

Timber Sale Appraisal Hoagie Sale KL-341-2019-21-

District: Klamath/Lake Date: April 16, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$947,710.55	\$0.00	\$947,710.55
		Project Work:	(\$15,340.40)
		Advertised Value:	\$932,370.15



Timber Sale Appraisal Hoagie

Sale KL-341-2019-21-

District: Klamath/Lake Date: April 16, 2018

Timber Description

Location: Portions of Sections 5, 6, and 7, T33S, R7E, Willamette Meridian, Klamath County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	14	0	96
White Fir	16	0	98
Sugar Pine	21	0	96
Ponderosa Pine	20	0	98
Lodgepole Pine	10	0	95

Volume by Grade	28	3S & 4S 6"- 11"	3S 12"+	6" - 11"	12"-15"	16"+	Camprun	Total
Douglas - Fir	20	14	11	0	0	0	0	45
White Fir	768	854	0	0	0	0	0	1,622
Sugar Pine	0	0	0	179	99	149	0	427
Ponderosa Pine	0	0	0	391	576	453	0	1,420
Lodgepole Pine	0	0	0	0	0	0	21	21
Total	788	868	11	570	675	602	21	3,535

Comments: Pond Values Used: Local Values, Februrary 2018

Log Markets: Klamath Falls and Medford.

Other Costs (with Profit & Risk to be added):

Dust Abatemant: \$8,924.45

TOTAL Other Costs (with Profit & Risk to be added) = \$8,924.45

Other Costs (No Profit & Risk added):

None.

5/14/18



Timber Sale Appraisal Hoagie

Sale KL-341-2019-21-

District: Klamath/Lake Date: April 16, 2018

Logging Conditions

Combination#: 1 Douglas - Fir 87.00%

 White Fir
 55.00%

 Sugar Pine
 16.00%

 Ponderosa Pine
 22.00%

 Lodgepole Pine
 100.00%

Logging System: Wheel Skidder Process: Feller Buncher

yarding distance: Medium (800 ft) downhill yarding: Yes

tree size: Small / Thinning 10in (90 Bft/tree), 18-20 logs/MBF

loads / day: 9 bd. ft / load: 4200

cost / mbf: \$100.44

machines: Log Loader (B)

Stroke Delimber (B)

Feller Buncher w/ Delimber

Tire Skidder

Combination#: 2 Douglas - Fir 13.00%

 White Fir
 45.00%

 Sugar Pine
 84.00%

 Ponderosa Pine
 78.00%

Logging System: Track Skidder Process: Manual Falling/Delimbing

yarding distance: Medium (800 ft) downhill yarding: Yes

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 9 bd. ft / load: 4400

cost / mbf: \$111.38

machines: Log Loader (B)

Track Skidder



Timber Sale Appraisal Hoagie

Sale KL-341-2019-21-

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Logging Costs

Operating Seasons: 1.00

Profit Risk: 10%

Project Costs: \$15,340.40

Other Costs (P/R): \$8,924.45

Slash Disposal: \$0.00 Other Costs: \$0.00

Miles of Road

Road Maintenance:

\$0.43

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.3
White Fir	\$0.00	3.0	4.5
Sugar Pine	\$0.00	3.0	4.2
Ponderosa Pine	\$0.00	3.0	4.5
Lodgepole Pine	\$0.00	3.0	4.2



Timber Sale Appraisal Hoagie Sale KL-341-2019-21-

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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total	
Douglas -	Douglas - Fir									
\$101.86	\$0.45	\$1.24	\$62.89	\$2.52	\$16.90	\$0.00	\$2.00	\$0.00	\$187.86	
White Fir										
\$105.36	\$0.44	\$1.24	\$58.94	\$2.52	\$16.85	\$0.00	\$2.00	\$0.00	\$187.35	
Sugar Pine	9									
\$109.63	\$0.45	\$1.24	\$64.38	\$2.52	\$17.82	\$0.00	\$2.00	\$0.00	\$198.04	
Ponderosa	Ponderosa Pine									
\$108.97	\$0.44	\$1.24	\$58.94	\$2.52	\$17.21	\$0.00	\$2.00	\$0.00	\$191.32	
Lodgepole	Lodgepole Pine									
\$100.44	\$0.45	\$1.24	\$65.00	\$2.52	\$16.96	\$0.00	\$2.00	\$0.00	\$188.61	

