



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Larson Headwaters Sale 341-03-96

District: Coos

Date: 4/30/03

| | Conifer | Hardwood | Total |
|------------------------------------|----------------|-------------------------|----------------|
| Gross Timber Sale Value | \$1,281,438.85 | \$991.00 | \$1,282,429.85 |
| | | Project Work | (\$68,522.74) |
| | | Advertised Value | \$1,213,907.11 |



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Timber Description Larson Headwaters Sale 341-03-96

District: Coos

Location: T24S, R12W, Sections 12 and 13
Coos County Oregon

Date: 4/30/03

Stand Stocking: 60%

| Species | Avg. DBH | Amortized % | Recovery % |
|---------------|----------|-------------|------------|
| Douglas - Fir | 25 | 0 | 95 |
| Alder (Red) | 16 | 0 | 90 |

| Volume by Grade | Douglas - Fir | Alder (Red) | Total |
|---------------------|---------------|-------------|-------|
| 3P | 48 | 0 | 48 |
| SM | 43 | 0 | 43 |
| 2S | 1,896 | 0 | 1,896 |
| 3S | 882 | 0 | 882 |
| CR 14" - 22" | 0 | 25 | 25 |
| Total | 2,869 | 25 | 2,894 |

Comments: Pond Values Used: 1st Quarter 2003



Timber Sale Appraisal Logging Conditions Larson Headwaters Sale 341-03-96

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 100.00%
 Alder (Red) 100.00%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Large Tower ≥ 70 **Process:** Manual Delimiting
Tree Size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
Loads/Day: 12 **Bd. Ft./Load:** 4,000
Cost/MBF: \$73.96

Machines:
 Log Loader (A)
 Tower Yarder (Large)



Timber Sale Appraisal Logging Costs Larson Headwaters Sale 341-03-96

"STEWARDSHIP IN FORESTRY"

Date: 4/30/03

Operating Seasons: 0.8

Profit & Risk: 12%

Project Costs: \$68,523

Other Costs (P/R): \$6,022

Slash Disposal: \$0

Other Costs: \$0

| Miles of Road | | | |
|---------------|----------------------|-----------------|-------|
| Dirt | Rock (Contractor) | Rock (State) | Paved |
| 1.0 | 1.0 | 0.0 | 0.0 |

Road Maintenance: \$0.00

Hauling Costs

| Species | \$/MBF | Trips/Day | MBF/Load |
|---------------|--------|-----------|----------|
| Douglas - Fir | \$0.00 | 3.0 | 4.5 |
| Alder (Red) | \$0.00 | 3.0 | 3.5 |



Timber Sale Appraisal Logging Costs Breakdown Larson Headwaters Sale 341-03-96

"STEWARDSHIP IN FORESTRY"

| Costs | Douglas - Fir | Alder (Red) |
|--------------------------|---------------|-------------|
| Logging | 73.96 | 73.96 |
| Road Maintenance | 0.86 | 0.91 |
| Fire Protection | 0.76 | 0.00 |
| Hauling | 35.89 | 48.67 |
| Other (P/R appl.) | 2.10 | 0.00 |
| Profit & Risk | 13.63 | 14.82 |
| Slash Disposal | 0.00 | 0.00 |
| Scaling | 2.00 | 2.00 |
| Other | 0.00 | 0.00 |
| Total | 129.20 | 140.36 |

| | | |
|---------------------|--------|--------|
| Amortization | 0.00 | 0.00 |
| Pond Value | 575.85 | 180.00 |
| Stumpage | 446.65 | 39.64 |
| Amortized | 0.00 | 0.00 |



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Larson Headwaters Sale 341-03-96

Amortized

| | Douglas - Fir | Alder (Red) |
|-------|---------------|-------------|
| MBF | 0.00 | 0.00 |
| Value | 0.00 | 0.00 |
| Total | 0.00 | 0.00 |

Unamortized

| | Douglas - Fir | Alder (Red) |
|-------|---------------|-------------|
| MBF | 2,869.00 | 25.00 |
| Value | 446.65 | 39.64 |
| Total | 1,281,438.85 | 991.00 |

