



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Flying Fish
Sale 341-11-51

District: Coos

Date: November 23, 2010

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,406,484.12	\$37,143.75	\$1,443,627.87
		Project Work:	\$(154,235.00)
		Advertised Value:	\$1,289,392.87



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timber description

Location: Portions of Section 1, T23S, R11W, and portions of Section 6, T23S, R10W, W.M., Coos County, Oregon.

Stand Stocking: 80%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	28	0	95
Western Hemlock / Fir	21	0	90
Alder (Red)	16	0	95

Volume by Grade	10" - 11"	12"+	2S	3P	3S	3S 12"+	4S	6" - 7"	8" - 9"	SM	Total
Douglas - Fir	0	0	3,955	308	514	0	51	0	0	308	5,136
Western Hemlock / Fir	0	0	77	0	30	0	3	0	0	0	110
Alder (Red)	14	56	0	0	0	0	0	23	32	0	125
Total	14	56	4,032	308	544	0	54	23	32	308	5,371



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comments: Pond Values Used: 3rd Quarter Calendar Year 2010.

Western Redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost.

$\$657.83/\text{MBF} = \$825/\text{MBF} - \$167.17/\text{MBF}$

SCALING COST ALLOWANCE = $\$5.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$3.00/\text{Gallon}$

HAULING COST ALLOWANCE

Hauling costs equivalent to \$700 daily truck cost.

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

Directional Felling/Tree Jacking = $120 \text{ MBF} \times \$2/\text{MBF} = \240

Brand and Paint Logs = $5,371 \text{ MBF} \times \$1/\text{MBF} = \$5,371$

Cull Sort/Slash Piles on Landings = $5 \text{ Landings} \times \$250 = \$1,250$

Artificial Guy Anchors(dozer, skidder) = $2 \text{ anchors} \times \$500 = \$1,000$

Additional Fire Equipment = $1 \text{ Season} \times \$2,000 = \$2,000$

Safety Flaggers = $2 \text{ days} \times \$150 = \300

Tree Topping/Girdling = $38 \text{ trees} \times \$100 = \$3,800$

Equipment Time: Pullback & Cleanup = $16 \text{ hrs} \times \$250 = \$4,000$

Fish Log Placement: $24 \text{ trees} \times \$126.25/\text{tree} = \$3,030$

Fish Log Stockpile Y&D: $54 \text{ MBF} \times 62/\text{MBF} = \$3,348$

Fish Log Stockpile Special Handling: $54 \text{ MBF} \times 8/\text{MBF} = \432

Ground-Based Equipment Wash: $6 \text{ hrs} \times \$65 = \390

TOTAL Other Costs (with Profit & Risk to be added) = $\$25,161$

Other Costs (No Profit & Risk added):

None.



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logging conditions

combination#:	1	Douglas - Fir	100.00%
		Western Hemlock / Fir	100.00%
		Alder (Red)	100.00%
yarding distance:	Long (1,500 ft)	downhill yarding:	No
logging system:	Cable: Large Tower >=70	Process:	Manual Felling/Delimiting
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
loads / day:	12.0	bd. ft / load:	5,000
cost / mbf:	\$61.56		
machines:	Log Loader (A)		
	Tower Yarder (Large)		



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logging costs

Operating Seasons:	2.00	Profit Risk:	10.00%
Project Costs:	\$154,235.00	Other Costs (P/R):	\$25,161.00
Slash Disposal:	\$0.00	Other Costs:	\$0.00

Miles of Road

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
1.0	1.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	5.0
Western Hemlock / Fir	\$0.00	2.0	4.5
Alder (Red)	\$0.00	2.0	3.5

Local Pond Values

Date	Specie	Grade	Value
11/23/10	Alder (Red)	8" - 9"	\$470.00
11/23/10	Alder (Red)	10" - 11"	\$500.00
11/23/10	Alder (Red)	12"+	\$530.00
11/23/10	Alder (Red)	6" - 7"	\$380.00



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logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$61.56	\$1.70	\$1.63	\$66.82	\$4.68	\$13.64	\$0.00	\$5.00	\$0.00	\$155.03
Western Hemlock / Fir									
\$61.56	\$1.78	\$1.63	\$77.78	\$4.68	\$14.74	\$0.00	\$5.00	\$0.00	\$167.17
Alder (Red)									
\$61.56	\$1.70	\$1.63	\$95.46	\$4.68	\$16.50	\$0.00	\$5.00	\$0.00	\$186.53

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$424.50	\$269.47	\$0.00
Western Hemlock / Fir	\$0.00	\$371.59	\$204.42	\$0.00
Alder (Red)	\$0.00	\$483.68	\$297.15	\$0.00



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summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,136	\$269.47	\$1,383,997.92
Western Hemlock / Fir	110	\$204.42	\$22,486.20
Alder (Red)	125	\$297.15	\$37,143.75