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$580.82	\$392.96	\$0.00
White Fir	\$0.00	\$523.79	\$336.44	\$0.00
Sugar Pine	\$0.00	\$395.08	\$197.04	\$0.00
Ponderosa Pine	\$0.00	\$397.64	\$206.32	\$0.00
Lodgepole Pine	\$0.00	\$532.00	\$343.39	\$0.00



Timber Sale Appraisal Hoagie

Sale KL-341-2019-21-

District: Klamath/Lake Date: April 16, 2018

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
White Fir	0	\$0.00	\$0.00
Sugar Pine	0	\$0.00	\$0.00
Ponderosa Pine	0	\$0.00	\$0.00
Lodgepole Pine	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	45	\$392.96	\$17,683.20
White Fir	1,622	\$336.44	\$545,705.68
Sugar Pine	427	\$197.04	\$84,136.08
Ponderosa Pine	1,420	\$206.32	\$292,974.40
Lodgepole Pine	21	\$343.39	\$7,211.19

Gross Timber Sale Value

Recovery: \$947,710.55

Prepared By: Chris Weekly Phone: 541-883-5681

Hoagie

341-19-21

Other Costs

		Road Maintenance
Move-in cost (grader):	\$500.00	
Number of Miles to be Bladed:	4.8	
Number of Bladings:	1	
Total Miles	4.8	
Miles / Hour for equipment:	0.5	
Cost / Hour (grader with operator):	\$105.50	
Total Grading Hours:	10	
Grading Cost:	\$1,012.80	
_	\$1,512.80	
Total Cost:	\$1.512.80	

Total Cost:	\$1,512.80
Cost / Mbf:	\$0.43

		Dust Abatem	ent (Profit & Risk to b	e added in Appro	aisal)	
WF	1622 Mbf	45.9%	Average Load	4.5 Mbf	No. of Loads	360
PP	1420 Mbf	40.2%	Average Load	4.5 Mbf	No. of Loads	316
SP	427 Mbf	12.1%	Average Load	4.2 Mbf	No. of Loads	102
DF	45 Mbf	1.3%	Average Load	4.3 Mbf	No. of Loads	10
LP	21 Mbf	0.6%	Average Load	4.2 Mbf	No. of Loads	5
Total:	3535 Mbf				Total Loads	793
Assume:	4 Trucks/[Day				
	3 Trips/Da	У	66 Days of Dust Abatement			
	12 Loads per Day 1.5 Hours/Day		Day			
	66 Hauling	Days		\$88.00 Cost/Ho	our	
				99 Total Ho	ours	
				\$200.00 Move ir	n for Water Truck	
			\$8	3,924.45 Dust Ab	atement Cost	
			\$8	3,924.45 Total Co	ost	
				\$2.52 Cost/M	bf	

Other Costs Summary	ı (Pro	fit and I	Risk to l	be ada	led in A	Appraisal)	
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\$8,924.45 Total cost for Dust Abatement

\$2.52 per MBF

\$8,924.45 Total Other Costs

\$2.52 per Mbf

Project Costs

Project #1 Road Improvement

Move in Cost Dozer: \$500.00

Improvement

	Points	Distance (ft)	Feet/Hour	Hours	Cost/Hour	Cost
Open/Clear/Shape	A to B	3329	750	4.4	\$132.50	\$588.12
Open/Clear/Shape	C to D	2271	750	3.0	\$132.50	\$401.21
Open/Clear/Shape	E to F	813	750	1.1	\$132.50	\$143.63
Open/Clear/Shape	G to H	2141	750	2.9	\$132.50	\$378.24
Open/Clear/Shape	I to J	2094	750	2.8	\$132.50	\$369.94
	Total	10648			Total	\$1,881.15

