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CONTACT: B. Kukulies, R.P.F., Woodlot Forester, Sunshine Coast Forest District

File: ORCS 19720-50/W0039

June 4, 1997

Mr. William Thomas Errico Jr.
Gambier Forest Resource Ltd.
RR 3
Gibsons, British Columbia
VON 1V0

Dear Mr. William Errico:

Your March 28, 1997, submission of **Management Plan Number 2 for Woodlot Licence W0039** is hereby approved for the term June 2, 1997 to December 31, 2000.

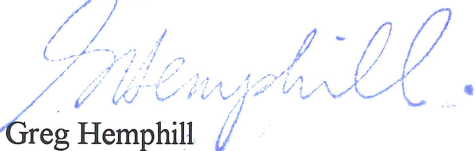


The Annual Allowable Cut (AAC) commencing on January 1, 1998, will be 2367 m³ based on operations conducted to the utilization standards specified in the plan. The AAC cancels and replaces the cut level of 2459m³ stated in Management Plan No. 2. The current AAC of 2700m³ will remain in effect until December 31, 1997.

Management Plan Number 3 is to be prepared in accordance with Ministry of Forests guidelines, the *Forest Act* and the Woodlot Licence document and is to be submitted to this office on or before July 1, 2000.

This letter forms an integral part of Management Plan Number 2 for Woodlot Licence W0039 and should be attached thereto.

Yours truly



Greg Hemphill
District Manager
Sunshine Coast Forest District

.../2

Ministry of
Forests

Sunshine Coast Forest District

Mailing Address:
7077 Duncan Street
Powell River BC V8A 1W1
Tel: (604) 485-0700
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Location:
7077 Duncan Street
Powell River BC V8A 1W1

Mr. William Thomas Errico Jr.
Gambier Forest Resource Ltd.
Page 2

bcc: Val Ciapponi, Tenures Manager
Vancouver Forest Region
Copy of plan attached

Resource Tenures and Engineering Branch
Copy of plan attached
Crown AAC = 2367m^3 This AAC will commence on January 1, 1998.
The current AAC of 2700m^3 will remain in effect until the end of the current cut
control period on December 31, 1997.

Timber Appraisal Section
B.C. Assessment Authority
1537 Hillside Avenue, Victoria, British Columbia
V8T 4Y2
Copy of plan attached

Islands Trust, 1627 Fort Street, Victoria, B.C. V8R 1H8
Attention: Ed Pickard
Copy of Plan Attached

Sechelt Field Office, Attention: Mike Whitehouse
Copy of Plan Attached

WOODLOT LICENCE NO. 039
GAMBIER ISLAND

MANAGEMENT PLAN #2

Licensee : Gambier Forest Resources Ltd.

Term : January 1, 1996 - December 31, 2000

Vancouver Forest Region

Sunshine Coast Forest District

Prepared by :



C.L. Anderson, R.P.F.

MAR 27, 1997

Date

Licensee :



Gambier Forest Resources Ltd.

APRIL 4, 1997

Date

Approved by :



Date 970602

1.0 AREA DESCRIPTION AND GENERAL LOCATION

Woodlot Licence 039 is located on the south west portion of Gambier Island in Howe Sound, in the vicinity of the community of New Brighton approximately 30 km northwest of Vancouver. This woodlot is within the Sunshine Coast TSA. The only public access is by foot passenger ferry from Langdale on the Sunshine Coast to the government wharf at New Brighton.

All of the stands which comprise the woodlot licence are second growth, generally resulting from harvesting which has taken place since the late 1800's through to the present. However single remnant old growth Douglas-fir are scattered throughout the Crown land portion of the woodlot licence area.

1.1 Schedule A Land (private) Area 45 ha

The Schedule A portion of the Woodlot Licence consists of six parcels south of the crown portion in the vicinity of New Brighton and Gambier Harbour. These parcels can be accessed by existing rural residential roads from the government wharf at New Brighton. These parcels are to the north south and east of New Brighton and are within 1.5 km of the Government Wharf at New Brighton.

All of these parcels are within an area designated as a Settlement Area in the Gambier Island Official Community Plan. As this area is generally rural residential, consisting to a large extent of "summer homes" some forest management activities, particularly timber harvesting may cause conflict. Anticipated problems include:

- Noise from falling, yarding and trucking operations
- Dust and safety concerns resulting from trucking operations.
- Physical limitations of the existing road system including tight corners, low overhead power lines and the ability of the road to withstand heavy industrial loads.
- Changes in the visual quality of the areas.

1.2 Schedule B Land (Crown) Area 376 ha

The Crown land portion lies generally within the Manion Creek and Whispering Creek watersheds. It can be accessed from either the government wharf at New Brighton or from the log dump at Andy's Bay. The crown area is approximately 2 km north of the government wharf by existing road. It is approximately 0.4 km east of Andy's Bay by existing road.

2.0 LICENSEE GOALS

The licensee's goal for the management of this woodlot licence are as follows :

- a) to provide for sustained yield management
- b) to salvage timber which is in danger of being lost or destroyed
- c) to provide a source of income for the licensee
- d) to manage a small scale forest management operation in compliance with the Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations, as well as the Gambier Island LRUP.

These goals will be attained through full cooperation with all government agencies concerned with the management of the Woodlot Licence

3.0 FOREST PRODUCTS

The following timber products may be produced from the woodlot license as appropriate.

Major : sawlogs, pulp logs, poles, pilings

Minor : firewood, shake blocks

4.0 TIMBER RESOURCE INVENTORY

A formal timber re-inventory of the woodlot licence will be carried out during the term of this Management Plan. During the term of this Management Plan, a reconnaissance of the private land portion of the woodlot license will be carried out to determine the most suitable management strategy for each parcel. This timber resource re-inventory will be completed to Forest Service Inventory Branch standards.

4.1 Allowable Annual Cut

The current cut control period is January 1, 1993 to December 31, 1997. The current AAC for the woodlot licence is 2,700 m³ providing a total five year cut of 13,500 m³.

The next cut control period is from January 1, 1998 to December 31, 2002. The preliminary AAC for this period has been calculated to be 2,459 m³ providing a total five year cut of 12,295 m³. The preliminary allowable annual cut(AAC) was calculated using the model WOODLOT which includes VDYP and TIPSYP. The Calculations are based on data gathered during the last re-inventory in 1991. Appendix A contains a description of the stands found in the Woodlot Licence.

The schedule A (private land) portion of both the current and next AAC. is nil because these areas consist of deciduous stands and non commercial cover. The AAC for the period from January 1, 1998 to December 31, 2002 will be modified if required based on data from the re-inventory to be carried out during the term of this management plan.

5.0 HARVESTING PRIORITIES

The harvesting priorities for this woodlot license are :

- 1) Salvage of timber which is in danger of being lost or destroyed while maintaining a logical, viable unit.
- 2) Stands suitable for an intermediate harvest or commercial thinning. Generally those with a significant component of Douglas-fir.
- 3) Stands suitable for alternate silvicultural systems. Generally those with a significant component of Douglas-fir and/or Western Red Cedar.
- 4 Other coniferous stands which have reached culmination.
- 5) Deciduous stands with the intent of conversion to coniferous stands.
- 6) Other merchantable stands.

For the term of this plan the stands which are planned for harvest can be described as one of the following:

- blowdown stands which will be harvested to a more wind firm boundary.
- harvest of individual dead down or dead standing trees adjacent to existing roads where yarding equipment does not have to leave road.
- stands suitable for an intermediate harvest or commercial thinning.
- stands which have been previously partially harvested to salvage dead down or standing timber

5.1 Utilization Standards

The utilization standards will be set out by the Ministry of Forests in the cutting permit document, these standards will be adhered to.

6.0 HARVESTING METHODS

The licensee shall carry out harvesting in compliance with the Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations. Harvesting operations will be carried out in accordance to a logging plan and silvicultural prescription approved by the Ministry of Forests.

Harvesting in the woodlot license will be carried out in the following manner :

- conventional hand falling
- highlead cable or ground based system (skidder or hoe chucking) as appropriate, dependent on site conditions.
- truck haul to dump

If a ground based system is used , yarding operations will be restricted to the drier season. The season of operation will be governed by site specific factors as stated in the Silviculture Prescriptions.

7.0 SILVICULTURAL SYSTEMS

Retention of old growth vets, where safe to do so will be an objective of all silviculture systems

7.1 Alternate silviculture systems

During the term of this management plan the areas which will be considered for alternate silviculture systems must meet all of the following requirements :

- be on sites suitable for ground based operations (either skidder or hoe chucking)
- have a significant component of Douglas-fir and / or Western Red Cedar.
- be considered potentially wind firm in terms of soil and topographical characteristics.

Within the term of this management plan, the following alternate system is planned :

Commercial Thin (with reserves)

Year 1 - partial removal of the suppressed and intermediate trees as well as damaged and diseased codominants and dominants. The intent is to leave approximately 250 - 300 well spaced stems / ha, favoring the healthiest, most wind firm Douglas-fir and Western Red Cedar as leave trees.

Year 20 - Clearcut stand reserving approximately 10 - 30 trees / ha of the healthiest, most wind firm Douglas-fir and Western Red Cedar as leave trees through to the next rotation.

7.2 Clearcut

It is the intent to harvest a significant portion of the cut using the clearcut system. The clearcut system will be used on areas which do not meet the criteria required for alternative system as listed in section 7.1.

8.0 BASIC SILVICULTURE

Reforestation will be carried out in accordance with the Forest Practices Code and an approved silviculture prescription.

Brush competition is not expected to be a major problem on most sites as heavy deer browsing has effectively eliminated competing brush (except bracken fern) on existing plantations. Bracken fern can be expected to be a problem on some sites

Deer browsing is an ongoing serious concern. Vexar tubing has been used in the past with limited success, particularly with respect to maintenance cost. Better results with respect to protection and maintenance costs are anticipated with the use of wire cages (1.5 m high). Other methods of reducing deer browse damage may be employed where deemed appropriate.

9.0 INCREMENTAL SILVICULTURE

For the period covered by this Management and Working Plan, no stand management activities are planned.

However as part of the woodlot license re-inventory, candidate areas for stand management projects will be noted and prioritized.

A Stand Management Prescription will be prepared prior to any incremental activities taking place.

10.0 FIRE PREVENTION AND SUPPRESSION

All Provincial Fire Prevention Regulations will be adhered to. All operations will be conducted in a manner consistent with the Provincial Fire Prevention Regulations.

