



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Hunt Creek LSD Sale 341-02-12

District: Astoria

Date: 12/31/01

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$2,750,768.44	\$4,622.32	\$2,755,390.76
		<b>Project Work</b>	(\$442,246.00)
		<b>Advertised Value</b>	\$2,313,144.76



# Timber Sale Appraisal Timber Description Hunt Creek LSD Sale 341-02-12

"STEWARDSHIP IN FORESTRY"

**District:** Astoria

**Location:** Sections 4, 5, & 9, T7N, R6W, and Sections 28, 29, 32, & 33, T8N, R6W, W.M., Clatsop County

**Date:** 12/31/01

**Stand Stocking:** 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	19	0	99
Western Hemlock / Fir	15	0	98
Sitka Spruce	13	0	95
Red Cedar	18	0	95
Alder (Red)	11	0	98

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Red Cedar	Alder (Red)	Total
3P	12	0	0	0	0	12
SM	370	184	0	0	0	554
2S	3,695	2,394	121	0	0	6,210
3S	1,248	1,336	92	1	0	2,677
4S	272	277	40	0	0	589
Utility	0	0	0	0	37	37
CR 8" - 14"	0	0	0	0	39	39
<b>Total</b>	<b>5,597</b>	<b>4,191</b>	<b>253</b>	<b>1</b>	<b>76</b>	<b>10,118</b>

**Comments:** Pond Values Used: 4th Quarter 2001

Anticipated Log Markets: Mist (D-fir); Estacada (Hemlock); Longview (Alder)



# Timber Sale Appraisal

## Logging Conditions

### Hunt Creek LSD

### Sale 341-02-12

"STEWARDSHIP IN FORESTRY"

<b>Combination#: 1</b>	Douglas - Fir	2.36%	
	Western Hemlock / Fir	12.91%	
	Sitka Spruce	28.28%	
	Alder (Red)	72.21%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding</b> Yes
<b>Logging System:</b>	Cut To Length		<b>Process:</b> Harvester Head Delimiting
<b>Tree Size:</b>	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF		
<b>Loads/Day:</b>	4		<b>Bd. Ft./Load:</b> 3,200
<b>Cost/MBF:</b>	\$204.74		
<b>Machines:</b>			
	Forwarder		
	Harvester		
<b>Combination#: 2</b>	Douglas - Fir	96.01%	
	Western Hemlock / Fir	85.50%	
	Sitka Spruce	69.91%	
	Red Cedar	100.00%	
	Alder (Red)	25.89%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding</b> Yes
<b>Logging System:</b>	Shovel		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 4,800
<b>Cost/MBF:</b>	\$80.61		
<b>Machines:</b>			
	Shovel Logger		
<b>Combination#: 3</b>	Douglas - Fir	1.63%	
	Western Hemlock / Fir	1.59%	
	Sitka Spruce	1.82%	
	Alder (Red)	1.89%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding</b> No
<b>Logging System:</b>	Cable: Small Tower <=40		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 4,000
<b>Cost/MBF:</b>	\$107.42		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Small)		



# Timber Sale Appraisal

## Logging Costs

### Hunt Creek LSD

### Sale 341-02-12

"STEWARDSHIP IN FORESTRY"

Date: 12/31/01

Operating Seasons: 2.0

Profit & Risk: 15%

Project Costs: \$442,246

Other Costs (P/R): \$75,760

Slash Disposal: \$0

Other Costs: \$9,160

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Road Maintenance: \$3.26

#### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	5.0
Western Hemlock / Fir	\$0.00	2.0	4.0
Sitka Spruce	\$0.00	2.0	3.5
Red Cedar	\$0.00	2.0	3.5
Alder (Red)	\$0.00	4.0	3.0

**Local Pond Values**

<b>Date</b>	<b>Species</b>	<b>Grade</b>	<b>Value</b>
12/31/01	Douglas - Fir	3P	\$740.00
12/31/01	Douglas - Fir	SM	\$580.00
12/31/01	Douglas - Fir	2S	\$530.00
12/31/01	Douglas - Fir	3S	\$495.00
12/31/01	Douglas - Fir	4S	\$430.00
12/31/01	Western Hemlock / Fir	SM	\$375.00
12/31/01	Western Hemlock / Fir	2S	\$360.00
12/31/01	Western Hemlock / Fir	3S	\$330.00
12/31/01	Western Hemlock / Fir	4S	\$295.00
12/31/01	Sitka Spruce	2S	\$355.00
12/31/01	Sitka Spruce	3S	\$320.00
12/31/01	Sitka Spruce	4S	\$305.00
12/31/01	Red Cedar	3S	\$850.00
12/31/01	Alder (Red)	Utility	\$195.00
12/31/01	Alder (Red)	CR 8" - 14"	\$435.00



# Timber Sale Appraisal Logging Costs Breakdown Hunt Creek LSD Sale 341-02-12

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Red Cedar	Alder (Red)
<b>Logging</b>	83.98	97.06	116.20	80.61	170.75
<b>Road Maintenance</b>	3.29	3.33	3.43	3.43	3.33
<b>Fire Protection</b>	0.54	0.54	0.54	0.54	0.54
<b>Hauling</b>	30.96	58.67	69.16	69.16	39.13
<b>Other (P/R appl.)</b>	7.49	7.49	7.49	7.49	7.49
<b>Profit &amp; Risk</b>	18.94	25.06	29.52	24.18	33.19
<b>Slash Disposal</b>	0.00	0.00	0.00	0.00	0.00
<b>Scaling</b>	2.00	2.00	2.00	2.00	2.00
<b>Other</b>	0.91	0.91	0.91	0.91	0.91
<b>Total</b>	148.11	195.06	229.25	188.32	257.34

<b>Amortization</b>	0.00	0.00	0.00	0.00	0.00
<b>Pond Value</b>	521.09	346.80	334.37	850.00	318.16
<b>Stumpage</b>	372.98	151.74	105.12	661.68	60.82
<b>Amortized</b>	0.00	0.00	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Hunt Creek LSD Sale 341-02-12

**Amortized**

	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Red Cedar	Alder (Red)
<b>MBF</b>	0.00	0.00	0.00	0.00	0.00
<b>Value</b>	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	0.00	0.00	0.00	0.00	0.00

**Unamortized**

	Douglas - Fir	Western Hemlock / Fir	Sitka Spruce	Red Cedar	Alder (Red)
<b>MBF</b>	5,597.00	4,191.00	253.00	1.00	76.00
<b>Value</b>	372.98	151.74	105.12	661.68	60.82
<b>Total</b>	2,087,569.06	635,942.34	26,595.36	661.68	4,622.32

**Gross Timber Sale Value**

**Recovery \$2,755,390.76**

Prepared by: Tom Scoggins

Date: 12/31/01

District: Astoria

Phone: (503) 325-5451

**Hunt Creek LSD Timber Sale  
341-02-12  
Summary of "Other Costs"**

Other Costs Plus P & R:

Branding & Painting Logs	\$2/MBF x 10,118 MBF =	\$20,236
Automark Tree Selection	\$2/MBF x 7,238 MBF =	14,476
Skid Trail Layout	\$3/MBF x 8,192 MBF =	24,576
Directional Felling/Understory Protection	\$2/MBF x 7,356 MBF =	14,712
Line Pulling (6 acres)	\$5/MBF x 100 MBF =	500
Logger's Choice Road Const.		= 1,000
Pile Landings in Area 10	\$65/hour x 4 hours =	<u>260</u>
TOTAL Costs Plus P & R		= \$75,760

Other Costs – No P & R:

Top 10 Trees in Area 10	\$30/tree x 10 trees =	\$ 300
Excavator Slash Piling	\$95/hour x 88 hours =	8,360
Excavator Move-in	\$500/move x 1 move =	<u>500</u>
TOTAL Costs – No P & R		= \$ 9,160

Appraisal Page 7



**SUMMARY OF ALL PROJECT COST**

**SALE NAME:** Hunt Creek LSD

**NEW CONSTRUCTION:**

Project No.	Road segment	Length/Sta	Cost
1	1A-1B, 1C-1D, 2A-2B, 3A-3B, 3C-3D, 6A-6B, 9A	48.70	\$39,220.00
<b>TOTALS</b>		48.70 0.92 Miles	\$39,220

**ROAD IMPROVEMENT:**

Project No.	Road segment	Length/Sta	Cost
1	11-12, 13-14, 15-16, 17-18, 19-110, 111-112, 113-114, 115-116, 117-118, 119	344.80	\$93,082
<b>TOTALS</b>		344.80 6.53 Miles	\$93,082

**SPECIAL PROJECTS:**

Project No.	Description	Cost
2	Vacating V1-V2, V3-V4	\$5,127
3	Paved Highway Approach	\$7,182
4	Northrup Ridge Rock Crushing - 26,000 CY	\$276,362
5	Tree Removal at Northrup Ridge Quarry	\$7,125
	Project Road Maintenance-Project No. 4	\$1,992
	Project Road Maintenance-Project Nos. 1, 2, and 3	\$6,384
	<b>TOTAL</b>	<b>\$304,172</b>

**MOVE IN:**

Equipment	Cost
Excavator C325 x 2	\$1,800
Dozer D8	\$980
Skidder C518	\$520
Vibratory Roller	\$540
Dump Truck 12cy X 4	\$456
Dump Truck 20cy X 6	\$804
Grader 14G	\$540
Water Truck 2,500 gallon	\$132
<b>TOTAL</b>	<b>\$5,772</b>

**GRAND TOTAL** **\$442,246**

Compiled By: D. Goody; T. Scoggins *RT* Date: 7/19/01

**HUNT CREEK LSD  
FY 2002  
TIMBER CRUISE REPORT**

1. **Sale Area Location:** Area 1 – Located in the NW¼ of Section 28 and the NW¼ of Section 29, T8N, R6W; Area 2 – Located in the W½ of Section 28, T8N, R6W; Area 3 – Located in the W½ of Section 28 and portion of the NW¼ of Section 33, T8N, R6W; Area 4 - Located in the W½ of Section 28 and in the E½ of Section 29, T8N, R6W; Area 5 - Located in the SW¼ of Section 28, the SE¼ of Section 29, and the NW¼ of Section 33, T8N, R6W; Area 6 – Located in the W½ of Section 33 and NE¼ of Section 32, T8N, R6W; Area 7 – Located in the SW¼ of Section 33, T8N, R6W, and the N½ of Section 4, T7N, R6W; Area 8 – Located in the SE¼ of Section 32 and the SW¼ of Section 33, T8N, R6W, and portions of the NW¼ of Section 4 and NE¼ of Section 5, T7N, R6W; Areas 9 and 10 – Located in portions of Section 4, T7N, T6W; Area 11 – Located in portions of the SE¼ of Section 4 and NE¼ of Section 9, T7N, R6W, W.M., Clatsop County, Oregon.

All timber sale areas are posted with ODF "Timber Sale Boundary" signs, pink ribbon, (and blue paint along property lines and stream buffers). Area 12 R/W is posted with ODF "Right-of-Way Boundary" signs, and with blue paint outside of sale area boundaries.

2. **Fund Distribution:**           **Fund:**           BOF (100%)  
  **Tax Code:**       1-02 (100%)

3. **Sale Acreage by Area:**

Area	Gross Acreage	New R/W Acreage	Existing R/W Acreage	Stream Buffer Acreage	Net Acreage
1	27	1	0	2	24
2	27	1	0	1	25
3	57	1	7	2	47
4	26	0	1	0	25
5	56	0	2	0	54
6	114	1	1	0	112
7	92	0	4	1	87
8	59	0	3	0	56
9	70	0	2	2	66
10	31	0	1	0	30
11 Rock Pit	9	0	0	0	9
12 R/W	0	0	0	0	4
<b>TOTALS</b>	<b>568</b>	<b>4</b>	<b>21</b>	<b>8</b>	<b>539</b>

4. **Cruisers and Cruise Dates:** Areas 1 and 2 were cruised by John Tillotson. Area 3 was cruised by Tom Scoggins. Area 4 was cruised by Tillotson and Tom Scoggins. Areas 5 and 6 were cruised by Chuck Day, Ed Holloran, and Tom Scoggins. Areas 7 and 9 were cruised by Ed Holloran and Kraig Kirkpatrick. Area 8 was cruised by Becky Mittner and Chuck Day. Areas 10 and 11 were cruised by Dan Goody. Sale Areas 1-12 were cruised in March and April, 2001. Cruises for Area 12 R/W were calculated using all applicable sale area cruises and applying road R/W acreage.

- 5. Cruise Method and Computation:** All cruises used Corvallis MicroTechnology (CMT) data collectors, and were downloaded to the Atterbury Super A.C.E. program in District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

<u>AREAS</u>	<u>PROJECT</u>	<u>CRUISE TYPE</u>
1 & 2	HUNTCR	8N6WSEC28TYPE:TK01
3	HUNTCR	8N6WSEC28TYPE:TK03
4	HUNTCR	8N6WSEC28TYPE:TK04
5 & 6	HUNTCR	8N6WSEC28TYPE:TK05
7 & 9	HUNTCR	7N6WSEC4TYPE:TK07
8	HUNTCR	8N6WSEC32TYPE: TK08
10 & 11	HUNTCR	7N6WSEC2TYPE: TK10
12 R/W	HUNTCR	8N6WSEC28TYPES: ROW1 & ROW3

**6. Timber Description:**

Areas 1 and 2 (SDI 25 Commercial Thinning) are Douglas-fir/hemlock planted stands with some scattered hardwoods, 35 years old. Average diameter is about 13 inches DBH, averaging 249 trees per acre with a basal area of 214 ft<sup>2</sup> per acre. Volumes to remove in these commercial thinning areas average 5.6 MBF per acre, while retaining residual basal area of 120 ft<sup>2</sup> per acre. Trees to be removed average about 11 inches DBH, and 27 feet in merchantable height.