Project #1 Summary

Move in Cost \$500.00
Improvement Cost \$1,881.15

Project #1 Total \$2,381.15

per Mbf \$0.67

Project Costs

Project #2 Felling, Skidding, and Piling of Submerchantable Trees

Total Sub-Sawlog Volume: 13 MBF

Fell and Skid/MBF: \$50.00

Sort/MBF: \$10.00

Total \$780.00 per MBF \$0.22

Landing Slash Piling

Number of Landings: 14

Shovel Time: 1 Hour per Landing Cost per Hour: \$125.00 Total Cost \$1,750.00

Cat Time: 1 Hour per Landing Cost per Hour: \$132.50 Total Cost \$1,855.00

Total \$3,605.00 per MBF \$1.02

Project #2 Summary

Fell/Pile/Skid: \$780.00 Landing Cleanup: \$3,605.00

Total: \$4,385.00

per Mbf: \$1.24

Project Costs

Project #3 Road Closure and Waterbarring

Road Closures

2 Number of Closure Points - Point E and I

\$132.50 Cost per Hour (Cat)

\$265.00 Total

\$0.07 per Mbf

Skid Trail Waterbarring

9 Number of Landings

2.5 Hours per Landing

\$132.50 Cost per Hour (Cat)

\$2,981.25 Total

\$0.84 per Mbf

Project #3 Summary

Road Closure: \$265.00

Waterbarring: \$2,981.25

Total: \$3,246.25

per Mbf: \$0.92

Project #4 Spot Rocking

Spot Rocking - Delivered	Rock Spreading (Grader)
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3/4 -	Rock Size	8	Total Grader Hours
180	Cubic Yards	\$105.50	Cost per Hour
1.5	Tons per Cubic Yard	\$844.00	Total
270	Tons		
\$14.00	cost per ton (delivered)	8	Total Water Truck Hours
\$3,780.00	Total	\$88.00	Cost per Hour
\$1.07	per Mbf	\$704.00	Total

\$1,548.00 Total Rock Spreading \$0.44 per Mbf

Project #4 Summary

Total cost Rock \$3,780.00 Total cost Spreading \$1,548.00

ding \$1,548.00 **Total** \$5,328.00

per Mbf \$1.51

Project Costs

	Cost Summary All Projects
\$2,381.15	Project #1 Road Improvement
\$4,385.00	Project #2 Fell, Skid, and Pile Submerchantable Trees
\$3,246.25	Project #3 Road Closures and Waterbarring
\$5,328.00	Project #4 Spot Rocking
\$15,340.40	Total
\$4.34	per MBF

Summary of Project Work



Hoagie 341-19-21

Project No. 1:	Road Improvement	\$2,381.15
Project No. 2:	Fell, Skid, and Pile Submerch. Material	\$4,385.00
Project No. 3:	Road closures and Waterbarring	\$3,246.25
Project No. 4:	Spot Rocking	\$5,328.00
	Total	: \$15,340.40

Hoagie KL-341-19-21 Cruise Report



SALE NAME: Hoagie

LEGAL DESCRIPTION:

Township 33S, Range 7E, Portions of Sections 5, 6, and 7, W.M., Klamath County, OR.

BOUNDARY LINES:

Unit boundaries are posted with "Timber Sale Boundary" signs, marked with fluorescent orange paint and fluorescent orange flagging.

FUND:

100% B.O.F.

ACREAGE:

Gross Sale Acreage: 349 Acres

Net Sale Acreage: 348 Acres

Mapping was accomplished using a handheld Global Positioning System unit with the data run on the district Geographical Information System Program.

TREATMENT:

The Timber Sale is a single tree selection cut with all unmarked trees 9.0 inches DBH or larger to be cut. All orange marked trees are reserved from cutting. All trees less than 5.0 inches DBH are reserved from cutting in the sale area. All unmarked trees 5.0 to 9.0 inches DBH within the submerchantable treatment areas designated on Exhibit A shall be cut.

CRUISE METHOD:

Variable plot cruise with a ratio of a count plot for every measure plot. Fixed plot cruise for all sub-merchantable material (5.0" to 9.0") DBH within designated submerchantable treatment areas.

BASAL AREA FACTOR:

Area	BAF	Type Acreage
Area 1	14 BAF	348

PLOT DESIGNATION:

Plot centers were established at every plot with blue flag wire stakes with the corresponding plot number. Blue and white striped flagging was attached to the nearest available tree branch.

SAMPLE SIZE:

34 plots were taken which resulted in a sampling error of 8.0%. Cruise plots and count plots were taken at a 1:1 ratio.