Gross Timber Sale Value

Recovery: \$1,443,627.87

Prepared by: Nick Morris

Phone: 541-267-1756

**SUMMARY OF CONSTRUCTION COST
Flying Fish**

Project 1A: Road and Landing Construction

Points: A to B Length: 1850' Type: 14' no ditch

Excavator	<u>60</u>	hrs at	<u>\$125.00</u>	per hour	<u>\$7,500.00</u>
Cat time - road construction	<u>30</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$3,600.00</u>
Cat time - waste area prep/shape	<u>30</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$3,600.00</u>
Dump Truck - haul waste to fill areas, between Points D to E & D to F (3500 yds) and haul root wads to waste areas	<u>60</u>	hrs at	<u>\$95.00</u>	per hour	<u>\$5,700.00</u>
Drill & Shoot	<u>30</u>	hrs at	<u>\$250.00</u>	per hour	<u>\$7,500.00</u>
Grader	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>
Laborer	<u>60</u>	hrs at	<u>\$35.00</u>	per hour	<u>\$2,100.00</u>

Total Project 1A: \$30,150.00

Project 1B: Road and Landing Construction

Point: D to E Length: 520' Type: 14' no ditch

Excavator	<u>20</u>	hrs at	<u>\$125.00</u>	per hour	<u>\$2,500.00</u>
Cat time	<u>20</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$2,400.00</u>
Grader	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
Laborer	<u>20</u>	hrs at	<u>\$35.00</u>	per hour	<u>\$700.00</u>

Total Project 1B: \$5,675.00

Project 1C: Road and Landing Construction

Point: D to F Length: 530' Type: 14' no ditch

Excavator	<u>20</u>	hrs at	<u>\$125.00</u>	per hour	<u>\$2,500.00</u>
Cat time	<u>20</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$2,400.00</u>
Dump Truck - haul waste back to STA 2+70 to 4+00	<u>10</u>	hrs at	<u>\$95.00</u>	per hour	<u>\$950.00</u>
Grader	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
Laborer	<u>20</u>	hrs at	<u>\$35.00</u>	per hour	<u>\$700.00</u>

Total Project 1C: \$6,625.00

Project 1D: Road and Landing Construction

Point: J to K Length: 1100' Type: 14' no ditch

Excavator	<u>90</u>	hrs at	<u>\$125.00</u>	per hour	<u>\$11,250.00</u>
Cat time - includes waste area at Pt L	<u>90</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$10,800.00</u>
Dump Truck - haul waste to Pt L (8000 yds) and haul root wads to waste areas	<u>90</u>	hrs at	<u>\$95.00</u>	per hour	<u>\$8,550.00</u>
Drill & Shoot	<u>30</u>	hrs at	<u>\$250.00</u>	per hour	<u>\$7,500.00</u>
Grader	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>
Laborer	<u>90</u>	hrs at	<u>\$35.00</u>	per hour	<u>\$3,150.00</u>

Total Project 1D: \$41,400.00

SUMMARY OF CONSTRUCTION COST
Flying Fish

Move-in

Equipment	Miles	hrs/RT	Lowboy Rate/hr	Total
Excavator	40	5	\$95.00	\$475.00
Cat	40	5	\$95.00	\$475.00
Drill & Comp	40	5	\$95.00	\$475.00
Grader	40	4	\$95.00	\$380.00
Dump Truck	40	4	\$95.00	\$380.00
Dump Truck	40	4	\$95.00	\$380.00

Total Move-in: \$2,565.00

Project 1 Total \$86,415.00

Project 2A: Road Improvement

Points: C to D Length: 800' Type: 14' no ditch

Excavator	5	hrs at	\$125.00	per hour	\$625.00
Cat time	5	hrs at	\$120.00	per hour	\$600.00
Grader time	1	hrs at	\$75.00	per hour	\$75.00
Laborer	5	hrs at	\$35.00	per hour	\$175.00

Total Project 2A: \$1,475.00

Project 2B: Road Improvement

Points: G to H Length: 1290' Type: 14' w/ditch

Grader time	2	hrs at	\$75.00	per hour	\$150.00
Laborer	2	hrs at	\$35.00	per hour	\$70.00

Total Project 2B: \$220.00

Project 2C: Road and Landing Improvement

Points: H to I Length: 2080' Type: 14' no ditch

Excavator	5	hrs at	\$125.00	per hour	\$625.00
Cat time	5	hrs at	\$120.00	per hour	\$600.00
Grader time	3	hrs at	\$75.00	per hour	\$225.00
Laborer	5	hrs at	\$35.00	per hour	\$175.00

Total Project 2C: \$1,625.00

Project 2 Total \$3,320.00

**SUMMARY OF CONSTRUCTION COST
Flying Fish**

Project 3A: Rock Stockpile

Location: Cougar Pass (7000/7700 jct)
 Measured amount: 1200 cu yds
 Size: 1 1/2" - 0"

Cost per cu yd at crusher (WWD pricing):	\$9.25	per yd
Haul cost per cu yd (3 hr RT):	\$15.00	per yd
Piling and shaping cost per cu yd:	<u>\$2.00</u>	per yd