Following harvesting, areas will be assessed regarding their fire hazard and appropriate measures will be taken such as roadside burning of slash piles. However because of the close proximity of populated areas such burning will be limited.

During periods of high fire hazard the licensee will endeavour to inform recreational users of the Woodlot Licence and adjacent areas of the hazard and risk

With regard to fire suppression the licensee will meet all requirements of the Forest Fire Prevention and Suppression Regulation. In the case of fire the licensee will take immediate and appropriate action as outlined in this regulation and will notify the Ministry of Forests at the first opportunity.

11.0 FOREST HEALTH

The Ministry of Forests forest experts and specialists from Forestry Canada will be conducting a tour of the woodlot in 1997 to have a look at forest health issues. The licensee endorses and will cooperate with the tour and take any recommendations into consideration.

11.1 Deer Browse

Deer Browsing is a very serious ongoing problem on plantations on the woodlot license. As stated previously, vexar tubing has been used with limited success. The use of wire cages (1.5 m high) will also be employed to protect seedlings. Other methods of protection will be investigated i.e. noise makers, predator urine, and fencing have been considered but do not appear to be practical or effective. Damage includes browsing and rubbing.

11.2 Hemlock Dwarf Mistletoe

Mistletoe is prevalent throughout much of the woodlot license area. Much of the heaviest infestation has been harvested under this woodlot licence. Heavily infested stands exist throughout the woodlot licence, particularly north of Block D & E. Heavily infected stands will have high priority for harvesting. However the areas adjacent to blocks D & E are not scheduled for harvest during the term of this plan because of adjacency and block size concerns. Spread of the mistletoe into planted areas is of concern, therefore Western Hemlock will not be planted nor will it be considered an acceptable species within 20 m of an infected stand.

11.3 Armillaria Root Disease

Armillaria is present in the woodlot license. It is not a serious problem on its own, but seems to be found in conjunction with mistletoe and an as yet unidentified disease agent causing Western Hemlock mortality. The infection centers identified so far have been limited to single trees or small groups of trees. Its occurrence will be monitored and appropriate action will be taken as required. Potential action would include harvest of larger infection centers.

11.4 Douglas-fir Bark Beetles

There is evidence of past minor bark beetle attacks which have caused relatively minor amounts of Douglas-fir mortality throughout the woodlot. Bark beetle activity will be monitored on an ongoing basis, and appropriate action will be taken as required. Should new beetle attacks occur, all timber felled during the spring and summer of any given year must be removed and utilized before April of the following year, to minimize the release of a new beetle population. Efforts should also be made to minimize the amount of slash over 20 cm in diameter in and adjacent to areas where beetle activity has been observed. These measures and others are outlined in the Forest Pest Leaflet #14(FRDA publication, 1995).

11.5 Other Decay Pathogens

Two other pathogens have been identified within the area referred to as the "Problem Hemlock Type" in section 12. They are Annosus Root Rot(*Heterobasidion annosum*) a butt rot decay and Bleeding fungus(*Sternium sanguinolentum*). Annosus root rot can cause mortality. This disease can colonize wounds, Thus stands damaged by previous logging may have a high incidence of this pathogen. Bleeding fungus is also associated with wounds. Most the Woodlot Licence and especially the "Problem Hemlock Type" have been previously logged and any remnant trees could be susceptible to these pathogens.

11.6 Wind Throw

The wind throw problem on the woodlot licence is significant. Wind throw on the woodlot licence can be categorized as one of two types.

- 1) The first type is associated with harvesting activities, particularly adjacent to clearcut openings. This type can be alleviated to some extent by wind throw management strategies such as locating boundaries to minimize wind damage and edge stabilization techniques. These strategies are detailed in the Wind Throw Management Handbook for British Columbia Forests. (Research Program Working Paper 9401.) However, topping or pruning the trees will not be utilized as a wind throw management strategy. It should be noted wind throw management strategies only reduce the risk of wind throw and because of other factors such as soil characteristics and topography, some wind throw might be expected on high hazard areas.
- 2) The second type is endemic windthrow which existed prior to harvesting activities and is currently ongoing. This type is found primarily in the "problem" Hemlock type. The primary contributing factors are soil characteristics, specifically an impervious root restricting layer of compacted silts at varying depths, but in some cases as shallow as 0.3m. This layer effectively restricts root depth and in some cases increases soil moisture above. This condition results in low anchorage strength of the root system.

There are definite indications of ongoing windthrow in this area since 1963 (Typhoon Frieda). There is some evidence that this windthrow has been ongoing for a considerably longer time than that as evidenced by the pit and mound micro topography found in much of the area. This pit and mound micro topography may be formed from the root wads and depressions from ancient windthrow. Regardless, this "problem" Hemlock type is clearly a high windthrow hazard area. The problem is exacerbated as the present stand is primarily Western Hemlock which is a shallow rooting species. Much of this Hemlock is also weakened by dwarf mistletoe and other as yet unidentified agents.

As part of the woodlot licence inventory, windfall hazards ratings be identified and delineated. This hazard mapping will be used in planning operations.

12.0 "PROBLEM" HEMLOCK TYPE

This area is delineated on the attached maps. It is comprised of approximately 60 ha. It is characterized by the following :

- a) Soils with an impervious, root restricting layer near the surface, generally at a depth of 0.3 to 1.2 m.
- b) A second growth stand (approximately 105 years) of primarily (95% +) Western Hemlock
- c) A significant portion of the Western Hemlock is infected with Hemlock Dwarf Mistletoe
- d) occurrence of Annosus Root Rot(*Heterobasidion annosum*) and Bleeding fungus(*Sternium sanguinolentum*).
- e) A high windthrow hazard rating.
- f) Significant ongoing windthrow both associated with and not associated with harvesting activities.

Management of this type is indeed problematic. Ongoing windthrow and mortality necessitate salvage, however any harvesting activity will aggravate the windthrow problem. Operations under the previous Management and Working Plan targeted the worst areas of windthrow, mortality and Hemlock dwarf mistletoe infestation. The remaining area in this problem type continues to degrade in terms of windthrow and mortality. If timber management were the only concern salvage harvesting of the remaining area would be in order. However, because of restrictions of the Gambier Island Local Resource Use Plan and the Forest Practices Code this is not possible at this time. Therefore the only harvesting activity planned in this problem type for the term of this management plan will be some minor salvage of windthrow associated with clearcut openings, as well as single tree salvage which can be accomplished with ground based equipment remaining on existing roads. The harvesting during the term of this management and working plan will focus in other areas of the woodlot licence.

The condition of this type will be monitored. A catastrophic windthrow event or accelerated mortality may necessitate postponing proposed harvesting plans and salvage harvesting in this problem type as appropriate.

13.0 LANDSCAPE MANAGEMENT

A landscape inventory and analysis has been conducted by the Ministry of Forests over the woodlot licence area. As part of this process visual quality objectives have been established. The VQOs established for the woodlot licence are either partial retention or retention, the majority of the area being partial retention. The licensee will adhere to these visual quality objectives. Techniques to meet the VQOs will include small block size, alternate silviculture systems, retention of reserve trees and landscape design techniques.

14.0 BIODIVERSITY

The biodiversity requirements of the Forest Practices Code will be met.

Specific strategies will include but not necessarily be limited to :

- Retention of old growth vets where safe in harvesting blocks.
- Retention of reserve trees through to the next rotation on shelterwood and commercial thin blocks.
- Retention of wildlife tree patches.
- Broadcast burning will not be prescribed, this will promote coarse woody debris.

15.0 SOIL MANAGEMENT

The Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations will be adhered to with regard to the protection of soils. Specific measures will be outlined in the silvicultural prescriptions.

Strategies which will be used to these objectives will include:

- using ground based equipment only on suitable sites
- not using broadcast burning.

16.0 WATER MANAGEMENT

Several domestic water users are present on Whispering Creek downstream from the woodlot licence.

The Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations will be adhered to with regard to the protection of water resources. Riparian management areas will be maintained on all creeks within the woodlot license. Their widths will be at least as wide as that required by the Forest Practices Code

Licensed water users will be notified of any development which may affect water quality prior to the commencement of the activity.

17.0 FISHERIES MANAGEMENT

The Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations will be adhered to with regard to the protection of the fisheries resource.

No formal fish inventory has been conducted on the woodlot licence area. As this is the case all riparian classification will be based on stream and gradient and the assumption of fish presence. The presence of resident trout in the lower reaches of Manion and Whispering Creeks, within the woodlot, has been confirmed by the licensee. During the term of this management plan a stream inventory (limited to width and gradient) will be conducted.

Riparian management areas will be maintained on all creeks within the woodlot license. Their widths will be at least as wide as that required by the Forest Practices Code. Site conditions may dictate that riparian management areas be wider than the minimums prescribed by the Forest Practices Code. A specific example would be to protect unstable stream banks.

18.0 RECREATION

Recreation in the woodlot licence area is highly valued by Gambier Island residents. The level of recreational use on the woodlot licence is low when you consider its proximity to the lower mainland and is likely due to the fact that there is no vehicle ferry to Gambier Island.

Current recreational uses and users are :

- a) Hikers use the main road for the woodlot licence (locally known as Andy's Bay Road) for a hiking route for access into interior of the island. Many of the existing skid trails and other roads are used as trails as well.
- b) Trail bikers (motorized) also use many of the above mentioned roads.
- c) Deer hunting is moderately popular in the area
- d) Overnight camping by several youth camps occurs adjacent to the main road at the Mannion Creek Bridge
- e) Mountain biking use is relatively low in comparison to similar areas on the mainland, probably because B.C. Ferries does not permit bicycles on the ferry to Gambier Island. However, mountain biking does occur.

There will be no access restrictions on use of the woodlot licence area except perhaps for safety reasons when harvesting activity is taking place or during fire season closures.

Specific areas which will be protected and reserved from harvesting activities are, an area adjacent to the main road at the Mannion Creek Bridge, and an area adjacent to Mannion and Whispering Creeks at least as great as that required under the Forest Practices Code for riparian reserve zones.

The licensee is a member of the Gambier Island Conservancy and intends to keep in contact with the conservancy regarding their plans for development of trails in and adjacent to the woodlot licence.

19.0 CULTURAL HERITAGE

There are no known cultural heritage sites on the woodlot licence area.

The Squamish Nation will be given the opportunity to review the management plan, development plan and the associated silviculture prescriptions. A letter was sent on April 15, 1996 asking if they were interested in reviewing copies of these plans and silvicultural prescriptions. No reply has been received.