Gross Timber Sale Value

Recovery \$1,282,429.85

Prepared by: Norma Kline

Date: 4/30/03

District: Coos

Phone: (541) 267-1758

Summary of "Other Costs" for Timber Sale Appraisals

Sale Name: Larson Headwaters

Additional "Other Cost" with additional profit and risk to be added:

| | <u>Units</u> | <u>Quantity</u> | <u>Cost/unit</u> | <u>Total Cost</u> |
|-----------------------------------|--------------|-----------------|------------------|-------------------|
| Felling | | | | |
| Directional Felling | MBF | 500 | \$ 2.00 | \$ 1,000.00 |
| | | | | \$ - |
| Yarding and Loading | | | | |
| Brand and paint logs | MBF | 2222 | \$ 1.00 | \$ 2,222.00 |
| Loader time for firewood stacking | Hours | 4 | \$ 75.00 | \$ 300.00 |
| Tree Topping | | | | |
| | Trees | 25 | \$ 100.00 | \$ 2,500.00 |

Miscellaneous Costs

| | | | |
|--------------------------------|-------------|-----------|------|
| Maintenance rock per section 5 | Cubic Yards | \$ 18.00 | \$ - |
| Safety Flagging and/or signing | per day | \$ 150.00 | \$ - |

Total additional "Other Cost" with additional profit and risk to be added

\$ 6,022.00

Additional "Other Cost" with no additional profit and Risk

| | <u>Units</u> | <u>Quantity</u> | <u>Cost/unit</u> | <u>Total Cost</u> |
|--------------------------------|--------------|-----------------|------------------|-------------------|
| Non-required road construction | Stations | | | \$ - |
| Non-required road rocking | Cubic Yards | | | \$ - |
| Stream clearance | Feet | | | \$ - |
| Scaling (high piece count) | MBF | | \$ 1.00 | \$ - |

Total additional "Other Cost" with no additional profit and Risk

\$ -

SUMMARY OF CONSTRUCTION COST

Larson Headwaters

Project No. 1A: Road and Landing Construction

Points: A to B Length: 430' Type: 14', no ditch

Clearing and Grubbing

..... 0.3 acres at \$790.00 \$ per acre = \$237.00

Total clearing and grubbing \$237.00

Excavation

| | | | | | |
|---------------------------------|------|--------------|----------|-----------|-------------|
| Drill and Shoot | 2309 | cubic yds at | \$3.00 | per cu yd | \$6,927.00 |
| Cat excavation/Shape waste area | 30 | hrs at | \$125.00 | per hr | \$3,750.00 |
| Excavation w/ excavator | 6754 | cubic yds at | \$1.70 | per cu yd | \$11,481.80 |
| Laborer | 80 | hrs at | \$30.00 | per hr | \$2,400.00 |

Total Excavation \$24,558.80

Hauling

| | | | | | |
|--|------|--------------|--------|-----------|------------|
| Endhaul/drift to waste area on ridge at STA 2+53 | 200 | cubic yds at | \$0.60 | per cu yd | \$120.00 |
| Endhaul to waste area at pt. D (0.2 mi RT) | 1200 | cubic yds at | \$0.75 | per cu yd | \$900.00 |
| Endhaul to waste area at pt. E (1.7 mi RT) | 5237 | cubic yds at | \$1.60 | per cu yd | \$8,379.20 |

Total Hauling \$9,399.20

Grade Road Surface

..... 1 hrs Grade @ \$75.00 per hour \$75.00

Total Grading \$75.00

Project 1A Cost \$34,270.00

Project 1B: Landing Construction

Point: C

Clearing and Grubbing

..... 0.2 acres at \$400.00 \$ per acre = \$80.00

Total clearing and grubbing \$80.00

Excavation

| | | | | | |
|---------------------------|---|--------|----------|--------|----------|
| Cat time for improvements | 4 | hrs at | \$125.00 | per hr | \$500.00 |
|---------------------------|---|--------|----------|--------|----------|

Total Excavation \$500.00

Project 1B Cost \$580.00

SUMMARY OF CONSTRUCTION COST

Larson Headwaters

Project No. 3a: Trail Butte Stockpile

Location: Trail Butte
Measured amount: 1000 cubic yards
Delivered amount: 1200 cubic yards (20% expansion)
Size: 1 1/2" - 0"

| | | |
|---|---------------|-----------|
| Cost per cubic yard at crusher: | \$7.00 | per cu yd |
| Haul cost per cubic yard (1.4 hr. RT): | \$4.67 | per cu yd |
| Piling and shaping cost per cubic yard: | <u>\$0.53</u> | per cu yd |

| | | |
|----------------------------|---------|-------------|
| Total cost per cubic yard: | \$12.20 | per cu yd |
| Total cubic yards: | 1200 | cubic yards |

