

Pre-Operations Report

Operation Name: Northrup Quarry Combination

County: Clatsop

Management Basin: Northrup

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	Partial Cut - Heavy	101	91
2	Partial Cut - Heavy	26	22
3	Modified Clearcut	99	90
4	Partial Cut - Moderate	127	120
5	Modified Clearcut	52	48
Total	Partial Cut	254	233
Total	Regeneration Harvest	151	138
Total		405	371

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

These sale areas are all located in the Northrup Basin. This area is dominated by Douglas-fir, with some western hemlock and red alder. The soil types present are primarily Tillamook (Ty), and Bradwood (Bq), with some Killam (Km) soils. These soils are deep, well-drained soils, with fine to moderate textures. Site index averages from 120-130 feet for the Douglas-fir, and 110 feet for the western hemlock.

The Sale is located on the gentle slopes dividing Northrup Creek and Walker Creek. Areas 1, 2, and 3 drain to Northrup Creek while Areas 4 and 5 drain to Walker Creek. All of Areas 1, 2 and 3 and most of Areas 4 and 5 are underlain by sedimentary origin rocks of the informal Sager Creek formation, mudstone and sandstone. A small portion of Areas 4 and 5 are underlain by sedimentary origin rocks of the Pittsburg Bluff Formation, primarily sandstone. Areas 1 and 4 also have igneous invasive intrusive origin rocks of the Grande Ronde Basalt formation, basalt dikes and sills of the Columbia River Basalt Group forming the northwest trending ridgeline.

II. CURRENT STAND CONDITION:

Area 1: The current stands are generally 65 years old, and are composed of mostly moderate sized Douglas-fir with scattered clumps and stringers of alder. The stand density is high, at approximately 52 SDI, and requires thinning to enhance its “understory” structure and move it toward a “layered” condition.

Area 2: The current stand is 70 years old, and composed of Douglas-fir, with pockets of mixed conifer and hardwoods. As with Area 1, this sale area also has a high stand density (56 SDI), which requires thinning enhance its “understory” structure and move it toward a “layered” condition.

Areas 3 and 5: These stands are approximately 63 to 67 years old, and are composed of moderately dense mixed Douglas-fir/hemlock stands with patches of hardwoods. The understory under the hardwoods is primarily salmonberry.

Area 4: The current stand is 60 years old, and is composed of mostly moderate sized Douglas-fir with stringers of alder. The existing stand density is relatively high (63 SDI). There is little understory development due to the dense stocking. The understory consists primarily of dense sword fern with occasional vine maple, huckleberry, and salmonberry.

Currently there is an average of two snags ≥ 24 ” in diameter per acre and 8 snags ≥ 12 ” in diameter per acre in all five units. There is greater than 600 cubic feet per acre of down wood in decay classes 1 and 2 in Areas 3 and 5.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Acres ²
1	PC - H	23747	DF	65	20	229	99	52	91
		Target ³	DF	66	22	110-140	40-60	20-30	91
2	PC - H	23746	DF	70	22	251	96	56	22
		Target ³	DF	71	24	110-140	40-60	20-30	22
3	MC	23764	DF,RA	65	17	223	139	55	90
		Target ³					5		90
4	PC - M	23766	DF	60	19	267	136	63	120
		Target ³	DF	61	22	130-160	55-75	25-35	120
5	MC	23751	DF	59	16	245	186	63	48
		Target ³					5		48

1. The source of stand inventory information is SLI from 2003

2. The acres are based on GIS and exclude roads, stream buffers, reserve areas, etc.

3. The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

III. DESIRED STAND CONDITION:

Area 1 and portions of Area 2 have a desired future stand structure of LYR. Areas 3, 4, and 5 have not been targeted for either old forest structure (OFS) or LYR, and are designated as general stewardship.

Areas 3 and 5 are modified clearcuts that will be replanted with a mixture of conifer species. Areas 1, 2, and 4 will be partial cut. The specific stand targets for basal area and stand density in Areas 1, 2, and 4 will be determined during sale layout, but will range from 20% to 35% SDI.

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Acres
1	23747	UDS	LYR	LYR	91
2	23746	UDS	LYR	LYR	22
3	23764	UDS	REG	General	90
4	23766	UDS	UDS	General	120
5	23751	UDS	REG	General	48

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:

Areas 1 and 2 will be automark thinned to an approximate stand density range of 20%-30%. These areas will be thinned to a level that will assist in the development of LYR the stand. Red alder patches which are an acre or more in size may be thinned to the basal area range of 100-130. Minor species and any red alder patches less than an acre will be reserved. Alternative thinning prescriptions may be applied at a "patch" scale to create variability in the stand. This partial cut will allow rapid growth of understory in order to accelerate the stand towards the desired future stand structure of layered.