The Ministry of Forests has undertaken an archeological overview assessment for this woodlot licence. If required the MoF will also conduct an archeological impact assessment.

20.0 RANGE MANAGEMENT

There has been no grazing improvements on the woodlot licence.

21.0 WILDLIFE MANAGEMENT

Black-tail deer are present on Gambier Island in fairly large numbers. There are no known natural predators of the deer on the island. Hunting is moderately popular.

It is an objective of the licensee to retain all old growth Vets where safe to do so. Any known roosting and nesting sites will be protected from harvesting. Habitat variability will be maintained through riparian management areas, wildlife tree patches, reserve trees, intermediate cutting and moderate opening sizes.

22.0 DEVELOPMENT PLAN

A Forest Development Plan will be submitted for the term of this management plan and will meet the requirements of the Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations.

22.1 Road Development

All development including construction, maintenance and deactivation will be in accordance with the Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations.

Existing access is from the south from the community of New Brighton or from the north from Andy's Bay which is currently used as a log dump by the licensee. For the term of this plan road construction activity will be primarily upgrading of existing roads and skid trails with construction of a few spur roads. Details of construction, maintenance and deactivation are outlined in the development plan.

22.2 Silviculture Prescriptions

Silviculture Prescriptions will be submitted as part of the Development Plan. These Silviculture Prescriptions will meet the requirements of the Forest Practices Code of British Columbia Act, the Forest Act and all associated Legislation and Regulations.

23.0 CRUISING, SCALING AND RESIDUE ASSESSMENT

23.1 Cruising

Cruising will be conducted in accordance with Ministry of Forests cruising and cruise compilation procedures (Provincial Cruising Manual) and the Operational Cruising Requirements in the Vancouver Forest Region.

23.2 Scaling

Scaling will be conducted in accordance with the Forest Act and the Scaling Regulations.

23.3 Residue and Waste Surveys

Upon completion of primary harvesting of a block, the licensee will notify the woodlot administration within 14 days. The licensee will not be required to perform waste and residue measurements provided utilization practices appear acceptable. If utilization appears unacceptable or instruction to improve utilization was given by a Forest Officer during a harvesting inspection, the District Manager will conduct a waste assessment survey. Monetary and / or cut control billings may follow, depending on the results of the survey.

24.0 COMMUNITY INVOLVEMENT

The licensee is a lifetime member of the Gambier Island Conservancy and is involved in the Islands Trust as a member of the Advisory Planning Committee.

25.0 COMPATIBLE USES

The licensee recognizes that the Ministry of Forests may grant other tenures over the Crown land portion of the woodlot licence area which are compatible with Forest Management or in compliance with the Forest Act and Range Act.

26.0 REFERRALS AND CONSULTATIONS

The following government agencies and groups were forwarded a copy of the management plan, development plan and silvicultural prescriptions.

- Ministry of Forests
 - Powell River District Office
 - Sechelt Field Office
- Ministry of Environment, Lands and Parks
 - Fish and Wildlife Branch and Water Management Branch
 - Surrey Office
 - Powell River Office
- Fisheries and Oceans Canada
 - Squamish Office
- Islands Trust

Two public meetings were held. The first held on December 2, 1995 was intended to allow the Ministry of Forests and the Licensee explain woodlot licence policy and answer concerns of the public as well as providing an opportunity for the public to comment on the woodlot licence. A second public meeting was held on June 9, 1996 to allow the public the opportunity to review and comment on the management plan, development plan and silviculture prescriptions. Ministry of Forests staff and the licensee were in attendance in order to answer any questions. In addition these plans and prescriptions were available for review as required by Ministry of Forests.

26.1 FIRST NATIONS

The Squamish Nation will be given the opportunity to review the management plan, development plan, the associated silviculture prescriptions and any stand management prescriptions for the purposes of ensuring that development does not impact traditional use activities and cultural heritage resources.

A letter was sent on April 15, 1996 asking if they were interested in reviewing copies of these plans and silvicultural prescriptions. No reply has been received.

27.0 PROVISION FOR REVISION

This Management Plan will be reviewed annually and may be revised if required. It is understood that any variations from the Management Plan in effect, will require written consent of the District Manager.

28.0 ANNUAL REPORT

An annual report will be submitted to the Ministry of Forests on or before April 30 of each year covering the previous calendar year. The annual report will be in the form requested by the District Manager.

29.0 ATTACHMENTS - MAPS

- Key map - 1:20,000 forest cover
- "Problem" hemlock type
- Forest Inventory information



Province of British Columbia
Ministry of Forests
FOREST SERVICE

EXHIBIT A

Date 89-02-07
Ref. Map 92G/6-e.f.
Base 92G:043,(92-G-6-e)
Scale 1 : 20,000

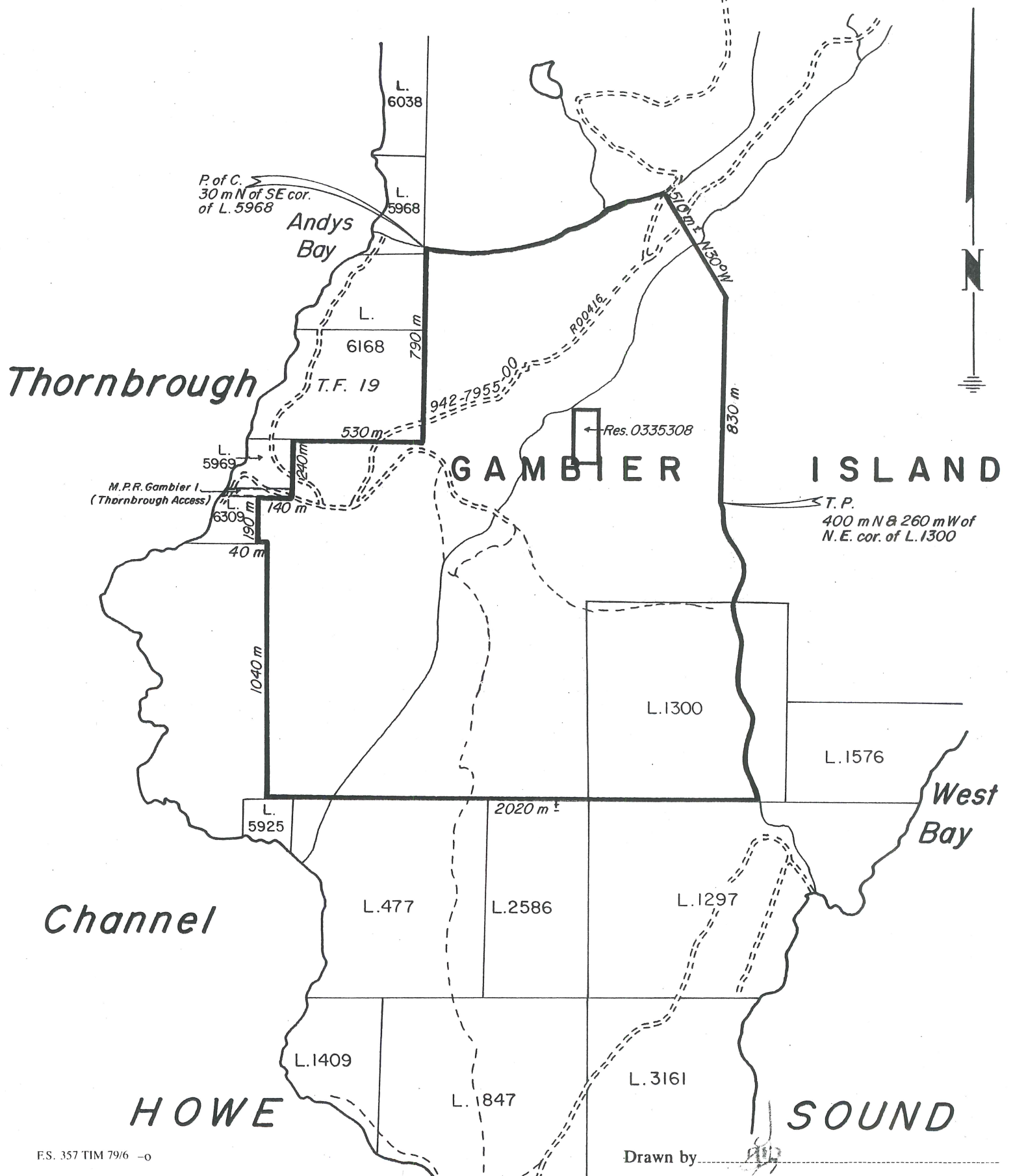
Map Of **Woodlot Licence 039** Schedule B Lands

Outlined Area 376 hectares ± Forest Region 01 - Vancouver

U.T.M. Grid
Zone 10469000 East 5480000 North Reg. 28002 Compl. L
District 15 - Sunshine Coast
Land District New Westminster

MANAGEMENT UNIT			TIMBER SUPPLY AREA		Pulpwood Agreement	Cascades	
Type	0		Number	39 - Sunshine Coast		East	
Number	64 - Quadra		Block	51 - Sechelt		West	C
Block			Sub-B				

Excluding Thereout: F.S.L. A21434, Res. 0335308
Save & Excepting Thereout Any Conflict With The Prior Rights Of: R00416, 942-7955





