



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Rackheap Falls Sale 341-07-22

District: Tillamook

Date: 6/12/06

| | Conifer | Hardwood | Total |
|--------------------------------|----------------|-------------------------|----------------|
| Gross Timber Sale Value | \$2,274,234.38 | \$124,330.64 | \$2,398,565.02 |
| | | Project Work | (\$313,950.00) |
| | | Advertised Value | \$2,084,615.02 |



Timber Sale Appraisal

Timber Description

Rackheap Falls

Sale 341-07-22

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Sections 10, 14, 15, 16, and 23, T3N, R9W, W.M., Tillamook County, Oregon.

Date: 6/12/06

Stand Stocking: 80%

| Species | Avg. DBH | Amortized% | Recovery% |
|-----------------------|----------|------------|-----------|
| Douglas - Fir | 20 | 0 | 95 |
| Western Hemlock / Fir | 16 | 0 | 95 |
| Sitka Spruce | 12 | 0 | 95 |
| Alder (Red) | 16 | 0 | 90 |

| Volume by Grade | Douglas - Fir | Western Hemlock / Fir | Sitka Spruce | Alder (Red) | Total |
|-----------------|---------------|-----------------------|--------------|-------------|-------|
| SM | 396 | 24 | 0 | 0 | 420 |
| 2S | 2,504 | 695 | 0 | 0 | 3,199 |
| 3S | 1,479 | 2,529 | 46 | 0 | 4,054 |
| 3S 10" - 11" | 0 | 0 | 0 | 99 | 99 |
| 3S 12"+ | 0 | 0 | 0 | 49 | 49 |
| 4S | 252 | 609 | 14 | 0 | 875 |
| 4S 8" - 9" | 0 | 0 | 0 | 246 | 246 |
| Total | 4,631 | 3,857 | 60 | 394 | 8,942 |

Comments: Pond Values Used: 1st Quarter Calendar Year 2006.

Hauling costs adjusted to make equivalent to \$700 daily truck cost.

Hauling Cost Calculation Douglas-fir:

\$700 - % Profit & Risk ($\$700 / 1.20$) = \$583 Daily Truck Cost.

\$583 Daily Truck Cost / (2 trips per day x 3.8 mbf per load) = \$76.71/MBF Gross Hauling Cost.

\$76.71/MBF Gross Hauling Cost - Recovery Percentage Adjustment

($\$76.71 - \$3.84 [5\%]$) = \$72.87/MBF Net Hauling Cost.

Hauling Cost Calculation Other Conifers:

\$700 - % Profit & Risk ($\$700 / 1.20$) = \$583 Daily Truck Cost.

\$583 Daily Truck Cost / (3 trips per day x 3.4 mbf per load) = \$57.16/MBF Gross Hauling Cost.

\$57.16/MBF Gross Hauling Cost - Recovery Percentage Adjustment

($\$57.16 - \$2.86 [5\%]$) = \$54.30/MBF Net Hauling Cost.

Hauling Cost Calculation Red Alder:

\$700 - % Profit & Risk ($\$700 / 1.20$) = \$583 Daily Truck Cost.

\$583 Daily Truck Cost / (3 trips per day x 3.2 mbf per load) = \$60.73/MBF Gross Hauling Cost.

\$60.73/MBF Gross Hauling Cost - Recovery Percentage Adjustment

($\$60.73 - \$6.07 [10\%]$) = \$54.66/MBF Net Hauling Cost.

Other Costs (w/ Profit and Risk added):

Brand and Paint: $\$2/\text{MBF} \times 8942 \text{ MBF} = \$17,884$

Snag Creation: $202 \text{ snags} \times \$40/\text{snag} = \$8,080$

TOTAL Other Costs (w/ Profit & Risk added) = \$25,964

Other Costs (No Profit and Risk added):

Slash piling and sorting: 40 acres - \$110/ hour for 50 acres: 0.8 hours = \$88

Non-Project Road #3 - Swing Road: Swing logs @ \$15/MBF x 98 MBF = \$1,470

Non-Project Roads - (Includes grass seeding disturbed soil):

Road #1: 5 Stations x \$160/Sta. + \$4.01 rocking/cu.yd x 353 cu.yds = \$2,215.53

Road #2: 4 Stations x \$160/Sta. + \$4.16 rocking/cu.yd x 284 cu.yds = \$1,821.44