Total cost per cu yd:	\$26.25	per yd
Total cu yds:	1200	yards

Total Cost for Stockpile rock: \$31,500.00

Total Project 3A: \$31,500.00

Project 3: Rock Stockpile

Location: Fish Creek (7000/7400/7500 road junctions)
 Measured amount: 1200 cu yds
 Size: 1 1/2" - 0"

Cost per cu yd at crusher (WWD pricing):	\$9.25	per yd
Haul cost per cu yd (3.25 hr RT):	\$16.25	per yd
Piling and shaping cost per cu yd:	<u>\$2.00</u>	per yd

Total cost per cu yd:	\$27.50	per yd
Total cu yds:	1200	yards

Total Cost for Stockpile rock: \$33,000.00

Total Project 3B: \$33,000.00

Project 3 Total \$64,500.00

Total Project Costs \$154,235.00

Volume Summary
Flying Fish - Point L Waste Area

Station		Horz. Dist.	End area		Double end area		Cubic Yards		% Rock	Rock	Unclass	Remarks
Index	Distance		Cut	Fill	Cut	Fill	Cut	Fill				
1	0		0	0								
		50.7			0	162.2	0	152		0	0	
2	50.7		0	162.2								
		43			0	555.2	0	442		0	0	
3	93.7		0	393								
		38.1			0	1028.7	0	726		0	0	
4	131.8		0	635.7								
		36.2			0	1828.8	0	1226		0	0	
5	168		0	1193.1								
		38.5			0	2175.2	0	1551		0	0	
6	206.5		0	982.1								
		46.8			0	1707.5	0	1480		0	0	
7	253.3		0	725.4								
		47			0	1043.9	0	909		0	0	
8	300.3		0	318.5								
		44.3			0	332.8	0	273		0	0	
9	344.6		0	14.3								
		0			0	14.3	0	0		0	0	

Totals Cut Fill Rock Common
 0 6758 0 0

1.2
8110

**Volume Summary
Flying Fish - Points A to B**

Station		Horz.	End area		Double end area		Cubic Yards		% Rock	Rock	Unclass	Remarks
Index	Distance	Dist.	Cut	Fill	Cut	Fill	Cut	Fill				
1	0		0	0								
		55.1			160.6	2.9	164	3		0	164	
2	55.1		160.6	2.9						0	146	
		20.6			382.4	2.9	146	1		0	146	
3	75.7		221.8	0								
		21			368.9	8.6	143	3	15	22	122	
4	96.7		147.1	8.6								
		37.2			252.6	8.6	174	6	15	26	148	
5	133.9		105.5	0								
		42.7			144.9	18.2	115	14	20	23	92	
6	176.6		39.4	18.2								
		37.6			100.6	18.5	70	13	25	18	53	
7	214.2		61.2	0.3								
		41.8			127.3	0.3	99	0	25	25	74	
8	256		66.1	0								
		44.7			130.6	7.5	108	6	25	27	81	
9	300.7		64.5	7.5								
		64.1			134.1	7.5	159	9	25	40	119	
10	364.8		69.6	0								
		48.4			95.9	0	86	0	10	9	77	
11	413.2		26.3	0								
		46.3			93.1	28	80	24		0	80	
12	459.5		66.8	28								
		30.4			104.4	61.9	59	35		0	59	
13	489.9		37.6	33.9								
		46.1			96.7	37.3	83	32		0	83	
14	536		59.1	3.4								
		47.5			129.3	3.4	114	3	20	23	91	
15	583.5		70.2	0								
		43			139.3	0	111	0	20	22	89	
16	626.5		69.1	0								
		35.2			137.2	0	89	0	20	18	72	
17	661.7		68.1	0								
		23.3			212.4	0	92	0	20	18	73	
18	685		144.3	0								
		42			274.9	0	214	0	20	43	171	
19	727		130.6	0								
		61.6			229.4	0	262	0	20	52	209	
20	788.6		98.8	0								
		33			150.9	0.9	92	1	20	18	74	
21	821.6		52.1	0.9								
		30.3			138.3	0.9	78	1	10	8	70	
22	851.9		86.2	0								
		41.6			122.5	0.4	94	0	10	9	85	
23	893.5		36.3	0.4								
		44.6			36.3	33.5	30	28		0	30	
24	938.1		0	33.1								
		63.7			4	36.6	5	43		0	5	
25	1001.8		4	3.5								
		66.4			10	7.8	12	10		0	12	
26	1068.2		6	4.3								
		64.8			27.2	4.3	33	5		0	33	