Province of
British Columbia
Ministry of
Forests

MAP OF Woodlot Licence 039
Schedule A Lands

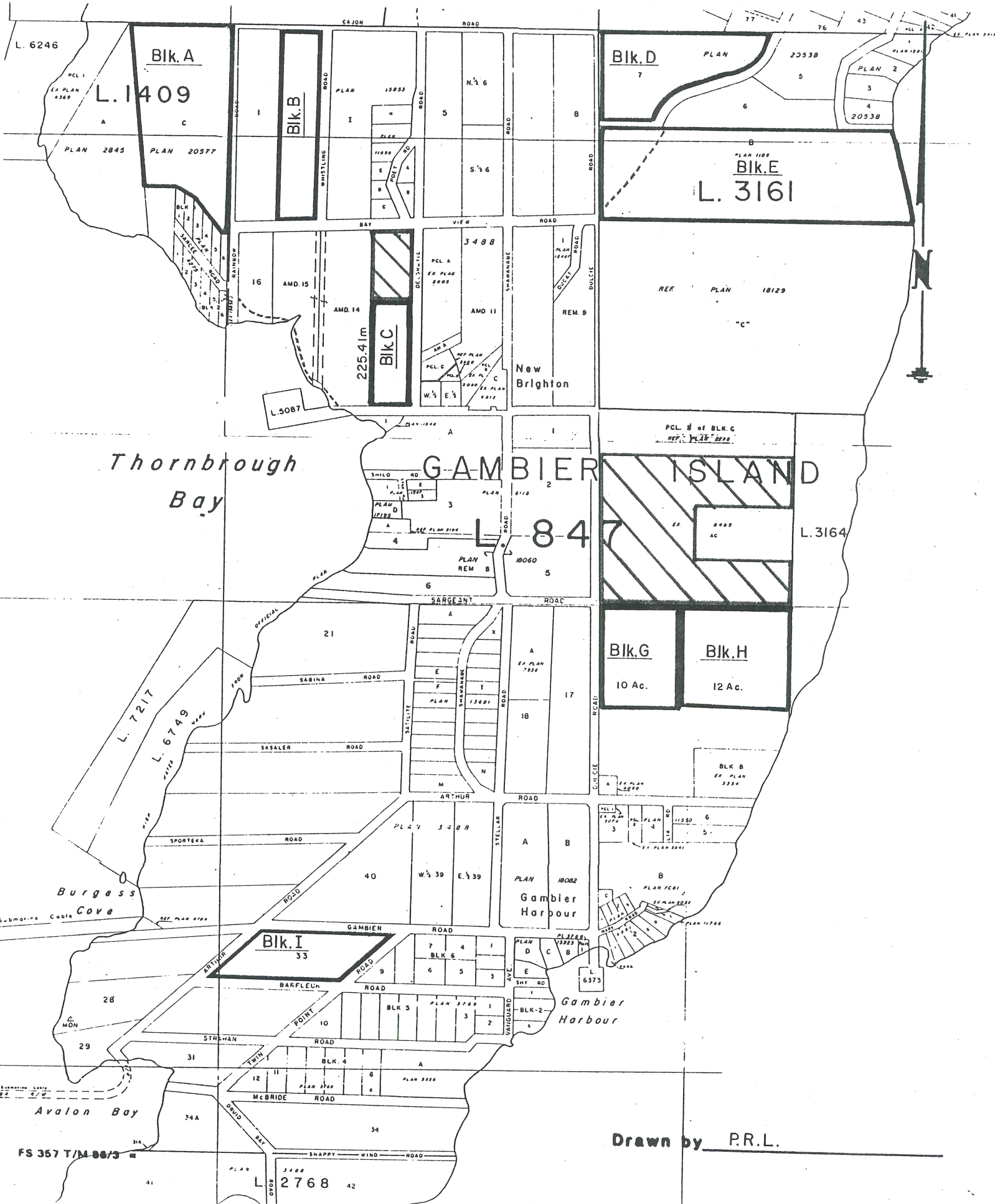
EXHIBIT 'A'

UTM.	Zone		East						North						Reg		Compt		L		
Grid	1	0	4	6	8	5	0	0	5	4	7	7	0	0	0	2	8	0	0	2	
FOREST											LAND										
REGION ▶ OI VANCOUVER											DISTRICT ▶ N.W.D.										
DISTRICT ▶ 15 SUNSHINE COAST											OUTLINE ▶ 										

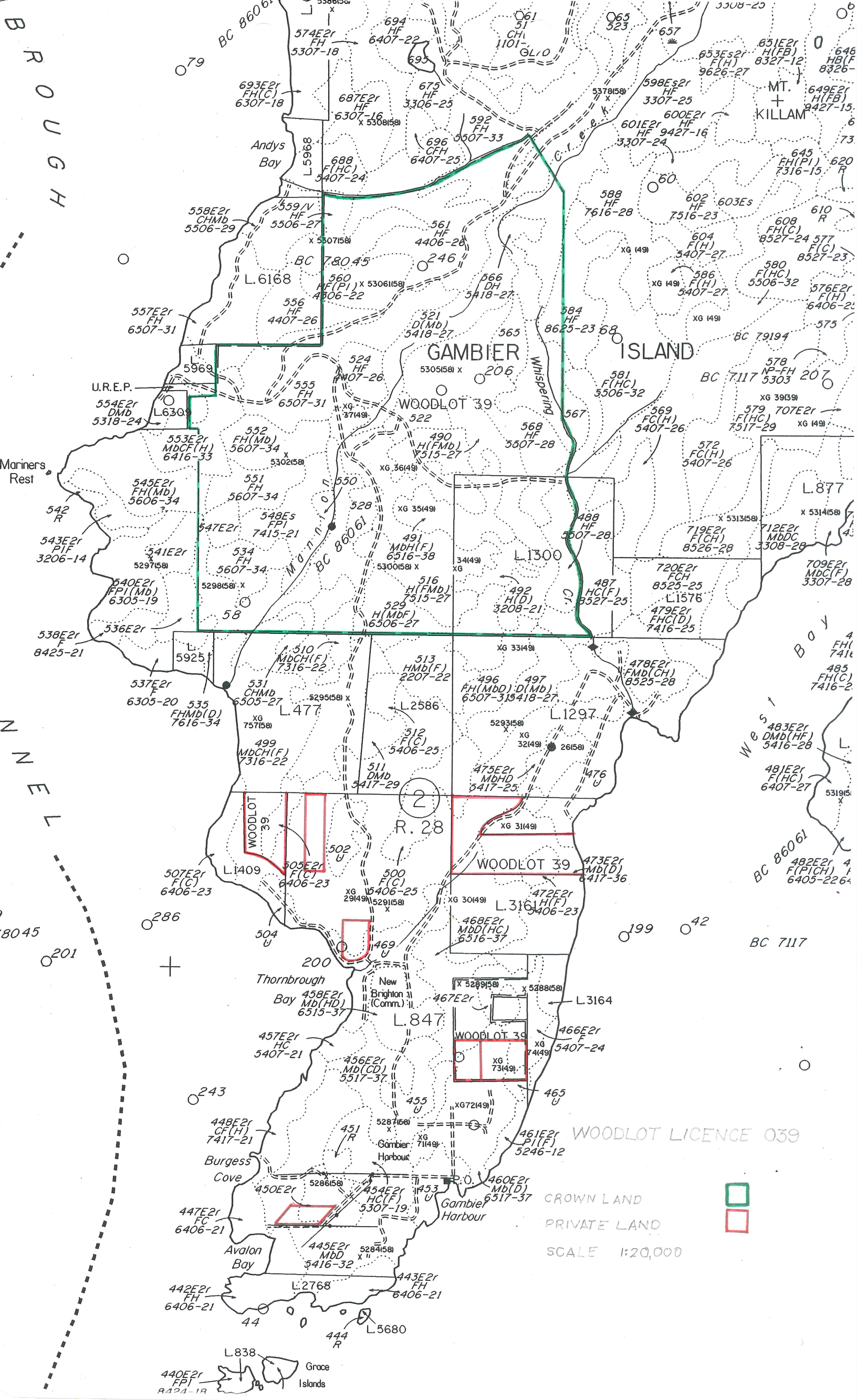
Date 97-04-16
Ref. Map 926/6ef
Base Used 1:5000 map
Scale 1: 10000
Area 46 hectares ±

Type	MANAGEMENT UNIT	TIMBER SUPPLY AREA		PULPWOOD	CASCADES
	F	39-SUNSHINE COAST		AGREEMENT	
Number		Block 39b			East
Block		Sub-B			West C

*RESTRICTIONS IN RED



Drawn by P.R.L.



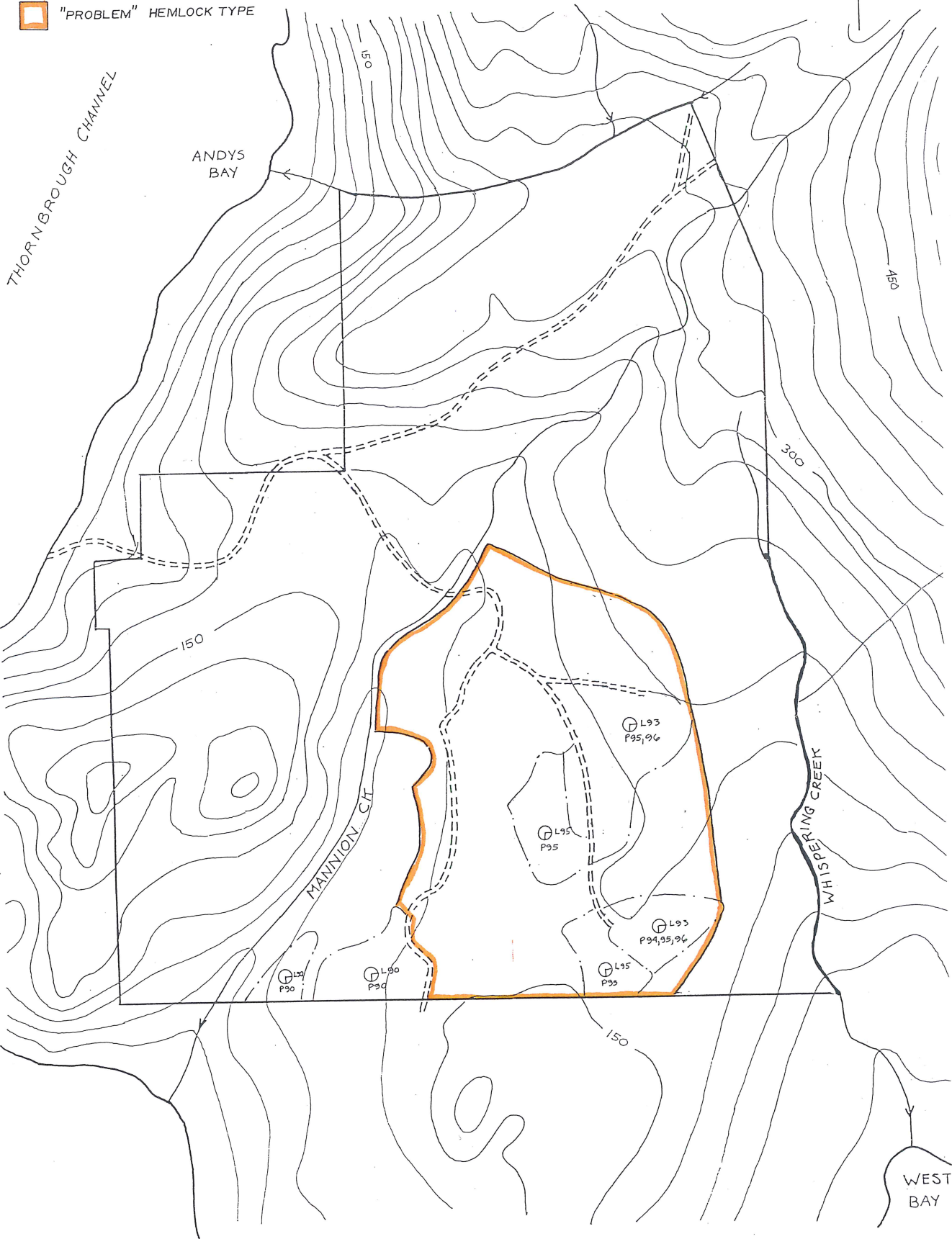
WOODLOT LICENCE 039
GAMBIER FOREST RESOURCES LTD.