Area 4 The proposed management prescription in Area 4 is a thinning to a stand density between 25% and 35%. The result of this partial harvest should be increased growth to individual trees, and development of conifer and deciduous understory species as the more open tree canopy allows light to reach the forest floor. Minor species, such as western red cedar, may be reserved from cutting. Larger remnant trees, if present, will be reserved from cutting. The existing hardwood clumps and stringers will also be retained to promote diversity in the unit.

Areas 3 and 5 are modified clearcuts that will be replanted with a mixture of conifer species at 250-300 TPA. An average of at least five green trees per acre will be scattered and/or clumped throughout clearcut units, and not solely located in riparian areas. (FMP, page 4-53, Paragraph 2).

During all harvesting activities, all existing snags will be retained unless deemed to be safety hazards. For planned clearcut units, where fewer than two hard

snags per acre are found to exist during sale layout, opportunities for snag creation or leaving additional live green trees will be implemented to supplement landscape snag levels. In addition, individual and small clumps of non-merchantable alder may be left in operationally feasible areas to provide short term snag recruitment. For partial cut units, it is anticipated that additional snags will develop during yarding activities by leaving, topping or girdling damaged rub trees, tail lift trees, and/or intermediate support trees. (FMP, "Landscape Management Strategy 3c. Snags", pages 4-53 and 4-54).

For all harvesting activities, all existing down woody debris will be retained. For clearcut units, down woody debris levels will be assessed and if deficiencies are found to exist on an individual unit, then additional conifer trees and/or conifer logs will be retained to meet the landscape targets for down woody debris as prescribed in the FMP, "Landscape Management Strategy 3d. Down Wood." pages 4-54 and 4-55.). Efforts will be made to leave nonmerchantable alder and hardwood cull logs within the sale areas as they are anticipated to decompose faster and provide habitat needs sooner than the conifer downed woody debris. For partial cut units, to increase down woody debris, operations will be required to top trees prior to yarding and only yard merchantable logs.

Site Preparation treatments for Areas 3 and 5 will be evaluated with the reforestation forester during sale layout. Clearcut areas will be evaluated at the completion of harvesting to ensure planting of appropriate species and density.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Planned Quarter:		4th	

	Conifer	Hardwood	Total
Net Volume (MBF)	9,061	1,080	10,141
Stumpage Value (\$/MBF)	\$350	\$300	
Estimated Gross Value	\$3,171,350	\$324,000	\$3,495,350
		Project Costs:	\$369,000
		Estimated Net Value:	\$3,126,350

VI. TRANSPORTATION PLANNING AND HARVESTING:

Access is Highway 202 to Northrup Creek Road to Foster Mainline. Sale access is secured through existing easements.

For sale access approximately 1.5 miles of new road construction, and 2.3 miles of road improvement within the sale area will be needed to access the areas for

harvest. Included in the road improvement is repair and maintenance of the Northrup No. 2 Bridge, approximately 25 miles of roadside brushing and a Type F stream crossing upgrade on Northrup Creek Road.

Roads are minor ridge top spurs that do not cross perennial streams. Since this area has an established road network, utilizing the existing infrastructure and constructing a few minor spurs was determined the most sound access/harvest system. The majority of the new road construction involves accessing Area 3 and will have limited future use beyond this sale. A majority of the sale area will be cable logged to existing ridge top roads and the newly constructed roads in Area 3. Many of these roads may be considered for future vacating upon completion of operations. Old roads in the vicinity will be evaluated for road vacating.

Approximately 15,000 cubic yards of rock crushing and stockpiling will also occur with this sale.

Table 5. Transportation Planning Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0.0	0.5	0.9	0.6
Improve	0.0	1.0	1.3	0.0
Maintain	0.7	1.9	2.5	0.0
Close/Block	0.0	0.0	0.0	0.0
Vacate	0.0	0.0	0.0	0.6

VII. AQUATIC RESOURCES AND WATER QUALITY:

Type F Streams: Area 1 – Northrup Creek, a large Type F stream, parallels the northeastern boundary for approximately 1,300 feet. Area 2 – Northrup Creek (large Type F) runs adjacent to the area for approximately 800 feet. Areas 3, 4, & 5 – No Type F streams are associated with the harvest activities. There are no known Domestic water systems associated with this sale.

Type N Streams: There are small perennial Type N streams in all sale areas

Stream Enhancement Opportunities: An extensive stream enhancement project was recently completed in Northrup Creek. Further assessment and collaboration will be done with ODFW biologists and the Jewell Unit Forester.