Area 3 (SDI 30, Marked Partial-Cut) is a Douglas-fir dominated, mixed conifer stand with some scattered hardwoods, averaging 71 years old. This area has been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 18 inches DBH, averaging 158 trees per acre with a basal area of 293 ft<sup>2</sup> per acre. Volumes to remove in this partial cut area average 20.2 MBF per acre, while retaining residual basal area of 180 ft<sup>2</sup> per acre. Trees to be removed average about 19 inches DBH, and 88 feet in merchantable height.

Area 4 (SDI 30 Partial-Cut) is a Douglas-fir stand with a hemlock component, and is approximately 71 years old. This area has been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 20 inches DBH, averaging 124 trees per acre with a basal area of 261 ft<sup>2</sup> per acre. Volumes to remove in this partial cut area average 18.7 MBF per acre, while retaining residual basal area of 140 ft<sup>2</sup> per acre. Trees to be removed average about 17 inches DBH, and 71 feet in merchantable height.

Areas 5 and 6 (SDI 30 Partial-Cut) are hemlock/Douglas-fir stands, averaging 77 years old. Most of Areas 5 and 6 have been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 20 inches DBH, averaging 131 trees per acre with a basal area of 296 ft<sup>2</sup> per acre. Volumes to remove in this partial cut area average 23.2 MBF per acre, while retaining residual basal area of 160 ft<sup>2</sup> per acre. Trees to be removed average about 18 inches DBH, and 77 feet in merchantable height.

Areas 7 and 9 (SDI 35 Partial-Cut) are Douglas-fir dominated mixed conifer stands, averaging 72 years old. Portions of these areas have been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. Average diameter is about 20 inches DBH, averaging 120 trees per acre with a basal area of 265 ft<sup>2</sup> per acre. Volumes to remove in this thinning area average 13.7 MBF per acre, while retaining residual basal area of 160 ft<sup>2</sup> per acre. Trees to be removed average about 18 inches DBH, and 67 feet in merchantable height.

Area 8 (SDI 35 Commercial Thinning) is a hemlock dominated mixed conifer stand, with some inclusions of hardwoods, approximately 55 years old. Average diameter is about 15 inches DBH, averaging 225 trees per acre with a basal area of 288 ft<sup>2</sup> per acre. Volume to remove in this thinning area averages 10.0 MBF per acre, while retaining residual basal area of 180 ft<sup>2</sup> per acre. Trees to be removed average about 12 inches DBH, and 46 feet in merchantable height.

Areas 10 and 11 (Clearcuts) are 74 year old and 50 year old conifer stands of predominantly Douglas-fir, with hemlock, cedar, and Pacific silver fir present. Portions of Area 10 have been previously thinned, creating a significant amount of naturally regenerated hemlock in the understory. The stands average 19" DBH, 78 feet in merchantable height, 234 ft<sup>2</sup> of basal area, and about 45.9 MBF per acre.

Area 12 R/W is comprised of most of the stand types within the sale areas. Therefore, this area includes varying sizes and stocking levels of Douglas-fir, hemlock, and alder.

**7. Statistical Analysis: (See also "Statistics Reports," attached.)**

Area	Target CV	Target SE%	Actual CV	Actual SE%
1 and 2	N/A	N/A	42.8	9.8
3*	N/A	N/A	45.7	10.0
4	N/A	N/A	22.4	6.2
5 and 6	N/A	N/A	24.2	3.6
7 and 9	N/A	N/A	28.7	4.6
8	N/A	N/A	57.9	13.3
10 and 11	45.0	8.0	57.2	8.6

\* Statistics for Area 3 reflect "take" tree values, since this was a marked stand. All other values are for the "total stand."

**8. Volumes by Species and Log Grades for All Sale Areas by MBF: (See "Species, Sort, Grade, Length % Type Reports" attached, of the thinning and regeneration harvest areas combined.)** Volumes do not include "ingrowth." The majority of defect and breakage was culled out during the cruise.

Species	DBH	Net Vol.	3P	SMIL	2 Saw	3Saw	4 Saw	D & B	% Sale
Douglas-fir	19"	5,597	12	370	3,695	1,248	272	91	55
Hemlock/True fir	15"	4,191		184	2,394	1,336	277	47	41
Sitka spruce	13"	253			121	92	40	23	3
Cedar	18"	1				1			<1
Alder	11"	76				39	37	1	1
<b>TOTAL</b>		<b>10,118</b>							

**9. Approvals:**

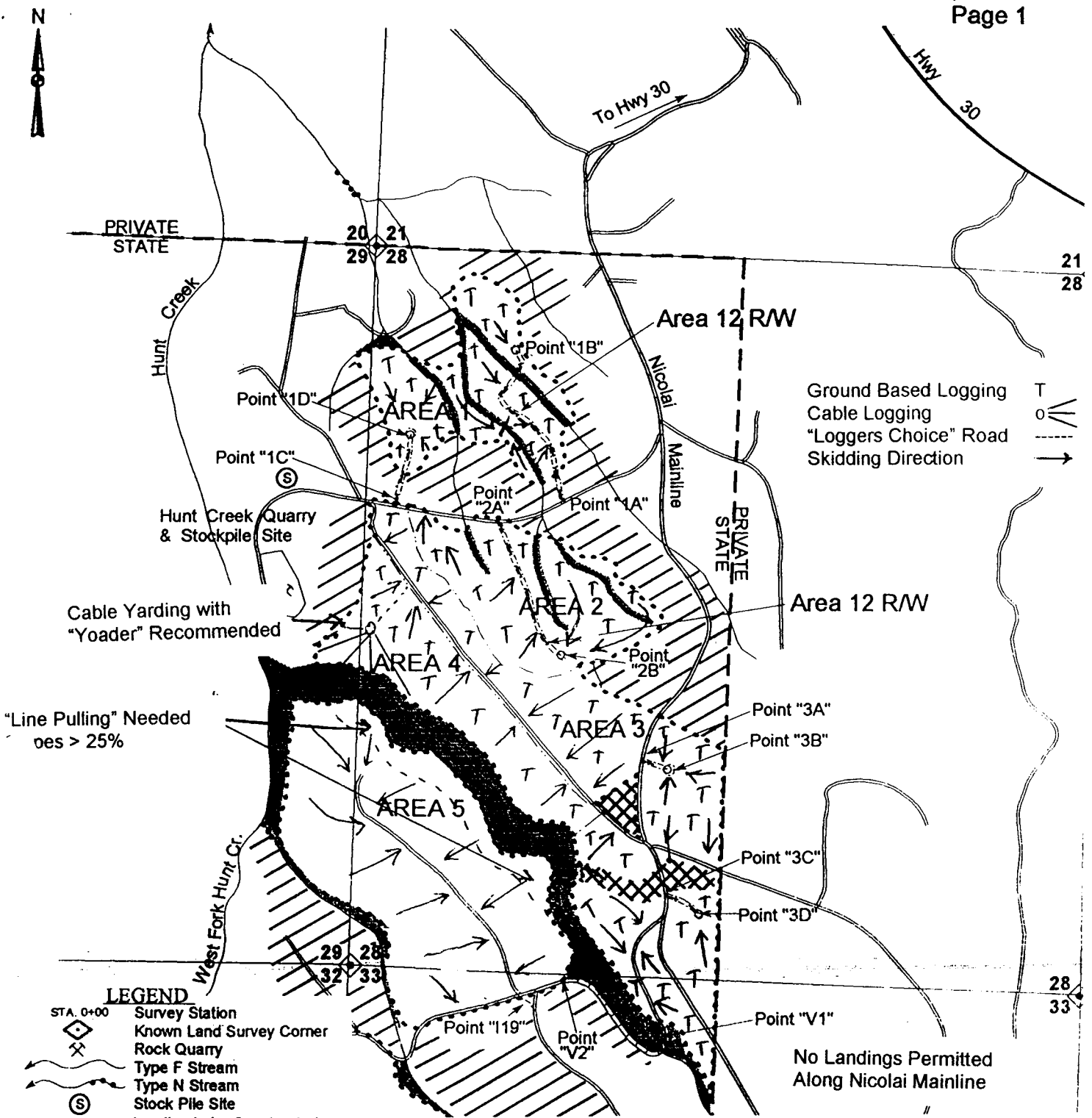
Prepared by: Dan Goody  
District Cruise Specialist