SCALE 1:10,000

MANAGEMENT PLAN No 2



 "PROBLEM" HEMLOCK TYPE



Woodlot Licence Harvest Planning Report

Date : 1 August, 1996

Woodlot Licence# : w0039
Forest District : Sunshine Coast
Company : Gambier Resources
User : bk
Woodlot File : C:\AACCALC\GAMB2.LOT
Scenario : 1

Model Information:
Woodlot Version : Release1.00 - June, 1996 - WIN3.1+
VDYP Version : Prod 6.3b
TIPSY Version : BTIPSY V2.2.1

1.0 Introduction

This report summarises information used to calculate a long term harvest rate on Woodlot Licence No. w0039. The calculated harvest rate can be used to assist in determining the allowable annual cut (AAC). It should be assessed in light of the assumptions used, social and economic considerations in determining the AAC.

2.0 Polygon Data

a) General Information and Current Volumes

Map Sheet	Poly ID	Area (ha)	Age (Yrs.)	VAF	PSYU	FIZ Zone	MANAGE Cur/Fut	Silv	Vol. m ³ /ha	Net Vol. m ³
92g043	487	0.8	158	1.00	0194	B	Nat/Nat CC		827	661
92g043	488	6.4	88	1.00	0194	B	Nat/Nat CC		748	4,785
92g043	490	10.2	126	1.00	0194	B	Nat/Nat CC		700	7,139
92g043	491	12.4	108	1.00	0194	B	Nat/Nat CC		513	6,359
92g043	492	5.0	48	1.00	0194	B	Nat/Nat CC		185	925
92g043	496	0.9	108	1.00	0194	B	Nat/Nat CC		797	718
92g043	497	0.4	88	1.00	0194	B	Nat/Nat CC		302	121
92g043	510	5.9	136	1.00	0194	B	Nat/Nat CC		454	2,680
92g043	511	2.2	86	1.00	0194	B	Nat/Nat CC		290	637
92g043	516	23.6	126	1.00	0194	B	Nat/Nat CC		700	16,518
92g043	521	16.2	88	1.00	0194	B	Nat/Nat CC		302	4,889
92g043	522	4.4	108	1.00	0194	B	Nat/Nat CC		479	2,109
92g043	524	5.0	76	1.00	0194	B	Nat/Nat CC		505	2,527
92g043	528	3.5	58	1.00	0194	B	Nat/Nat CC		299	1,045
92g043	529	10.4	108	1.00	0194	B	Nat/Nat CC		673	6,999
92g043	531	0.5	108	1.00	0194	B	Nat/Nat CC		572	286
92g043	534	7.6	96	1.00	0194	B	Nat/Nat CC		962	7,309
92g043	535	9.6	126	1.00	0194	B	Nat/Nat CC		822	7,888
92g043	536	0.8	58	1.00	0194	B	Nat/Nat CC		72	58
92g043	541	0.1	58	1.00	0194	B	Nat/Nat CC		6	1
92g043	545	0.6	96	1.00	0194	B	Nat/Nat CC		887	532
92g043	547	3.4	108	1.00	0194	B	Nat/Nat CC		624	2,122
92g043	548	1.1	128	1.00	0194	B	Nat/Nat CC		393	432
92g043	550	1.6	58	1.00	0194	B	Nat/Nat CC		299	478
92g043	551	8.7	96	1.00	0194	B	Nat/Nat CC		962	8,367
92g043	552	10.6	96	1.00	0194	B	Nat/Nat CC		897	9,512
92g043	553	4.8	108	1.00	0194	B	Nat/Nat CC		624	2,995
92g043	554	0.7	88	1.00	0194	B	Nat/Nat CC		263	184
92g043	555	26.4	108	1.00	0194	B	Nat/Nat CC		884	23,332
92g043	556	2.7	76	1.00	0194	B	Nat/Nat CC		590	1,594
92g043	557	2.0	108	1.00	0194	B	Nat/Nat CC		884	1,768
92g043	558	0.1	96	1.00	0194	B	Nat/Nat CC		574	57
92g043	559	9.7	98	1.00	0194	B	Nat/Nat CC		755	7,320
92g043	560	9.2	76	1.00	0194	B	Nat/Nat CC		423	3,887
92g043	561	20.7	76	1.00	0194	B	Nat/Nat CC		574	11,886
92g043	565	5.0	58	1.00	0194	B	Nat/Nat CC		440	2,202
92g043	566	5.4	88	1.00	0194	B	Nat/Nat CC		564	3,047

92g043	567	5.2	88	1.00	0194	B	Nat/Nat	CC	469	2,438
92g043	568	27.4	86	1.00	0194	B	Nat/Nat	CC	697	19,106
92g043	584	2.0	208	1.00	0194	B	Nat/Nat	CC	872	1,745
92g043	592	5.0	88	1.00	0194	B	Nat/Nat	CC	845	4,226
92g043	654	3.0	58	1.00	0194	B	Nat/Nat	CC	401	1,204
92g043	803	12.0	1	1.00	0194	B	Man/Man	CC	0	0
92g043	804	6.0	1	1.00	0194	B	Man/Man	CC	0	0
92g043	805	5.5	6	1.00	0194	B	Man/Man	CC	0	0
92g043	813	3.8	1	1.00	0194	B	Man/Man	CC	0	0
92g043	812	5.2	1	1.00	0194	B	Man/Man	CC	0	0
TOTAL		313.7								182,086

3.0 Yield Data

a) VDYP (unmanaged) Specific - Input

Map Sheet	Poly ID	Site Index (m)	Crown closure	Stock Class	SPECIES AND COMPOSITION							
					S1 %	S2 %	S3 %	S4 %	S5 %	S6 %		
92g043	487	24.9	70	1	HW 50%	CW 40%	FD 10%	0%	0%	0%		
92g043	488	27.8	70	1	HW 60%	0%	FD 40%	0%	0%	0%		
92g043	490	26.6	50	1	HW 80%	MB 10%	FD 10%	0%	0%	0%		
92g043	491	38.2	60	1	HW 20%	MB 70%	FD 10%	0%	0%	0%		
92g043	492	19.7	80	1	HW 90%	0%	DR 10%	0%	0%	0%		
92g043	496	30.5	70	1	FD 60%	HW 20%	DR 10%	MB 10%	0%	0%		
92g043	497	26.9	80	1	0%	0%	DR 90%	MB 10%	0%	0%		
92g043	510	21.5	60	1	CW 30%	HW 20%	FD 10%	MB 40%	0%	0%		
92g043	511	28.3	70	1	0%	0%	0%	MB 30%	DR 70%	0%		
92g043	516	26.6	50	1	0%	HW 80%	FD 10%	MB 10%	0%	0%		
92g043	521	26.9	80	1	DR 90%	0%	0%	MB 10%	0%	0%		
92g043	522	23.1	70	1	0%	HW 50%	FD 10%	MB 40%	0%	0%		
92g043	524	23.1	70	1	0%	HW 70%	FD 30%	0%	0%	0%		
92g043	528	21.5	70	1	DR 10%	HW 90%	0%	0%	0%	0%		
92g043	529	26.7	60	1	0%	HW 80%	FD 10%	MB 10%	0%	0%		
92g043	531	26.1	50	1	0%	HW 30%	0%	MB 20%	CW 50%	0%		
92g043	534	34.1	70	1	0%	HW 40%	FD 60%	0%	0%	0%		
92g043	535	33.0	60	1	DR 10%	HW 30%	FD 40%	MB 20%	0%	0%		
92g043	536	16.0	60	1	0%	0%	FD 40%	0%	0%	PL 60%		
92g043	541	11.2	40	1	0%	0%	FD 20%	0%	0%	PL 80%		
92g043	545	34.1	60	1	0%	HW 30%	FD 60%	MB 10%	0%	0%		
92g043	547	33.1	60	1	0%	HW 10%	FD 20%	MB 40%	CW 30%	0%		
92g043	548	20.2	50	1	0%	0%	FD 30%	0%	0%	PL 70%		
92g043	550	21.5	70	1	DR 10%	HW 90%	0%	0%	0%	0%		
92g043	551	34.1	70	1	0%	HW 40%	FD 60%	0%	0%	0%		
92g043	552	34.1	70	1	0%	HW 40%	FD 50%	MB 10%	0%	0%		
92g043	553	33.1	60	1	0%	HW 10%	FD 20%	MB 40%	CW 30%	0%		
92g043	554	23.3	80	1	DR 80%	0%	0%	MB 20%	0%	0%		
92g043	555	30.5	70	1	0%	HW 40%	FD 60%	0%	0%	0%		
92g043	556	25.6	70	1	0%	HW 70%	FD 30%	0%	0%	0%		
92g043	557	30.5	70	1	0%	HW 40%	FD 60%	0%	0%	0%		
92g043	558	28.6	60	1	0%	HW 20%	0%	MB 20%	CW 60%	0%		
92g043	559	26.8	60	1	0%	HW 60%	FD 40%	0%	0%	0%		
92g043	560	21.5	60	1	0%	HW 60%	FD 30%	0%	0%	PL 10%		
92g043	561	25.6	60	1	0%	HW 70%	FD 30%	0%	0%	0%		
92g043	565	27.1	70	1	0%	HW 80%	0%	0%	CW 20%	0%		
92g043	566	26.9	80	1	DR 60%	HW 40%	0%	0%	0%	0%		
92g043	567	22.4	60	1	0%	HW 50%	FD 10%	0%	CW 40%	0%		
92g043	568	28.2	70	1	0%	HW 80%	FD 20%	0%	0%	0%		
92g043	584	22.5	50	1	0%	HW 60%	FD 40%	0%	0%	0%		
92g043	592	32.6	70	1	0%	HW 40%	FD 60%	0%	0%	0%		
92g043	654	25.2	80	1	0%	HW 80%	0%	0%	CW 20%	0%		
92g043	803	25.2	1	1	0%	0%	0%	0%	0%	0%		
92g043	804	25.2	80	1	0%	0%	0%	0%	0%	0%		
92g043	805	25.2	80	1	0%	0%	0%	0%	0%	0%		
92g043	813	25.2	80	1	0%	0%	0%	0%	0%	0%		
92g043	812	25.2	80	1	0%	0%	0%	0%	0%	0%		