Measurements and Grading:

- Ratio of a count plot for every measure plot.
- DBH and Height were measured on all "in" trees for measure plots.
- Pulp volume and sawlog volume cruised.
- See attached species and grade tables for minimum requirements.
- All trees were graded using the segment system.
- Separate fixed plot cruise for all submerchantable material (5"to 10" DBH).

TREE HEIGHT:

All trees were measured to a fixed diameter outside bark. This height is usually taken as high up the bole as possible, where the cruiser can clearly see the bole, and the taper remains constant (usually 6 or 8 inches). The log segments are broken out and graded accordingly.

MINIMUM D.B.H:

9.0" DBH for sawlog volume. 5.0" DBH for submerchantable material.

DIAMETER STANDARDS:

1" diameter class

BTR:

Standard ratios were used. See attached species tables.

FORM FACTOR:

Form factor was measured or estimated at 16' for each tree. Each tree was assigned its own FF.

FORM POINT:

All trees were sighted at DBH.

VOLUME COMPUTATION:

All cruise data was input and run at the district on Atterbury's Super Ace program.

CRUISERS: James Monteil, Chris Weekly, and Ed Scheick.

FINAL CRUISE RESULTS:

AREA	CV%	SE%	ACRES
Area 1	46.6	8.0	348

TIMBER DESCRIPTION

SAWLOG VOLUME:

This volume was obtained from the variable plot cruise. All material graded camprun. See grade table for minimum standards.

TOTAL SAWLOG VOLUME

SPECIES	AVE. DBH	GROSS VOL (MBF)	NET VOL (MBF)
White Fir	15.9	1627	1622
Ponderosa Pine	20.1	1429	1420
Sugar Pine	20.8	427	427
Douglas-Fir	13.7	45	45
Lodgepole Pine	10.2	21	21

TOTAL NET SAWLOG VOLUME: 3535 MBF

GREEN PULP VOLUME:

This volume was obtained from the fixed plot cruise (5.0" - 9.0" DBH), within the submerchantable treatment areas.

All material was graded green pulp, see grade table for minimum standards.