Road #3: 3 Stations x \$100/Sta. (dirt spur for swing road) = \$300.00

Road #4: 3.5 Stations x \$160/Sta. + \$3.31 rocking/cu.yd x 271 cu.yds = \$1,457.01

Road #5: 3.5 Stations x \$160/Sta. + \$3.09 rocking/cu.yd x 259 cu.yds = \$1,360.31

Road #6: 5 Stations x \$120/Sta. + \$2.80 rocking/cu.yd x 334 cu.yds = \$1,535.20

TOTAL Other Costs (No Profit & Risk added) = \$ 10,247

ROAD MAINTENANCE

Grading -Once per 2MMbf

Maintenance $\$600/\text{Mile} \times 3.4 \text{ miles} \times 4.5 \text{ gradings}/(8942) = \$ 1.03$

Compacting and ditch cleaning $17.75/\text{sta.} \times 289 \text{ stations} = \$ 0.57$

Maintenance rock (Includes move in)

Crushed ($\$4.00/\text{yard} \times 5.5 \text{ miles} \times 10 \text{ cy/MMBF}/\text{mile} \times 8.9 \text{ MMBF})/8942 = \0.22

Pit-run ($\$4.00/\text{yard} \times 4.7 \text{ miles} \times 25 \text{ cy/MMBF}/\text{mile} \times 7.0 \text{ MMBF})/8942 = \0.37

TOTAL MAINTENANCE COST = \$2.19

Western Red Cedar Stumpage = Pond Value minus Logging Cost

$\$710/\text{MBF} = \$985/\text{MBF} - \$275/\text{MBF}$

Noble Fir Stumpage = Pond Value minus Logging Cost

$\$110/\text{MBF} = \$410/\text{MBF} - \$300/\text{MBF}$



Timber Sale Appraisal

Logging Conditions

Rackheap Falls

Sale 341-07-22

"STEWARDSHIP IN FORESTRY"

| | | | |
|--------------------------|--|--------|-----------------------------------|
| Combination#: 1 | Douglas - Fir | 2.67% | |
| | Western Hemlock / Fir | 21.11% | |
| | Alder (Red) | 4.24% | |
| Yarding Distance: | Medium (800 ft) | | Downhill Yarding: No |
| Logging System: | Cable: Small Tower <=40 | | Process: Stroke Delimber |
| Tree Size: | Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF | | |
| Loads/Day: | 4 | | Bd. Ft./Load: 3,300 |
| Cost/MBF: | \$210.06 | | |
| Machines: | Log Loader (A) | | |
| | Stroke Delimber (A) | | |
| | Tower Yarder (Small) | | |
| Combination#: 2 | Douglas - Fir | 28.10% | |
| | Western Hemlock / Fir | 33.61% | |
| | Sitka Spruce | 12.00% | |
| | Alder (Red) | 15.13% | |
| Yarding Distance: | Short (400 ft) | | Downhill Yarding: Yes |
| Logging System: | Shovel | | Process: Manual Delimiting |
| Tree Size: | Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF | | |
| Loads/Day: | 9 | | Bd. Ft./Load: 3,400 |
| Cost/MBF: | \$76.95 | | |
| Machines: | Shovel Logger | | |
| Combination#: 3 | Douglas - Fir | 45.13% | |
| | Western Hemlock / Fir | 28.28% | |
| | Sitka Spruce | 40.00% | |
| | Alder (Red) | 47.61% | |
| Yarding Distance: | Long (1,500 ft) | | Downhill Yarding: No |
| Logging System: | Cable: Large Tower >=70 | | Process: Manual Delimiting |
| Tree Size: | Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF | | |
| Loads/Day: | 4 | | Bd. Ft./Load: 3,800 |
| Cost/MBF: | \$233.55 | | |
| Machines: | Log Loader (A) | | |
| | Tower Yarder (Large) | | |
| Combination#: 4 | Douglas - Fir | 24.10% | |
| | Western Hemlock / Fir | 17.00% | |
| | Sitka Spruce | 48.00% | |
| | Alder (Red) | 33.02% | |



Timber Sale Appraisal

Logging Costs

Rackheap Falls

Sale 341-07-22

"STEWARDSHIP IN FORESTRY"