Date: May 25, 2001

Approved by: Tom Scoggins  
Unit Forester

Date: May 31, 2001

**10. Attachments:** Species, Sort, Grade Reports ( 9 pages)  
Statistics Reports ( 23 pages)  
Stand Table Reports ( 8 pages)  
Cruise Plans & Maps ( 8 ) (23 pages)



Ground Based Logging T  
 Cable Logging O  
 "Loggers Choice" Road - - -  
 Skidding Direction →

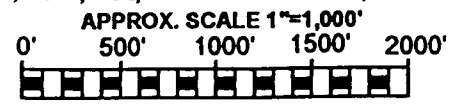
"Line Pulling" Needed  
 Areas > 25%

No Landings Permitted  
 Along Nicolai Mainline

- LEGEND**
- STA. 0+00 Survey Station
  - Known Land Survey Corner
  - Rock Quarry
  - Type F Stream
  - Type N Stream
  - Stock Pile Site
  - Landing to be Constructed
  - Ownership Boundary
  - TIMBER SALE BOUNDARY
  - Area Boundary
  - Right Of Way Boundary
  - Stream Buffer
  - Reforestation Area
  - POINT "A"
  - Point For Project Work
  - Unsurfaced Road
  - Surfaced Road
  - New Construction
  - State Highway
  - Road Vacation
  - Green Tree Retention Area
  - Wetland or Marsh
  - Gate
  - Unmarked/ Non-thinnable

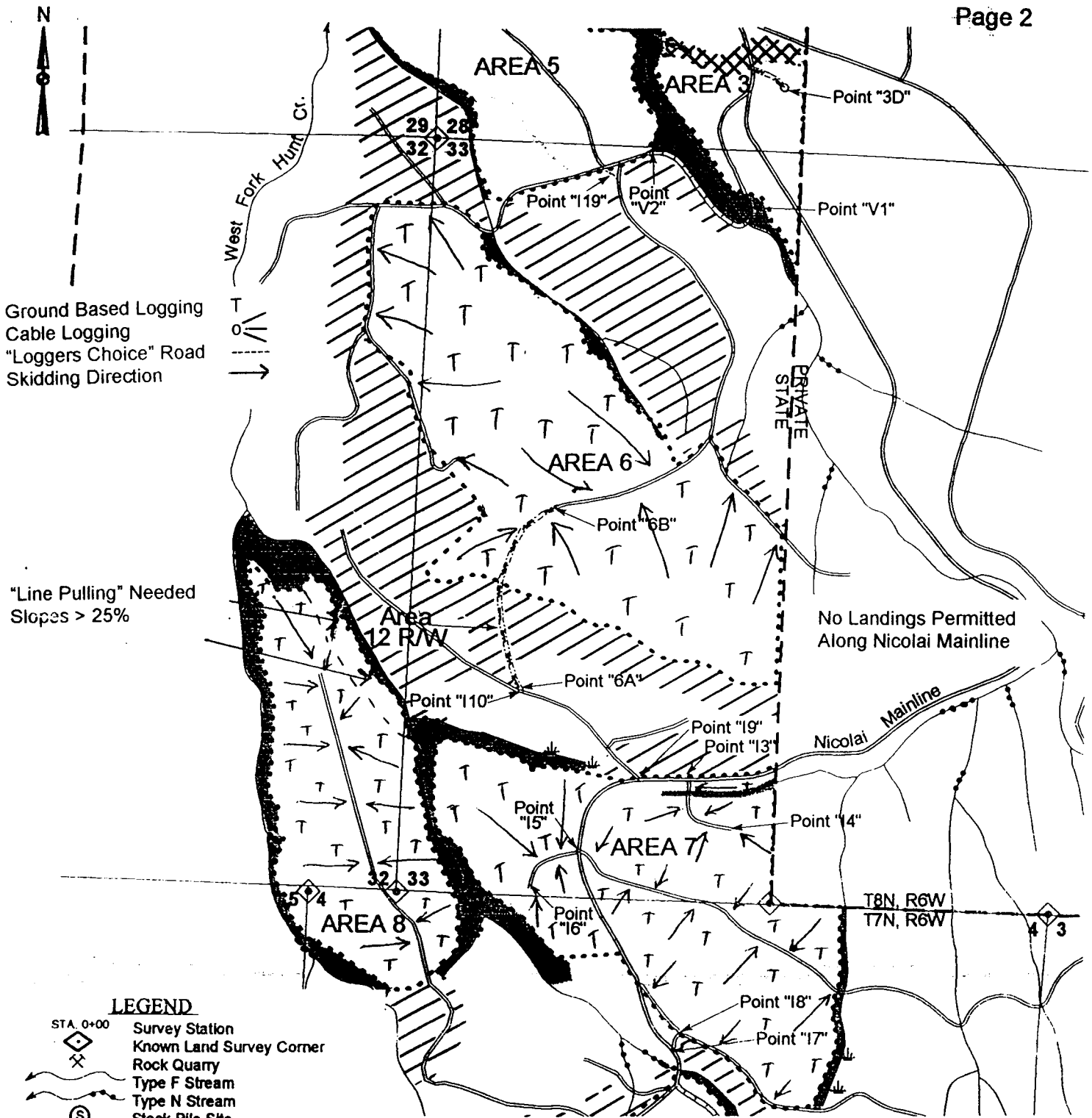
### Logging Plan Map

OF TIMBER SALE CONTRACT NO. 341-02-12  
 HUNT CREEK LSD  
 PORTIONS OF SECTIONS 4, 5 & 9, T7N, R6W,  
 AND PORTIONS OF SECTIONS 28, 29, 32 & 33,  
 T8N, R6W, WM, CLATSOP COUNTY, OREGON



