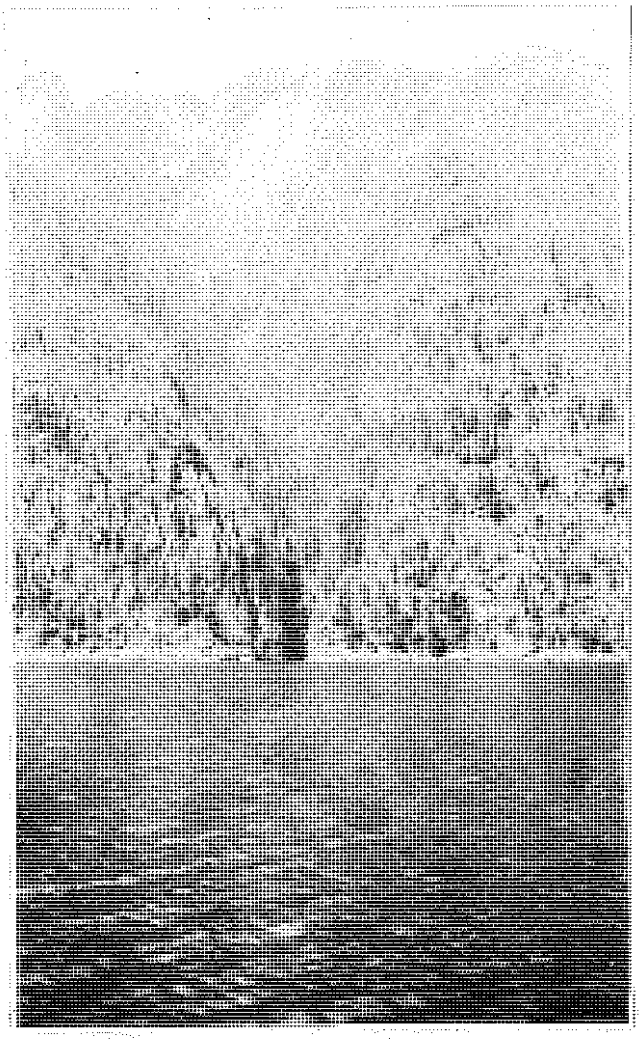
Very little estimating was required in mature stands - sufficient information on the greater part of such having been obtained from commercial sources and accepted for this survey.

COST OF SURVEY.

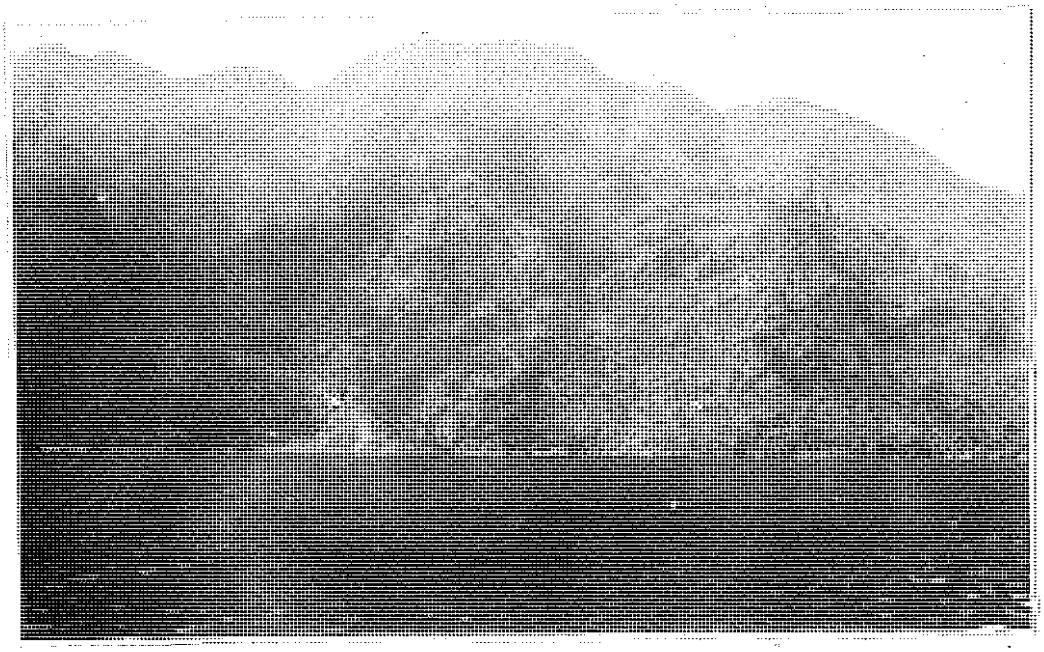
Salaries	$1,462.31
Launch Hire, Gas, Oil & Repairs	1,110.25
Food (35¢ per meal basis)	443.80
Miscellaneous	60.50
Total Charge to Vote	$3,076.86