TOTAL GREEN PULP VOLUME: 13 MBF

SPECIES	AVE DBH	NET VOL MBF
ALL	6.5	13

				ST PROJEC	ATIST:	ICS HOAGIE			PAGE DATE 4	1 4/17/2018
TWP RGE	SECT	TRACT		ТҮРЕ		RES	PLOTS	TREES	CuFt	BdFt
033 007	06	221		VARI		348.00	34	201	1	E
	30		т	REES		ESTIMATED TOTAL	Pl	ERCENT AMPLE	•	<u> </u>
	PLOTS	TREES		ER PLOT	•	TREES		REES		
TOTAL	34	201		5.9						
CRUISE DBH COUNT REFOREST COUNT	19	104		5.5		16,402		.6		
BLANKS 100 %	13	04		5.0						
			STAN	D SUMMA	ARY					
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHITE F	31	9 24.9	15.9	49	8.6	34.4	4,676	4,660	987	987
PPINE	4	1 14.8	20.1	53	7.2	32.4	4,107	4,082	838	838
SUG PINE	19		20.8	55	2.5	11.6	1,227	1,227	267	
DOUG-FIR		3 1.2	13.7	32	0.3	1.2	129	129	27	
LP PINE TOTAL		2 1.4	10.2	25	0.3	.8	60	60	15	
	10-	4 47.1	17.7	50	19.1	80.5	10,199	10,157	2,134	2,134
68.		THE SAMPLE Γ OF 100 THE VO	DLUME WILI	L BE WITH	IIN THE S	SAMPLE ERR	OR			
	COE	CC								
CL: 68.1 %			1.0	SAMPLE			#	OF TREES I		INF. POP.
SD: 1.0	VAR	.% S.E.%	LO	W	AVG	HIGH	#	OF TREES I	REQ. 10	
00.1		.% S.E.% 2 10.7	LO		AVG 257	HIGH 285	#			
SD: 1.0 WHITE F	VAR	.% S.E.% 2 10.7 0 14.0	LO	W 230	AVG	HIGH	#			
SD: 1.0 WHITE F PPINE	VAR 67. 90.	.% S.E.% 2 10.7 0 14.0 .5 26.3	LO	230 390	AVG 257 453	HIGH 285 517	#			
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE	VAR 67. 90.	.% S.E.% 2 10.7 .0 14.0 5 26.3 8 77.3	LO	230 390 284	AVG 257 453 386	HIGH 285 517 487	#			
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR	VAR 67. 90. 111.	.% S.E.% 2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6	LO	230 390 284 52	257 453 386 230	HIGH 285 517 487 408	#			1
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL	VAR 67. 90. 111. 111. 101.	.% S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6	LO	230 390 284 52 4	257 453 386 230 70 354	HIGH 285 517 487 408 136 387		5	95	:
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0	VAR 67. 90. 111. 111. 101. 97. COEL	.% S.E.% 2 10.7 .0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF .% S.E.%	LO	230 390 284 52 4 320 SAMPLE	257 453 386 230 70 354 TREES -	HIGH 285 517 487 408 136 387 CF HIGH		5 380	95	1
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F	VAR 67. 90. 111. 111. 101. 97. COEL VAR 58.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF		230 390 284 52 4 320 SAMPLE W	AVG 257 453 386 230 70 354 TREES - AVG 53	HIGH 285 517 487 408 136 387 CF HIGH 58		5 380 OF TREES I	95 REQ.	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE	VAR 67. 90. 111. 111. 101. 97. COE VAR 58.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8		230 390 284 52 4 320 SAMPLE W 48 78	AVG 257 453 386 230 70 354 TREES - AVG 53 88	HIGH 285 517 487 408 136 387 CF HIGH 58 98		5 380 OF TREES I	95 REQ.	INF. POP.
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SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR	VAR 67. 90. 111. 111. 101. 97. COE VAR 58.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2		230 390 284 52 4 320 SAMPLE W 48 78	AVG 257 453 386 230 70 354 TREES - AVG 53 88	HIGH 285 517 487 408 136 387 CF HIGH 58 98		5 380 OF TREES I	95 REQ.	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104.	.% S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF .% S.E.% 7 9.4 4 11.8 .1 21.2 3 72.2 .1 95.6		230 390 284 52 4 320 SAMPLE W 48 78 61 13	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81		5 380 OF TREES I	95 REQ.	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE	VAR 67. 90. 111. 111. 101. 97. 6 COE VAR 58. 75. 90. 104. 102. 81.	.% S.E.% 2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0		230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35	#	380 OF TREES I 5	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 %	VAR 67. 90. 111. 111. 101. 97. 6 COE VAR 58. 75. 90. 104. 102. 81.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0 FF		230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35	#	5 380 OF TREES I 5	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 %	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81.	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CCRE	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76	#	380 OF TREES F 5 265 OF PLOTS F	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE TOTAL	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98.	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% 1 16.8 0 20.7	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18	#	380 OF TREES F 5 265 OF PLOTS F	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 688.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 688.1 % SD: 1.0 WHITE F PPINE SUG PINE SUG PINE SUG PINE SUG PINE SUG PINE SUG PINE	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98. 121.	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 .1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% .1 16.8 0 20.7 .1 25.4	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6	#	380 OF TREES F 5 265 OF PLOTS F	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81 COE VAR 98. 121. 148.	.% S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF .% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF .% S.E.% 1 16.8 0 20.7 1 25.4 9 82.4	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2	#	380 OF TREES F 5 265 OF PLOTS F	95 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE DOUG-FIR LP PINE DOUG-FIR LP PINE	VAR 67. 90. 111. 111. 101. 97. 5 COE VAR 58. 75. 90. 104. 102. 81. 5 COE VAR 98. 121. 148. 480. 583.	.% S.E.% 2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0 FF .% S.E.% .1 16.8 .0 20.7 .1 25.4 .9 82.4 .1 99.9	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3	#	5 380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL	VAR 67. 90. 111. 111. 101. 97. 5 COE VAR 58. 75. 90. 104. 102. 81. 5 COE VAR 98. 121. 148. 480. 583. 55.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0 FF .% S.E.% .1 16.8 .0 20.7 .1 25.4 .9 82.4 .1 99.9 .8 9.6	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CCRE AVG 25 15 5 1 1 47	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE CL: 68.1 % CL: 68.1 %	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98. 121. 148. 480. 583. 55.	.% S.E.% .2 10.7 .0 14.0 .5 26.3 .8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0 FF .% S.E.% .1 16.8 .0 20.7 .1 25.4 .9 82.4 .1 99.9 .8 9.6 FF	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1 47 REA/ACE	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52 RE	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP. INF. POP. INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL	VAR 67. 90. 111. 111. 101. 97. 5 COE VAR 58. 75. 90. 104. 102. 81. 5 COE VAR 98. 121. 148. 480. 583. 55.	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% 1 16.8 0 20.7 1 25.4 9 82.4 1 99.9 8 9.6 FF -% S.E.%	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CCRE AVG 25 15 5 1 1 47	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP. INF. POP. INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % TOTAL CL: 68.1 % TOTAL CL: 68.1 % TOTAL	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98. 121. 148. 480. 583. 55. COE VAR	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% 1 16.8 0 20.7 1 25.4 9 82.4 1 99.9 8 9.6 FF -% S.E.% 5 15.8	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A W	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1 1 47 REA/ACH AVG	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52 RE HIGH	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP. INF. POP. INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE TOTAL CL: 68.1 % SD: 1.0 WHITE F POUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE CL: 68.1 % SD: 1.0 WHITE F TOTAL	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98. 121. 148. 480. 583. 55. COE VAR	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% 1 16.8 0 20.7 1 25.4 9 82.4 1 99.9 8 9.6 FF -% S.E.% 5 15.8 3 17.4	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A W	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1 1 47 REA/ACH AVG 34	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52 RE HIGH 40	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE TOTAL CL: 688.1 % SD: 1.0 WHITE F PINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE TOTAL CL: 688.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR	VAR 67. 90. 111. 111. 101. 97. COE VAR 58. 75. 90. 104. 102. 81. COE VAR 98. 121. 148. 480. 583. 55. COE VAR 92. 101.	S.E.% 2 10.7 0 14.0 5 26.3 8 77.3 0 94.6 5 9.6 FF -% S.E.% 7 9.4 4 11.8 1 21.2 3 72.2 1 95.6 5 8.0 FF -% S.E.% 1 16.8 0 20.7 1 25.4 9 82.4 1 99.9 8 9.6 FF -% S.E.% 5 15.8 3 17.4 5 22.2 3 73.6	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A W 29 27	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1 1 47 REA/ACH AVG 34 32	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52 RE HIGH 40 38	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP. INF. POP. INF. POP.
SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE SUG 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE DOUG-FIR LP PINE SUG PINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE TOTAL CL: 68.1 % SD: 1.0 WHITE F PPINE SUG PINE SUG PINE	VAR 67. 90. 111. 111. 101. 97. 6 COE VAR 58. 75. 90. 104. 102. 81. 148. 480. 583. 55. COE VAR 92. 101. 129.	.% S.E.% 2 10.7 .0 14.0 .5 26.3 8 77.3 .0 94.6 .5 9.6 FF .% S.E.% .7 9.4 .4 11.8 .1 21.2 .3 72.2 .1 95.6 .5 8.0 FF .% S.E.% .1 16.8 .0 20.7 .1 25.4 .9 82.4 .1 99.9 .8 9.6 FF .% S.E.% .1 17.4 .5 22.2 .3 73.6 .1 99.9	LO	230 390 284 52 4 320 SAMPLE W 48 78 61 13 1 65 TREES/A W 21 12 4 0 0 43 BASAL A W 29 27 9	AVG 257 453 386 230 70 354 TREES - AVG 53 88 78 47 18 70 CRE AVG 25 15 5 1 47 REA/ACH AVG 34 32 12	HIGH 285 517 487 408 136 387 CF HIGH 58 98 94 81 35 76 HIGH 29 18 6 2 3 52 RE HIGH 40 38 14	#	380 OF TREES I 5 265 OF PLOTS I 5	95 REQ. 10 66 REQ. 10	INF. POP. INF. POP. INF. POP.

