Pre-Operations Report

Operation Name: Helibates
County: Tillamook
Management Basin: Rogers
Legal Description: Sec. 4, 5, and 6, T01N, R06W, W.M.

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
I	Moderate Partial Cut	370	329
Total	**Partial Cut**	**370**	**329**

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have a varied aspect and range from 10% to 70%. Elevations range from 1200 to 2300 feet. The major soil types are Osweg, Killam, and Rye. The sale areas occupy the ridges and upper slopes.

The landforms are moderate to steep slopes between the South Fork and the Devils Lake Fork of the Wilson River. The underlying rock is mostly igneous rock of the Tillamook Volcanics subaerial flows near the top of the lower shelf building sequence. In the east portion of the sale area the underlying rock is sedimentary origin rock of the "Sandstone at Roy Creek" basalt boulder conglomerate overlain by sandstone and siltstone, derived from subaerial basalt flows of the Tillamook Volcanics.

II. CURRENT STAND CONDITION:

The sale area was in the 1933,39, and 45 Tillamook Burn. The stands in the sale area were seeded in 1951-53, and have since had no stand management.

The stands in the sale areas are classified as 100% UDS according to the SLI data measured in 2004.

The stand is composed almost entirely of overstocked Douglas-fir.

The stand contains significant amounts of *Phellinus weirii* and will be treated at time of harvest.

The understory in the sale area is comprised primarily of vine maple, sword fern, salal, western hemlock, western red cedar, dwarf Oregon grape, and oxalis.

Understory vegetation is lacking in amount and species diversity (except in pockets of *Phellinus weirii*) as a result of a closed canopy. Average ground cover throughout all areas is measured to be 100%.

There is a moderate amount of snags in various states of decay throughout the sale area.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID [1]	Species	Age	DBH	BA	TPA	SDI	Net Acres [2]
I	PC-M[4]	7877	DF	48	13	190	196	53	269
		7880	DF,WH	50	15	186	145	48	60
		Target [3]	*DF*		*17*	*130*	*82*	*32*	*329*

[1] The source of stand inventory information is from SLI in 2004.
[2] The acres are based on GIS and exclude existing and planned roads, stream buffers, and non-thinnable areas.
[3] The Target row for partial cut areas identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.
[4] PC-M is Moderate Partial Cut

III. DESIRED STAND CONDITION:

The harvest operation will develop these stands into UDS structure in the short term. According to the Forest Grove District's landscape design for the Rogers basin, the desired future condition (DFC) for these stands is 6% GEN and 94% LYR.

The anticipated management pathway for the sale area is to conduct a 1st entry operation for density management. Reducing the SDI, by partial cutting with *Phellinus* treatment, will maintain vigorous growth of the overstory. The *Phellinus* pockets will then be planted with a *Phellinus* resistant species.

This entry, in the short term, will create a variety of stand densities. Gaps in the overstory will promote the development of a more biodiverse understory and a multi-layered canopy.

All existing snags and down woody debris of all decay classes shall be retained. All trees less than 8 inches shall be retained. Hardwoods and all conifer species other than Douglas-fir shall be retained. All of these components combined will maintain and promote biodiversity within the future stand.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest [1]	Desired Future	Net Acres
I	7877	UDS	UDS	GEN	21
				LYR	247
	7880	UDS	UDS	LYR	61

[1] The stand is expected to develop into this condition in the five to ten years after this operation is completed.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

Partial Cut - Moderate:
The sale area is PC-M**.** The target SDI is approximately 32. The stand will be thinned to a target basal area of 130 square feet. The average DBH of the residual stand will be approximately 17 inches. Species other than DF will not be targeted for harvest. In addition, trees infected with Pellinus will be cut, creating small patches ¼ - 3 acres in size. Residual trees will be the trees that have the largest DBH and height, and are of the best form and vigor. All trees less than 8 inches shall be reserved and shall not count toward the target basal area.

Understory vegetation will be enhanced from the additional growing spaces made available.

All existing DWD will be reserved in the sale areas. DWD recruitment is expected through mortality, windthrow of residual trees, felled snags, and logging slash.

Existing snags determined not to be a safety hazard will be retained and any felled snags will be left for down wood. Additional snags will be created over time through natural processes.

The *Phellinus* patch-cuts will be planted with hemlock, cedar, white pine, or alder.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%	☐	☑
Planned Quarter:		**4**	

OPTION 1	Conifer	Hardwood	Total
Net Volume (MBF)	**4,500**		**4,500**
Stumpage Value ($/MBF)	**$230**		
Estimated Gross Value	**$1,035,000**		**$1,035,000**
		Project Costs:	**$100,000**
		Estimated Net Value:	**$935,000**

OPTION 2	Conifer	Hardwood	Total
Net Volume (MBF)	**4,500**		**4,500**
Stumpage Value ($/MBF)	**$300**		
Estimated Gross Value	**$1,350,000**		**$1,350,000**
		Project Costs:	**120,000**
		Estimated Net Value:	**$1,230,000**

VI. TRANSPORTATION PLANNING AND HARVESTING:

The sale area is accessed via the Bates Road. This road is currently an unsurfaced road, which is currently designated as a 4WD trail. Two roading options were analyzed and are described below.

The proposed road location passes through several steep slope portions of the sale area. If during field work by the road specialist the road locations are not realigned on to gentler ground the geotechnical specialist will be consulted to determine if a field visit is needed.