Cost per Acre----------$ .045

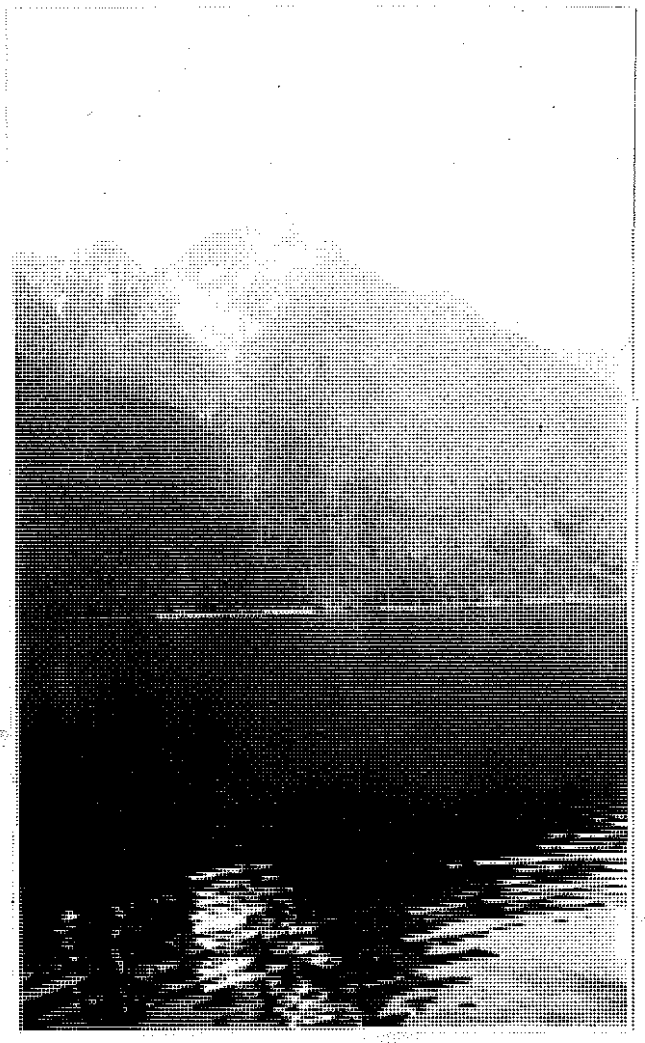




Fire Denuded Areas - East shore of E. Redonda Is. Note damage to soil and bare rock remaining. Such areas were classified as barren non-productive.

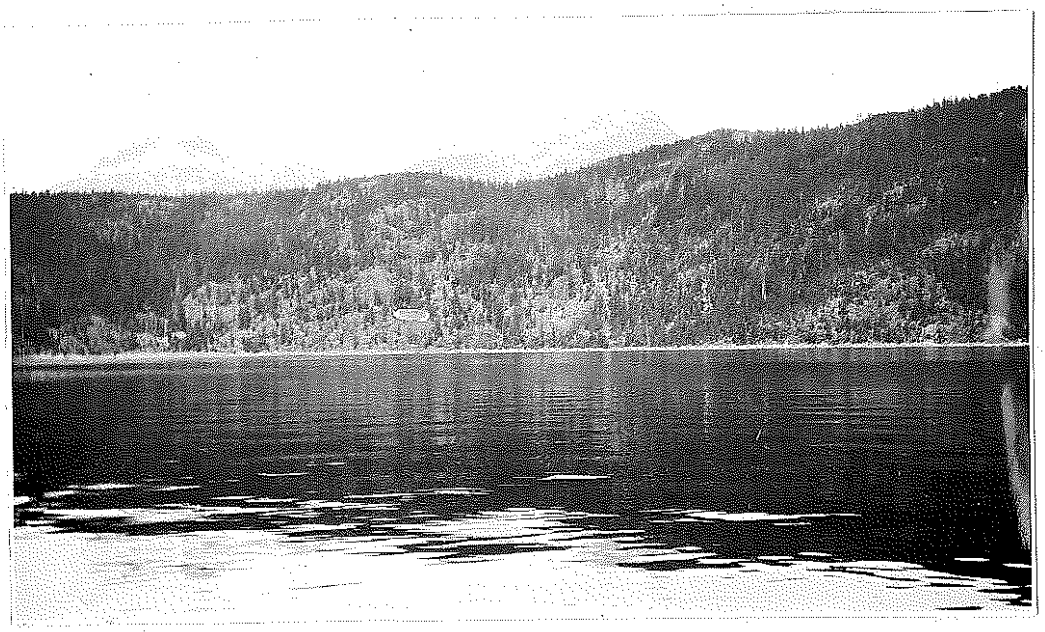


Typical One-Donkey Logging Show on the Islands.
(marked, "x" in photo).



Mt. Addenbroke - 5200 ft. - E. Redonda Is.

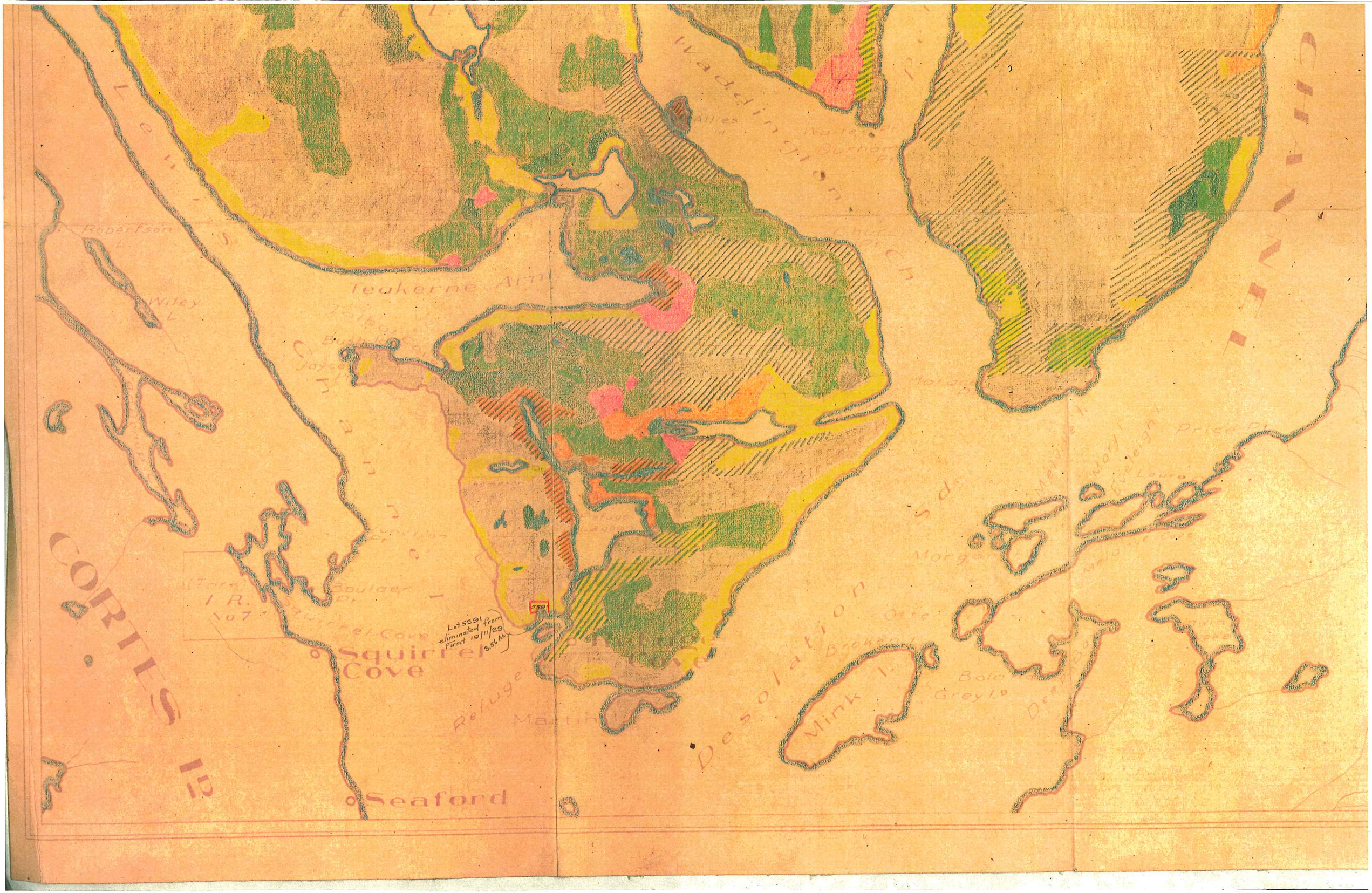
Burned to Bare Rock -- Non-Productive.



