Timber Sale Appraisal
Helpin Hanns
Sale TL-341-2022-W00876-01

District: Tillamook

Date: February 08, 2022

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$4,611,220.35	$78,628.57	$4,689,848.92
		Project Work:	($301,260.00)
		Advertised Value:	$4,388,588.92

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District: Tillamook **Date: February 08, 2022**

Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	100
Alder (Red)	15	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	6,263	2,860	0	0	0	0	9,123
Alder (Red)	0	0	88	60	15	226	389
Total	6,263	2,860	88	60	15	226	9,512

Comments: Helpin' Hanns
Pond Values Used: February 2022
Region: Astoria, Forest Grove, and Tillamook

Western red cedar and other cedars stumpage price = $1,219.00/MBF - $316.00/MBF = $903.00/MBF
Western hemlock and true firs stumpage price = $629.00/MBF - $316/MBF = $313/MBF

Pulp (Conifer and Hardwood) Price = $ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = $2.00/ MBF
FUEL COST ALLOWANCE = $5.00/ Gallon
HAULING COST ALLOWANCE
Hauling cost equivalent to $1,200 daily truck cost
($120.00/hr x 10 hr. = $1,200)

Other costs with profit and risk to be added:
Non-project Rd. 1: 1+05 sta. $185/sta. = $ 194.25
Non-project Rd. 2: 4+05 sta. $185/sta. = $ 749.25
Non-project Rd. 3: 2+92 sta. $185/sta. = $ 540.20
Non-project Rd. 4: 5+43 sta. $185/sta. = $1,004.55
Closing non-project: 4 x $50/road = $ 200.00
Roadside non-project landings: 3 x $200/landing = $ 600.00
Closing non-project landings: 3 x $50/landing = $ 150.00

TOTAL Other costs with profit and risk to be added = $3,438.25

Other Costs with No Profit and Risk Added:
Move-in Machine Cleaning: $1,000/machine x 3 machines x 2 seasons = $6,000
Move-in tailhold dozer: $1,000 x 1 machine x 3 units = $3,000
Slash piling and sorting (Cable Settings): $5/ac x 225ac. = $1,125
Heliport construction: $500/unit x 3 unit = $1,500
Placement of tops/slash in driveable skid roads near main roads = $500
Restoration of trail entrances/vehicular blockage 3 x $100 = $300
Blocking & water-barring dirt spurs: 12 hours X $150/hour = $1,800

Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/ tilt bed & small excavator: $900 x 2 = $1,800
Small excavator (Cat 312 or equivalent): 40 hours @ $150/ hour = $6,000
Dump truck: 40 hours @ $90/ hour = $3,600

TOTAL Other Costs no Profit and Risk added = $25,625

ROAD MAINTENANCE:
Spot Rocking: 15cy/MMBF/mile x 9.512 MMBF x $15/cy x 7.9 miles / 9,512 MBF = $1.78/MBF
Interim Grading: $1,150/mile x 7.9 miles x 2 times/ 9,512 MBF = $1.91/MBF
Final Maintenance Grading:$1,500/mile x 7.9 miles/ 9,512 MBF = $1.25/MBF
Final Maintenance Compaction: $950/mile x 6.6 miles/ 9,512 MBF = $0.66/MBF

Total Road Maintenance: = $5.60/MBF

District: Tillamook **Date: February 08, 2022**

Logging Conditions

Combination#: 1

	Douglas - Fir	29.82%
	Alder (Red)	33.80%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 10 **bd. ft / load:** 4000
cost / mbf: $194.51
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 2

	Douglas - Fir	22.29%
	Alder (Red)	33.92%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 4000
cost / mbf: $277.87
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 3

	Douglas - Fir	11.05%
	Alder (Red)	17.22%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 4 **bd. ft / load:** 4000
cost / mbf: $486.27
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 4

	Douglas - Fir	36.84%
	Alder (Red)	15.06%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 14 **bd. ft / load:** 4000
cost / mbf: $95.43
machines: Forwarder
Harvester

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Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$301,260.00	**Other Costs (P/R):**	$3,438.25
Slash Disposal:	$0.00	**Other Costs:**	$25,625.00

Miles of Road

Road Maintenance: $5.60

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	4.7
Alder (Red)	$0.00	2.0	4.0

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Date: February 08, 2022

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$208.81	$5.60	$0.92	$67.38	$0.36	$28.31	$0.00	$2.00	$2.69	$316.07
Alder (Red)									
$258.12	$5.60	$0.92	$118.75	$0.36	$38.38	$0.00	$2.00	$2.69	$426.82

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$821.52	$505.45	$0.00
Alder (Red)	$0.00	$628.95	$202.13	$0.00

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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Alder (Red)	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	9,123	$505.45	$4,611,220.35
Alder (Red)	389	$202.13	$78,628.57

Gross Timber Sale Value

Recovery: $4,689,848.92

Prepared By: Cole Lindsay **Phone:** 503-842-2545

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: Helpin Hanns

CONSTRUCTION

Point	E to F	2+40	stations =	$5,482.80
Point	K to L	7+40	stations =	$3,918.90
Point	M to N	1+00	stations =	$662.50
Point	O to P	15+00	stations =	$54,021.63
Point	Q to R	5+50	stations =	$3,840.75
Point	S to T	4+90	stations =	$8,037.20
Point	U to V	1+50	stations =	$4,498.95
Point	W to X	1+00	stations =	$3,673.95
Point	Y to Z	1+20	stations =	$1,703.30
Point	AA to BB	10+10	stations =	$12,221.80
Point	CC to DD	3+00	stations =	$1,316.70
Point	EE to FF	4+20	stations =	$1,741.70
Point	GG to HH	2+75	stations =	$1,290.16
			SUBTOTAL CONSTRUCTION	**$102,410.34**

IMPROVEMENT

Point	A to B	126+00	stations =	$24,932.65
Point	C to D	46+40	stations =	$21,275.25
Point	G to H	15+25	stations =	$17,337.29
Point	O to P	9+75	stations =	$11,932.75
Point	AA to BB	31+40	stations =	$31,287.75
			SUBTOTAL IMPROVEMENT	**$106,765.69**

RECONSTRUCTION

Point	G to H	15+10	stations =	$16,795.91
Point	I to J	5+00	stations =	$9,071.15
Point	O to P	19+50	stations =	$26,850.00
Point	S to T	14+50	stations =	$21,493.80
			SUBTOTAL RECONSTRUCTION	**$74,210.86**

SPECIAL PROJECTS

Pit Work Project #2		8,400.00
Pit Test Drilling Project #3		3,500.00
	SUBTOTAL SPECIAL PROJECTS	**$11,900.00**

MOVE IN **$5,973.11**

GRAND TOTAL **$301,260.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **A to B**

Construction -	0+00	stations	Improvement -	126+00	stations	Reconstruction -	0+00	stations
	0.00	miles		2.39	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Ditching Right	120+10	to	122+70	2.60	sta. @	$50.00	per sta. =	$130.00	
Ditching Left	120+10	to	126+00	6	sta. @	$50.00	per sta. =	$300.00	
							TOTAL EXCAVATION		**$430.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$600.00		210	LF of 24"	$6,510.00	
50	LF of 30"	$2,050.00					
		$2,650.00				$6,510.00	

Culvert Stakes & Markers

16	markers	$128.00					
					TOTAL CULVERTS		**$9,288.00**

ROCK

120+10 to	126+00	110	cy. of	Crushed	@	$9.39	per c.y.=	$1,032.90	
Culvert Backfill	8 Locations	160	cy. of	Crushed	@	$7.69	per c.y.=	$1,230.40	
Junction Rock	119+20, 126+00	40	cy. of	Crushed	@	$9.39	per c.y.=	$375.60	
Spot Rock	0+00 to 120+10	50	cy. of	Crushed	@	$9.39	per c.y.=	$469.50	
Energy Dissipator	26+60, 33+10	15	cy. of	Riprap	@	$12.23	per c.y.=	$183.45	
Rock Ditch Filter	5 Locations	25	cy. of	Drain Rock	@	$17.47	per c.y.=	$436.75	
Subgrade Spot Rock	121+55	20	cy. of	Pit-Run	@	$11.93	per c.y.=	$238.60	
Backfill	26+60	175	cy. of	Pit-Run	@	$11.93	per c.y.=	$2,087.75	
								TOTAL ROCK	**$6,177.25**

SPECIAL PROJECTS

Construct ditchouts at 122+70 and 126+00 -	4.00	@	$60.00	each	$240.00
Repair Subgrade Between 121+55 to 122+05 -	0.50	stations @	$175.00	per station	$87.50
Improve draft site @ 23+40 -	2.00	hours @	$250.00	per hour	$500.00
Grade and shape road -	126.00	stations @	$22.00	per station	$2,772.00
Roll subgrade w/ vibratory roller prior to rocking -	126.00	stations @	$17.50	per station	$2,205.00
Clean existing ditches/ditchouts/culvert catch basins -	126.00	stations @	$15.00	per station	$1,890.00
Remove large stumps -	1.00	lump sum @	$540.00		$540.00
Remove culverts from state lands	7.00	@	$654.90	total	$654.90
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00
Mulching -	0.100	acres @	$780.00	per acre	$78.00
				TOTAL SPECIAL PROJECTS	**$9,037.40**

GRAND TOTAL **$24,932.65**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **C to D**