Volume Summary
Flying Fish - Points A to B

27	1133		21.2	0								
		61.5			22.6	3.7	26	4		0	26	
28	1194.5		1.4	3.7								
		43.9			4.4	5.7	4	5		0	4	
29	1238.4		3	2								
		69			4.8	2.6	6	3		0	6	
30	1307.4		1.8	0.6								
		72.9			5.1	4.6	7	6		0	7	
31	1380.3		3.3	4								
		75.1			5.5	11.3	8	16		0	8	
32	1455.4		2.2	7.3								
		69.3			2.2	81.8	3	105		0	3	
33	1524.7		0	74.5								
		31.5			0	122.3	0	71		0	0	
34	1556.2		0	47.8								
		47.2			123.9	139.4	108	122		0	108	
35	1603.4		123.9	91.6								
		61.9			379.4	246.5	435	283	15	65	370	
36	1665.3		255.5	154.9								
		36.8			641.9	449.6	437	306	20	87	350	
37	1702.1		386.4	294.7								
		34.2			736.1	490	466	310	20	93	373	
38	1736.3		349.7	195.3								
		41.3			603.6	428.8	462	328	20	92	369	<u>Landing</u>
39	1777.6		253.9	233.5								Cut
		24.9			253.9	506.1	117	233		0	117	2026
40	1802.5		0	272.6								Fill
		28.1			0	272.6	0	142		0	0	1901
41	1830.6		0	0								
		26			0	0	0	0		0	0	
42	1856.6		0	0								
		0			0	0	0	0		0	0	

Totals	Cut	Fill	Rock	Common	Total
	4788	2171	738	4050	
	2760	271	400	2360	Road Only (no landing)
		1.2	1.3	1.4	
		325	520	3304	
					3499
					haul to waste area

**Volume Summary
Flying Fish - Points D to E**

Station		Horz. Dist.	End area		Double end area		Cubic Yards		% Rock	Rock	Unclass	Remarks
Index	Distance		Cut	Fill	Cut	Fill	Cut	Fill				
1	0		3.1	1.6								
		33.5			5.7	1.6	4	1		0	4	
2	33.5		2.6	0								
		44.1			13.2	130.7	11	107		0	11	
3	77.6		10.6	130.7								
		52.4			25.3	422.9	25	410		0	25	
4	130		14.7	292.2								
		85.6			22.5	612.7	36	971		0	36	
5	215.6		7.8	320.5								
		44.7			18.6	328.6	15	272		0	15	
6	260.3		10.8	8.1								
		64.4			23.8	24.9	28	30		0	28	
7	324.7		13	16.8								
		47.7			254.6	16.8	225	15		0	225	
8	372.4		241.6	0								
		31			818.4	0	470	0		0	470	
9	403.4		576.8	0								
		30.2			809.8	68.8	453	38		0	453	
10	433.6		233	68.8								
		23.9			286.8	212.4	127	94		0	127	
11	457.5		53.8	143.6								
		29.3			53.8	614.8	29	334		0	29	
12	486.8		0	471.2								
		33			0	471.2	0	288		0	0	
13	519.8		0	0								
		0			0	0	0	0		0	0	

Totals Cut Fill Rock Common
1422 2560 0 1422

1.2 1.4 1.3
3072 0 1849

1849

1223 extra fill

**Volume Summary
Flying Fish - Points D to F**

Station		Horz. Dist.	End area		Double end area		Cubic Yards		% Rock	Rock	Unclass	Remarks
Index	Distance		Cut	Fill	Cut	Fill	Cut	Fill				
1	0		3.1	1.6								
		33.5			5.7	1.6	4	1		0	4	
2	33.5		2.6	0								
		44.1			14.7	0.2	12	0		0	12	
3	77.6		12.1	0.2								
		52.4			26.9	24.4	26	24		0	26	
4	130		14.8	24.2								
		56.3			19.7	31.1	21	32		0	21	
5	186.3		4.9	6.9								
		32.4			16.1	6.9	10	4		0	10	
6	218.7		11.2	0								
		52.8			11.2	20.4	11	20		0	11	
7	271.5		0	20.4								
		75.8			0	697.4	0	979		0	0	
8	347.3		0	677								
		47.5			0	1278	0	1124		0	0	
9	394.8		0	601								
		45.6			337.2	1056.4	285	892		0	285	
10	440.4		337.2	455.4								
		34.2			801.6	688.9	508	436		0	508	
11	474.6		464.4	233.5								
		35.4			676.5	353.6	443	232		0	443	
12	510		212.1	120.1								
		28.7			212.1	120.1	113	64		0	113	
13	538.7		0	0								
		0			0	0	0	0		0	0	