TC TSTA	ATS			S PROJE	STATIS CCT	TICS HOAGIE			PAGE DATE	2 4/17/2018
TWP	RGE	SECT TRA	ACT	TYPE	A	CRES	PLOTS	TREES	CuFt	BdFt
033	007	06 221		VARI		348.00	34	201	1	Е
CL:	68.1 %	COEFF		NET B	F/ACRE			# OF PLO	ΓS REQ.	INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
CL:	68.1 %	COEFF		NET B	F/ACRE			# OF PLOTS I	REQ.	INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15
WHIT	ΈF	92.1	15.8	3,925	4,660	5,395				
PPINE	Ε	98.1	16.8	3,396	4,082	4,767				
SUG I	PINE	132.4	22.7	949	1,227	1,506				
DOUG	G-FIR	458.3	78.5	28	129	230				
LP PI	NE	583.1	99.9	0	60	120				
TOTA	AL	46.6	8.0	9,346	10,157	10,969		87	22	10
CL:	68.1 %	COEFF		NET C	UFT FT/A	CRE		# OF PLOTS 1	REQ.	INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15
WHIT	ΈF	92.0	15.8	832	987	1,143				
PPINE	Ε	97.9	16.8	697	838	979				
SUG I	PINE	134.4	23.0	205	267	328				
DOUG	G-FIR	443.5	76.0	6	27	47				
LP PI	NE	583.1	99.9	0	15	31				
TOTA	L	46.4	7.9	1,965	2,134	2,304		86	21	10