Total Cost for Trail Butte Stockpile rock: \$14,640.00

Project No. 3b: Sullivan I Stockpile

Location: 3 mi on 3000 Rd
Measured amount: 1000 cubic yards
Delivered amount: 1200 cubic yards (20% expansion)
Size: 3/4" - 0"

| | | |
|---|---------------|-----------|
| Cost per cubic yard at crusher: | \$7.50 | per cu yd |
| Haul cost per cubic yard (1.0 hr. RT): | \$3.33 | per cu yd |
| Piling and shaping cost per cubic yard: | <u>\$0.53</u> | per cu yd |

| | | |
|----------------------------|---------|-------------|
| Total cost per cubic yard: | \$11.36 | per cu yd |
| Total cubic yards: | 1200 | cubic yards |

Total Cost for Sullivan I Stockpile rock: \$13,632.00

Project 4 cost \$28,272.00

Total Project Costs \$68,522.74

TIMBER SALE SUMMARY

Larson Headwaters

1. Type of sale: Final harvest; Recovery, Sealed Bid.

2. Boundary Lines: 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: This sale is 100% on CSL fund lands in Coos County.

4. Sale Acreage: The sale acreage is 51 acres. The acreage for the timber sale area was determined using orthophoto imagery on the ARCVIEW Geographic Information System program.

5. Volume by Species, Fund, and County: See attached table.

6. Grade (by percent):

| Species | 3 Peeler | Special Mill | 2 Saw | 3 Saw | 4 Saw/Camp | Utility |
|-------------|----------|--------------|-------|-------|------------|---------|
| Douglas-fir | 2% | 1% | 66% | 31% | --- | ---- |
| Hardwood | ---- | ---- | ---- | ---- | 100% | ---- |

7. Cruise: The sale area was variable plot cruised using the Big BAF cruise design, which consisted of 50 nested plots. Each plot consists of both a full 20 BAF count plot and a full 360 BAF measure plot. The 20 BAF count plot was used to tally the number of trees by species to determine the stand basal area. The 360 BAF plot was used to select trees to cruise for height, grade and defect. Thirty Big BAF trees were cruised at form point for diameter, height, grade and defect.

A. Cruise Summary Data:

| Diameter | Top Diameter | Form Point | Form Factor | Top Cr Dia. | CV % | SE % |
|----------|---------------|------------------------------|------------------------------------|-----------------------|------|------|
| D4H | 6" or 25% DBH | Conifer: 16' Hardwood: 4' | Estimated or measured on all trees | Con:6",25% Hdwd:8" | 34 | 7 |

B. Stand Summary:

Variable Plot Cruise

| Species | D4H | Trees per Acre | Basal Area (ft ² /ac) | MBF per acre |
|-------------|-----|----------------|----------------------------------|--------------|
| Douglas-fir | 22 | 90 | 242 | 42 |
| Hardwood | 11 | 35 | 23 | 2 |

C. Green Tree Retention: Green trees were designated by red W's within the sale unit as well as posted outside of the timber sale.

Green Tree Retention Marked within Timber Sale Area

| Species | No. | Volume |
|-------------|-----|--------|
| Douglas-fir | 5 | 4 |
| Hardwood | 0 | 0 |

Green Tree Retention Posted out of the Timber Sale Area

| Species | No. | Volume |
|-----------------|-----|--------|
| Douglas-fir | 91 | 35 |
| Red Alder | 39 | 2 |
| Red Cedar | 4 | 4 |
| Sitka Spruce | 2 | 2 |
| Western Hemlock | 4 | 2 |

D. Minor Species: Minor species were left as reserve trees as summarized below. The following table summarizes their approximate volume from the variable plot cruise reports. Red Cedar was not picked up in the timber cruise, but there are several present in the unit.

| Timber Sale Area | Hemlock | Sitka Spruce |
|------------------|---------|--------------|
| Tree Count | 30 | 20 |
| Average Diameter | 17 | 19 |
| Volume MBF | 7 | 7 |

8. Timber Description: The timber in this sale area is moderately stocked second-growth Douglas-fir approximately 120 years old. There is an approximately 2 acre patch of blowdown in the southern portion of area I, resulting from the February 2002 windstorm. This blowdown is accounted for in the cruise report by an additional cull and breakage percentage.

9. Topography: The unit has steep, dissected slopes over 65%.

10. Logging Method: The sale will be cable logged uphill using full suspension when adequate deflection is available, otherwise single-end suspension is required. A motorized carriage may be required to obtain the necessary suspension. Artificial guyline anchors may need to be installed for yarding portions of the sale area as approved in the operations plan.