Typical Scrub Area - Note numerous rocky outcrops and short scrubby nature of timber cover.

KEY PLAN
showing
FOREST COVER
on
WEST REDONDA ISLAND
PROVINCIAL FOREST
and
EAST REDONDA ISLAND
(Proposed Provincial Forest)
Scale - 1" = 1 Mile
LEGEND
Logged
Logged and burned
Reproduction
Merchantable Timber under 20 M. per A.
Merchantable Timber over 20 M. per A.
Barren or scrub
Burn
Lakes, Swamp
PRYCE CHANNEL
Elizabeth
Double
Forbes
Bay
Wadsworth Glory
Walter
Overhead
Wilcox
Bohn
Alyce

Tibbs Pt.
Elizabeth
Connis Pt.
PRYCE CHANNEL
Redondo
Bay
Waddington
Robertson


Robertson L.
Wiley L.
Ivadlingloq
Teakerne Arm
Squirrel Cove
Seaford
Refuge
Desolation
Mink I.
Lot 5591 eliminated from Forest 19/11/29 3.51 Ac.
5591
CORTES I.

Teakerne Arm
Squirrel Cove
Seaford
Desolation Sd
Mink I.
Lot 5591 from eliminated Forest 1911/29 3.56 Ac
5591

Classification of Areas (in Acres).

WEST REDONDA ISLAND

F.B. 81 2M-1227-197

No.	Section or Lot	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
L	2132	55	-	119	-	-	-	306	-	-	-	480	H
L	2840	120	-	-	-	-	-	-	-	4	-	124	
L.	2842	516	-	116	-	-	-	-	-	8	-	640	C
L.	2843	138	-	177	-	-	-	-	-	5	-	320	C
L.	3122	-	-	-	-	-	-	14	-	-	-	14	
L	3123	-	-	-	-	-	-	8	-	-	-	8	
L	3185	-	-	39	48	-	-	8	-	-	-	95	H
L.	3286	8	-	196	191	-	-	245	-	-	-	640	
L.	4174	13	-	16	-	-	3	19	-	-	-	51	
L.	4175	19	-	31	-	-	-	-	-	-	-	50	
L.	4176	-	-	22	-	-	-	66	-	-	-	88	F
L.	4937	12	-	-	50	-	-	57	-	-	-	119	
L.	4938	-	-	12	10	-	-	70	-	-	-	92	
L.	4941	23	-	71	4	-	-	59	-	3	-	160	F
L.	4942	21	-	7	41	-	-	-	-	-	-	69	F

.D.A ISLAND **Provincial Forest.** Date 1927 Sheet No. 1

Swamp.	Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
-	-	480	H.F.C.										Imm. stand many aged following repeated old overlapping fires. Mature stand 13 ac. 10M/ac. & 42 ac. 20M/ac. F.C.&H.
4	-	124											Mature stand patchy--avgs. 10M/ac. Fir & Cedar
3	-	640	C.H.F.	Ref.Plot .35 ch.N. on Strip 8	.075	C H F	2.2 2.5 4.0	30 44 56	33 43 41	906 373 320			75 ac. in N. of L. represents many aged stand following old burns. Mature stand patchy and somewhat scrubby aver. 5M/ac. F.C.H.
5	-	320	C.H.F										For descrip. Imm. See. L. 2842. Mature stand 5M/ac. F.C.H.--patchy.
-	-	14											
-	-	8											
-	-	95	H.F.C.										Imm. stand approx. 8000/ac. with avg. age 5 yr. following logging & slash burn.
-	-	640											Imm. stand many aged following old overlapping fires. Logged & burned area should reproduce satisfactorily.
-	-	51											Imm. stand on old selective logging. Mature stand 10M/ac. F.C. & H.
-	-	50											See. Lot 4174.
-	-	88	F.H.C.										See L. 4936 for descrip. of Imm. stand.
-	-	119											Logged area will reproduce satisfactorily from forest fringe. Mature stand 10M/ac chiefly piling size Fir.
-	-	92											See L. 4936--Area logged about 1924.
3	-	160	F.C.H.										See L. 2849 for 22 ac. Imm. in W. of this L. Remainder of Imm. many aged. Mature stand: 16 ac. 10M/ac. F.C.H.& 7 ac. 13M/ac. Fir.
-	-	69	F.C.H.										See L. 2849 for young growth descrip. Mature stand 10M/ac. chiefly Fir & Cedar.

Classification of Areas (in Acres).