OPTION 1: Approximately 1.6 miles of the Bates Road, from point A to point B will be improved to an all-season standard which includes grading, rocking, widening, culvert replacement, possible sidecast pullback and adding new culverts. Additionally, a helicopter log landing/service landing will be constructed along the University Falls road. An alternate service landing is being explored along Hwy. 6 between Bates Road and University Falls Road. Approximately 0.7 miles of University Falls Road will be surfaced to bring it to all season hauling standards. Surfacing will be high quality crushed rock. This option will result in 35% of the sale area being cable yarding and 65% helicopter yarding.

Project work estimated costs: Bates Road improvement and surfacing: $80,000. Log/service landing on U Falls Road: $5,000. U Falls road surfacing: $15,000. Total project work cost: $100,000.

OPTION 2: In addition to project work in Option 1, improve 1.2 miles of the upper portion of the Bates Road from point B to points C, D & E. Improvement will be to a summer season standard only, which will allow for easier conversion to a trail-like condition after logging. No streams are crossed on this ridgetop portion of the road. This will result in 70% cable and 30% helicopter yarding, with approximately 110 acres of cable yarding restricted to the dry season.

Additional Project estimated costs: $20,000. Total Project cost for Option 2: $120,000.

Option 2 is the Forest Grove Marketing Unit's preferred choice because it results in additional net revenue of approximately $300,000 due to lower logging costs of cable compared to helicopter yarding. By keeping the upper portion of the Bates Road unsurfaced, the trail to road issue is mitigated.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0	0	0	0
Improve	0	0	0.7	2.8
Maintain[1]	0	0.7	2.8	0
Close/Block	0	0	0	0
Vacate	0	0	0	0

For determination of road class either use results of the Harvest and Habitat roads classifications, or if this information is not available then low use roads are spurs, medium use roads are collectors and high use roads are mainlines. Use these same criteria when comparing the total for all AOP sales to the IP plans.

[1] Represents Option 2

VII. AQUATIC RESOURCES AND WATER QUALITY:

There are no known Type F streams within or adjacent to the sale areas.

There are several unnamed, small, perennial, Type N streams within the sale areas, which are tributary to Devil's Lake Fork of the Wilson River, and South Fork of the Wilson River. During sale layout, all streams will be field verified as to size, type, locations, and/or source. Riparian area stand types along these streams are generally hardwood/conifer mixed.

Stream buffers within harvest unit boundaries will be managed according to FMP Riparian Strategies. The riparian areas will be reviewed during sale layout for current stand conditions and/or operational constraints for implementing FMP strategies.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, using sediment control devices in road ditches when necessary, and seasonal restrictions on logging and hauling operations. Culvert installment and replacement in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

Dave Plawman, ODF&W fish biologist, has recommended an in-stream fish habitat project in conjunction with this sale. The project involves using 8-10 hours of helicopter time to place 100-120 logs in Elliot Creek.

VIII. T&E SPECIES CONSIDERATIONS:

The sale area has been reviewed with the ODF Northwest Oregon Area Biologist (Area Biologist).

Surveys for northern spotted owls were conducted in 2004 due to the presence of potentially suitable spotted owl habitat within and adjacent to the timber sale area. Helibates was surveyed for spotted owls three times in 2004 with no responses, and the second year of survey will be completed in 2005. All surveys were/will be conducted in accordance with USFWS protocol.

Surveys for marbled murrelets are not required, due to the absence of potentially suitable habitat within the sale area. The ODF wildlife biologist for the NW Oregon Area made the determination that the sale area is non-suitable habitat for marbled murrelets.

The sale area was checked against the Oregon Natural Heritage Program (OHNP) database of known listed plant locations. No listed plant records were identified within the sale area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial assessment from the geotechnical specialist is high. There are steep and very steep slopes scattered throughout the sale area. The geotechnical specialist will review the sale in the field. If the sale boundaries are changed prior to field review, the geotechnical specialist may be consulted and the need for field review may be reassessed.

X. RECREATION RESOURCES:

The sale area is designated as Motorized in the Tillamook State Forest Comprehensive Recreation Plan (1993). The District Recreation Coordinator has reviewed this sale, and suggests:

The Bates Road is an OHV trail within the sale area. Short-term closure of this trail may occur to facilitate logging and public safety. Slash will be removed from the OHV trails upon completion of the operation. A plan will be developed to advise the public when trails are closed due to harvest activity.

Recreational use common to this area includes hunting, mountain biking and OHV use.

XI. CULTURAL RESOURCES:

The sale area was checked against the Tillamook State Forest Cultural Resource Inventory database. No cultural resource records were identified within the sale area. If any significant cultural resources are located during sale preparation, the Public Use Coordinator (ODF Salem Staff) will be consulted regarding potential protection measures.

XII. SCENIC RESOURCES:

The sale area has a visual classification of Level 2, moderate sensitivity. Measures will be taken to mitigate the visual impact. A minimum 100 feet no harvest buffer along the length of Highway 6 will apply. Visual impact is expected to be minimal anyway, due to the amount of residual trees being left in the sale area.

XIII. OTHER RESOURCE CONSIDERATIONS:

All known survey corners and witness trees shall be protected from damage during any operations.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Table 6. Land Management Classification Summary. This table summarizes the acres of Focused and Special Stewardship within the operations. Due to overlapping classifications under the Land Management Classification System, the acres summarized for each operational area in this table may exceed the net or gross acreage of the area. For example, a particular acre can be classified as Focused Stewardship for Aquatic and Riparian Habitat, Recreation, and Scenic resources.

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
I	Aquatic and Riparian Habitat	84	12
	Visual	328	0
	Recreation	327	0
	Operationally Limited	0	20