Construction -	0+00	stations	Improvement -	46+40	stations	Reconstruction -	0+00	stations
	0.00	miles		0.88	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts
70 LF of 24" $2,170.00

Culvert Stakes & Markers
4 markers $32.00

TOTAL CULVERTS **$2,202.00**

ROCK

0+00 to	19+20	340	cy. of	Crushed	@	$9.63	per c.y.=	$3,274.20	
19+20 to	46+40	330	cy. of	Crushed	@	$9.63	per c.y.=	$3,177.90	
Culvert Backfill	6+10	60	cy. of	Crushed	@	$7.93	per c.y.=	$475.80	
Landing Rock	19+20, 29+05	160	cy. of	Jaw-Run	@	$16.58	per c.y.=	$2,652.80	
Fill Armor	6+10	10	cy. of	Riprap	@	$12.47	per c.y.=	$124.70	
Rock Ditch Filter	30+65	5	cy. of	Drain Rock	@	$35.00	per c.y.=	$175.00	
Rock Berm	5+80 to 6+75	5	cy. of	Crushed	@	$8.43	per c.y.=	$42.15	
Loaded Truck Turnaround	19+20	330	cy. of	Jaw-Run	@	$16.78	per c.y.=	$5,537.40	
								TOTAL ROCK	**$15,459.95**

SPECIAL PROJECTS

Construct landing at 19+20 -	1.00	@	$370.00	each	$370.00
Construct loaded truck turnaround at 19+20 -	2.00	hours @	$180.00	per hour	$360.00
Grade and shape road -	46.40	stations @	$22.00	per station	$1,020.80
Roll subgrade w/ vibratory roller prior to rocking -	46.40	stations @	$17.50	per station	$812.00
Clean existing ditches/ditchouts/culvert catch basins -	46.40	stations @	$15.00	per station	$696.00
Remove culverts from state lands	1.00	@	$257.40	total	$257.40
Grass seed and fertilize -	0.11	acres @	$280.00	per acre	$30.80
Mulching -	0.085	acres @	$780.00	per acre	$66.30
				TOTAL SPECIAL PROJECTS	**$3,613.30**

GRAND TOTAL **$21,275.25**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **E to F**

Construction -	2+40	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.05	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		2+40	40%		Outslope	$303	=		$727.20	
									TOTAL	**$727.20**

ROCK

0+00	to	2+40	150	cy. of	Jaw-Run	@	$17.12	per c.y.=	$2,568.00	
Landing Rock		2+40	100	cy. of	Jaw-Run	@	$16.92	per c.y.=	$1,692.00	
									TOTAL ROCK	**$4,260.00**

SPECIAL PROJECTS

Construct landing at Point F -	1.00	@	$370.00	each	$370.00
Grade and shape road -	2.40	stations @	$22.00	per station	$52.80
Roll subgrade w/ vibratory roller prior to rocking -	2.40	stations @	$17.50	per station	$42.00
Grass seed and fertilize -	0.11	acres @	$280.00	per acre	$30.80
				TOTAL SPECIAL PROJECTS	**$495.60**

GRAND TOTAL **$5,482.80**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **G to H**

Construction -	0+00	stations	Improvement -	15+25	stations	Reconstruction -	15+10	stations
	0.00	miles		0.29	miles		0.29	miles

IMPROVEMENT: CLEARING AND GRUBBING -										
Side cast					0.023	acres @	$860.00	per acre =	$19.78	
Widening					0.231	acres @	$860.00	per acre =	$198.66	
								TOTAL CLEARING AND GRUBBING		**$218.44**
IMPROVEMENT: EXCAVATION -										
Pullback	9+45	to	10+45		49	cy. @	$2.00	per c.y.=	$98.00	
Widening	0+00	to	19+20		513	cy. @	$2.00	per c.y.=	$1,026.00	
								TOTAL EXCAVATION		**$1,124.00**
IMPROVEMENT: ENDHAUL -										
Pullback	9+45	to	10+45		49	cy. @	$1.39	per c.y.=	$68.11	
Widening	0+00	to	9+45		228	cy. @	$1.39	per c.y.=	$316.92	
Widening	9+45	to	10+45		73	cy. @	$1.13	per c.y.=	$82.49	
Widening	10+45	to	19+20		212	cy. @	$1.13	per c.y.=	$239.56	
Spread & compact					562	cy. @	$0.50	per c.y.=	$281.00	
								TOTAL ENDHAUL		**$988.08**
RECONSTRUCTION: CLEARING AND GRUBBING -										
Scattering					0.690	acres @	$1,275.00	per acre =	$879.75	
								TOTAL CLEARING AND GRUBBING		**$879.75**
RECONSTRUCTION: EXCAVATION -										
Road Earthwork					15.10	sta. @	$70.00	per sta. =	$1,057.00	
								TOTAL EXCAVATION		**$1,057.00**

ROCK									
0+00 to	15+25	190	cy. of	Crushed	@	$9.71	per c.y.=	$1,844.90	
15+25 to	30+35	1,130	cy. of	Jaw-Run	@	$17.05	per c.y.=	$19,266.50	
Landing Rock	3 Locations	300	cy. of	Jaw-Run	@	$16.85	per c.y.=	$5,055.00	
Landing Approach Rock	22+45	30	cy. of	Jaw-Run	@	$17.05	per c.y.=	$511.50	
								TOTAL ROCK	**$26,677.90**

SPECIAL PROJECTS					
Construct waste area at 15+00 -	1.00	hours @	$180.00	per hour	$180.00
Construct landing at 15+25, 22+45, Point H-	3.00	@	$370.00	each	$1,110.00
Construct turn around at 15+25 -	1.00	@	$100.00	each	$100.00
Construct landing approach at 22+45 -	0.60	stations @	$130.00	per hour	$78.00
Grade and shape road -	30.35	stations @	$22.00	per station	$667.70
Roll subgrade w/ vibratory roller prior to rocking -	30.35	stations @	$17.50	per station	$531.13
Remove large stumps-	1.00	lump sum @	$180.00		$180.00
Grass seed and fertilize -	0.94	acres @	$280.00	per acre	$263.20
Mulching -	0.100	acres @	$780.00	per acre	$78.00
				TOTAL SPECIAL PROJECTS	**$3,188.03**

GRAND TOTAL **$34,133.20**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **I to J**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	5+00	stations
	0.00	miles		0.00	miles		0.09	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.230	acres @	$1,275.00	per acre =	$293.25	
				TOTAL CLEARING AND GRUBBING		**$293.25**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	5.00	sta. @	$70.00	per sta. =	$350.00	
				TOTAL EXCAVATION		**$350.00**

ROCK

0+00 to	5+00	280	cy. of	Jaw-Run	@	$16.95	per c.y.=	$4,746.00	
Landing Rock	1+50, 5+00	160	cy. of	Jaw-Run	@	$16.75	per c.y.=	$2,680.00	
								TOTAL ROCK	**$7,426.00**

SPECIAL PROJECTS

Construct landing at 1+50, 5+00-	2.00	@	$370.00	each	$740.00	
Grade and shape road -	5.00	stations @	$22.00	per station	$110.00	
Roll subgrade w/ vibratory roller prior to rocking -	5.00	stations @	$17.50	per station	$87.50	
Grass seed and fertilize -	0.23	acres @	$280.00	per acre	$64.40	
				TOTAL SPECIAL PROJECTS		**$1,001.90**

GRAND TOTAL **$9,071.15**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **K to L**

Construction -	7+40	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.14	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		3+00	20%	0.0	Outslope	$174	=	$522.00	
3+00		4+40	45%	0	Outslope	$336	=	$470.40	
4+40		7+40	40%	0	Outslope	$303	=	$909.00	
								TOTAL	**$1,901.40**

ROCK

0+00	to	1+00	50	cy. of	Jaw-Run	@	$18.00	per c.y.=	$900.00	
									TOTAL ROCK	**$900.00**

SPECIAL PROJECTS

Construct landing at Point L -	1.00	@	$370.00	each	$370.00	
Grade and shape road -	7.40	stations @	$22.00	per station	$162.80	
Roll subgrade w/ vibratory roller prior to rocking -	7.40	stations @	$17.50	per station	$129.50	
Remove large stumps -	1.00	lump sum @	$360.00		$360.00	
Grass seed and fertilize -	0.34	acres @	$280.00	per acre	$95.20	
					TOTAL SPECIAL PROJECTS	**$1,117.50**

GRAND TOTAL **$3,918.90**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **M to N**

Construction -	1+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.02	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		1+00	35%	0.0	Outslope	$239	=		$239.00	
								TOTAL		**$239.00**

SPECIAL PROJECTS

Construct landing at Point N -	1.00	@	$370.00	each	$370.00	
Grade and shape road -	1.00	stations @	$22.00	per station	$22.00	
Roll subgrade w/ vibratory roller prior to rocking -	1.00	stations @	$17.50	per station	$17.50	
Grass seed and fertilize -	0.05	acres @	$280.00	per acre	$14.00	
				TOTAL SPECIAL PROJECTS		**$423.50**

GRAND TOTAL **$662.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **O to P**