b) TIPSYP (Managed) Specific - Input

Map Sheet	Poly ID	Site Index (m)	Initial Density (s/ha)	Thinned to (s/ha)	Regeneration	SPECIES AND COMPOSITION				
						S1 %	S2 %	S3 %	S4 %	S5 %
92g043	487	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	488	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	490	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	491	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	492	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	496	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	497	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	510	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	511	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	516	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	521	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	522	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	524	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	528	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	529	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	531	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	534	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	535	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	536	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	541	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	545	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	547	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	548	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	550	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	551	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	552	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	553	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	554	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	555	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	556	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	557	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	558	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	559	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	560	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	561	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	565	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	566	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	567	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	568	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	584	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	592	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	654	0.0	1,600	1,000	Natural	0%	0%	0%	0%	0%
92g043	803	27.0	1,000	1,000	Planted	FD 60%	CW 40%	0%	0%	0%
92g043	804	27.0	1,000	1,000	Planted	CW 60%	FD 40%	0%	0%	0%
92g043	805	27.0	1,000	1,000	Planted	FD 70%	CW 30%	0%	0%	0%
92g043	813	27.0	1,000	1,000	Planted	FD 50%	CW 50%	0%	0%	0%
92g043	812	27.0	1,000	1,000	Planted	CW 80%	FD 20%	0%	0%	0%

c) First and Subsequent Cutting Parameters

Map Sheet	Poly ID	Manage	CULMINATION			HARVEST AGE			PARTIAL CUT	
			Age (yrs)	Vol (m³/ha)	Mai (m³/ha/yr)	Age (yrs)	Vol (yrs)	Mai (m³/ha)	% Cut (m³/ha/yr)	Re-Enter
	(yrs)									
92g043	487	VDYP	88	561	6.79	88	561	6.79	0%	0
		VDYP	88	561	6.79	88	561	6.79	0%	0
92g043	488	VDYP	75	647	8.96	75	647	8.96	50%	0
		VDYP	75	647	8.96	75	647	8.96	50%	0
92g043	490	VDYP	68	456	6.96	68	456	6.96	50%	0
		VDYP	68	456	6.96	68	456	6.96	50%	0
92g043	491	VDYP	30	263	9.06	40	334	8.71	50%	0
		VDYP	30	263	9.06	40	334	8.71	50%	0
92g043	492	VDYP	81	400	5.15	81	400	5.15	50%	0
		VDYP	81	400	5.15	81	400	5.15	50%	0
92g043	496	VDYP	65	530	8.45	65	530	8.45	50%	0

		VDYP	65	530	8.45	65	530	8.45	50%	0
92g043	497	VDYP	32	195	6.34	40	235	6.17	50%	0
		VDYP	32	195	6.34	40	235	6.17	50%	0
92g043	510	VDYP	78	304	4.09	78	304	4.09	50%	0
		VDYP	78	304	4.09	78	304	4.09	50%	0
92g043	511	VDYP	28	178	6.57	40	234	6.16	50%	0
		VDYP	28	178	6.57	40	234	6.16	50%	0
92g043	516	VDYP	68	456	6.96	68	456	6.96	50%	0
		VDYP	68	456	6.96	68	456	6.96	50%	0
92g043	521	VDYP	32	195	6.34	40	235	6.17	50%	0
		VDYP	32	195	6.34	40	235	6.17	50%	0
92g043	522	VDYP	69	339	5.12	69	339	5.12	50%	0
		VDYP	69	339	5.12	69	339	5.12	50%	0
92g043	524	VDYP	84	561	6.97	84	561	6.97	50%	0
		VDYP	84	561	6.97	84	561	6.97	50%	0
92g043	528	VDYP	76	412	5.65	76	412	5.65	50%	0
		VDYP	76	412	5.65	76	412	5.65	50%	0
92g043	529	VDYP	66	460	7.23	66	460	7.23	50%	0
		VDYP	66	460	7.23	66	460	7.23	50%	0
92g043	531	VDYP	96	527	6.00	96	527	6.00	50%	0
		VDYP	96	527	6.00	96	527	6.00	50%	0
92g043	534	VDYP	66	707	11.07	66	707	11.07	50%	0
		VDYP	66	707	11.07	66	707	11.07	50%	0
92g043	535	VDYP	59	489	8.60	59	489	8.60	50%	0
		VDYP	59	489	8.60	59	489	8.60	50%	0
92g043	536	VDYP	123	278	2.34	123	278	2.34	50%	0
		VDYP	123	278	2.34	123	278	2.34	50%	0
92g043	541	VDYP	137	186	1.39	148	201	1.39	50%	0
		VDYP	137	186	1.39	148	201	1.39	50%	0
92g043	545	VDYP	66	653	10.25	66	653	10.25	50%	0
		VDYP	66	653	10.25	66	653	10.25	50%	0
92g043	547	VDYP	51	347	7.07	51	347	7.07	50%	0
		VDYP	51	347	7.07	51	347	7.07	50%	0
92g043	548	VDYP	109	336	3.18	109	336	3.18	50%	0
		VDYP	109	336	3.18	109	336	3.18	50%	0
92g043	550	VDYP	76	412	5.65	76	412	5.65	50%	0
		VDYP	76	412	5.65	76	412	5.65	50%	0
92g043	551	VDYP	66	707	11.07	66	707	11.07	50%	0
		VDYP	66	707	11.07	66	707	11.07	50%	0
92g043	552	VDYP	63	639	10.50	63	639	10.50	50%	0
		VDYP	63	639	10.50	63	639	10.50	50%	0
92g043	553	VDYP	51	347	7.07	51	347	7.07	50%	0
		VDYP	51	347	7.07	51	347	7.07	50%	0
92g043	554	VDYP	40	183	4.81	44	200	4.79	50%	0
		VDYP	40	183	4.81	44	200	4.79	50%	0
92g043	555	VDYP	70	627	9.28	70	627	9.28	50%	0
		VDYP	70	627	9.28	70	627	9.28	50%	0
92g043	556	VDYP	78	606	8.08	78	606	8.08	50%	0
		VDYP	78	606	8.08	78	606	8.08	50%	0
92g043	557	VDYP	70	627	9.28	70	627	9.28	50%	0
		VDYP	70	627	9.28	70	627	9.28	50%	0
92g043	558	VDYP	80	502	6.60	80	502	6.60	50%	0
		VDYP	80	502	6.60	80	502	6.60	50%	0
92g043	559	VDYP	78	620	8.27	78	620	8.27	50%	0
		VDYP	78	620	8.27	78	620	8.27	50%	0
92g043	560	VDYP	94	534	5.95	94	534	5.95	50%	0
		VDYP	94	534	5.95	94	534	5.95	50%	0
92g043	561	VDYP	78	589	7.86	78	589	7.86	50%	0
		VDYP	78	589	7.86	78	589	7.86	50%	0
92g043	565	VDYP	73	566	8.07	73	566	8.07	50%	0
		VDYP	73	566	8.07	73	566	8.07	50%	0
92g043	566	VDYP	48	377	8.19	48	377	8.19	50%	0
		VDYP	48	377	8.19	48	377	8.19	50%	0
92g043	567	VDYP	98	514	5.71	98	514	5.71	50%	0
		VDYP	98	514	5.71	98	514	5.71	50%	0
92g043	568	VDYP	70	582	8.61	70	582	8.61	50%	0
		VDYP	70	582	8.61	70	582	8.61	50%	0
92g043	584	VDYP	87	518	6.23	87	518	6.23	50%	0
		VDYP	87	518	6.23	87	518	6.23	50%	0
92g043	592	VDYP	66	658	10.31	66	658	10.31	50%	0
		VDYP	66	658	10.31	66	658	10.31	50%	0

92g043	654	VDYP	78	561	7.50	78	561	7.50	50%	0
		VDYP	78	561	7.50	78	561	7.50	50%	0
92g043	803	TIPSY	90	739	8.21	90	739	8.21		
		TIPSY	90	739	8.21	90	739	8.21		
92g043	804	TIPSY	90	812	9.02	90	812	9.02		
		TIPSY	90	812	9.02	90	812	9.02		
92g043	805	TIPSY	90	702	7.80	90	702	7.80		
		TIPSY	90	702	7.80	90	702	7.80		
92g043	813	TIPSY	90	775	8.62	90	775	8.62		
		TIPSY	90	775	8.62	90	775	8.62		
92g043	812	TIPSY	100	984	9.84	100	984	9.84		
		TIPSY	100	984	9.84	100	984	9.84		

4.0 Calculation Assumptions

a) Initial Polygon Order

#	Map Sheet	Poly ID	Current Age (yrs)	1st Harvest Age (yrs)
40.	92g043	584	208	87
1.	92g043	487	158	88
4.	92g043	491	108	40
18.	92g043	535	126	59
8.	92g043	510	136	78
3.	92g043	490	126	68
10.	92g043	516	126	68
22.	92g043	547	108	51
27.	92g043	553	108	51
6.	92g043	496	108	65
15.	92g043	529	108	66
37.	92g043	566	88	48
12.	92g043	522	108	69
29.	92g043	555	108	70
31.	92g043	557	108	70
26.	92g043	552	96	63
17.	92g043	534	96	66
21.	92g043	545	96	66
25.	92g043	551	96	66
41.	92g043	592	88	66
33.	92g043	559	98	78
23.	92g043	548	128	109
32.	92g043	558	96	80
39.	92g043	568	86	70
2.	92g043	488	88	75
16.	92g043	531	108	96
30.	92g043	556	76	78
35.	92g043	561	76	78
13.	92g043	524	76	84
38.	92g043	567	88	98
36.	92g043	565	58	73
34.	92g043	560	76	94
14.	92g043	528	58	76
24.	92g043	550	58	76
42.	92g043	654	58	78
5.	92g043	492	48	81
19.	92g043	536	58	123
20.	92g043	541	58	148
43.	92g043	803	1	90
44.	92g043	804	1	90
45.	92g043	805	6	90
46.	92g043	813	1	90
47.	92g043	812	1	100

b) Constraints

Area Netdown	: 4
Height Constraint	: NONE
Age Constraint	: NONE

Minimum constraints

Minimum Harvest Age : 40 Years
Minimum Harvest Diameter : 20 cm.
Minimum Harvest Vol/ha : 200 m³/ha.
TIPSY OAF1 : 15%
TIPSY OAF2 : 5%
Partial Cut Netdown : 20%
Planning Horizon : 250 years