**APPROXIMATE NET ACREAGE:**

AREA 1	24 ACRES
AREA 2	25 ACRES
AREA 3	47 ACRES
AREA 4	25 ACRES
AREA 5	54 ACRES
AREA 6	112 ACRES
AREA 7	87 ACRES
AREA 8	56 ACRES
AREA 9	66 ACRES
AREA 10	30 ACRES
AREA 11	9 ACRES
AREA 12 R/W	4 ACRES
<b>TOTAL</b>	<b>539 ACRES</b>

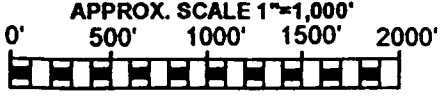


**LEGEND**

- STA. 0+00 Survey Station
- Known Land Survey Corner
- Rock Quarry
- Type F Stream
- Type N Stream
- Stock Pile Site
- Landing to be Constructed
- Ownership Boundary
- TIMBER SALE BOUNDARY
- Area Boundary
- Right Of Way Boundary
- Stream Buffer
- Reforestation Area
- POINT "A"
- Unsurfaced Road
- Surfaced Road
- New Construction
- State Highway
- Road Improvement
- Green Tree Retention Area
- Wetland or Marsh

**Logging Plan Map**

OF TIMBER SALE CONTRACT NO. 341-02-12  
 HUNT CREEK LSD  
 PORTIONS OF SECTIONS 4, 5 & 9, T7N, R6W,  
 AND PORTIONS OF SECTIONS 28, 29, 32 & 33,  
 T8N, R6W, WM, CLATSOP COUNTY, OREGON

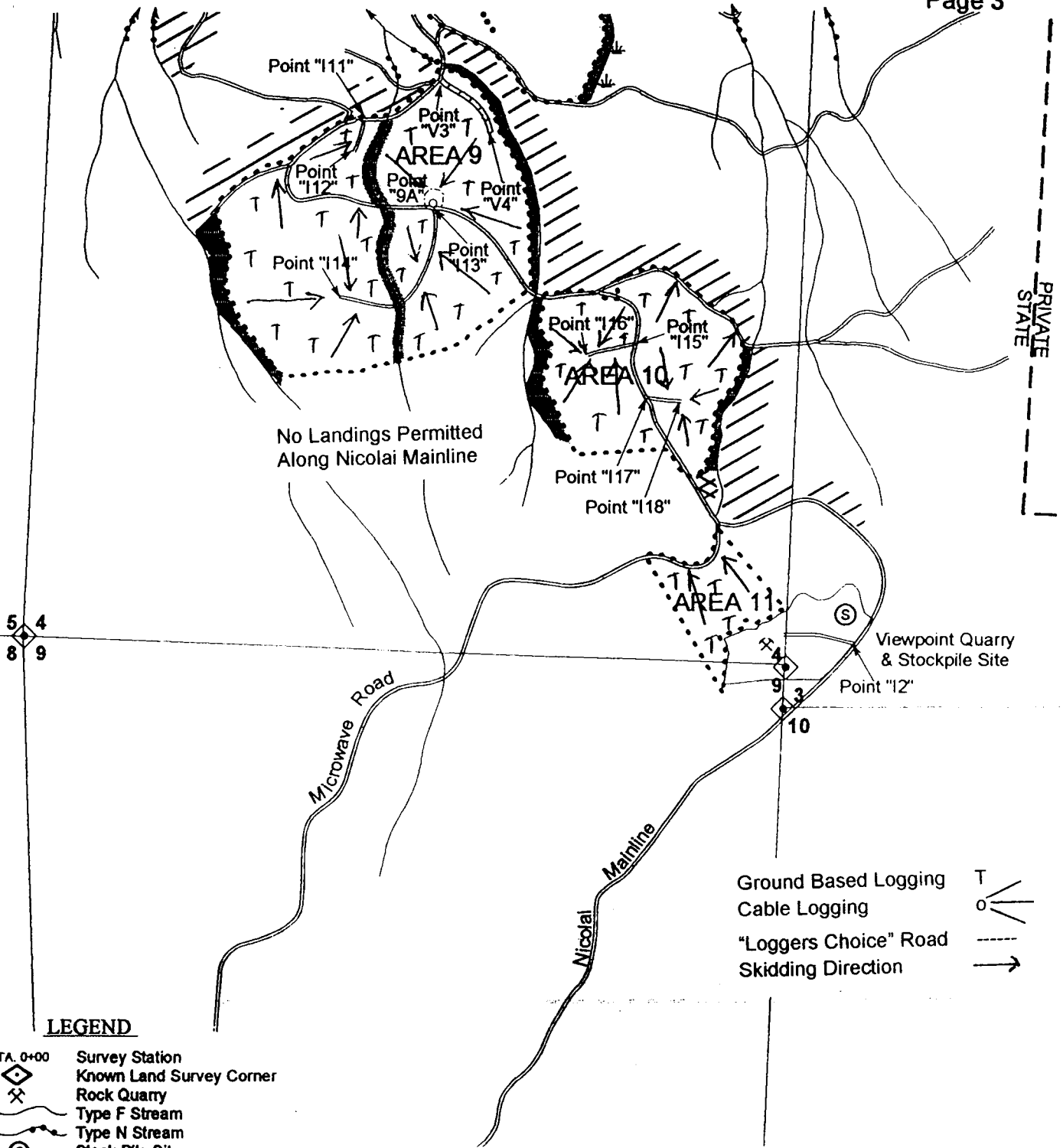


APPROXIMATE NET ACREAGE:

AREA 1	24 ACRES
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AREA 12 R/W	4 ACRES
<b>TOTAL</b>	<b>539 ACRES</b>



PRIVATE STATE



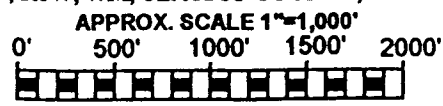
**LEGEND**

- STA. 0+00 Survey Station
- Known Land Survey Corner
- Rock Quarry
- Type F Stream
- Type N Stream
- Stock Pile Site
- Landing to be Constructed
- Ownership Boundary
- TIMBER SALE BOUNDARY
- Area Boundary
- Right Of Way Boundary
- Stream Buffer
- Reforestation Area
- POINT "A"
- Unsurfaced Road
- Surfaced Road
- New Construction
- State Highway
- Road Vacation
- Green Tree Retention Area
- Wetland or Marsh
- Quarry & Stockpile Area

- Ground Based Logging
- Cable Logging
- "Loggers Choice" Road
- Skidding Direction

**Logging Plan Map**

OF TIMBER SALE CONTRACT NO. 341-02-12  
 HUNT CREEK LSD  
 PORTIONS OF SECTIONS 4, 5 & 9, T7N, R6W,  
 AND PORTIONS OF SECTIONS 28, 29, 32 & 33,  
 T8N, R6W, WM, CLATSOP COUNTY, OREGON



APPROXIMATE NET ACREAGE:

AREA 1	24 ACRES
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AREA 3	47 ACRES
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AREA 5	54 ACRES
AREA 6	112 ACRES
AREA 7	87 ACRES
AREA 8	56 ACRES
AREA 9	66 ACRES
AREA 10	30 ACRES
AREA 11	9 ACRES
AREA 12 R/W	4 ACRES
<b>TOTAL</b>	<b>539 ACRES</b>

**FPA "Written Plan" for Hunt Creek Fill Vacating**  
**Hunt Creek LSD Timber Sale**  
**Portion of Section 33, T8N, R6W, W.M.**  
**Clatsop County, Oregon.**

**Protected Resources:**

A written plan is required for any activities within 100 feet of a Type F stream. The protected resource for this written plan is Hunt Creek, a large Type F stream. This large Type F stream crossing is located within NW¼ of Section 33, T8N, R6W, W.M., Clatsop County, Oregon.