Construction -	15+00	stations	Improvement -	9+75	stations	Reconstruction -	19+50	stations
	0.28	miles		0.18	miles		0.37	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
29+25		31+30	35%	0.0	Outslope	$239	=	$489.95	
31+30		33+00	60%	0.25	Ditch	$2,897	=	$4,924.90	
33+00		33+85	70%	0.25	Ditch	$4,496	=	$3,821.60	
33+85		34+75	60%	0.25	Ditch	$2,897	=	$2,607.30	
34+75		38+05	75%	0.25	Ditch	$5,304	=	$17,503.20	
38+05		40+05	60%	0.25	Ditch	$2,897	=	$5,794.00	
40+05		44+25	40%	0.25	Outslope	$303	=	$1,272.60	
								TOTAL	**$36,413.55**

IMPROVEMENT: EXCAVATION -

Road Earthwork	9.75	sta. @	$50.00	per sta. =	$487.50			
					TOTAL EXCAVATION			**$487.50**

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.980	acres @	$1,275.00	per acre =	$1,249.50			
					TOTAL CLEARING AND GRUBBING			**$1,249.50**

RECONSTRUCTION: EXCAVATION -

Road Earthwork			19.50	sta. @	$100.00	per sta. =	$1,950.00			
Fill Construction	17+80	to	19+70	1.90	sta. @	$400.00	per sta. =	$760.00		
							TOTAL EXCAVATION			**$2,710.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts				
	90	LF of 18"	$1,800.00	
Culvert Stakes & Markers				
	3	markers	$24.00	
			TOTAL CULVERTS	**$1,824.00**

ROCK

0+00 to	44+25	2,320	cy. of	Jaw-Run	@	$17.84	per c.y.=	$41,388.80	
31+30 to	40+00	160	cy. of	Crushed	@	$9.55	per c.y.=	$1,528.00	
Landing Rock	44+25	160	cy. of	Jaw-Run	@	$16.70	per c.y.=	$2,672.00	
Corner Widening	0+00	40	cy. of	Riprap	@	$5.51	per c.y.=	$220.40	
Corner Widening	0+00	10	cy. of	Pit-Run	@	$5.51	per c.y.=	$55.10	
								TOTAL ROCK	**$45,864.30**

SPECIAL PROJECTS

Construct ditchout right at 40+05 -	1.00	@	$60.00	each	$60.00	
Construct landing at 26+70, Point P-	2.00	@	$370.00	each	$740.00	
Grade and shape road -	44.25	stations @	$22.00	per station	$973.50	
Roll subgrade w/ vibratory roller prior to rocking -	44.25	stations @	$17.50	per station	$774.38	
Clean existing ditches/ditchouts/culvert catch basins -	9.75	stations @	$15.00	per station	$146.25	
Remove large stumps -	1.00	lump sum @	$1,080.00		$1,080.00	
Grass seed and fertilize -	1.58	acres @	$280.00	per acre	$442.40	
Mulching -	0.050	acres @	$780.00	per acre	$39.00	
					TOTAL SPECIAL PROJECTS	**$4,255.53**

GRAND TOTAL **$92,804.38**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **Q to R**

Construction -	5+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope or Activity	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		3+40	35%		Outslope	$239	=	$812.60	
3+40		5+50	35%		Outslope	$239	=	$501.90	
2+10		4+10	Fill Const.		Outslope	$400	=	$800.00	
								TOTAL	**$2,114.50**

ROCK

0+00	to	1+00	50	cy. of	Jaw-Run	@	$17.78	per c.y.=	$889.00	
									TOTAL ROCK	**$889.00**

SPECIAL PROJECTS

Construct landing at Point R-	1.00	@	$370.00	each	$370.00
Grade and shape road -	5.50	stations @	$22.00	per station	$121.00
Roll subgrade w/ vibratory roller prior to rocking -	5.50	stations @	$17.50	per station	$96.25
Remove large stumps -	1.00	lump sum @	$180.00		$180.00
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00
				TOTAL SPECIAL PROJECTS	**$837.25**

GRAND TOTAL **$3,840.75**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **S to T**

Construction -	4+90	stations	Improvement -	0+00	stations	Reconstruction -	14+50	stations
	0.09	miles		0.00	miles		0.27	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
14+50		15+40	20%	0	Outslope	$174	=	$156.60	
15+40		16+85	35%	0	Outslope	$239	=	$346.55	
16+85		17+35	55%	0	Outslope	$862	=	$431.00	
17+35		19+40	25%	0	Outslope	$206	=	$422.30	
								TOTAL	**$1,356.45**

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.670	acres @	$1,275.00	per acre =	$854.25	
				TOTAL CLEARING AND GRUBBING		**$854.25**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	14.50	sta. @	$60.00	per sta. =	$870.00	
				TOTAL EXCAVATION		**$870.00**

ROCK

0+00 to	19+40	1,420	cy. of	Jaw-Run	@	$16.24	per c.y.=	$23,060.80	
Landing Rock	19+40	100	cy. of	Jaw-Run	@	$16.04	per c.y.=	$1,604.00	
								TOTAL ROCK	**$24,664.80**

SPECIAL PROJECTS

Construct waste area -	1.00	hours @	$160.00	per hour	$160.00	
Construct ditchout at 18+50 -	1.00	@	$60.00	each	$60.00	
Construct landing at Point T-	1.00	@	$370.00	each	$370.00	
Grade and shape road -	19.40	stations @	$22.00	per station	$426.80	
Roll subgrade w/ vibratory roller prior to rocking -	19.40	stations @	$17.50	per station	$339.50	
Remove large stumps -	1.00	lump sum @	$180.00		$180.00	
Grass seed and fertilize -	0.89	acres @	$280.00	per acre	$249.20	
					TOTAL SPECIAL PROJECTS	**$1,785.50**

GRAND TOTAL **$29,531.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **U to V**

Construction -	1+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.03	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		1+50	40%	0.0	Outslope	$303	=	$454.50	
								TOTAL	**$454.50**

ROCK

0+00	to	1+50	110	cy. of	Jaw-Run	@	$16.36	per c.y.=	$1,799.60	
Landing Rock		1+50	100	cy. of	Jaw-Run	@	$16.16	per c.y.=	$1,616.00	
									TOTAL ROCK	**$3,415.60**

SPECIAL PROJECTS

Construct landing at Point V-	1.00	@	$370.00	each	$370.00
Grade and shape road -	1.50	stations @	$22.00	per station	$33.00
Roll subgrade w/ vibratory roller prior to rocking -	1.50	stations @	$17.50	per station	$26.25
Remove large stumps -	1.00	lump sum @	$180.00		$180.00
Grass seed and fertilize -	0.07	acres @	$280.00	per acre	$19.60
				TOTAL SPECIAL PROJECTS	**$628.85**

GRAND TOTAL **$4,498.95**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **W to X**

Construction -	1+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.02	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		0+95	40%	0.0	Outslope	$303	=	$287.85	
								TOTAL	**$287.85**

ROCK

0+00	to	1+00	80	cy. of	Jaw-Run	@	$16.57	per c.y.=	$1,325.60		
Landing Rock		0+95	100	cy. of	Jaw-Run	@	$16.37	per c.y.=	$1,637.00		
									TOTAL ROCK	**$2,962.60**

SPECIAL PROJECTS

Construct landing at Point X-	1.00	@	$370.00	each	$370.00
Grade and shape road -	1.00	stations @	$22.00	per station	$22.00
Roll subgrade w/ vibratory roller prior to rocking -	1.00	stations @	$17.50	per station	$17.50
Grass seed and fertilize -	0.05	acres @	$280.00	per acre	$14.00
				TOTAL SPECIAL PROJECTS	**$423.50**

GRAND TOTAL **$3,673.95**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **Y to Z**

Construction -			Improvement -			Reconstruction -		
	1+20	stations		0+00	stations		0+00	stations
	0.02	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		1+20	40%	0.0	Outslope	$303	=		$363.60	
								TOTAL		**$363.60**

ROCK

0+00	to	1+00	50	cy. of	Jaw-Run		@	$18.11	per c.y.=	$905.50	
									TOTAL ROCK		**$905.50**

SPECIAL PROJECTS

Construct landing at Point Z-	1.00	@	$370.00	each	$370.00	
Grade and shape road -	1.20	stations @	$22.00	per station	$26.40	
Roll subgrade w/ vibratory roller prior to rocking -	1.20	stations @	$17.50	per station	$21.00	
Grass seed and fertilize -	0.06	acres @	$280.00	per acre	$16.80	
				TOTAL SPECIAL PROJECTS		**$434.20**

GRAND TOTAL **$1,703.30**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **AA to BB**

Construction -	10+10	stations	Improvement -	31+40	stations	Reconstruction -	0+00	stations
	0.19	miles		0.59	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
31+40		33+40	40%	0.0	Outslope	$303	=	$606.00	
33+40		36+50	45%	0	Outslope	$336	=	$1,041.60	
36+50		41+50	40%	0	Outslope	$303	=	$1,515.00	
								TOTAL	**$3,162.60**

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering			0.580	acres @	$1,275.00	per acre =	$739.50	
						TOTAL CLEARING AND GRUBBING		**$739.50**

IMPROVEMENT: EXCAVATION -

Road Earthwork/Widening				31.40	sta. @	$60.00	per sta. =	$1,884.00	
Ditch left	0+00	to	1+55	2	sta. @	$50.00	per sta.=	$100.00	
Ditch Right	3+50	to	11+30	8	sta. @	$50.00	per sta.=	$400.00	
							TOTAL EXCAVATION		**$2,384.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts			
60	LF of 18"	$1,200.00	
Culvert Stakes & Markers			
2	markers	$16.00	
		TOTAL CULVERTS	**$1,216.00**