5.0 Harvest Planning Results

a) Harvest Rate : 2246 m³/year

b) Harvest by Polygon:

Order	Area (ha)	Period	Mapsheet	Poly
	2.0	1996-1996	92g043	584
	0.8	1996-1997	92g043	487
	12.4	1997-1999	92g043	491
	9.6	1999-2003	92g043	535
	5.9	2003-2004	92g043	510
	10.2	2004-2007	92g043	490
	23.6	2007-2014	92g043	516
	3.4	2014-2015	92g043	547
	4.8	2015-2017	92g043	553
	0.9	2017-2017	92g043	496
	10.4	2017-2020	92g043	529
	5.4	2020-2022	92g043	566
	4.4	2022-2023	92g043	522
	26.4	2023-2034	92g043	555
	2.0	2034-2035	92g043	557
	10.6	2035-2040	92g043	552
	7.6	2040-2044	92g043	534
	0.6	2044-2044	92g043	545
	8.7	2044-2048	92g043	551
	5.0	2048-2051	92g043	592
	9.7	2051-2055	92g043	559
	1.1	2055-2055	92g043	548
	0.1	2055-2055	92g043	558
	27.4	2055-2066	92g043	568
	6.4	2066-2069	92g043	488
	0.5	2069-2069	92g043	531
	2.7	2069-2070	92g043	556
	20.7	2070-2078	92g043	561
	5.0	2078-2080	92g043	524
	5.2	2080-2082	92g043	567
	5.0	2082-2084	92g043	565
	9.2	2084-2087	92g043	560
	3.5	2087-2088	92g043	528
	1.6	2088-2088	92g043	550
	3.0	2088-2089	92g043	654
	5.0	2089-2090	92g043	492
	0.8	2090-2091	92g043	536
	0.1	2091-2091	92g043	541
	12.0	2091-2095	92g043	803
	6.0	2095-2097	92g043	804
	5.5	2097-2099	92g043	805
	3.8	2099-2100	92g043	813
	5.2	2100-2103	92g043	812
	2.0	2103-2103	92g043	584
	0.8	2103-2103	92g043	487
	12.4	2103-2105	92g043	491
	9.6	2105-2109	92g043	535
	5.9	2109-2110	92g043	510
	10.2	2110-2112	92g043	490
	23.6	2112-2119	92g043	516
	3.4	2119-2120	92g043	547

	4.8	2120-2121	92g043	553
	0.9	2121-2121	92g043	496
	10.4	2121-2124	92g043	529
	5.4	2124-2125	92g043	566
	4.4	2125-2126	92g043	522
	26.4	2126-2136	92g043	555
	2.0	2136-2136	92g043	557
	10.6	2136-2140	92g043	552
	7.6	2140-2144	92g043	534
	0.6	2144-2144	92g043	545
	8.7	2144-2147	92g043	551
	5.0	2147-2149	92g043	592
	9.7	2149-2152	92g043	559
	0.1	2152-2153	92g043	558
	27.4	2153-2161	92g043	568
	6.4	2161-2164	92g043	488
Q	1.1	2164-2164	92g043	548
	2.7	2164-2164	92g043	556
	20.7	2164-2170	92g043	561
Q	0.5	2170-2171	92g043	531
	5.0	2171-2172	92g043	524
	5.0	2172-2173	92g043	565
	3.5	2173-2174	92g043	528
	1.6	2174-2174	92g043	550
	3.0	2174-2175	92g043	654
	5.0	2175-2175	92g043	492
	12.4	2175-2178	92g043	491
	9.6	2178-2180	92g043	535
Q	5.2	2180-2181	92g043	567
Q	9.2	2181-2183	92g043	560
Q	12.0	2183-2187	92g043	803
Q	6.0	2187-2189	92g043	804
Q	5.5	2189-2191	92g043	805
Q	3.8	2191-2192	92g043	813
Q	2.0	2192-2193	92g043	584
Q	0.8	2193-2193	92g043	487
	5.9	2193-2194	92g043	510
	10.2	2194-2196	92g043	490
	23.6	2196-2201	92g043	516
	3.4	2201-2202	92g043	547
Q	5.2	2202-2204	92g043	812
	4.8	2204-2205	92g043	553
	0.9	2205-2206	92g043	496
	10.4	2206-2208	92g043	529
	5.4	2208-2210	92g043	566
	4.4	2210-2210	92g043	522
	26.4	2210-2219	92g043	555
Q	0.8	2219-2219	92g043	536
	2.0	2219-2219	92g043	557
	10.6	2219-2223	92g043	552
	7.6	2223-2226	92g043	534
	0.6	2226-2226	92g043	545
	8.7	2226-2229	92g043	551
	5.0	2229-2231	92g043	592
	9.7	2231-2233	92g043	559
	0.1	2233-2233	92g043	558
	27.4	2233-2240	92g043	568
Q	0.1	2240-2240	92g043	541
	6.4	2240-2241	92g043	488
	12.4	2241-2244	92g043	491
Q	2.7	2244-2244	92g043	556
	9.6	2244-2246	92g043	535
Q	20.7	2246-2246	92g043	561

c) Age Constraints Not Met During the following Period(s)

d) Height Constraints Not Met During the following Period(s)

e) Nothing Harvestable During the following Period(s)

f) Minimum Constraints Not Met During the following Period(s)

6.0 Conclusions

Enter your conclusions to the user of this report on your observations about the upward or downward bias of the assumptions used to calculate the results. Open this report.txt file in the 'Note Pad' program or into Word for Windows to edit.

Ministry of Forests
Forest Inventory For Woodlot Licence W0039

POLYGON NUMBER	CLASSIFICATION	VISUAL QUALITY OBJECTIVE	SP#1	SPECIES PERCENT				CROWN CLOSURE	CURRENT AGE Yrs.	ROTATION AGE Yrs.	HEIGHT (M)	SITE INDEX	ESA CLASS		SENSITIVE AREAS	% RED.	AREA Ha.	VOL/HA m3	TOTAL VOL.	MAI m3/ha	TOTAL m3/Yr.
				SP#2	SP#3	SP#4	1						2								
487	Mature	PR	Hw 50	Cw 40	Fdc 10			70	158	88	46	24.9			RRZ	100	1.45	0	0.0	0	
487	Mature	PR	Hw 50	Cw 40	Fdc 10			70	158	88	46	24.9			RMZ	50	0.34	299.2	101.7	3.4	1.2
487	Mature	PR	Hw 50	Cw 40	Fdc 10			70	158	88	46	24.9					0.61	597.52	364.5	6.79	4.1
488	Immature	PR	Hw 60	Fdc 40				70	88	75	38	27.8			RRZ	100	1.18	0	0.0	0	0.0
488	Immature	PR	Hw 60	Fdc 40				70	88	75	38	27.8			RMZ	50	0.66	336	221.8	4.48	3.0
488	Immature	PR	Hw 60	Fdc 40				70	88	75	38	27.8			RRZ	100	1.18	0	0.0	0	0.0
488	Immature	PR	Hw 60	Fdc 40				70	88	75	38	27.8					2.60	672	1747.2	8.96	23.3
488	Immature	NV	Hw 60	Fdc 40				70	88	75	38	27.8			RMZ	50	0.82	336	275.5	4.48	3.7
488	Immature	NV	Hw 60	Fdc 40				70	88	75	38	27.8					1.92	672	1290.2	8.96	17.2
490	Mature	PR	Hw 80	Fdc 10	Mb 10			50	126	68	44	26.6					2.70	473.28	1277.9	6.96	18.8
490	Mature	NV	Hw 80	Fdc 10	Mb 10			50	126	68	44	26.6					16.70	473.28	7903.8	6.96	116.2
491	Mature	NV	Mb 70	Hw 20	Fdc 10			60	108	30	39	38.2					20.20	271.8	5490.4	9.06	183.0
492	Immature	NV	Hw 90	Dr 10				80	48	81	17	19.7					5.70	417.15	2377.8	5.15	29.4
496	Immature	PR	Fdc 60	Hw 20	Mb 10	Dr 10		70	108	65	43	30.5					0.90	549.25	494.3	8.45	7.6
497	Mature	PR	Dr 90	Mb 10				80	88	32	30	26.9					0.40	202.88	81.2	6.34	2.5
510	Mature	NV	Mb 40	Cw 30	Hw 20	Fdc 10		60	136	78	27	21.5			RRZ	100	2.19	0	0.0	0	0.0
510	Mature	NV	Mb 40	Cw 30	Hw 20	Fdc 10		60	136	78	27	21.5			RMZ	50	1.90	159.9	303.8	2.05	3.9
510	Mature	NV	Mb 40	Cw 30	Hw 20	Fdc 10		60	136	78	27	21.5					7.91	319.02	2523.4	4.09	32.4
511	Mature	NV	Dr 70	Mb 30				70	86	28	31	28.3			RRZ	100	0.15	0	0.0	0	0.0
511	Mature	NV	Dr 70	Mb 30				70	86	28	31	28.3			RMZ	50	0.10	91.84	9.2	3.28	0.3
511	Mature	NV	Dr 70	Mb 30				70	86	28	31	28.3					4.45	183.96	818.6	6.57	29.2
516	Mature	NV	Hw 80	Mb 10	Fdc 10			50	126	68	44	26.6			RRZ	100	0.54	0	0.0	0	0.0
516	Mature	NV	Hw 80	Mb 10	Fdc 10			50	126	68	44	26.6			RMZ	50	0.66	236.64	156.2	3.48	2.3
516	Mature	NV	Hw 80	Mb 10	Fdc 10			50	126	68	44	26.6					31.80	473.28	15050.3	6.96	221.3
521	Mature	NV	Dr 90	Mb 10				80	88	32	30	26.9			RRZ	100	7.98	0	0.0	0	0.0
521	Mature	NV	Dr 90	Mb 10				80	88	32	30	26.9			RMZ	50	3.78	101.44	383.4	3.17	12.0
521	Mature	R	Dr 90	Mb 10				80	88	32	30	26.9					7.30	202.88	1481.0	6.34	46.3
521	Mature	NV	Dr 90	Mb 10				80	88	32	30	26.9					7.24	202.88	1468.9	6.34	45.9
522	Immature	NV	Hw 50	Mb 40	Fdc 10			70	108	69	36	23.1					4.70	353.28	1660.4	5.12	24.1
524	Immature	R	Hw 70	Fdc 30				70	76	84	32	23.1					1.10	585.48	644.0	6.97	7.7
524	Immature	NV	Hw 70	Fdc 30				70	76	84	32	23.1			RRZ	100	0.09	0	0.0	0	0.0
524	Immature	NV	Hw 70	Fdc 30				70	76	84	32	23.1			RMZ	50	0.22	339.36	74.7	4.04	0.9
524	Immature	NV	Hw 70	Fdc 30				70	76	84	32	23.1					4.00	585.48	2341.9	6.97	27.9
528	Immature	NV	Hw 90	Dr 10				70	58	76	22	21.5					3.50	429.4	1502.9	5.65	19.8
529	Immature	NV	Hw 80	Fdc 10	Mb 10			60	108	66	41	26.7					15.40	477.18	7348.6	7.23	111.3
531	Immature	NV	Cw 50	Hw 30	Mb 20			50	108	96	39	26.1					1.50	576	864.0	6	9.0
534	Immature	R	Fdc 60	Hw 40				70	96	66	46	34.1					7.60	730.62	5552.7	11.1	84.1
535	Mature	R	Fdc 40	Hw 30	Mb 20	Dr 10		60	126	59	50	33			RRZ	100	1.35	0	0.0	0	0.0
535	Mature	R	Fdc 40	Hw 30	Mb 20	Dr 10		60	126	59	50	33			RMZ	50	0.90	253.7	228.3	4.3	3.9
535	Mature	R	Fdc 40	Hw 30	Mb 20	Dr 10		60	126	59	50	33					9.70	507.4	4921.8	8.6	83.4
536	Immature	R	Plc 60	Fdc 40				60	58	123	16	16					0.80	287.82	230.3	2.34	1.9