F.B. 84 M.S. 97

WEST REDONDA ISL.

T.C.L. (Cont'd.)	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.	
L.	4943	4	-	10	10	-	37	-	-	3	-	64
L.	4945	-	-	-	75	-	-	94	-	-	-	169
L.	4969	13	-	13	44	-	-	-	-	-	-	70
L.	4970	5	-	61	14	-	-	71	-	-	-	151
L.	4971	21	-	34	28	-	-	58	-	-	-	141
L.	4973	-	-	-	49	-	-	93	-	14	-	156
L.	5015	-	-	70	25	-	-	-	-	-	-	95
L.	2581p	382	-	-	-	-	-	178	-	-	-	560
T.L.	32284	6	-	42	-	-	-	44	-	-	-	92
L.	36093	97	-	-	-	-	-	361	-	-	-	458
L.	36094	191	-	-	-	-	-	443	-	-	6	640
L.	36095	368	-	-	-	-	-	157	-	-	-	525
L.	36096	110	-	-	-	-	-	491	-	5	6	612
L.	36097	114	-	-	-	-	-	410	-	4	-	528
L.	40979	100	-	-	117	-	-	423	-	-	-	640
LL	43836	199	-	-	32	-	-	326	-	11	2	570

D O N D A I S L A N D **Provincial Forest.** Date 1927 Sheet No. 2

		TOTAL ACRES.	IMMATURE TIMBER (Description per Acre).										REMARKS. (Former Stand, Date of Fire, or other History.)
op.	Water.		Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	
													Ref. L. 2849 for Imm. stand. Mature timber 13M/ac. Fir.
	-	64	F.C.H.										
	-	169											58 ac. power logged 1924--will reproduce from forest fringe. Remainder of logged area has been handlogged.
	-	70											Imm. stand many aged following very old overlapping fires. Burned area wil will reprod. satisfactorily. Mature stand 13M/ac. Fir.
	-	151											See L. 4969 for descrip. of Imm.stand. Mat. stand 10M/ac. F.C.H.
	-	141											See Lot 4970
4	-	156											Area logged about 1919--should reproduce satisfactorily.
	-	95	F.C.H.										Ref. T.L. 33940 for Imm. stand
	-	560											Mature stand. 45 ac. 7M/ac. & 337 ac. 40M/ac. Fir and Cedar.
	-	92	F.H.C.										See L. 4936 for description of Imm. stand.
	-	458											Mature stand: 28 ac. 7M/ac. 55 ac. 30M/ac. & 14 ac. 15M/ac. Fir & Cedar.
	6	640											Mature stand: 32 ac. 3M/ac. 112 ac. 5M/ac. & 147 ac. 15M/ac. H.F. & C.
	-	525											Mature stand: 156 ac. 3M/ac. 168 ac. 5M/ac. 41 ac. 7M/ac. & 3 ac. 15M/ac.
5	6	612											Mature stand; 2 ac. 3M/ac. 106 ac. 5M/ac. & 2 ac. 15M/ac. Fir & Cedar.
4	-	528											Mature stand; 45 ac. 5M/ac. 4 ac. 7M/ac. 44 ac. 14M/ac. & 21 ac. 20M/ac. Fir & Cedar.
-	-	640											Mature stand 5M/ac. Hom.- Of the scrub area 234 acres are burned over.
1	2	570											Mature stand 155 ac. 5M/ac. & 44 ac. 20M/ac. C&F. Scrub area includes 103 acres burned over 1925.

Classification of Areas (in Acres).

WEST REDONDA ISL

F.K. 84 3M-1237-'07

W.C.L. (Cont'd)	Section or Lot.	CAPABLE OF PRODUCING TIMBER. Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	NON-PRODUCTIVE. Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.	TOTAL ACRES.
X	45	325	-	-	-	-	-	75	-	-	-	400
X	1658	179	-	14	36	-	-	36	-	-	-	265
Area	S.of Ls. 4973	-	-	-	72	-	-	60	-	-	-	132
"	S.of Ls. 4944 & 4945	26	-	154	44	-	-	635	-	23	10	892
"	N.of L. 4945 & W.of TL 33940	180	-	137	44	-	12	225	-	-	-	598
"	N.of L. 4936	-	-	15	-	-	-	-	-	-	-	15
"	E.&S.of TL.6468p	168	-	15	143	-	-	208	-	-	-	534
"	S.of L. 4941	47	-	-	17	-	4	96	-	-	-	164
"	E.of X 1658	27	-	-	35	-	-	-	-	-	-	62
"	E.of L. 4971	41	-	91	190	-	-	501	-	-	-	823
"	N.of L. 4969	-	-	-	2	-	-	-	-	22	-	24
"	N. of Black L. & S.E.of Teakerne Arm.	411	-	108 332 264	277	-	-	186	-	11	-	1589

E D O N D A I S L A N D **Provincial Forest.** Date 1927 Sheet No. 3

Amp.	Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	-	400											Mature Stand 15M/ac. Hem. Fir. & Ced.
	-	265											Imm. stand on very old selec. logging Maturesstand 10M/ac. F.C. & H.
	-	132											Area logged intermittently since 1919
23	10	892	F.C.H.		.1	F C H Pl	0 Cl " " "	6.3 Seedlings 5.1 4.2	8 7 8	3000 1660 1600 40			Mature stand: 10 ac. 30M/ac. & 16 ac. 40M/ac.-isolated parcels. Logged area will reproduce satisfactorily.
-	-	598	H.F.C.										See,L. 4944 for description of Imm. stand. Mature stand includes: 123 ac. 20M/ac. 42ac. 10M/ac. 12 ac. 13M/ac. & 3 ac. 60M/ac. Fir, Cedar & Hem.
-	-	15											See Lot 4936.
-	-	534											Imm. stand on old selective logging. Logged area handlogged 1924 with exception of 25 ac. in 1923. Mature stand 10M/ac. chiefly piling size Fir
-	-	164											Mature stand 10M/ac. F.C.H. - logged area handlogged.
-	-	62											See remarks on area S. of L. 4941.
-	-	823											Mature stand 10M/ac. F.C.H.--Imm. stand many aged following repeated old fires.
22	-	24											
1	-	1589	F.C.H. C.H.F.Pw	40-47.5	.075	C H F Pw	2.8 3.8 4.6 5.0	32 50 58 -	30 45 42 -	760 320 80 26			Ref. T.L. 33940 for 108 ac. 10 yr. Imm stand. Additional Ref. L. 2842 for 332 ac. 40 yr. Imm. stand. Remaining 264ac. of Imm. is many aged following repeated old overlapping fires. Mature timber: 15 ac. 5M/ac. 184 ac. 10M/ac. 128 ac. 15M/ac. 21 ac. 26M/ac. 53 ac. 29M/ac. & 10 ac. 60M/ac. Fir, Cedar & Hem.