Totals Cut Fill Rock Common
 1431 3808 0 1431

 1.2 1.4 1.3
 4570 0 1861 1861

2709 extra fill

**Volume Summary
Flying Fish - Points J to K**

Station		Horz. Dist.	End area		Double end area		Cubic Yards		% Rock	Rock	Unclass	Remarks
Index	Distance		Cut	Fill	Cut	Fill	Cut	Fill				
1	0		0	0								
		54.8			9.7	0	10	0		0	10	
2	54.8		9.7	0						0	12	
		21.3			29.3	0	12	0		0	12	
3	76.1		19.6	0						0	82	
		47.1			93.5	0	82	0		0	82	
4	123.2		73.9	0						0	193	
		54.2			192.1	0	193	0		0	193	
5	177.4		118.2	0						0	221	
		59.7			199.5	0	221	0		0	221	
6	237.1		81.3	0						0	183	
		59			167.3	0	183	0		0	183	
7	296.1		86	0						0	206	
		66.7			166.9	0	206	0		0	206	
8	362.8		80.9	0						0	205	
		67.9			163.4	0	205	0		0	205	
9	430.7		82.5	0						0	190	
		63.9			160.3	0	190	0		0	190	
10	494.6		77.8	0						0	245	
		68.6			192.6	0	245	0		0	245	
11	563.2		114.8	0								
		53.7			214.6	0	213	0	15	32	181	
12	616.9		99.8	0								
		90.3			135.7	0	227	0	25	57	170	
13	707.2		35.9	0								
		63.3			274.3	0	322	0	50	161	161	
14	770.5		238.4	0								
		54.9			242.9	16.3	247	17	25	62	185	
15	825.4		4.5	16.3								
		30.2			4.5	91.8	3	51		0	3	
16	855.6		0	75.5								
		29.6			0	145	0	79		0	0	
17	885.2		0	69.5								
		58.9			280.3	69.5	306	76	20	61	245	
18	944.1		280.3	0								
		41.5			1257.2	0	966	0	50	483	483	
19	985.6		976.9	0								
		23			2028.8	0	864	0	50	432	432	
20	1008.6		1051.9	0								
		23.4			1749.5	0	758	0	50	379	379	
21	1032		697.6	0								
		35.5			811.4	0	533	0	40	213	320	
22	1067.5		113.8	0								
		28.6			113.8	0	60	0	10	6	54	
23	1096.1		0	0								
		0			0	0	0	0		0	0	

Totals Cut Fill Rock Common
 6044 223 1886 4158

 1.4 1.3
 2640 5406

TIMBER SALE SUMMARY

Flying Fish

1. **Type of sale:** Final harvest; Recovery, Sealed Bid.
2. **Boundary Lines:** This timber sale is comprised of four sale areas. Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, red paint, and red flagging at locations shown on the Exhibit A.
3. **Revenue Distribution:** 100% CSL, 100% Coos County.
4. **Sale Acreage:** The total sale area is 76 net acres. Buffer areas are posted outside the sale area and are not included in the net acreage calculation. The acreage was determined by electronic digitizing using 2009 digital orthophotography, 2008 Lidar and ArcMap 9.3 GIS software program.
5. **Volume by Species, Fund, and County:** See attached table.
6. **Grade by Percent:** (All areas)

Species	3 Peeler	Special Mill	2 Saw (12"+)	3 Saw (11"-10")	3 Saw Large Diameter	4 Saw/Camp (9"-6")	Utility
Douglas-fir	6%	6%	77%	5%	5%	1%	----
Red Alder*	----	----	45%	11%	----	44%	----
Western Hemlock	----	----	70%	27%	----	3%	----

* Red alder is represented by size class rather than grade.

7. **Cruise:** The sale was variable plot cruised using the Big BAF cruise design. Each plot consisted of both a full 40 BAF count plot and a full 360 BAF measure plot. The 40 BAF count plot was used to tally the number of trees by species to determine the stand basal area. The 360 BAF plot was then used to select Douglas-fir to cruise as measure trees.

The sale area is approximately 76 acres and has 68 nested plots and 95 measure trees that were cruised for diameter, total height, grade and defect. The cruise design was analyzed using the SuperACE cruising program. Logs were merchandised at a length of 40 feet to compile total cruise volume.

A. Cruise Summary Data:

Diameter	Top Diameter	Form Point	Form Factor	CV%	SE%
D4H	Total Height	Conifer: 16' Hardwood: 16'	Estimated or measured on all trees	52.2	7.13

B. Stand Summary:

Species	D4H	Trees per Acre	Basal Area (ft ² /ac)	BF per acre
Douglas-fir	28	61	270	67,400
Red Alder	16	23	34	1,600
Western Hemlock	21	5	13	1,400

C. **Green Tree Retention Summary:** Green trees were posted both inside and outside of the timber sale areas. There are scattered and grouped GTR throughout the timber sale area.

8. **Timber Description:** The timber is comprised of 100 to 146 year-old Douglas-fir with a minor component of red alder and scattered understory hemlock and cedar. Conifers range from 80 to 210 feet tall while hardwoods are about 40 to 80 feet.

9. **Topography:** The sale area ranges from 10 percent to over 90 percent slope. Area 1 has a large component of gentle slopes and benches throughout the unit. Areas two and three are dominated by steep slopes.

10. **Logging Method:** The sale will be cable logged mostly uphill with single-end suspension over the units; full suspension will be required over designated streams and RMAs. A motorized carriage will be required to obtain the necessary suspension. Tailtrees may need to be placed for yarding the sale area as approved in the operations plan. There will be some opportunity for ground based operations as well.