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POLYGON NUMBER	CLASSIFICATION	VISUAL QUALITY OBJECTIVE	SPECIES PERCENT				CROWN CLOSURE	CURRENT AGE Yrs.	ROTATION AGE Yrs.	HEIGHT (M)	SITE INDEX	ESA CLASS		SENSITIVE AREAS	% RED.	AREA Ha.	VOL/HA m3	TOTAL VOL.	MAI m3/ha	TOTAL m3/Yr.
			SP#1	SP#2	SP#3	SP#4						1	2							
541	Immature	R	Plc 80	Fdc 20			40	58	137	11	11.2					0.10	0	0.0	0	0.0
545	Immature	NV	Fdc 60	Hw 30	Mb 10		60	96	66	46	34.1		R		40	1.00	468.6	468.6	7.1	7.1
547	Mature	R	Mb 40	Cw 30	Fdc 20	Hw 10	60	108	51	35	33.1					3.40	360.57	1225.9	7.07	24.0
548	Mature	R	Fdc 70	Plc 30			50	128	109	30	20.2	S			90	11.10	33.79	375.1	0.31	3.4
550	Immature	R	Hw 90	Dr 10			70	58	76	22	21.5					0.70	429.4	300.6	5.65	4.0
550	Immature	R	Hw 90	Dr 10			70	58	76	22	21.5			RRZ	100	3.39	0	0.0	0	0.0
550	Immature	R	Hw 90	Dr 10			70	58	76	22	21.5			RMZ	50	1.24	215.08	266.7	2.83	3.5
551	Immature	R	Fdc 60	Hw 40			70	96	66	46	34.1					1.90	730.62	1388.2	11.1	21.0
551	Immature	NV	Fdc 60	Hw 40			70	96	66	46	34.1					6.80	730.62	4968.2	11.1	75.3
552	Immature	R	Fdc 50	Hw 40	Mb 10		70	96	63	46	34.1					1.80	661.5	1190.7	10.5	18.9
552	Immature	NV	Fdc 50	Hw 40	Mb 10		70	96	63	46	34.1					8.80	662.13	5826.7	10.5	92.5
553	Mature	NV	Mb 40	Cw 30	Fdc 20	Hw 10	60	108	51	35	33.1		R		40	8.20	216.24	1773.2	4.24	34.8
554	Mature	NV	Dr 80	Mb 20			80	88	40	27	23.3			R	40	1.10	96.4	106.0	2.41	2.7
555	Immature	R	Fdc 60	Hw 40			70	108	70	43	30.5					8.20	649.6	5326.7	9.28	76.1
555	Immature	NV	Fdc 60	Hw 40			70	108	70	43	30.5					20.00	649.6	12992.0	9.28	185.6
556	Immature	R	Hw 70	Fdc 30			70	76	78	32	25.6					2.90	630.24	1827.7	8.08	23.4
557	Immature	NV	Fdc 60	Hw 40			70	108	70	43	30.5					2.00	649.6	1299.2	9.28	18.6
558	Immature	NV	Cw 60	Hw 20	Mb 20		60	96	80	40	28.6					0.10	528	52.8	6.6	0.7
559	Immature	NV	Hw 60	Fdc 40			60	98	78	39	26.8					9.70	645.06	6257.1	8.27	80.2
560	Immature	R	Hw 60	Fdc 30	Plc 10		60	76	94	27	21.5					6.70	559.3	3747.3	5.95	39.9
560	Immature	R	Hw 60	Fdc 30	Plc 10		60	76	94	27	21.5					3.30	559.3	1845.7	5.95	19.6
561	Immature	R	Hw 70	Fdc 30			60	76	78	32	25.6					5.80	613.08	3555.9	7.86	45.6
561	Immature	NV	Hw 70	Fdc 30			60	76	78	32	25.6			RRZ	100	1.02	0	0.0	0	0.0
561	Immature	NV	Hw 70	Fdc 30			60	76	78	32	25.6			RMA	50	0.68	306.54	208.4	3.93	2.7
561	Immature	NV	Hw 70	Fdc 30			60	76	78	32	25.6					16.00	613.08	9809.3	7.86	125.8
565	Immature	NV	Hw 80	Cw 20			70	58	73	28	27.1					5.00	589.11	2945.6	8.07	40.4
566	Mature	NV	Dr 60	Hw 40			80	88	48	30	26.9			RRZ	100	0.90	0	0.0	0	0.0
566	Mature	NV	Dr 60	Hw 40			80	88	48	30	26.9			RMZ	50	0.38	196.8	74.8	4.1	1.6
566	Mature	NV	Dr 60	Hw 40			80	88	48	30	26.9					3.00	392.64	1177.9	8.18	24.5
566	Mature	R	Dr 60	Hw 40			80	88	48	30	26.9					1.12	393.12	440.3	8.19	9.2
566	Mature	PR	Dr 60	Hw 40			80	88	48	30	26.9					1.12	393.12	440.3	8.19	9.2
567	Mature	PR	Hw 50	Cw 40	Fdc 10		60	88	98	31	22.4			RRZ	100	3.29	493.92	1625.0	5.04	16.6
567	Mature	PR	Hw 50	Cw 40	Fdc 10		60	88	98	31	22.4			RMZ	50	2.24	280.28	627.8	2.86	6.4
567	Mature	NV	Hw 50	Cw 40	Fdc 10		60	88	98	31	22.4					4.07	559.58	2277.5	5.71	23.2
568	Mature	NV	Hw 80	Fdc 20			70	86	70	38	28.2			RRZ	100	0.16	0	0.0	0	0.0
568	Mature	NV	Hw 80	Fdc 20			70	86	70	38	28.2			RMZ	50	0.3	294	88.2	4.2	1.3
568	Mature	NV	Hw 80	Fdc 20			70	86	70	38	28.2					27.54	588	16193.5	8.4	231.3
584	Mature	NV	Hw 60	Fdc 40			50	208	87	47	22.5			RRZ	100	0.15	0	0.0	0	0.0
584	Mature	NV	Hw 60	Fdc 40			50	208	87	47	22.5			RMZ	50	0.2	271.44	54.3	3.12	0.6
584	Mature	R	Hw 60	Fdc 40			50	208	87	47	22.5					1.1	542.01	596.2	6.23	6.9
584	Mature	NV	Hw 60	Fdc 40			50	208	87	47	22.5					0.8	542.88	434.3	6.24	5.0

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POLYGON NUMBER	CLASSIFICATION	VISUAL QUALITY OBJECTIVE	SPECIES PERCENT				CROWN CLOSURE	CURRENT AGE Yrs.	ROTATION AGE Yrs.	HEIGHT (M)	SITE INDEX	ESA CLASS		SENSITIVE AREAS	% RED.	AREA Ha.	VOL./HA m3	TOTAL VOL.	MAI m3/ha	TOTAL m3/Yr.	
			SP #1	SP #2	SP #3	SP #4						1	2								
592	Immature	NV	Fdc 60	Hw 40			70	88	66	42	32.6			RRZ	100	1.89	0	0.0	0	0.0	
592	Immature	NV	Fdc 60	Hw 40			70	88	66	42	32.6			RMZ	50	1.26	340.56	429.1	5.16	6.5	
592	Immature	NV	Fdc 60	Hw 40			70	88	66	42	32.6					5.35	680.46	3640.5	10.3	55.2	
654	Immature	NV	Hw 80	Fdc 20			80	58	78	26	25.2					3.2	585	1872.0	7.5	24.0	
TOTAL																	373.22	166919.9		2544.5	

Site index - Stand height @ 50 years
ESA -Environmentally Sensitive Areas
Sensitive Area - Areas, that have constraints to harvesting. These areas are recreation (R) or steep sensitive soils (S).
% RED. - This is the % reduction of the MAI for areas that are Sensitive or have been determined to be Environmentally Sensitive Areas.
Riparian Reserve Zone (RRZ) no harvesting or Riparian Management Zone (RMZ) partial harvesting
MAI - Mean Annual Increment
Vol/ha - MAI x Rotation Age
Total Volume - Vol/ha x Area
Total m3/yr - MAI x Area
AAC - Sum Total m3/yr