Classification of Areas (in Acres).

F.R. 34—29/127-197

V.C.L. (con't)	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.	
Area	NE.&W of L.2714	245	-	94	15	-	-	122	-	8	259	743
"	N.of TL 745p&S of T.L. 36096	480	-	-	-	-	-	736	-	39	18	1273
"	S.&E.OF L.3322	-	-	-	123	-	-	965	-	-	3	1091
"	Adj.&N. of Lots 3286 & 2132	205	-	103	107	-	-	3166	-	-	-	3581
"	Bet.Lts. 689 & 3286	16	-	27	2	-	-	75	-	-	-	120
"	W.of TL. 36095	90	-	-	-	-	-	193	-	34	-	317
"	Bet.T.L. 36094 & L.2098	218	-	-	-	-	-	67	-	-	-	285
"	Adj.& Surrounding TL. 40979	703	-	-	548	-	1713	2344	-	3	-	5311
	Total V.C.L.	5896	-	2390	2393	-	1769	13691	-	197	304	26,640

E D O N D A I S L A N D **Provincial Forest.** Date 1927 Sheet No. 4

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
259	743	H.C.F										See description under L.1158 for Imm. stand. Mature stand patchy but averages 10M/ac. F.C. & H.
18	1273											Mature stand 181 ac. 3M/ac. 183 ac. 10M/ac. & 116 ac. 15 M/ac.
3	1091											69 ac. of logged area has been power logged & burned over 1925--remainder is handlogged. Whole will reproduce from forest fringe. Scrub area includes 425 ac. burned 1925.
-	3581											Mature stand 138 ac. 10M/ac. 58 ac. 15M/ac. & 9 ac. 20M/ac. Imm. stand many aged. 689 ac. of scrub area burned over.
-	120											Mature stand 20M/ac. Imm. many aged. Logged areaburned over 1923.
-	317											Mature stand: 2 ac. 5M/ac. 37 ac. 17M/ac. 45 ac. 30M/ac. & 6 ac. 40M/ac. F.C. & H.
-	285											Mature stand: 63 ac. 15M/ac. F.C. & 155 ac. 30M/ac. F.C.H.
-	5311											Mat. stand: 3 ac. 3M/ac. 386 ac. 5M/ac. 179 ac. 6M/ac. 13 ac. 7M/ac. 51 ac. 15M/ac. 14 ac. 17M/ac. & 57 ac. 30M/ac. Rock area has been burned clean. Logged area in this case is old logging but was not examined.
304	26,640											

Classification of Areas (in Acres).

WEST REDONDA ISLAND

F.B. 84-2NC12-107

	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Ty
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
AKES	Refuge Lagoon Lake										595	595	
	Arrawac Lake (Portion N. of Lot 2714)										48	48	
	Jack Lake										120	120	
	Ellis Lake										472	472	
	Total Lakes										1235	1235	
Adj. Is.	Martin Is.	-	-	-	-	-	-	105	-	-	-	105	
	Prussian Is.	-	-	15	-	-	-	32	-	-	-	47	H
	Total Adj. Is.	-	-	15	-	-	-	137	-	-	-	152	
MIEN.	L. 698	13	-	33	446	-	-	78	-	31	50	651	
	L. 1648	-	-	-	-	-	-	52	-	-	-	52	
	L. 2426	-	-	-	-	-	-	38	-	-	-	38	
	L. 2446	-	-	-	-	-	-	52	-	-	-	52	
	L. 2475	-	-	-	-	-	-	52	-	-	-	52	
	L. 2476	-	-	4	-	-	-	48	-	-	-	52	
	L. 2713	316	-	292	-	-	-	-	-	-	32	640	
	L. 2849	50	-	63	16	-	-	8	-	18	-	155	
	L2 3439	-	-	19	-	-	-	1	-	-	-	20	

DONDA ISLAND **Provincial Forest.** Date 1927 Sheet No. 5

	Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	595	595											
	48	48											Salt water enters this lake on an 11½ foot tide--average high tide for region 10 ft.
	120	120											
	472	472											
	1235	1235											
	-	105											
	-	47	H.C.F.	0-7.5	.075	H C F Pl	0 Cl " " "	Seedlings	" " " "	1653 373 160 93			Area now immature timber previously logged and burned.
	-	152											
													Imm. stand on old selec. logging.
	50	651											Imm. stand on old selec. logging. Logged area burned over 1923--will re produce from adj. forest fringe.
	-	52											Area taken up under Mineral Act.
	-	38											" " " " " "
	-	52											" " " " " "
	-	52											" " " " " "
	-	52											" " " " " "
	32	640											Mature timber: 287 ac. 5M/ac. 15M/ac. chiefly Fir. Imm. stand many aged following old overlapping & repeated fires.
3	-	155	F.C.H.		.1	F C H	.5 0 Cl. "	5.7 Seedlings "	7 "	1940 230 70			Mature stand: 7ac. 13M/ac. Fir & 43 ac. 10M/ac.. F.C.H.
	-	20											Imm. stand many aged on poor site. Lot taken up under Mineral Act.

Classification of Areas (in Acres).