TC TLOGSTVB Log Stock Table - MBF Project: HOAGIE																			
T033 F Twp 033	R007 S0 Rge 007		S	RI ec Tra 06 221	ct		Type VARI	1	Acres		Plots 34	Samp	le Trees			3 R007 Page Date Fime	7 S06 TVARI 1 4/17/2018 2:44:37PM		
		Gr	Log	Gross	%	Net	%			Net Vol	ume by	Scaling	Diamet	er in Inc	hes				
Spp T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
WF	1	CF	R 17	82		82	5.1			36	17	29							
WF	1	CF		150		150	9.3			32	89	30	1.50	227	255				
WF	1	CF	34	1,395	.4	1,389	85.7			69	179	374	153	337	277				
WF		То	tals	1,627		1,622	45.9			136	285	433	153	337	277	'			
PP	1		R 16	18		18	1.3									18			
PP	1	CF		100		100	7.1			37	27	8	10		17	I			
PP	1		R 26	175	.5	174	12.3			39	17	12	30	19	27	1	30		
PP PP	1 1	CF	R 32	398 738	1.1	398 730	28.0 51.4			58	75	117	195	59 263	162 22		75		
					1.1														
PP		То	tals	1,429		1,420	40.2	-		135	119	137	235	341	227	121	105		
SP	1		R 16	12		12	2.9							12					
SP	1		R 17	28		28	6.5			9	5				14	l l			
SP SP	1 1	CF	R 26	42 136		42 136	9.8 31.8				21	10	11		68	3 40	28		
SP	1		R 34	209		209	49.0			33	18	83	56	21	U.C	40	26		
SP		То	tals	427		427	12.1			42	43	93	66	33	81	40	28		
DF	1		R 17	8		8	18.9			8		<u> </u>	00	- 55	- 01	1	20		
DF	1		R 26	11		8	24.6			8			11						
DF	1		R 34	25		25	56.5				6				19				
DF		То	tals	45		45	1.3			8	6		11		19				
LP	1	CF	R 17	8		8	36.4			8									
LP	1	CF	R 34	13		13	63.6				13								
LP		То	tals	21		21	.6			8	13								
Total All	Specie	es		3,549		3,535	100.0			330	466	664	466	711	605	161	133		