ROCK

0+00	to	3+50	60	cy. of	Crushed	@	$6.15	per c.y.=	$369.00
0+00	to	31+40	1,660	cy. of	Jaw-Run	@	$19.80	per c.y.=	$32,868.00
Culvert Backfill		3+50, 7+05	40	cy. of	Crushed	@	$4.45	per c.y.=	$178.00
Junction Rock		0+00	20	cy. of	Crushed	@	$6.15	per c.y.=	$123.00
								TOTAL ROCK	**$33,538.00**

SPECIAL PROJECTS

Construct landing at 37+50, 41+50	2.00	@	$250.00	each	$500.00
Grade and shape road -	41.50	stations @	$22.00	per station	$913.00
Roll subgrade w/ vibratory roller prior to rocking -	41.50	stations @	$17.50	per station	$726.25
Grass seed and fertilize -	1.04	acres @	$280.00	per acre	$291.20
Mulching -	0.050	acres @	$780.00	per acre	$39.00
				TOTAL SPECIAL PROJECTS	**$2,469.45**

GRAND TOTAL **$43,509.55**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **CC to DD**

Construction -	3+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.06	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		3+00	40%	0.0	Outslope	$303	=	$909.00	
								TOTAL	**$909.00**

SPECIAL PROJECTS

Construct landing at Point DD-	1.00	@	$250.00	each	$250.00	
Grade and shape road -	3.00	stations @	$22.00	per station	$66.00	
Roll subgrade w/ vibratory roller prior to rocking -	3.00	stations @	$17.50	per station	$52.50	
Grass seed and fertilize -	0.14	acres @	$280.00	per acre	$39.20	
				TOTAL SPECIAL PROJECTS		**$407.70**

GRAND TOTAL **$1,316.70**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **EE to FF**

Construction -	4+20	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.08	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		4+20	40%	0.0	Outslope	$303	=	$1,272.60	
								TOTAL	**$1,272.60**

SPECIAL PROJECTS

Construct landing at Point FF-	1.00	@	$250.00	each	$250.00	
Grade and shape road -	4.20	stations @	$22.00	per station	$92.40	
Roll subgrade w/ vibratory roller prior to rocking -	4.20	stations @	$17.50	per station	$73.50	
Grass seed and fertilize -	0.19	acres @	$280.00	per acre	$53.20	
					TOTAL SPECIAL PROJECTS	**$469.10**

GRAND TOTAL **$1,741.70**

SUMMARY OF CONSTRUCTION COST

Sale: **Helpin Hanns** Road: **GG to HH**

Construction -	2+75	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.05	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		2+75	40%	0.0	Outslope	$303	=	$833.25	
								TOTAL	**$833.25**

SPECIAL PROJECTS

Construct landing -	1.00	@	$250.00	each	$250.00	
Grade and shape road -	2.75	stations @	$22.00	per station	$60.50	
Roll subgrade w/ vibratory roller prior to rocking -	2.75	stations @	$17.50	per station	$48.13	
Mulching -	0.126	acres @	$780.00	per acre	$98.28	
					TOTAL SPECIAL PROJECTS	**$456.91**

GRAND TOTAL **$1,290.16**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Crushed	Location:	Sec. , TN, RW, W.M.		
Sale:	**Helpin Hanns**		Road:		1595 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		1595 c.y.
Drill Pct.:	0%		In Place Total:		1139 c.y.

Load Dump Truck:	$1.00	/cu.yd.	x	1595 cu.yds.	=	$1,595.00
					Subtotal	$1,595.00
Move in Loader	1	@		$752.00	=	$752.00
					Subtotal	$752.00
				TOTAL PRODUCTION COSTS		$2,347.00

Base Cost= $1.47 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B 12010 12600 (Crushed)	4.72	3.20	1.47	9.39	110		$1,032.90
A to B Culvert Backfill (Crushed)	4.72	1.50	1.47	7.69	160		$1,230.40
A to B Junction Rock (Crushed)	4.72	3.20	1.47	9.39	40		$375.60
A to B Spot Rock (Crushed)	4.72	3.20	1.47	9.39	50		$469.50
A to B Rock Ditch Filter (Drain Rock)	15.00	1.00	1.47	17.47	25		$436.75
C to D 0 1920 (Crushed)	4.96	3.20	1.47	9.63	340		$3,274.20
C to D 1920 4640 (Crushed)	4.96	3.20	1.47	9.63	330		$3,177.90
C to D Culvert Backfill (Crushed)	4.96	1.50	1.47	7.93	60		$475.80
C to D Rock Ditch Filter (Drain Rock)	15.00	1.00	1.47	17.47	5		$87.35
C to D Rock Berm (Crushed)	4.96	2.00	1.47	8.43	5		$42.15
G to H 0 1525 (Crushed)	5.04	3.20	1.47	9.71	190		$1,844.90
O to P 3130 4000 (Crushed)	4.88	3.20	1.47	9.55	160		$1,528.00
AA to BB 0 350 (Crushed)	1.48	3.20	1.47	6.15	60		$369.00
AA to BB Culvert Backfill (Crushed)	1.48	1.50	1.47	4.45	40		$178.00
AA to BB Junction Rock (Crushed)	1.48	3.20	1.47	6.15	20		$123.00
				Total C.Y.	1595	Sub Total	$14,645.45
					TOTAL ROCKING COSTS		$14,645.45

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jaw_run	Location:	Sec. 21, T1N, R7W, W.M.	
Sale:	**Helpin Hanns**		Road:	9170 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	9170 c.y.
Drill Pct.:	100%		In Place Total:	6550 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread							$5,840.00
Drill & Shoot:	$3.25	/cu.yd.	x	6550	cu.yds.	=	$21,287.50
Load Crusher:	$1.00	/cu.yd.	x	8740	cu.yds.	=	$8,740.00
Crush Rock:	$3.75	/cu.yd.	x	8740	cu.yds.	=	$32,775.00
Load Dump Truck:	$1.00	/cu.yd.	x	9170	cu.yds.	=	$9,170.00
Oversize Reduction:	$6.00	/cu.yd.	x	1210	cu.yds.	=	$7,260.00
						Subtotal	$85,072.50

Move In/Set-up Jaw	1		$2,016		$2,016.00
Move In and set up Drill and Compressor	1	@	$697.50	=	$697.50
Move in Roller and Compactor	1	@	$612.50	=	$612.50
Move in Grader	1	@	$666.67	=	$666.67
Move in D-8	1	@	$979.00	=	$979.00
Move in Loader	1	@	$752.00	=	$752.00
Move in Excavator	1	@	$867.00	=	$867.00
Move in Trucks	4	@	$226.67	=	$906.68
Move in Water Truck	1	@	$226.67	=	$226.67
				Subtotal	$7,724.02

TOTAL PRODUCTION COSTS	$92,796.52

Base Cost= $10.12 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds	ROCK COST
A to B Fill Armor (Riprap)	4.72	2.00	5.51	12.23	10	$122.30
A to B Energy Dissipator (Riprap)	4.72	2.00	5.51	12.23	15	$183.45
A to B Subgrade Spot Rock (Pit-Run)	4.72	1.70	5.51	11.93	20	$238.60
A to B Backfill (Pit-Run)	4.72	1.70	5.51	11.93	175	$2,087.75
C to D Landing Rock (Jaw-Run)	4.96	1.50	10.12	16.58	160	$2,652.80
C to D Fill Armor (Riprap)	4.96	2.00	5.51	12.47	10	$124.70
C to D Loaded Truck Turnaround (Jaw-Run)	4.96	1.70	10.12	16.78	330	$5,537.40
E to F 0 240 (Jaw-Run)	5.30	1.70	10.12	17.12	150	$2,568.00
E to F Landing Rock (Jaw-Run)	5.30	1.50	10.12	16.92	100	$1,692.00
G to H 1525 3035 (Jaw-Run)	5.23	1.70	10.12	17.05	1130	$19,266.50
G to H Landing Rock (Jaw-Run)	5.23	1.50	10.12	16.85	300	$5,055.00
G to H Landing Approach Rock (Jaw-Run)	5.23	1.70	10.12	17.05	30	$511.50
I to J 0 500 (Jaw-Run)	5.13	1.70	10.12	16.95	280	$4,746.00
I to J Landing Rock (Jaw-Run)	5.13	1.50	10.12	16.75	160	$2,680.00
K to L 0 100 (Jaw-Run)	4.68	3.20	10.12	18.00	50	$900.00
O to P 0 4425 (Jaw-Run)	4.52	3.20	10.12	17.84	2320	$41,388.80
O to P Landing Rock (Jaw-Run)	4.88	1.70	10.12	16.70	160	$2,672.00
O to P Corner Widening (Riprap)	4.52	2.00	10.12	5.51	40	$220.40
O to P Corner Widening (Pit-Run)	4.52	2.45	10.12	5.51	10	$55.10
Q to R 0 100 (Jaw-Run)	4.46	3.20	10.12	17.78	50	$889.00
S to T 0 1940 (Jaw-Run)	4.42	1.70	10.12	16.24	1420	$23,060.80
S to T Landing Rock (Jaw-Run)	4.42	1.50	10.12	16.04	100	$1,604.00
U to V 0 150 (Jaw-Run)	4.54	1.70	10.12	16.36	110	$1,799.60
U to V Landing Rock (Jaw-Run)	4.54	1.50	10.12	16.16	100	$1,616.00
W to X 0 100 (Jaw-Run)	4.75	1.70	10.12	16.57	80	$1,325.60
W to X Landing Rock (Jaw-Run)	4.75	1.50	10.12	16.37	100	$1,637.00
Y to Z 0 100 (Jaw-Run)	4.79	3.20	10.12	18.11	50	$905.50
AA to BB 0 3140 (Jaw-Run)	7.98	1.70	10.12	19.80	1660	$32,868.00
CC to DD 0 to 100 (Jaw-Run)	7.83	1.70	10.12	19.65	50	$982.50