**Current Condition:**

An existing 48" steel culvert located 0.3 miles on Hunt Creek Road prevents upstream fish passage. The existing fill and culvert shall be removed. The road/stream crossing shall be vacated and left in a stable condition that meets current FPA Guidance. Further detailed work specifications for this project are included as portions of road vacating project V1 to V2 of the Hunt Creek LSD timber sale as shown/described in Exhibits A and G.

**Basin Analysis:**

A basin analysis was performed for the stream/road crossing on Hunt Creek. Using GIS, a basin area was calculated and found to be approximately 715 acres. Also obtained from the analysis was the length of fish usable (Large Type F) stream above the impediment to fish passage. This length was approximated to be 3,200 feet.

The active stream channel width was measured and averaged 18 feet in width. A width of 20 feet was used during the design process. A 50-year peak flow for the basin was calculated using current FPA guidance and a 50-year recurrence interval of 250 cfs/mi<sup>2</sup>. The 50-year recurrence interval was interpolated off of a 50-year recurrence interval map. The equated 50-year flow for this basin was 279 cfs.

The existing substrate material above and below the existing structure is mostly composed of boulders/gravels/cobbles and sedimentary rock fines. Strata depths and classifications of materials below the existing structure are "unknown".

**Fill Removal Design:**

The excavated stream channel width will be 20 feet with developed streambanks excavated at a 1½ :1 slope ratio.

**Resource Protection Measures:**

- 1) Any in-stream work will be performed only during dry weather periods, low water stream flows and between July 1 and September 15, annually.
- 2) Machine activity in stream channels will be minimized. All excavation will be performed using a track-mounted excavator.
- 3) Waste materials will be placed in stable locations and sloped for drainage. Straw mulch shall be applied to all exposed areas, bare soils, and waste materials. Applied mulch shall be a minimum of 2 inches deep and provide a uniform cover.
- 4) Disturbance of riparian vegetation will be minimized.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the operations conducted within 100 feet of Type F streams. I agree to the protection measures listed on this plan:

Submitted by: \_\_\_\_\_  
Operator

Date: \_\_\_\_\_

Approved by: Thomas Scoppin  
State Lands Forester

Date: 7/19/01

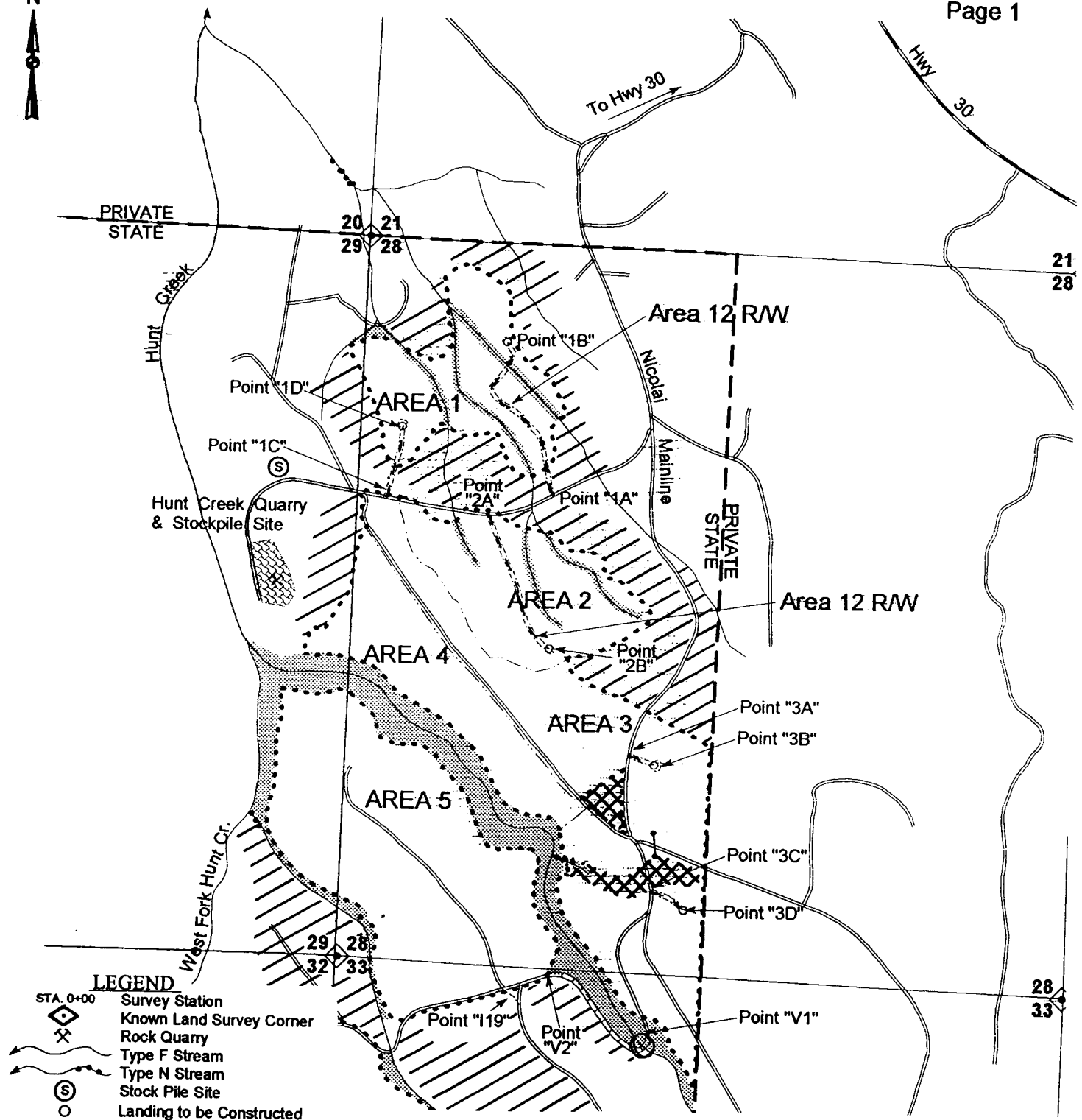
Approved by: SN  
Forest Practices Forester