WEST REDONDA ISLAN

F.B. 84—20-12-37-197

	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.	
ALLEN (Cont'd.)												
L	3768	85	-	45	5	-	-	3	-	5	7	150
L	4611	-	-	-	11	-	-	-	-	-	-	11
L	4936	16	-	152	-	-	-	18	-	-	-	186
L	4944	-	-	30	51	-	-	56	-	-	-	137
L	4946	-	-	-	30	-	-	51	-	-	--	81
L	4967	-	-	-	15	-	-	164	-	-	-	179
L	4972	9	-	-	175	-	-	-	-	-	-	184
L	5371	-	-	-	-	-	29	-	-	-	-	29
L	5372	-	-	-	67	-	-	-	-	-	-	67
TL	743p	380	-	30	100	-	-	130	-	-	-	640
TL	744p	383	-	-	69	-	60	127	-	1	-	640
TL	745p	413	-	-	165	-	-	10	-	-	25	613

O N D'A I S L A N D **Provincial Forest.** Date 1927 Sheet No. 6

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
7	150											Imm. stand approx. 8M/ac with avg.age 5 yrs. following logging & slash burn. Mature stand patchy & averages 10M/ac Fir & Cedar.
-	11											
-	186	F.H.C.	17.5-27.5	.1	F H C.	O Cl " "	Seedlings	" "	3000 1040 500			Mature stand 10M/ac.--chiefly piling size fir.
-	137	H.F.C.		.1	H F C	O Cl " "	6.6 4.8 Seedlings	8 7	4540 2110 1070			Logged area will reproduce satisfactorily from adj. forest fringe.
--	81											Logged area along shore with forest fringe back of it,-has been logged intermittently since 1919.
-	179											Area logged 1926--will reproduce satis-factorily.
-	184											Mature stand 8 ac. 5M/ac. & 1 ac. 15M/ac. F.& C. Logged area selectively handlogged & should reproduce satisfactorily.
-	29											Area burned over 1925.
-	67											45 ac. logged & burned 1925--remainder burned 1925--whole area should reproduce from adj. seed trees scattered through surrounding burn.
-	640											See L.4944 for descrip. of imm. stand. Mature stand; 27 ac. 16M/ac., 42 ac. 17M/ac. 22 ac. 20M/ac., 20 ac. 33M/ac. 58 ac. 43M/ac. 11 ac. 48M/ac. 22 ac. 52M/ac. & 178 ac. 60M/ac. Logged area handlogged.
-	640											Mature stand: 43 ac. 6M/ac. 200 ac. 16M/ac. 102 ac. 17M/ac. & 38 ac.53M/ac Fir & Ced. Area logged 1925-1926.
25	613											Mature stand includes: 192 ac. 10M/ac. 10 ac. 15M/ac. 14ac. 16M/ac. 42 ac. 21M/ac & 29 ac. 34M/ac. Fir & Cedar. Logged area logged 1924-25.

Classification of Areas (in Acres).

WEST REDONDA ISLANI

E.B. 84—2M(1327-197)

LIEN on'd.	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Typ
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
TL	1656p	167	-	-	132	-	-	287	-	8	-	594	
T.L	4803p	74	-	-	34	-	-	413	-	19	-	540	
TL	4804p	132	-	121) 90)	3	-	-	74	-	-	-	420	H.(
TL	6468p	493	-	62	-	-	-	85	-	-	-	640	
TL	14033	1083	-	17	253	-	-	560	-	28	8	1949	
TL	14034	207	-	-	-	-	-	77	-	-	-	284	
TL	14151	44	-	88	71	-	-	1060	-	-	-	1263	H.
TL	14152	2	-	-	160	-	-	318	-	-	8	488	
TL	30790 -1131p	142	-	-	-	-	-	375	-	66	-	583	
TL	32282 -3642p	426	-	109	70	-	-	35	-	-	-	640	

EDONDA ISLAND **Provincial Forest.** Date 1927 Sheet No. 7

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
-	594											Mature stand: 57 ac. 10M/ac. & 110 ac. 5M/ac. Fir. Logged area is chiefly old handlogging along the shore.
-	540											Mature timber 10M/ac. Fir & Cedar. Logged area is handlogging along shore
-	420	H.C.F.	0-10	.1	H C F	3.1 2.3 4.7	41 27 55	44 35 41	1040 760 140			Remaining 90 ac. of Imm. is many aged on comparatively poor site. Mature stand includes: 84 ac. 10M/ac. F.& C. 29 ac. 15M/ac. & 19 ac. 34M/ac. Fir.
-	640											See L.4936 for descrip. of Imm.stand. Mature timber 10M/ac. chiefly piling size Fir.
8	1949											Area logged 1923-1926 will reproduce satis. from surrounding forest fringe. Slash has been burned over whole of area barring 98 ac. on Ellis & Tom Lakes. Mature stand; 11 ac. 6M/ac. 9 ac. 7M/ac. 65 ac. 17M/ac. 157 ac. 20M/ac. 831 ac. 30M/ac.& 10 ac.40M/ac.
-	284											Mature stand: 50 ac. 3M/ac. & 157 ac. 15M/ac. Fir, Cedar & Hem.
-	1263	H.F.C.		.025	H F C	0 Cl " "	3.5 Seedlings "	6	7920 920 680			Lot is an old tanbark lease. Mature stand 7M/ac. Remainder of area has a few small patches of timber but generally speaking offers but a poor timber site.
8	488											Logged area burned over 1924. Fir stumps examined showed approx. 4.5ft. diam. growth with age about 350 yrs. Area will re-establish itself from adjacent fringe.
-	583											Mature stand 56 ac. 5M/ac. & 86 ac. 20M/ac. C.F.
-	640											Imm. stand many aged on poor site. Logged area represents handlogging along shoreline. Mature stand: 195 ac. 15M/ac. & 231 ac. 5M/ac. chiefly Fir.

Classification of Areas (in Acres).