Total C.Y. 9170 Sub Total $159,390.30

TOTAL ROCKING COSTS	$159,390.30

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Helpin Hanns**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
56.0	Pavement	30
5.6	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Graders	$666.67		$3.65	0.00	2.70	2.7	$9.86	$676.53
1	Excavators (Med.)	$726.25		$35.50	0.00	2.70	2.7	$95.85	$822.10
1	Excavators (Large)	$867.00	1	$44.80	0.00	2.70	2.7	$120.96	$987.96
1	Tractors (D6)	$923.58	2	$7.10	0.00	2.70	2.7	$19.17	$942.75
1	Tractor (D8)	$979.00	2	$15.10	0.00	2.70	2.7	$40.77	$1,019.77
2	Dump Truck (10 cy +)	$459.08		$2.85	0.00	0.00	0	$0.00	$459.08
1	Dump Truck (Off Hiway)	$838.25	1	$4.75	0.00	0.00	0	$0.00	$838.25
1	Water Truck (1500 Gal)	$226.67		$2.85	0.00	0.00	0	$0.00	$226.67
					TOTAL MOVE-IN COSTS:				$5,973.11

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Helpin' Hanns

Type of Sale
Regeneration harvest, Recovery

Legal Description
Sections 13,22,23,24 of T1N R7W; Section 18 of T1N R6W W.M.

Sale Acreage
Sale acreage was determined by GPS and orthophotographs along with GIS.

	ACRES	
	Gross	Net
Unit 1 (Modified Clearcut)	106	85
Unit 2 (Modified Clearcut)	132	110
Unit 3 (Modified Clearcut)	104	84
Total Acres	342	279

Gross Acres
Area within the Timber Sale Boundary signs

Net acres
Used for calculating the advertised volume.
Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Cruising Procedures

A. Cruise Method
Units were cruised using a 225' x 410' grid. All timber sale units were cruised with a variable plot sampling method. All conifers 8" DBH and greater and all hardwoods 10" DBH and greater were recorded on all plots. A 1:1 volume plot to basal area plot ratio was used, with each volume plot recording species, diameter, height, form factor and grade and each basal area plot recording species and diameter. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods, respectively.

B. Plot size

Point of observation was 4.0'. Form factor was measured at 16.0'.

Unit	BAF
1	33.61
2,3	27.78

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

Computation Procedure

Cruise data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type. Cruise volumes were cruised by the marketing unit in 2021. Plots landing in riparian management areas or areas excluded from the timber sale harvest areas were removed from computation procedures.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Unit	Number of Plots	SE (%)	CV (%)
1	29	7.9	41.8
2	39	6.2	38.9
3	28	7.3	37.8
Total	96	4.3	42.1

Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 2% reduction to hardwood volumes for hidden defect and breakage.

Timber Description

Unit 1 is an approximately 66 year-old stand of primarily Douglas-fir with pockets of red alder. The unit was encompassed in the Tillamook Burn of 1933, the Saddle Mtn. Fire of 1939 and the Wilson River/Salmonberry Fire of 1945. The north ½ of the unit was commercially thinned in 2003 with the Phelps timber sale and the eastern tip in 1996 with the Ben Thin timber sale.

Unit 2 is an approximately 67 year-old stand of primarily Douglas-fir with pockets of red alder and a minor amount of western hemlock (reserve). The unit was encompassed in the Tillamook Burn of 1933, the Saddle Mtn. Fire of 1939 and the Wilson River/Salmonberry Fire of 1945. Most of the unit was commercially thinned in 2003 with

the Phelps timber sale but the eastern tip was thinned in 1998 with the East Jordan Thin timber sale and the southwestern tip in 1995 with the Air Jordan timber sale.

Unit 3 is an approximately 65 year-old stand of primarily Douglas-fir with pockets of red alder . The unit was encompassed in the Tillamook Burn of 1933, the Saddle Mtn. Fire of 1939 and the Wilson River/Salmonberry Fire of 1945. The west ½ of the unit was commercially thinned in 1994 with the Moore Thin timber sale and the east ½ in 1993 with the Phipps thin timber sale.

The stand is comprised of multiple merchantable species, please see the table below:

Unit #	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	19.3	82	5
1	Red alder	13.7	41	6
2	Douglas-fir	21.8	84	5
2	Red alder	14.1	33	6
3	Douglas-fir	21.2	93	5
3	Red alder	15.9	40	6

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

Cruiser /Dates

The timber sale was cruised by the Tillamook District Marketing unit in December of 2021 and January of 2022.

Revenue Distribution

FDF 100%

Tax Code: 902 – 100%

Deed Numbers: 145,157, 159, 186

Attachments

Volume Summary

Stand Tables (3)

Log Stock Tables (3)

Species, Sort, Grade Tables (3)

Logging Plan (3)

Stand and Log Stock Tables Species Key

DF – Douglas-fir (take)
WL – western hemlock (leave)
RA – red alder (take)
OC – other conifer-snag (leave)

Prepared by: Cole Lindsay Date: 2/3/2022

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FINLHANN

Date 2/3/2022

Time 2:39:39PM

T01N R07W S23 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	07W	23	408 U1	0100	85.00	29	212	S	W

T01N R07W S23 T0100

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		CO	2	63	.7	20,737	20,586	1,750			58	42				100	40	15	343	1.93	60.1
DF		CO	3	31	.1	10,048	10,041	853		93	7			1	1	98	40	8	109	0.73	92.2
DF		CO	4	6		1,785	1,785	152	67	33			15	32	13	40	29	6	35	0.39	51.6
DF	**Totals**			93	.5	32,570	32,411	2,755	4	31	39	27	1	2	1	96	37	10	159	1.05	203.9
RA		H	3	23		588	588	50		100						100	40	10	150	1.30	3.9
RA		H	4	77	1.4	1,943	1,917	163		100			6	20		75	33	7	56	0.58	34.3
RA	**Totals**			7	1.0	2,531	2,504	213		100			4	15		81	34	7	65	0.67	38.3
Type Totals					.5	35,101	34,916	2,968	3	36	36	25	1	3	1	95	36	9	144	0.99	242.2

TC TSTNDSUM

Stand Table Summary

Project **FINLHANN**

T01N R07W S23 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	23	408 U1	0100	85.00	29	212

T01N R07W S23 T0100

Date: 02/03/202

Time: 2:39:40PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		10	1	91	73	3.735	2.04	3.73	12.8	60.0	1.36	48	224	115	41	19
DF		11	3	90	72	9.260	6.11	9.26	14.8	60.0	3.92	137	556	333	117	47
DF		12	2	89	60	5.187	4.07	5.19	16.6	50.0	2.44	86	259	208	73	22
DF		13	2	81	84	4.420	4.07	6.63	17.4	56.7	3.28	115	376	279	98	32
DF		14	3	90	86	5.716	6.11	9.53	19.3	76.0	5.24	184	724	446	156	62
DF		15	2	84	94	3.320	4.07	4.98	25.6	103.3	3.63	127	515	309	108	44
DF		16	5	86	114	7.294	10.18	16.05	23.9	97.3	10.91	383	1,561	928	325	133
DF		17	5	88	105	6.461	10.18	14.22	27.1	109.1	10.97	385	1,551	933	327	132
DF		18	8	85	114	9.222	16.30	19.60	32.6	124.1	18.21	639	2,432	1,548	543	207
DF		19	3	85	117	3.104	6.11	8.28	29.2	112.5	6.90	242	931	586	206	79
DF		20	8	86	112	7.469	16.30	16.81	37.8	148.3	18.09	635	2,493	1,538	539	212
DF		21	6	84	115	5.081	12.22	11.01	39.7	150.8	12.45	437	1,660	1,059	371	141
DF		22	5	81	100	3.858	10.18	7.72	43.5	165.0	9.56	336	1,273	813	285	108
DF		23	9	86	125	6.354	18.33	17.65	45.6	199.2	22.92	804	3,516	1,948	684	299
DF		24	6	87	139	3.890	12.22	11.67	50.7	222.8	16.88	592	2,600	1,434	503	221
DF		25	6	85	123	3.585	12.22	9.56	55.2	233.8	15.03	527	2,235	1,277	448	190
DF		26	7	86	129	3.867	14.26	11.05	56.9	255.5	17.92	629	2,823	1,523	534	240
DF		27	3	84	118	1.537	6.11	4.10	62.5	257.5	7.30	256	1,055	621	218	90
DF		28	1	86	121	.476	2.04	1.43	63.2	276.7	2.57	90	395	219	77	34
DF		29	5	83	123	2.220	10.18	5.77	75.6	320.0	12.44	436	1,847	1,057	371	157
DF		30	6	82	123	2.490	12.22	6.64	78.8	337.5	14.92	523	2,241	1,268	445	190
DF		31	2	81	119	.777	4.07	1.94	86.5	358.0	4.79	168	696	407	143	59
DF		32	1	82	142	.365	2.04	1.09	88.5	410.0	2.76	97	449	235	82	38
DF		Totals	99	86	104	99.690	201.66	203.89	38.6	159.0	224.50	7,877	32,411	19,082	6,696	2,755
RA		10	1	86	82	6.761	3.69	6.76	14.8	60.0	2.76	100	406	234	85	34
RA		12	2	73	51	9.390	7.38	9.39	14.3	35.0	3.69	134	329	313	114	28
RA		13	1	77	72	4.001	3.69									
RA		14	2	83	63	6.899	7.38	6.90	26.7	70.0	5.07	184	483	431	157	41
RA		15	2	78	83	6.010	7.38	6.01	30.2	90.0	4.98	181	541	424	154	46
RA		16	2	77	54	5.282	7.38	7.92	20.4	70.0	4.45	162	555	379	138	47
RA		23	1	75	60	1.278	3.69	1.28	79.1	150.0	2.78	101	192	236	86	16
RA		Totals	11	79	66	39.621	40.56	38.26	22.6	65.5	23.73	863	2,504	2,017	734	213
OC		24	1	89	101	.553	1.74									
OC		29	1	89	116	.379	1.74									
OC		Totals	2	89	107	.932	3.48									
Totals			112	84	93	140.243	245.70	242.16	36.1	144.2	248.23	8740	34,916	21,100	7,429	2,968