Date: \_\_\_\_\_

Attachments: Exhibits A and G

Copies: PURCHASER, Operator, District File, Engineering Unit, Sunset Unit

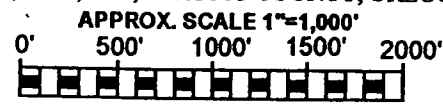




**LEGEND**

- Survey Station
- Known Land Survey Corner
- Rock Quarry
- Type F Stream
- Type N Stream
- Stock Pile Site
- Landing to be Constructed
- Ownership Boundary
- TIMBER SALE BOUNDARY
- Area Boundary
- Right Of Way Boundary
- Stream Buffer
- Reforestation Area
- POINT "A"
- Unsurfaced Road
- Surfaced Road
- New Construction
- State Highway
- Road Vacation
- Green Tree Retention Area
- Wetland or Marsh
- Gate
- Unmarked/ Non-thinnable

**Exhibit "A"**  
 OF TIMBER SALE CONTRACT NO. 341-02-12  
 HUNT CREEK LSD  
 PORTIONS OF SECTIONS 4, 5 & 9, T7N, R6W,  
 AND PORTIONS OF SECTIONS 28, 29, 32 & 33,  
 T8N, R6W, WM, CLATSOP COUNTY, OREGON



APPROXIMATE NET ACREAGE:

AREA 1	24 ACRES
AREA 2	25 ACRES
AREA 3	47 ACRES
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<b>TOTAL</b>	<b>539 ACRES</b>

EXHIBIT "G"

ROAD VACATING AND FILL REMOVAL SPECIFICATIONS: V1 to V2, V3 to V4

- (1) Culvert Removal. Remove drainage structures and culverts. Removed culverts shall be hauled to an approved refuse site off State Land.
- (2) Fill Removal and Stream Channel Development. Remove fills to the natural stream course level(s). Stream channel(s) shall be excavated/developed to specified widths. Developed stream banks shall be sloped at natural contours or no steeper than 1½ :1, as directed by STATE.

FPA Written Plan. STATE has prepared the required FPA Written Plan for this work and the Plan is on file at the Astoria District, Oregon Department of Forestry. Fill removal, stream channel development and/or in-stream work shall be conducted between July 1 and September 15, annually.

- (3) Use of Excavated Materials.
  - (a) Fill Excavation. Excavated materials shall be placed and compacted on the roadway a minimum of 10 feet from the top of the developed stream bank.
  - (b) Woody Debris may be incorporated in embankment material and/or placed on the surface of compacted embankment material.
- (4) Construct Waterbars at designated locations and as directed by STATE. Construct waterbars according to the specifications in Exhibit H.
- (5) Block Roads. Use excavated material from fill removals or sidecast pullback areas to block roads from vehicle access, as directed by STATE.
- (6) Erosion Control. All exposed excavation areas and waste materials shall be mulched with a straw mulch approved by STATE. Applied straw mulch shall be a minimum of 2 inches deep and provide a uniform cover.
- (7) Equipment. A minimum 1½ cubic-yard, track mounted excavator shall be used for all excavation, culvert removal, streambed preparation, road blocking, and waterbarring, unless otherwise approved in writing by STATE. All work shall be performed during dry conditions acceptable to STATE.

SPECIFIC INSTRUCTIONS

<u>Segment</u>	<u>Station</u>	<u>Work Description</u>
V1 to V2	0+00	Point V1. Block road.
	1+15	Type F Stream. Remove all fill material. Develop 20 foot stream channel.
	8+70	Point V2. Block road.
V3 to V4	0+00	Point V3. Remove culvert. Block road.
	5+00	Remove culvert.
	6+00	Point V4.

**FPA "Written Plan" for Harvest of State Timber**  
**Sale No. 341-02-12**  
**Hunt Creek LSD**

**Portions of Sections 4, 5, & 9, T7N, R6W; Portions of Sections  
28, 29, 32, & 33, T8N, R6W, W.M., Clatsop County, Oregon**

**Protected Resources:**

**Areas 3, 4 & 5:** East Fork of Hunt Creek (Type "F" stream) and several unnamed tributaries (all perennial Type "N" streams).

**Areas 7 & 8:** West Fork of Hunt Creek (Type "F" stream) and several unnamed tributaries (all perennial Type "N" streams).

**Specific Site Characteristics:**

**Areas 3, 4, & 5:** All of these sale areas are partial cut units. Type F stream buffers are posted 75 to 100 feet from the stream. Harvest prescriptions within the partial cuts calls for 140 to 160 square feet of basal area retention of the largest trees. Vegetation within the buffers consists of a combination of conifers, hardwoods, and shrubs.

**Areas 7 & 8:** Both of these sale areas are partial cut units. Type F stream buffers are posted 75 to 100 feet from the stream. Harvest prescriptions within the partial cuts calls for 160 to 180 square feet of basal area retention of the largest trees. Vegetation within the buffer is a combination of conifers, hardwoods, and shrubs.

**Tree and Vegetation Retention:**

In all of the specified harvest areas, all trees and shrubs within the posted buffers will be retained and left undamaged. Additionally, within the harvest units, upslope from the buffers, between 140 and 180 square feet of basal area retention of the largest trees will provide sufficient shade and large down wood potential.

**Practices:**

Along all of the above mentioned streams, as well as any live streams, the following practices are required, under the timber sale contract, to protect the streams and streamside areas:

- No trees will be felled within posted stream buffers (RMA's).
- Trees adjacent to the posted stream buffers (RMA's) will be felled away from or parallel to the streams to prevent trees from entering the aquatic areas.
- No ground based logging equipment will be permitted within the posted RMA's nor within 50 feet of any live stream.
- When cable logging is conducted nearby the RMA's, logging lines may cross, but will not be lowered into the RMA's during yarding, except during rigging. During rigging the lines must be pulled out of the RMA's when changing corridors.

- Cable corridors must be at least 100 feet apart where they cross the RMA's.
- Trees that fall or slide into Type F RMA's shall not be removed without prior approval from STATE.