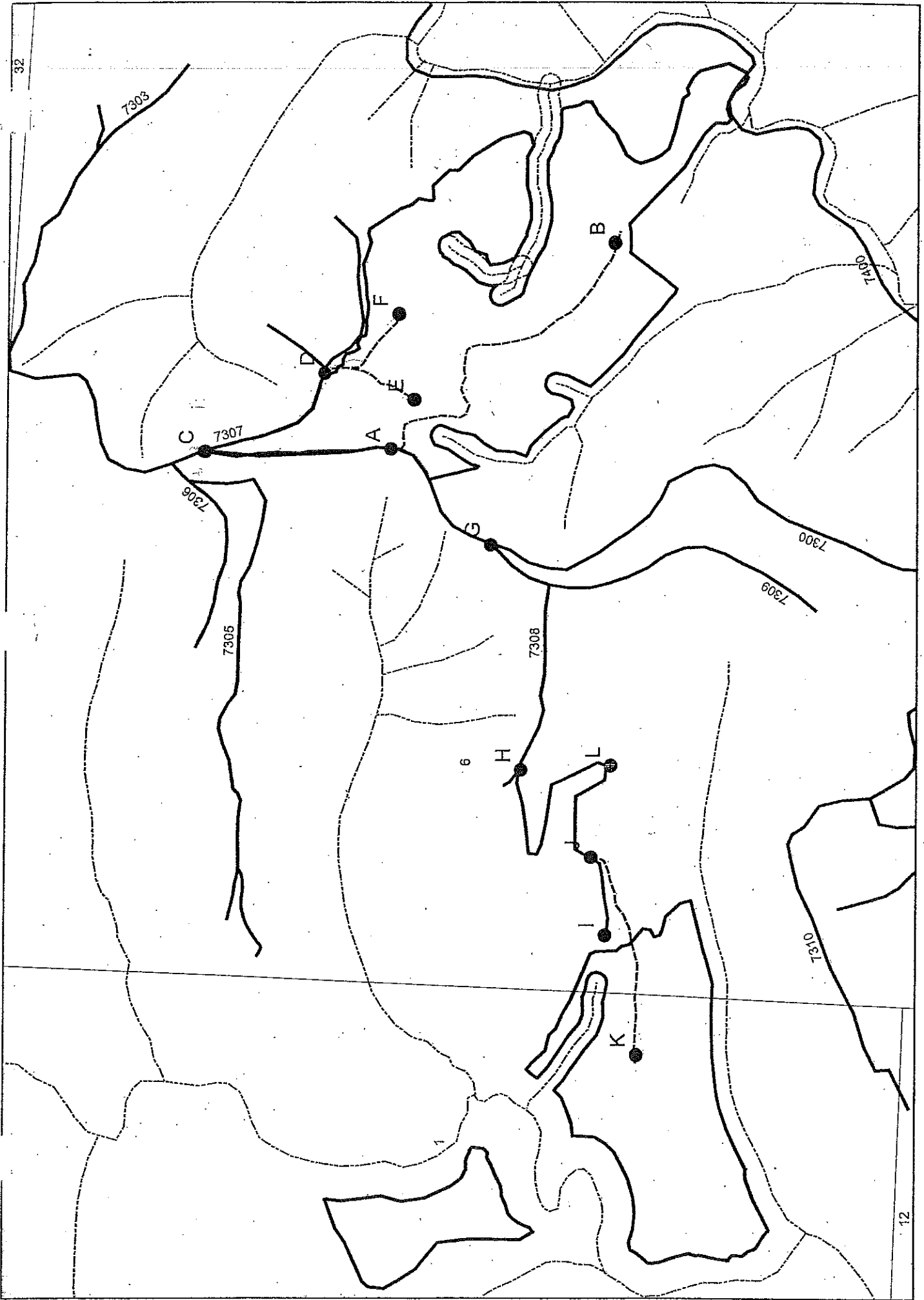
11. **Access:** From Coos Bay travel North on Highway 101 for 28 miles to Reedsport. From Reedsport proceed East on highway 38 for 13 miles and turn right on Loon Lake road, (DCR 3). Continue on DCR 3 for approximately 2 miles and turn left onto forest road 7500. Take FR 7500 to FR 7000; approximately 5 miles and turn right onto FR 7000. Proceed on FR 7000 for about 1 mile to the 7300. Turn left on the 7300 and continue for about 1 mile to area one of the timber sale. Continue for another 1700 feet and turn left on the 7308. Follow the 7308 (approx. 3,000 feet) to the end of the road and areas 2, 3 and 4.