TC TLOGSTVB

Log Stock Table - MBF

Project: **FINLHANN**

T01N R07W S23 T0100

T01N R07W S23 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	23	408 U1	0100	85.00	29	212

Page 1
Date 2/3/2022
Time 2:39:39PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	40	1,763	.7	1,750	63.5						445	360	796	149			
DF		CO	3	25	2		2	.1				2								
DF		CO	3	26	2		2	.1				2								
DF		CO	3	30	2		2	.1				2								
DF		CO	3	31	2		2	.1				2								
DF		CO	3	32	6		6	.2			6									
DF		CO	3	34	3		3	.1			3									
DF		CO	3	36	8		8	.3			8									
DF		CO	3	37	3		3	.1			3									
DF		CO	3	40	826	.1	825	30.0			182	190	397	44		12				
DF		CO	4	14	3		3	.1		1	1	1								
DF		CO	4	15	2		2	.1		2										
DF		CO	4	16	2		2	.1		1		1								
DF		CO	4	17	6		6	.2		5	1									
DF		CO	4	18	1		1	.0			1									
DF		CO	4	19	2		2	.1			2									
DF		CO	4	20	5		5	.2		1	4									
DF		CO	4	21	6		6	.2		1	4									
DF		CO	4	23	3		3	.1		2		1								
DF		CO	4	24	10		10	.4		7	2	1								
DF		CO	4	25	4		4	.1		4										
DF		CO	4	26	4		4	.1			4									
DF		CO	4	27	2		2	.1		2										
DF		CO	4	28	5		5	.2		3	2									
DF		CO	4	29	10		10	.4		10										
DF		CO	4	30	6		6	.2			6									
DF		CO	4	32	4		4	.1		4										
DF		CO	4	34	16		16	.6		14		2								
DF		CO	4	36	9		9	.3		9										
DF		CO	4	38	6		6	.2		6										
DF		CO	4	40	45		45	1.7		29	16									
DF		Totals			2,768		2,755	92.8		101	246	204	397	489	360	808	149			
RA		H	3	40	50		50	23.5					50							
RA		H	4	16	9		9	4.2				9								
RA		H	4	21	7	33.3	4	2.1			4									
RA		H	4	24	12		12	5.6			12									
RA		H	4	30	16		16	7.5			16									
RA		H	4	40	122		122	57.1			76	46								
RA		Totals			215	1.0	213	7.2			108	55	50							
Total All Species					2,984		2,968	100.0		101	354	259	447	489	360	808	149			

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FINLHANN

Date 2/8/2022

Time 7:27:05AM

T01N R07W S24 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	07W	24	398 U2	0100	110.00	39	283	S	W

T01N R07W S24 T0100

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		CO	2	69	.7	19,861	19,718	2,169			49	51				100	40	16	418	2.31	47.1
DF		CO	3	25	.8	7,090	7,030	773		88	11	2		0	0	100	40	9	128	0.89	54.8
DF		CO	4	6		1,552	1,552	171	56	44			26	37	16	21	24	6	31	0.44	49.9
DF	**Totals**			95	.7	28,503	28,300	3,113	3	24	37	36	1	2	1	96	35	10	186	1.30	151.8
RA		H	2	9		151	151	17			100			57		43	34	14	222	2.20	.7
RA		H	4	91		1,402	1,402	154		100			13	8	17	63	30	7	52	0.67	27.0
RA	**Totals**			5		1,553	1,553	171		90	10		11	12	15	61	30	7	56	0.72	27.7
WL		CO	2	100	10.7	81	73	8			100				100		32	15	250	3.22	.3
WL	**Totals**			0	10.7	81	73	8			100				100		32	15	250	3.22	.3
Type Totals					.7	30,138	29,926	3,292	3	28	35	34	2	3	2	94	34	10	166	1.22	179.8

TC TSTNDSUM

Stand Table Summary

Project **FINLHANN**

T01N R07W S24 T0100

T01N R07W S24 T0100

Page: 1

Date: 02/08/202

Time: 7:27:06AM

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	24	398 U2	0100	110.00	39	283

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9	1	69	17	2.729	1.21	2.73	4.3	20.0	.34	12	55	37	13	6
DF		12	1	79	87	1.535	1.21	3.07	11.9	40.0	1.04	37	123	115	40	14
DF		13	3	79	42	3.925	3.62	3.92	15.3	33.3	1.71	60	131	188	66	14
DF		14	2	82	80	2.256	2.41	4.51	15.7	47.5	2.02	71	214	222	78	24
DF		15	3	82	90	2.948	3.62	5.90	19.5	68.3	3.27	115	403	360	126	44
DF		16	5	84	96	4.318	6.03	7.77	25.6	94.4	5.68	199	734	624	219	81
DF		17	4	83	105	3.060	4.82	6.12	29.5	108.8	5.15	181	666	566	199	73
DF		18	5	82	104	3.412	6.03	7.51	29.4	99.1	6.29	221	744	692	243	82
DF		19	6	83	118	3.675	7.24	9.80	30.4	115.6	8.50	298	1,133	935	328	125
DF		20	5	84	117	2.764	6.03	7.19	34.2	131.5	6.99	245	945	769	270	104
DF		21	6	85	128	3.008	7.24	9.02	35.9	150.6	9.25	324	1,359	1,018	357	149
DF		22	11	83	112	5.025	13.26	12.79	41.3	159.6	15.06	529	2,042	1,657	581	225
DF		23	6	87	124	2.508	7.24	7.52	42.9	191.1	9.20	323	1,438	1,012	355	158
DF		24	18	84	119	6.909	21.71	18.04	50.7	207.0	26.07	915	3,735	2,868	1,006	411
DF		25	11	83	124	3.891	13.26	10.61	52.1	224.3	15.77	553	2,381	1,734	609	262
DF		26	11	84	118	3.598	13.26	9.16	60.9	251.1	15.89	558	2,299	1,748	613	253
DF		27	6	84	109	1.820	7.24	4.55	62.7	256.0	8.13	285	1,165	894	314	128
DF		28	3	85	124	.846	3.62	2.26	70.0	298.8	4.50	158	674	495	174	74
DF		29	7	83	127	1.840	8.44	5.26	70.7	293.5	10.59	372	1,543	1,165	409	170
DF		30	2	86	121	.491	2.41	1.23	84.5	392.0	2.96	104	481	325	114	53
DF		31	5	84	137	1.150	6.03	3.45	82.9	386.7	8.15	286	1,334	897	315	147
DF		32	3	84	117	.648	3.62	1.73	87.6	385.0	4.31	151	665	475	166	73
DF		33	1	85	123	.203	1.21	.61	88.3	416.7	1.53	54	254	169	59	28
DF		34	6	85	120	1.148	7.24	3.06	101.8	470.0	8.88	311	1,438	976	343	158
DF		35	2	82	127	.361	2.41	1.08	98.0	463.3	3.02	106	502	333	117	55
DF		36	1	87	134	.171	1.21	.51	112.8	583.3	1.65	58	299	181	64	33
DF		37	3	88	119	.484	3.62	1.29	124.9	632.5	4.60	161	817	506	177	90
DF		38	1	80	127	.153	1.21	.46	113.3	493.3	1.48	52	227	163	57	25
DF		40	1	86	111	.138	1.21	.28	174.8	865.0	1.38	48	239	151	53	26
DF		42	1	88	115	.125	1.21	.38	139.3	700.0	1.49	52	263	164	58	29
DF		Totals	140	83	104	65.137	168.82	151.80	45.1	186.4	194.92	6,839	28,300	21,441	7,523	3,113
RA		11	3	86	36	4.917	3.24	4.92	9.6	33.3	1.30	47	164	143	52	18
RA		12	4	76	17	5.509	4.33	5.51	8.0	25.0	1.22	44	138	134	49	15
RA		13	7	80	62	8.214	7.57	8.21	22.7	61.4	5.13	186	505	564	205	56
RA		14	2	79	64	2.024	2.16	2.02	25.1	65.0	1.40	51	132	153	56	14
RA		16	1	86	57	.775	1.08	.77	33.3	70.0	.71	26	54	78	28	6
RA		17	3	79	67	2.059	3.24	2.74	32.9	82.5	2.48	90	226	273	99	25
RA		18	2	79	52	1.224	2.16	1.22	39.1	75.0	1.32	48	92	145	53	10
RA		19	2	79	61	1.099	2.16	.55	50.6	90.0	.76	28	49	84	31	5
RA		22	2	80	49	.819	2.16	1.23	35.4	100.0	1.20	44	123	132	48	14
RA		27	1	79	63	.272	1.08	.54	55.5	130.0	.83	30	71	91	33	8
RA		Totals	27	80	47	26.912	29.20	27.73	21.4	56.0	16.34	594	1,553	1,797	653	171
WL		30	1	78	50	.290	1.42	.29	103.0	250.0	.96	30	73	106	33	8
WL		Totals	1	78	50	.290	1.42	.29	103.0	250.0	0.96	30	73	106	33	8
OC		19	1	88	93	.362	.71									
OC		20	2	86	74	.653	1.42									
OC		Totals	3	87	81	1.015	2.14									
Totals			171	82	87	93.354	201.58	179.82	41.5	166.4	212.22	7463	29,926	23,344	8,209	3,292