11. Access: From Coos Bay, enter the forest via the the Haynes Inlet road to Larson Way. Continue straight on Larson Way for approximately 3 miles, Larson Way turns into the State 3000 road. Continue up the 3000 for about 4 miles to the Timber Sale Area.

12. Projects:

Project No. 1: Road and Landing Construction

Project No. 2: Road Widening

Project No. 3: Rock Stockpiles

NET VOLUMES AND ACREAGE

| SALE AREA & SPECIES | | Tree cnt. 100% Units | NET VOLUMES (MBF) | | | | | | | Vol. per Acre |
|---------------------|-------|----------------------|--------------------|-------|-----|---------|-------|------|-------------|---------------|
| | | | By County and Fund | | | | | | Total Vols. | |
| Area | Spec | | Coos | | | Douglas | | | | |
| | | CSL | BOF | Total | CSL | BOF | Total | | | |
| I | D-fir | 1965 | | 1965 | | | 0 | 1965 | 54.58 | |
| | Hdwd | 18 | | 18 | | | 0 | 18 | 0.5 | |
| II | D-fir | 904 | | 904 | | | 0 | 904 | 60.26 | |
| | Hdwd | 7 | | 7 | | | 0 | 7 | 0.5 | |
| TOTALS | | 2894 | 0 | 2894 | 0 | 0 | 0 | 2894 | | |

TOTAL SALE VOLUME BY SPECIES

Douglas-fir 2869 MBF
 Hardwoods 25 MBF

Report by: Larson Headwaters

Date: 1/22/2003

Unit For. _____
 Date _____

Asst. Dist. For. Meg Kreininger 3/22/2003
 Date

**UTILITY VOLUME NOT SHOWN TO PROVIDE FOR RETENTION OF DOWN LOGS
 NO INGROWTH INCLUDED**

ACREAGE BY COUNTY (to nearest acre)

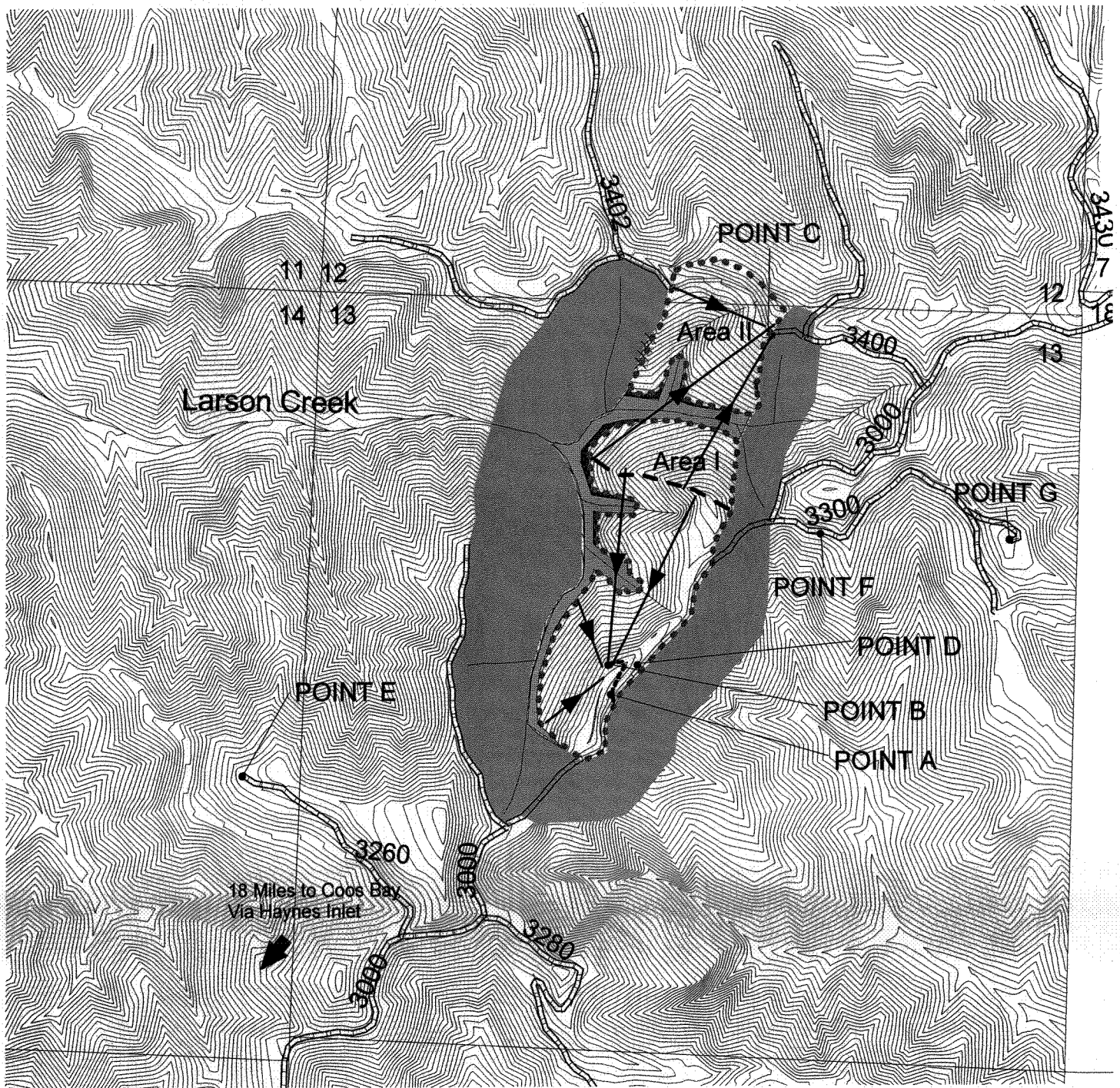
| Sale Area | Coos County | | | | | | Douglas County | | | | | | TOTAL ACRES |
|-----------|-------------|------------|-----------|------------|------------|------------|----------------|------------|------------|------------|------------|------------|-------------|
| | CSL | | | BOF | | | CSL | | | BOF | | | |
| | Conifer cc | Conifer pc | Hard wood | Conifer cc | Conifer pc | Hard woods | Conifer cc | Conifer pc | Hard woods | Conifer cc | Conifer pc | Hard woods | |
| I | 36 | | | | | | | | | | | | 36 |
| II | 15 | | | | | | | | | | | | 15 |
| SUM | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |

cc- clearcut


















pc- partial cut

BOF - Board of Forestry

CSL - Common School Land



Larson Headwaters Logging Plan

-  Setting
-  Yarding
-  Purchaser Maintained Road
-  Boundary
-  Timber sale boundary.shp
-  Project Points
-  × Green Tree Retention
-  • End of Fish
-  State Maintained Road
-  Draws
-  Streams
-  New Construction
-  Reforestation Area
-  Sections
-  Green tree retention group.shp
-  Stream Buffer
-  2412.shp



WRITTEN PLAN

SALE NAME: Larson Headwaters

LOCATION: Portions of Sections 12 and 13, T24S R12W, Coos County, Oregon

LANDOWNER: Oregon Department of Forestry; 63612 Fifth Road, Coos Bay, Or.

CONTRACT PURCHASER: _____

NOTIFICATION NO: _____

FILE: I:\Timber Sales\FPAPLANS\Larson Hdwters.doc (1/8/03)

SITUATION AND PROTECTED RESOURCE

The Larson Headwaters timber sale is located in the *Tyee Core Area*. Slope and headwalls within the sale area are in excess of 70% gradient and so are classed as high risk sites. The entire sale area is designated as high hazard with the exception of the ridge tops and the location of the spur A-B location. The protected resource is the downstream Type F Larson Creek.

LAYOUT

Landings have been provided to enable best possible deflection for suspension of logs while yarding the sale area.

FELLING AND BUCKING

1. Trees shall be directionally felled parallel to or away from stream riparian management areas (RMA's) as feasible.
2. High stumps shall be left as needed to minimize accumulation of logs in stream channels.

YARDING

1. Operator will use a machine and logging system capable of fully suspending logs.
2. Operator will fully suspend logs when sufficient deflection is available.

OPERATIONS PLAN. Purchaser shall attach a yarding plan indicating landing locations, machinery and procedures to be used obtain adequate suspension in the sale area and to minimize impacts during the felling process.

SLOPE PROTECTION. Purchaser shall establish or maintain plant species that will enhance slope stability in harvested areas where needed to minimize the risk of erosion.

O.D.F. REPRESENTATIVE

DATE: _____

PURCHASER REPRESENTATIVE

DATE: _____

OPERATOR REPRESENTATIVE (if listed on notification)

DATE: _____

APPROVED BY: _____
FOREST PRACTICES/UNIT FORESTER

DATE: _____