Aquatic Resource Protection: For all areas, full log suspension is required when cable yarding over streams. No ground-based logging equipment operation is allowed within the stream bank zone. No stream crossings are anticipated during road construction. To protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These

methods range from use of hay bales in road ditches, to “ditch-outs” away from streams, to complete shutdown of logging and hauling operations during times of heavy rainfall. There are no known high hazard sites or debris track Type N streams within the sale area. All streams will be examined to determine stream type and classification during sale layout, and then the specific riparian management area strategies required in the FMP will be implemented. The FMP riparian management area strategies that will be implemented are found in the FMP, Appendix J, “Management Standards for Aquatic and Riparian Areas”, pages J-1 through J-16.

A Type F stream that has historically contained listed fish (Coho, Fall Chinook, and Winter Steelhead) is adjacent to the forest operation area and access roads cross perennial streams in which these fish have been present. Therefore, per ODF’s Salmon Protection Policy for State Forest Operations, contract provisions will be included to reduce the likelihood of adverse effects on listed fish. Specific standards will include: (1) hauling on roads which are in proximity to streams in which “listed” fish are present would only be allowed during weather conditions and use levels commensurate with the capabilities of road drainage systems; (2) implementation of riparian management area strategies in accordance with the FMP, Appendix J, “Management Standards for Aquatic and Riparian Areas”, pages J-1 through J-16, for perennial Type N streams that are within 500 feet of streams in which listed fish are present.

If any in-stream work is required with this sale, then the in-stream work will be conducted during in-stream periods established by ODFW.

VIII. T&E SPECIES CONSIDERATIONS:

The ODF Northwest Area Biologist determined on April 11, 2000 none of the sale areas contained suitable habitat for Marbled Murrelets.

All sale areas were surveyed to protocol for northern spotted owl in 2000, 2001, 2002, 2003, and 2004 with no responses. All sale areas are scheduled for surveys again in 2005.

The sale area was checked against district knowledge for any listed plant location. The sale area was also 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 topographic map indicates isolated high landslide hazard locations on the northeast edge of Area 1 and in the north-central part of Area 4. These partial cut units have a low risk. There are no high landslide hazard locations indicated on the topographic map for the clearcut units. The geotechnical specialist may be consulted if concerns arise during sale layout.

X. RECREATION RESOURCES:

This area will see increasing recreation use as the Northrup Creek Horse camp is proposed just north of the sale. The Northrup Creek loop trail that was reviewed with the unit forester in December 2003 will pass through Sale Areas 1 and 2. Portions of this trail that are constructed prior to harvest will be protected and rehabilitated should any damage occur from harvest activities. Coordination between the unit forester and the district recreation coordinator will be important when laying out the timber sale.

XI. CULTURAL RESOURCES:

According to the Clatsop State Forest Cultural Resource Inventory Report, Big Creek Logging Trestles/Settlement (farm) are located in NW ¼, Section 16, T6N, R6W. In addition, it is noted in the same report that a railroad logging camp – Camp 17, Big Creek Logging Co. is located in W ½, SE ¼, Section 17, T6N, R6W. Although the legal descriptions of these cultural resources are within the sale area, from presale reconnaissance, these resources were not found to be within the sale area. During actual sale layout, if any of these resources are found, they will be protected.

XII. SCENIC RESOURCES:

The sale area is in a landscape of low visual sensitivity (Level 3)

XIII. OTHER RESOURCE CONSIDERATIONS:

All property lines have been posted and blazed. In Area 3, the common corner to Sections 16, 17, 20, and 21 needs to be re-witnessed. As does the W 1/16 corner to Section 16 and 21 along the southeast boundary and the SW 1/16 to Section 16. In Area 5, the N 1/16 corner and the S 1/16 corner to Sections 17 and 18 need to be re-witnessed.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Table 6. Land Management Classification Summary

Area	LMCS Subclass	Focused Stewardship	Special Stewardship
1	Aquatic & Riparian	22	4
2	Aquatic & Riparian	13	2
3	Aquatic & Riparian	39	7
4	Energy & Minerals	0	2
4	Aquatic & Riparian	28	5
5	Aquatic & Riparian	13	2

This table summarizes the acres of Focused and Special Stewardship within the operations. The acres in each operational area in this table do not necessarily add up to its gross or net acres, because of overlapping classifications under the Land Management Classification System. For

example, a particular acre can be classified as Focused Stewardship for Aquatic and Riparian, Recreation, and Scenic resources.