Date: 6/12/06

Operating Seasons: 2.0

Profit & Risk: 20%

Project Costs: \$313,950

Other Costs (P/R): \$25,964

Slash Disposal: \$0

Other Costs: \$10,247

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

Road Maintenance: \$2.19

Hauling Costs

| Species | \$/MBF | Trips/Day | MBF/Load |
|-----------------------|---------|-----------|----------|
| Douglas - Fir | \$72.87 | 2.0 | 3.8 |
| Western Hemlock / Fir | \$54.30 | 3.0 | 3.4 |
| Sitka Spruce | \$54.30 | 2.0 | 3.0 |
| Alder (Red) | \$54.66 | 3.0 | 3.2 |



Timber Sale Appraisal Logging Costs Breakdown Rackheap Falls Sale 341-07-22

"STEWARDSHIP IN FORESTRY"

| Costs | Douglas - Fir | Westem Hemlock / Fir | Sitka Spruce | Alder (Red) |
|--------------------------|----------------------|---------------------------------|---------------------|--------------------|
| Logging | 167.69 | 160.98 | 172.48 | 179.78 |
| Road Maintenance | 2.31 | 2.31 | 2.31 | 2.43 |
| Fire Protection | 0.61 | 0.61 | 0.61 | 0.61 |
| Hauling | 76.71 | 57.16 | 57.16 | 60.73 |
| Other (P/R appl.) | 2.90 | 2.90 | 2.90 | 2.90 |
| Profit & Risk | 50.04 | 44.79 | 47.09 | 49.29 |
| Slash Disposal | 0.00 | 0.00 | 0.00 | 0.00 |
| Scaling | 2.00 | 2.00 | 2.00 | 2.00 |
| Other | 1.15 | 1.15 | 1.15 | 1.15 |
| Total | 303.41 | 271.90 | 285.70 | 298.89 |

| | | | | |
|---------------------|--------|--------|--------|--------|
| Amortization | 0.00 | 0.00 | 0.00 | 0.00 |
| Pond Value | 673.45 | 415.32 | 409.17 | 614.45 |
| Stumpage | 370.04 | 143.42 | 123.47 | 315.56 |
| Amortized | 0.00 | 0.00 | 0.00 | 0.00 |



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Rackheap Falls Sale 341-07-22

Amortized

| | Douglas - Fir | Western Hemlock / Fir | Sitka Spruce | Alder (Red) |
|--------------|---------------|-----------------------|--------------|-------------|
| MBF | 0.00 | 0.00 | 0.00 | 0.00 |
| Value | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 |

Unamortized

| | Douglas - Fir | Western Hemlock / Fir | Sitka Spruce | Alder (Red) |
|--------------|---------------|-----------------------|--------------|-------------|
| MBF | 4,631.00 | 3,857.00 | 60.00 | 394.00 |
| Value | 370.04 | 143.42 | 123.47 | 315.56 |
| Total | 1,713,655.24 | 553,170.94 | 7,408.20 | 124,330.64 |

Gross Timber Sale Value

Recovery \$2,398,565.02

Prepared by: Jacob Phillips

Date: 6/12/06

District: Tillamook

Phone: (503) 842-2545



PROJECT SUMMARY SHEET

Sale: Rackheap Falls

CONSTRUCTION

| | | | | |
|------------------------------|--------|-------|------------|--------------------|
| Point | A to B | 4+10 | stations = | \$2,458.27 |
| Point | C to D | 10+45 | stations = | \$7,956.10 |
| Point | E to F | 4+45 | stations = | \$1,962.59 |
| Point | M to N | 1+50 | stations = | \$950.57 |
| SUBTOTAL CONSTRUCTION | | | | \$13,327.53 |

IMPROVEMENT

| | | | | |
|-----------------------------|--------|--------|------------|---------------------|
| Point | A to B | 74+70 | stations = | \$44,788.44 |
| Point | E to F | 49+60 | stations = | \$21,875.12 |
| Point | I to J | 190+55 | stations = | \$106,737.13 |
| Point | K to L | 21+60 | stations = | \$11,936.71 |
| Point | M to N | 42+30 | stations = | \$26,806.15 |
| Point | O to P | 60+70 | stations = | \$42,275.06 |
| Point | "T" | | | \$1,721.62 |
| SUBTOTAL IMPROVEMENT | | | | \$256,140.23 |