WEST REDONDA ISLAND

ALIEN (Con'd)	Section or Lot.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
		Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
T.L. 33940 -12811p		429	-	100	91	-	2	-	-	18	-	640	F.C.
T.L. 44751 -7993p		412	-	8	71	-	-	-	-	44	105	640	
T.L. 44752 -7994p		344	-	-	72	-	-	200	-	8	16	640	
T.L. 45042 -12743p		574	-	56	4	-	-	-	-	-	6	640	
	Total Alien	6194	-	1319	2111	-	91	4372	-	246	257	14590	
	Grand Totals	12090	-	3724	4504	-	1860	18200	-	443	1796	42617	

Note:
"Alien" includes T.L's., C.G's. & P.R's. in good standing at date of survey.
"V.C.L." covers all remaining areas as vacant crown land.

E D O N D A I S L A N D **Provincial Forest.** Date 1927 Sheet No. 8

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
-	640	F.C.H.	45-47.5	.025	F C H	.6 .6 1.6	9.0 9.5 12.0	9 11 10	6320 2240 1360			Mature stand: 5 ac. 10M/ac., 6 ac. 11M/ac., 197 ac. 13M/ac. 76 ac. 14M/ac 107 ac. 20M/ac. & 38 ac. 29M/ac. -- chiefly F.& C.
105	640											Mature stand 10M/ac. F.& C. Area logged was power logged 1924--will reproduce satisfactorily from adj. forest fringe.
16	640											Logged area power logged 1924-26. Will satis. reproduce from adj. forest fringe. Mature stand includes: 331 ac 10M/ac. & 13ac. 16M/ac. F.C.& H.
6	640											Imm. stand many aged on comparatively poor site. Mature timber includes: 22 ac. 11M/ac., 115 ac. 14M/ac., 240 ac. 20M/ac. 33 ac. 26M/ac., 59 ac. 29M/ac. 88 ac. 43M/ac., 8 ac. 52M/ac. & 9 ac. 60M/ac. - all chiefly Fir & Cedar.
257	14590											
1796	42617											
date of survey.												

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPOS

F.B. 84 [illegible]

Type ~~Section or Lot~~ No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
1			26								26	H.F.(
2			7								7	
3									8		8	
4			36								36	H.C.I
5			54 12								54 12	H.C.I
6				22 28							22 28	
7			58								58	H.C.I
8			30 44								30 44	H.C.
9					54 40						54 40	
10			31 58								31 58	H.F.C
11	400 71										400 71	
12				34							34	
13				40							40	
14	745 505										745 505	

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPOS

Type ~~Section or Lot.~~ No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
1			26								26	H.F.
2			7								7	
3									8		8	
4			36								36	H.C.
5			54 12								54 12	H.C.
6				22 28							22 28	
7			58								58	H.C.
8			30 44								30 44	H.C.
9					54 40						54 40	
10			31 58								31 58	H.F.C
11	400 71										400 71	
12				34							34	
13				40							40	
14	745 505										745 505	

S L A N D P R O P O S E D **Provincial Forest.** Date 1927 Sheet No. 1

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	26	H.F.C.		.025	H	0 Cl	4.5	4	9040			Stand on small power logged area.
					F	"	3.1	3	2360			
					C	"	Seedlings		320			
					Pl.	"	"		120			
	7											Stand of H.C.F.- avg. age 12 yrs.
	8											
	36	H.C.F.Pw		.025	H	.75	7.9	9	4760			Stand on small power logged area.
					C	0 Cl.	Seedlings		1560			
					F	1.0	10	8	240			
					Pw	0 Cl.	Seedlings		240			
					Pl.	"	"		80			
	54	H.C.F.		.025	H	.85	14	9	4040			Area previously a small power logging operation.
	12				C	0 Cl	-	-	880			
					F	"	-	-	440			
	22											Area power logged 1925. Stump examination showed following averages: Fir, 48.6 in stump diam. 192 yrs; Cedar, 50.2 stump diam., 168 yrs.
	28											
	58	H.C.F.		.025	H	1.45	-	9	2560			
					F	1.2	-	9	1040			
					C	.8	-	9	920			
					Pw.	0 Cl	2.5	9	80			
	30	H.C.		.025	H	2.5	40	43	2240			On old selec. logged area--10 to 20 mature trees /ac. remain on area but for most part are all conky.
	44				C	2.7	38	42	120			
	54											Alder bottom.
	40											
	31	H.F.C.		.025	H	.55	5.6	5	7280			Area previously logged & burned.
	58				F	0 Cl	5.9	6	600			
					C	"	Seedlings		80			
	400											Stand averages 5M/ac. F.H.& C.-area steep & rocky.
	71											
	34											Logged 1924--a few scattered trees remain
	40											Area power logged 1925--heavy slash.
	745											Stand averages 10M/ac. chiefly Fir & Cedar.--area steep & rocky.
	505											

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPO

Type ~~Section or Lot~~ No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
15				12							12	
16				24							24	
17				37							37	
18				20 38							20 38	
19							3				3	
20			85				5				5 85	H.C
21							118				118	
22							35				35	
23			125								125	H.F
24						24					24	
25				302							302	
26	32										32	
27				34							34	
28	58										58	
29	35										35	
30				30							30	
31							540				540	
32									33		33	
33	36										36	
34									21		21	

ISLAND PROPOSED **Provincial Forest.** Date 1927 Sheet No. 2

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	12											Area logged 1924. Will restock from forest fringe.
	24											Area logged 1924--will restock from surrounding forest fringe.
	37											See Type 16
	20											
	38											Area logged 1925--slash heavy. Stump examination shows following avg: Fir, 52.8" stump diam., 301 yrs. & Cedar 42.7" stump diam., 252 yrs.
	3											
	5											
	85	H.C.F.		.1	H.	3.8	50	49	490			Stand on poor site.
					C.	3.3	-	-	340			
					F.	4.0	-	-	10			
	118											
	35											
	125	H.F.C.		.02	H.	0 Cl	6.8	8	11350			Area previously power logged.
					F	"	Seedlings		750			
					C	"	"		100			
					Pw	"	"		50			
					Pl	"	"		50			
	24											
	302											Area burned
	32											Stand 15M/ac. F. & C.
	34											Area handlogged 1927
	58											Stand 10M/ac. H.F. & C.
	35											Stand 15M/ac. F. & C.
	30											Area handlogged.
	540											
	33											
	36											Stand 5M/ac. H.C. & F.
	21											

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPOS

C.B. 114 OM-125-L-07

Type Section or Lot No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
35							594				594	
36			435								435	
37							2424 101				2424 101	
38				28							28	
39			155 2								155 2	C.H.I
40							66				66	
41			23								23	H.C.I
42				86							86	
43				10							10	
44	193										193	
45				16							16	
46							1168				1168	
47	62										62	
48			46								46	
49							18				18	
50			206								206	H.C.F.