TC TLOGSTVB

Log Stock Table - MBF

Project: FINLHANN

T01N R07W S24 T0100

T01N R07W S24 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	24	398 U2	0100	110.00	39	283

Page 1
Date 2/8/2022
Time 7:27:05AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	40	2,185	.7	2,169	69.7						278	416	950	358	167		
DF		CO	3	30	1		1	.0				1								
DF		CO	3	31	2		2	.1					2							
DF		CO	3	38	3		3	.1			3									
DF		CO	3	40	774	.9	767	24.6			90	185	396	82		14				
DF		CO	4	12	2		2	.1		2										
DF		CO	4	13	3		3	.1		1	1	1	1							
DF		CO	4	14	3		3	.1		3										
DF		CO	4	15	10		10	.3		9		1								
DF		CO	4	16	3		3	.1		1	1	1								
DF		CO	4	17	12		12	.4		4	4	2	1							
DF		CO	4	18	4		4	.1		3	1									
DF		CO	4	19	5		5	.2		1	3	1								
DF		CO	4	20	3		3	.1		3	1									
DF		CO	4	21	11		11	.4		3	1	4	2							
DF		CO	4	22	7		7	.2		4	1	2								
DF		CO	4	23	7		7	.2		2	3		2							
DF		CO	4	24	15		15	.5		12	3									
DF		CO	4	25	11		11	.4		3	3	5								
DF		CO	4	26	3		3	.1			3									
DF		CO	4	27	1		1	.0		1										
DF		CO	4	28	5		5	.2			1		3							
DF		CO	4	29	1		1	.0				1								
DF		CO	4	30	2		2	.1			2									
DF		CO	4	31	9		9	.3		2	2	2	4							
DF		CO	4	32	7		7	.2		5	2									
DF		CO	4	33	4		4	.1		2	2									
DF		CO	4	34	2		2	.1			2									
DF		CO	4	35	4		4	.1			2	2								
DF		CO	4	37	2		2	.1				2								
DF		CO	4	38	15		15	.5		15										
DF		CO	4	39	6		6	.2		6										
DF		CO	4	40	13		13	.4		13										
DF		Totals			3,135		3,113	94.6		96	130	211	411	360	416	964	358	167		
RA		H	2	30	9		9	5.5							9					
RA		H	2	40	7		7	4.2						7						
RA		H	4	12	1		1	.4			1									
RA		H	4	14	5		5	2.7				5								
RA		H	4	15	8		8	4.4			3	5								
RA		H	4	16	7		7	3.9			7									
RA		H	4	22	2		2	1.3			2									
RA		H	4	23	3		3	1.6				3								
RA		H	4	24	7		7	4.0			7									
RA		H	4	31	4		4	2.4				4								
RA		H	4	32	6		6	3.8			6									
RA		H	4	34	9		9	5.3			9									
RA		H	4	35	6		6	3.8			6									
RA		H	4	37	14		14	8.4			14									
RA		H	4	38	9		9	5.3			9									
RA		H	4	39	5		5	2.7			5									
RA		H	4	40	69		69	40.5			40	18	11							

TC TLOGSTVB

Log Stock Table - MBF

Project: **FINLHANN**

T01N R07W S24 T0100

T01N R07W S24 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	24	398 U2	0100	110.00	39	283

Date **2/8/2022**

Time **7:27:05AM**

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		Totals			171		171	5.2			109	34	11	7	9					
WL	CO	2		32	9	10.7	8	100.0							8					
WL		Totals			9	10.7	8	.2							8					
Total All Species					3,315		3,292	100.0		96	239	245	423	368	433	964	358	167		

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FINLHANN

Date 2/11/2022

Time 3:15:26PM

T01N R07W S13 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
01N	07W	13	322 U3	0100	84.00	28	226	S	W

T01N R07W S13 T0100

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		CO	2	73	.3	29,349	29,271	2,459			56	44	0	2	0	97	40	15	369	1.98	79.3
DF		CO	3	23	.2	9,020	9,002	756		98	2		0	2	6	92	38	9	116	0.77	77.9
DF		CO	4	4		1,587	1,587	133	72	28			16	54	3	27	27	5	31	0.39	51.1
DF	**Totals**			100	.2	39,956	39,860	3,348	3	23	42	32	1	4	2	93	36	10	191	1.21	208.3
RA		H	4	100		143	143	12		100					32	68	38	7	66	0.81	2.1
RA	**Totals**			0		143	143	12		100					32	68	38	7	66	0.81	2.1
Type Totals					.2	40,099	40,003	3,360	3	23	42	32	1	4	2	93	36	10	190	1.20	210.5

TC TSTNDSUM

Stand Table Summary

Project **FINLHANN**

T01N R07W S13 T0100

T01N R07W S13 T0100

Page: 1

Date: 02/11/202

Time: 3:15:26PM

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	13	322 U3	0100	84.00	28	226

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		10	2	81	78	6.271	3.42	6.27	12.3	45.0	2.20	77	282	185	65	24
DF		11	1	90	66	2.591	1.71	2.59	14.8	60.0	1.10	38	155	92	32	13
DF		13	1	89	82	1.855	1.71	3.71	13.5	50.0	1.43	50	186	120	42	16
DF		15	2	89	91	2.787	3.42	5.57	20.0	82.5	3.18	112	460	268	94	39
DF		16	4	89	111	4.899	6.84	9.80	26.8	115.0	7.48	263	1,127	629	221	95
DF		17	5	87	115	5.424	8.55	11.93	28.3	116.4	9.63	338	1,389	809	284	117
DF		18	5	88	104	4.838	8.55	10.64	30.0	120.0	9.10	319	1,277	764	268	107
DF		19	9	88	125	7.817	15.39	20.84	31.7	135.0	18.82	660	2,814	1,581	555	236
DF		20	12	87	120	9.406	20.52	23.51	37.2	156.7	24.90	874	3,684	2,092	734	309
DF		21	7	88	121	4.977	11.97	13.51	38.1	166.3	14.68	515	2,247	1,233	433	189
DF		22	5	88	129	3.239	8.55	9.72	40.6	187.3	11.25	395	1,820	945	331	153
DF		23	11	84	121	6.520	18.81	18.37	43.2	182.6	22.62	794	3,355	1,900	667	282
DF		24	8	87	123	4.355	13.68	11.98	50.4	222.3	17.21	604	2,662	1,446	507	224
DF		25	10	84	128	5.016	17.10	14.05	54.5	236.8	21.82	766	3,326	1,833	643	279
DF		26	12	86	131	5.566	20.52	15.77	59.8	268.2	26.86	942	4,230	2,256	792	355
DF		27	4	83	130	1.720	6.84	5.16	61.6	271.7	9.06	318	1,402	761	267	118
DF		28	2	87	136	.800	3.42	2.40	70.0	351.7	4.78	168	844	402	141	71
DF		29	8	85	138	2.982	13.68	8.95	73.7	349.6	18.79	659	3,128	1,579	554	263
DF		30	5	83	130	1.742	8.55	5.23	72.8	338.0	10.84	380	1,766	910	319	148
DF		31	3	86	128	.979	5.13	2.61	89.8	430.0	6.68	235	1,122	561	197	94
DF		32	1	80	131	.306	1.71	.92	84.3	366.7	2.21	77	337	185	65	28
DF		34	5	85	133	1.356	8.55	4.07	98.5	469.3	11.42	401	1,909	959	336	160
DF		36	1	82	120	.242	1.71	.73	93.4	466.7	1.93	68	339	162	57	28
DF		Totals	123	86	116	85.687	210.33	208.32	43.5	191.3	257.99	9,052	39,860	21,672	7,604	3,348
RA		14	1	83	61	1.392	1.49	1.39	26.7	70.0	1.02	37	97	86	31	8
RA		19	1	82	42	.756	1.49	.76	36.9	60.0	.77	28	45	64	23	4
RA		Totals	2	83	54	2.148	2.98	2.15	30.3	66.5	1.79	65	143	150	55	12
OC		15	1	87	98	.808	.99									
OC		19	1	89	101	.504	.99									
OC		24	1	83	117	.316	.99									
OC		Totals	3	87	103	1.628	2.98									
Totals			128	86	114	89.463	216.29	210.47	43.3	190.1	259.78	9118	40,003	21,822	7,659	3,360