12. **Projects:**

Project No. 1: Road and Landing Construction

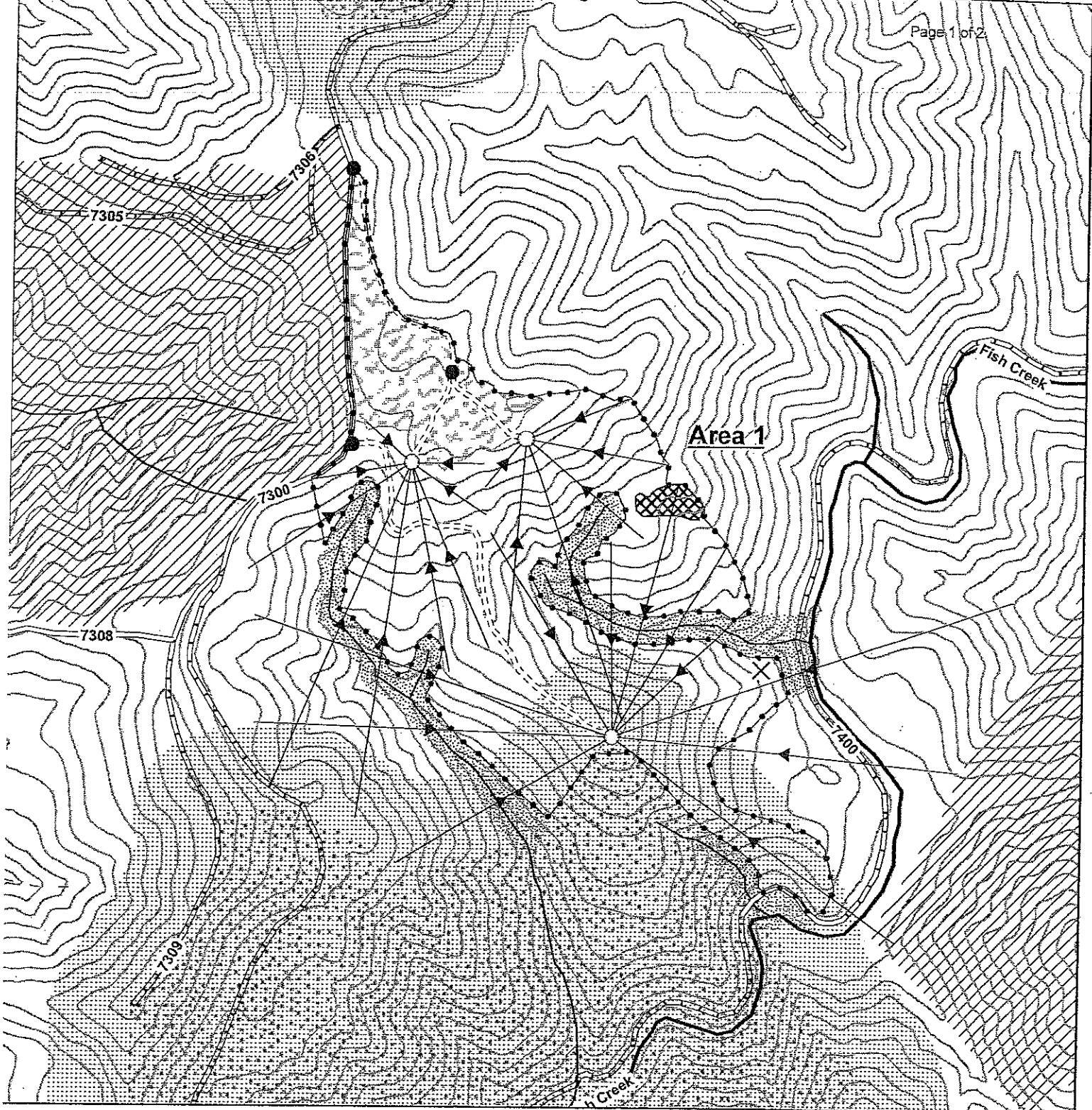
Project No. 2: Road and Landing Improvement

Project No. 3: Rock Stockpile



Scale 1" = 700'

Flying Fish



Timber Sale Boundary	Project Points
Yarding Area - Cable	Landing
Yarding Area - Ground	Road Point
Single Tree	Waste Area
Pod	Roads
Reforestation Area	State Maintained
40 Foot Contours	Purchaser Maintained
Stream Buffers	New Road Construction
Seasonally Restricted Area	Streams
Marbled Murrelet Management Area	Type F Perennial
	Type N Perennial
	Type N Seasonal
	Unclassified

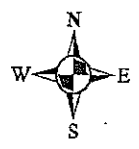
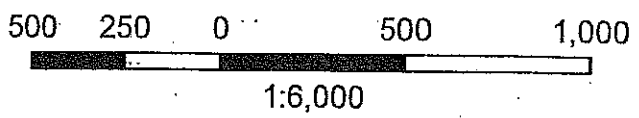
LOGGING PLAN