Species Table Report

TblSpecies Date: 12/22/2014

Page: 1

Table Name: SUNPASS

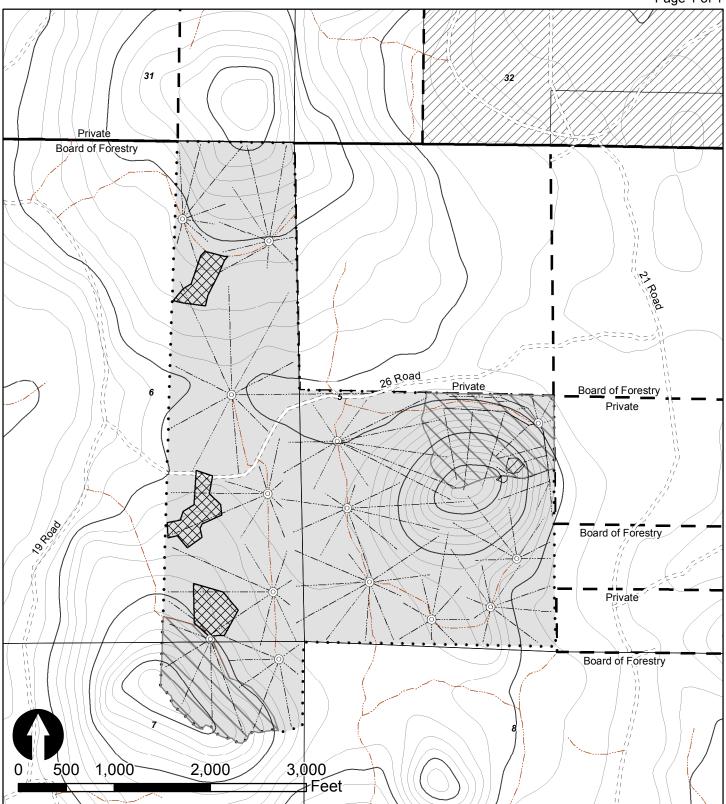
Code	Abrv	Description	Bark Ratio	ASubo Const	Form Factor	Wood Type	Comp- onent	Yield Table	Min Log Dia	Min Log Len	Max Log Len	Log Trim	Max Tree Dia	Max Tree Hgt.	BdFt Rule	CuFt Rule	Weight
Couc	ADIV	Description	Katio	Collst	ractor	турс	oncii	Ticiu Tabic	Dia	Len	Len	111111	Dia	11gt.	Kuit	Kuit	- Vicigni
1	PP	PPINE	.87	PP	.85	P	C	PPEQUA100	3	9	20	1.0	99	200	E	1	4800
2	WF	WHITE F	.94	NF	.87	W	C	DFEQUA050	3	9	20	1.0	99	200	E	1	5000
3	LP	LP PINE	.96	DF	.9	P	C	LPEQUA100	3	9	20	1.0	99	200	E	1	4800
4	DF	DOUG-FIR	.92	DF	.87	D	C	DFEQUA050	3	9	20	1.0	99	200	E	1	5700
5	SP	SUG PINE	.87	PP	.84	P	C	PPEQUA100	3	9	20	1.0	99	200	E	1	4800
6	IC	INC CED	.90	SS	.80	C	C	DFEQUA050	3	9	20	1.0	99	200	E	1	4500
7	RF	SH FIR	924	DF	89	V.	С	DFFOLIA050	3	9	20	1.0	99	200	E	1	5000

TblSortGrade

Sort/Grade Table

Table Name: SUNPASS **Date:** 12/22/2014

Sort	Grd	Abr	Desc	Fbr		Max Dia	Max B Butt	Min I Len		Defect	Min Vol	Vol Type	Min Rings	Knot S Size	Knot Freq	Str S	Mi Sap Ag		Lbs	Lbs Type	Cords	Cords Type
	0	CU	CULL	G	1	0	0	1	99	0	0	M	0	0	0			0	0		0	
	1	CR	CAMPRU	G	6	0	0	10	99	0	0	M	0	0	0			0	0		0	
	7	GP	GRNPULP	G	3	0	0	10	99	0	0	M	0	0	0			0	0		0	
	8	DP	DEADPUL	G	3	0	0	10	99	0	0	M	0	0	0			0	0		0	
	9	UT	UTILITY	G	8	0	0	12	99	0	0	M	0	0	0			0	0		0	
0		CU	CULL	G	1	0	0	1	99	0	0	M	0	0	0			0	0		0	
1		CR	CAMPRU	G	1	0	0	1	99	0	0	M	0	0	0			0	0		0	



LOGGING PLAN

Of Timber Sale Contract 341-19-21 Hoagie Portions of Section 5, 6 and 7, T33S, R7E, Willamette Meridian, Klamath County, Oregon