**Attachments:** Exhibit A maps (2).

Submitted by: \_\_\_\_\_  
Operator/ Purchaser

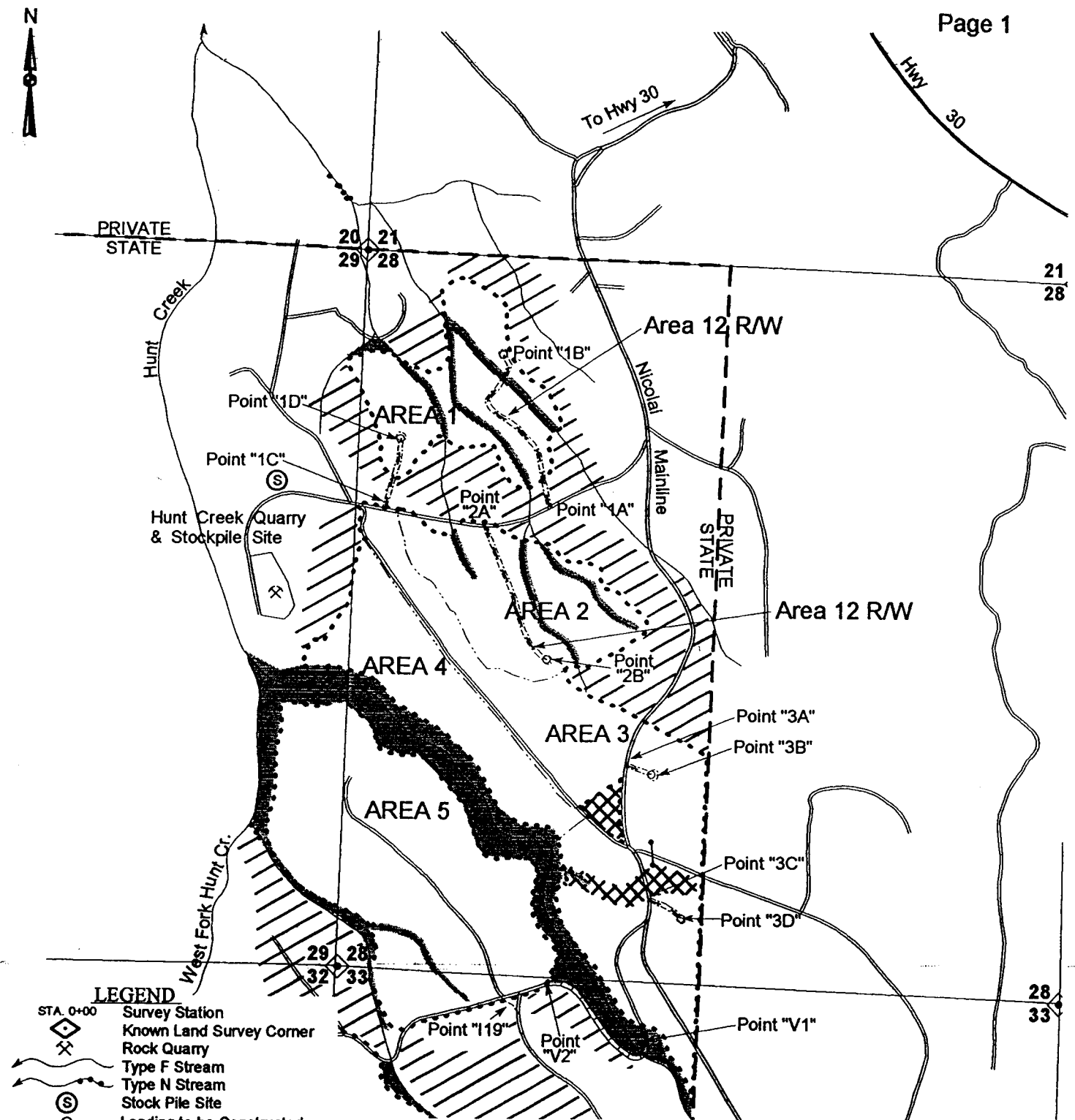
Date: \_\_\_\_\_

Approved by: Thomas Scoggins  
State Lands Forester

Date: 7/19/01

Approved by: HW  
Forest Practices Forester

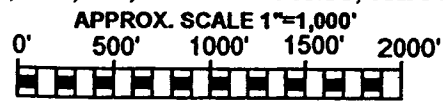
Date: \_\_\_\_\_



**LEGEND**

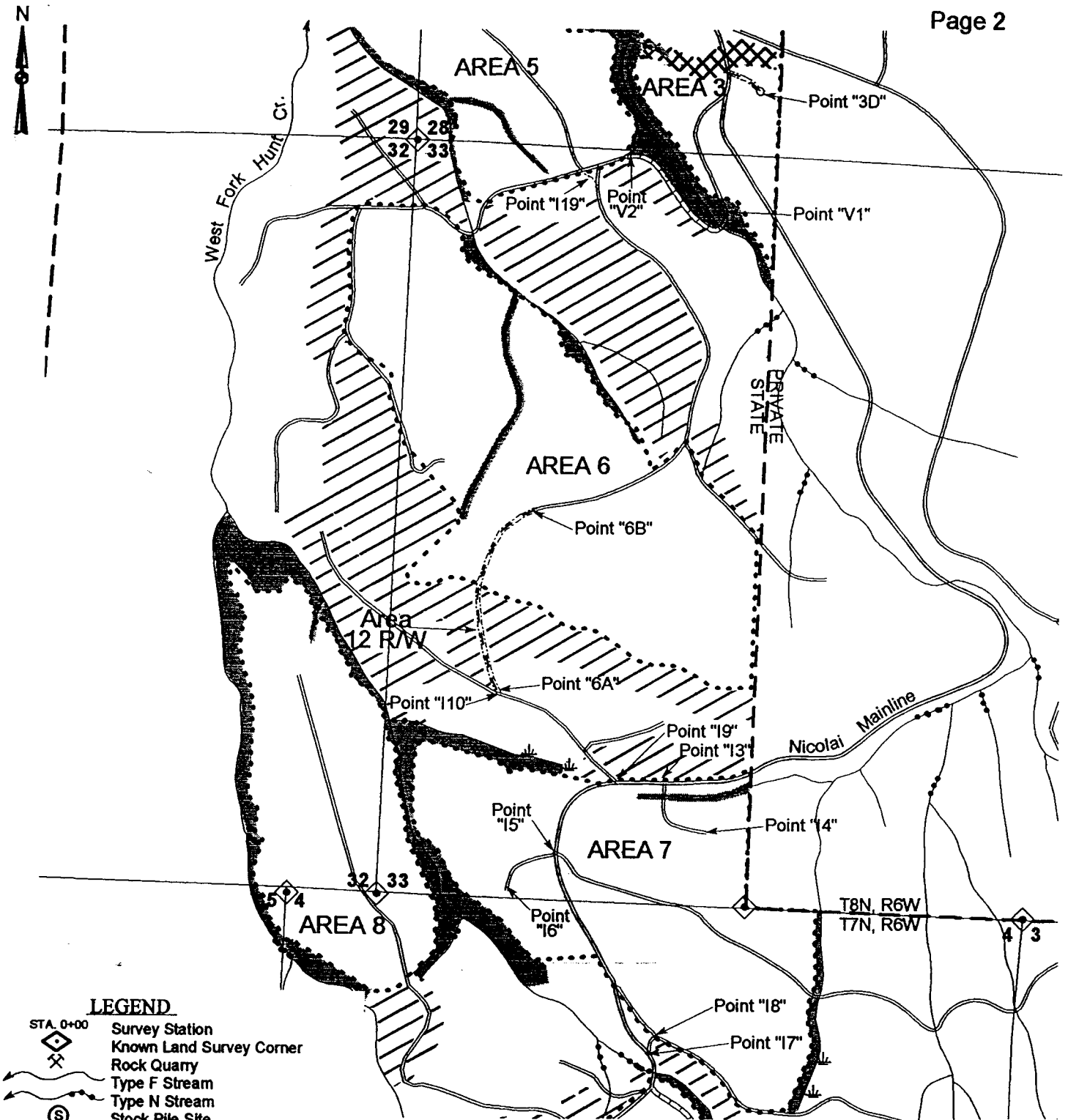
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- Type N Stream
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