Flying Fish
Timber Sale No. 341-11-51

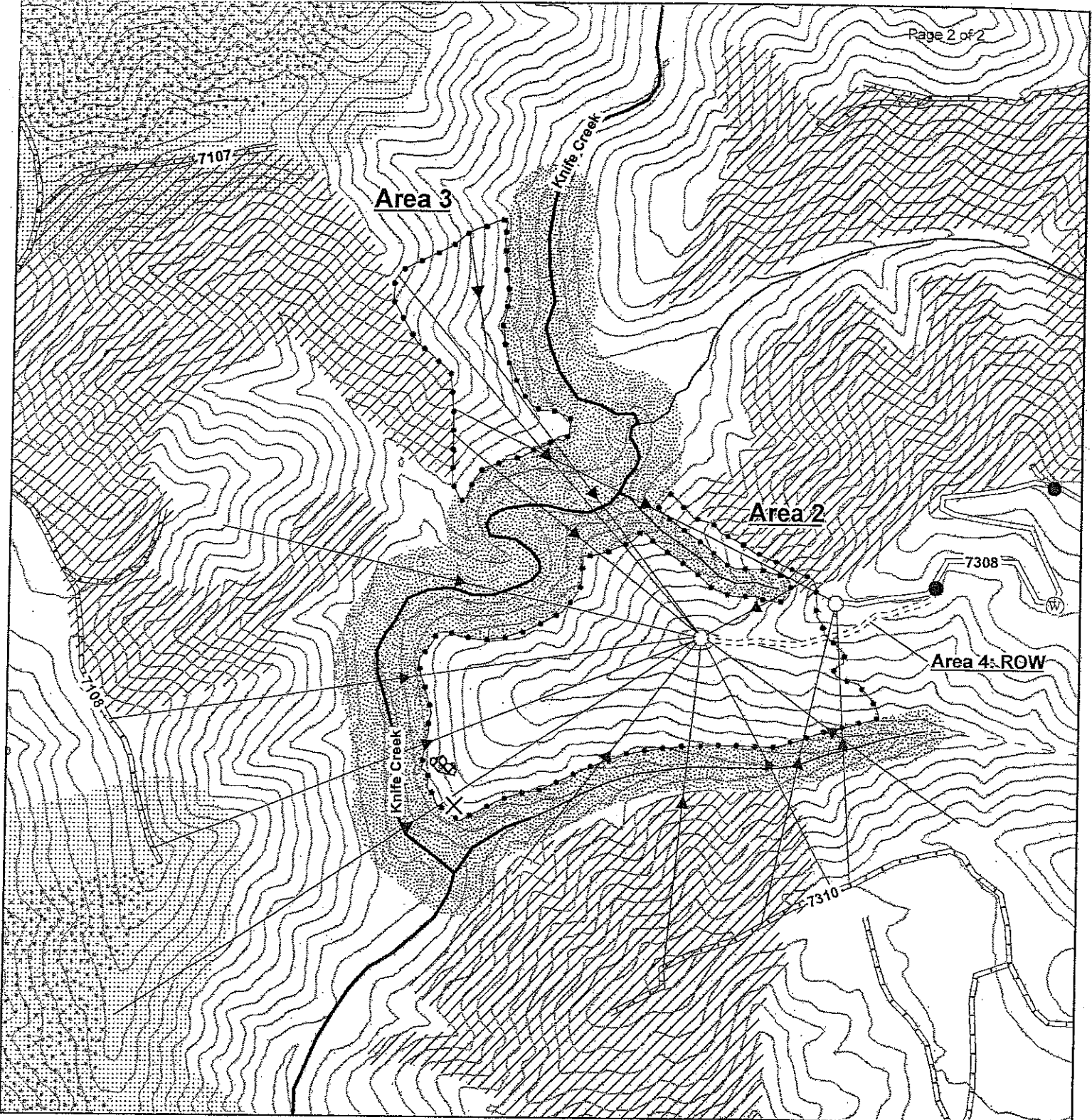
Portions of Section 01, T23S, R11W, W.M. &
Portions of Section 06, T23S, R10W, W.M.
Coos County, Oregon

UNIT	HARVEST TYPE	NET ACRES
Area 1	CC	45
Area 2	CC	24
Area 3	CC	7
Area 4	ROW	<1
		76

UNIT	GROUND HARVEST
Area 1	7
Area 2	0
Area 3	0
Area 4	<1
	7



This product is for informational use only and was not prepared for legal, engineering, or surveying purposes.



- | | |
|----------------------------------|-----------------------|
| Timber Sale Boundary | Project Points |
| Yarding Area - Cable | Landing |
| Yarding Area - Ground | Road Point |
| Single Tree | Waste Area |
| Pod | Roads |
| Reforestation Area | State Maintained |
| 40 Foot Contours | Purchaser Maintained |
| Stream Buffers | New Road Construction |
| Seasonally Restricted Area | Streams |
| Marbled Murrelet Management Area | Type F Perennial |
| | Type N Perennial |
| | Type N Seasonal |
| | Unclassified |

LOGGING PLAN

Flying Fish
Timber Sale No. 341-11-51

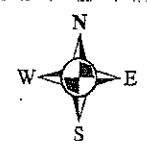
Portions of Section 01, T23S, R11W, W.M. &
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	7



1:6,000



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