LAND PROPOSED **Provincial Forest.** Date 1927 Sheet No. 3

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	594											
	435											Stand many aged.
	2424											Majority of area high & mountainous
	101											
	28											Area logged 1924--Will reproduce satisfactorily from surrounding fringe.
	155	C.H.F.		.05	C	0 Cl	Seedlings		2280			Area logged & unburned. Repr. 1-3 yrs. of age & 1" to 4" in ht. Scattered advance growth averaging 609 yrs. of age is also on the area. Seed trees numerous & good forest fringe within 20 chs. of any part of area.
	2				H	"	"		1080			
					F	"	"		720			
					Pw	"	"		40			
	66											
	23	H.C.F.		.025	H	.62	8.5	8	3680			Area previously power logged.
					C	0 Cl	Seedlings		1040			
					F	"	"		560			
	86											Area handlogged
	10											
	193											Timber poor but area contains a considerable number of scattered poles & piles.
	16											
	1168											Whole area very badly burned 1919--now largely waste land.
	62											Stand 20M/ac. F.C.& H.- isolated.
	46											Stand on logged unburned area. Avg. age 6 yrs. & stocking approx. 4000 trees/ac. H.C.& F.
	18											
	206	H.C.F.	20-30	.1	H	0 Cl	5.4	6	2460			Cedar & Fir 2" to 12" in ht. Stump examination showed following avgs. for former stand: Fir, 41" stump diam 348 yrs., Ced. 22" stump diam. 150 yr & Hem. 17" stump diam., 98 yrs.
					C	"	Seedlings		1020			
					F	"	"		490			
					Pw	"	"		10			

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPOSE

Type ~~Section or Lot~~ No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
51						1135					1135	
52				124							124	
53				17 21							17 21	
54				11							11	
55			1047 3 450 3								1047 450	C.H.F
55A	229 9										229 9	
56				139							139	
57	121 25										121 25	
58				42							42	
59			165 3								165	H.C.F
60							256				256	
61					42						42	
62						18					18	
63			222 3								222	C.H.F.
64			609 3								609	C.H.F.
												H.C.F.

S L A N D P R O P O S E D **Provincial Forest.** Date 1927 Sheet No. 4

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Agu.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	1135											Area badly burned & is now practically bare rock.
	124											Area handlogged & burned over.
	17											Area logged & burned--will reproduce from adj. forest fringe.
	21											
	11											Area logged unburned.
	1047	C.H.F.		.075	C	1.7	37	36	1026			Area over many parts is covered by a many aged stand. There is a fair sprinkling of poles scattered throughout as well but accessibility is poor. Site unfavorable for a good future stand.
	450				H	2.8	32	31	533			
					F	6.2	62	43	146			
	229											Area represents 2500 cedar poles--accessible & good quality but expensive show.
	9											
	139											Handlogged.
	121											Stand averages 25M/ac. F. & C.
	25											
	42											Area logged 1924.
	165	H.C.F.		.075	H	2.9	40	33	613			Area previously logged.
					C	1.8	-	-	440			
					F	3.7	42	36	427			
	256											
	42											Alder growth following old logging.
	18											
	222	C.H.F.		.1	C	2.8	33	34	1080			Area previously logged.
					H	3.6	44	39	660			
					F	4.0	38	40	50			
	609	C.H.F.		.05	C	1.3	28	33	1200			
					H	3.3	41	45	860			
					F	2.3	39	38	620			
		H.C.F.		.1	H	2.8	33	34	1130			
					C	1.95	28	36	350			
					F	3.65	40	43	340			

Classification of Areas (in Acres).

EAST REDONDA ISLAND PROPOSED

E.R. 84—2M-1227-107

Type Section ~~or Lot~~ No.	CAPABLE OF PRODUCING TIMBER.					NON-PRODUCTIVE.					TOTAL ACRES.	Type.
	Mature (1).	Mature (2).	Immature.	Recent Burn or Logging.	Non-commercial Cover.	Rock.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
66							8600 294				8600 294	
67			207 84								207 84	H.C.
68				259							259	
69			1718 40								1718 40	H.C.
70				21							21	
Cloud Lake.										88	88	
Lake SE. of Cloud L.										16	16	
Total V.C.L.	1911	-	5193	1247	96	1177	13822	-	54	104	23604	
Total Alien	610	-	782	148	40	-	400	-	8	-	1988	
Grand Totals	2521	-	5975	1395	136	1177	14222	-	62	104	25592	

NOTE:
Red type denotes alienated land--that is, areas falling within the boundaries of T.L's, C.G's, or P.R's in good standing at date of survey.

S L A N D P R O P O S E D **Provincial Forest.** Date 1927 Sheet No. 5

Water.	TOTAL ACRES.	IMMATURE TIMBER (Description per Acre). Type.	PLOT. Chainage.	PLOT. Acres.	Species.	D.B.H.	Total Height.	Total Age.	Number.	Total B.A.	Seed Trees.	REMARKS. (Former Stand, Date of Fire, or other History.)
	8600											Area high & mountainous.
	294											
	207	H.C.		.025	H	2.9	4.1	33	3240			Old logging area
	84				C	.7	-	-	1560			
	259											Area has been intermittently hand-logged--chiefly between 1925 & 1927.
	1718	H.C.		.1	H	3.7	52	42	1090			
	40				C	5.1	57	49	300			
	21											Area logged 1924.
88	88											
16	16											
104	23604											
-	1988											
104	25592											