TC TLOGSTVB

Log Stock Table - MBF

Project: FINLHANN

T01N R07W S13 T0100

T01N R07W S13 T0100

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01N	07W	13	322 U3	0100	84.00	28	226

Page 1
Date 2/11/2022
Time 3:15:25PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	20	6		6	.2						6						
DF		CO	2	30	56		56	1.7							8	15	15	17		
DF		CO	2	33	8		8	.2							8					
DF		CO	2	40	2,396	.3	2,390	71.4						497	573	886	366	69		
DF		CO	3	19	1		1	.0				1								
DF		CO	3	20	1		1	.0				1								
DF		CO	3	22	1		1	.0				1								
DF		CO	3	26	5		5	.1				5								
DF		CO	3	28	2		2	.1			2									
DF		CO	3	29	5		5	.1			2	3								
DF		CO	3	31	17		17	.5			17									
DF		CO	3	32	11		11	.3			7	4								
DF		CO	3	33	7		7	.2			3	4								
DF		CO	3	35	7		7	.2			5	2								
DF		CO	3	38	5		5	.1			2	2								
DF		CO	3	39	3		3	.1				3								
DF		CO	3	40	693	.2	692	20.7			58	236	382	16						
DF		CO	4	15	1		1	.0			1									
DF		CO	4	16	3		3	.1		1	1									
DF		CO	4	17	5		5	.1		1	4									
DF		CO	4	18	7		7	.2		5	1									
DF		CO	4	19	6		6	.2		4		1								
DF		CO	4	20	1		1	.0			1									
DF		CO	4	21	4		4	.1		4										
DF		CO	4	22	11		11	.3		2	7		2							
DF		CO	4	23	4		4	.1		1	2	1								
DF		CO	4	24	10		10	.3		5	3	2								
DF		CO	4	25	9		9	.3		6	3									
DF		CO	4	26	5		5	.2		4	2									
DF		CO	4	27	18		18	.5		11	8									
DF		CO	4	29	10		10	.3		10										
DF		CO	4	33	3		3	.1		3										
DF		CO	4	35	1		1	.0		1										
DF		CO	4	36	6		6	.2		6										
DF		CO	4	37	2		2	.1		2										
DF		CO	4	38	4		4	.1		4										
DF		CO	4	39	7		7	.2		7										
DF		CO	4	40	18		18	.5		18										
DF		Totals			3,356		3,348	99.6		96	126	267	384	519	588	901	381	87		
RA		H	4	33	4		4	31.8			4									
RA		H	4	40	8		8	68.2			8									
RA		Totals			12		12	.4			12									
Total All Species					3,368		3,360	100.0		96	138	267	384	519	588	901	381	87		

"STEWARDSHIP IN FORESTRY"

Helpin' Hanns

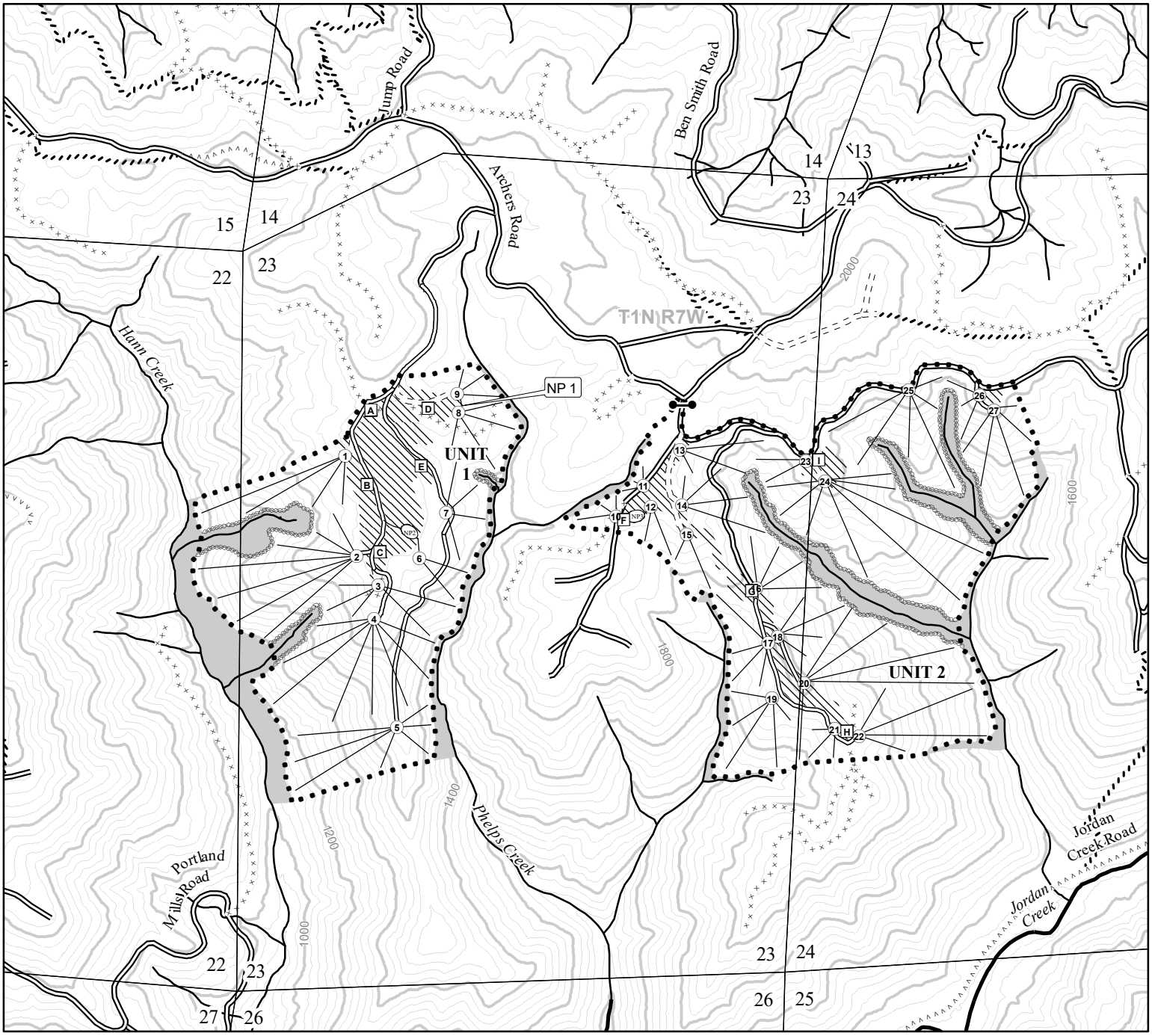
Volume Summary

Unit 1-Modified Clearcut				
		85 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	32.41	2755	1%	2727
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	2.50	213	2%	209
TOTAL	34.91	2968.0		2936

Unit 2-Modified Clearcut				
		110 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	28.30	3113	1%	3082
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	1.55	171	2%	168
TOTAL	29.85	3284		3250

Unit 3- Modified Clearcut				
		84 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	39.86	3348	1%	3315
Hemlock		0	1%	0
Spruce		0	1%	0
Noble Fir		0	1%	0
Alder	0.14	12	2%	12
TOTAL	40.00	3360		3326

TOTAL SALE VOLUME	279 acres	
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	9216	9123
Hemlock	0	0
Spruce	0	0
Noble Fir	0	0
Red Alder	396	389
TOTAL	9612	9512



Legend

- Gates
- Cable Landing
- Tractor Landing
- Cable Logging
- Riparian Boundary
- Timber Sale Boundary
- Riparian Buffer
- Ground Based Logging
- Recreation Trail
- Non-Project Road
- Surfaced Road
- Unsurfaced Road
- Blocked Road
- Abandoned Road
- Type-F Stream
- Type-N Stream
- 200' Contour
- 40' Contour

LOGGING PLAN

FOR TIMBER SALE CONTRACT
TL-341-2022-W00876-01
HELPIN' HANNS
PORTIONS OF SECTIONS 13, 22, 23, 24, T1N, R7W
& SECTION 18, T1N, R6W, W.M.
TILLAMOOK COUNTY, OREGON
Tillamook District GIS
March, 2022

This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.

N

1:12,000

1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000 Feet

NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	13	72	85
UNIT 2	9	101	110
UNIT 3	32	52	84
TOTAL	64	225	279

Legend

- Gates
- Electric Transmission Lines
- Cable Landing
- Tractor Landing
- Cable Logging
- Riparian Boundary
- Timber Sale Boundary
- Riparian Buffer
- Ground Based Logging
- Recreation Trail
- Non-Project Road
- Surfaced Road
- Unsurfaced Road
- Blocked Road
- Abandoned Road
- Type-F Stream
- Type-N Stream
- 200' Contour
- 40' Contour

LOGGING PLAN

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TL-341-2022-W00876-01
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1:12,000
1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000 Feet

NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	13	72	85
UNIT 2	9	101	110
UNIT 3	32	52	84
TOTAL	64	225	279