RECONSTRUCTION

| | | | | |
|-----------------------------|--------|-------|------------|--------------------|
| Point | C to D | 1+50 | stations = | \$1,142.02 |
| Point | G to H | 15+20 | stations = | \$8,617.29 |
| Point | Q to R | 10+00 | stations = | \$4,888.96 |
| SUBTOTAL IMPROVEMENT | | | | \$14,648.27 |

VACATING

| | | | | |
|-----------|--|--|--|------------|
| Point "S" | | | | \$1,974.05 |
|-----------|--|--|--|------------|

SPECIAL PROJECTS

| | | | | |
|----------------------------------|--|--|--|--------------------|
| Crushed Stockpile (1500 CY) | | | | \$17,955.00 |
| Pit-Run Stockpile #1 (964 CY) | | | | \$3,142.64 |
| Pit-Run Stockpile #2 (737 CY) | | | | \$3,574.45 |
| SUBTOTAL SPECIAL PROJECTS | | | | \$24,672.09 |

MOVE IN

\$3,187.13

GRAND TOTAL

\$313,949.30

SUMMARY OF CONSTRUCTION COST

| Sale: | <u>Rackheep Falls</u> | Road: | <u>A to B</u> | | | | | | | |
|---|---|------------------------------------|--------------------------------|------|-------|--|-------|----------|------|-------|
| Construction - | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">4+10</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">0.08</td> <td style="text-align: center;">miles</td> </tr> </table> | 4+10 | stations | 0.08 | miles | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">74+70</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">1.41</td> <td style="text-align: center;">miles</td> </tr> </table> | 74+70 | stations | 1.41 | miles |
| 4+10 | stations | | | | | | | | | |
| 0.08 | miles | | | | | | | | | |
| 74+70 | stations | | | | | | | | | |
| 1.41 | miles | | | | | | | | | |
| CLEARING AND GRUBBING - | | | | | | | | | | |
| Roadside Brushing | 1.38 miles @ | \$800.00 per mile = | \$1,104.00 | | | | | | | |
| Side cast | 0.069 acres @ | \$660.00 per acre = | \$45.54 | | | | | | | |
| Lg. Fills - | 0.104 acres @ | \$660.00 per acre = | \$68.64 | | | | | | | |
| Road Failure Area | 0.025 acres @ | \$660.00 per acre = | \$16.50 | | | | | | | |
| Road Widening - | 0.126 acres @ | \$660.00 per acre = | \$83.16 | | | | | | | |
| | | TOTAL CLEARING AND GRUBBING | \$1,317.84 | | | | | | | |
| EXCAVATION - | | | | | | | | | | |
| Road Earthwork (Sta. 74+70 - 78+80) | 4.10 sta. @ | \$90.00 per sta. = | \$369.00 | | | | | | | |
| Pullback (Sta. 59+45 - 60+95) | 534 cy. @ | \$1.40 per c.y. = | \$747.60 | | | | | | | |
| Widening; Common (Sta. 59+15 - 60+95) | 353 cy. @ | \$1.28 per c.y. = | \$451.84 | | | | | | | |
| Widening; Rippable (Sta. 59+15 - 60+95) | 45 cy. @ | \$2.25 per c.y. = | \$101.25 | | | | | | | |
| Slope Stabilization Prep. (Sta. 21+65 - 21+90) | 233 cy. @ | \$1.40 per c.y. = | \$326.20 | | | | | | | |
| Large Fill Removal (Sta. 8+10 - 8+60 & 17+75 - 18+25) | 1060 cy. @ | \$1.28 per c.y. = | \$1,356.80 | | | | | | | |
| Clean Ditchlines and End-haul Material (2/3 of ditched road length) | 46.75 sta. @ | \$100.00 per sta. = | \$4,675.00 | | | | | | | |
| Construct Turnouts (Sta. 13+10, 20+00, 31+50, 59+15, & 69+95) | 5 @ | \$60.00 Each = | \$300.00 | | | | | | | |
| Construct Turnaround (Sta. 74+70) | 1 @ | \$75.00 Each = | \$75.00 | | | | | | | |
| Construct Landing (Sta. 78+80) | 1 @ | \$250.00 Each = | \$250.00 | | | | | | | |
| | | TOTAL EXCAVATION | \$8,652.69 | | | | | | | |
| ENDHAUL - | | | | | | | | | | |
| Pullback | 59+45 to 60+95 | 534 cy. @ | \$1.11 per c.y. = \$592.74 | | | | | | | |
| Widening | 59+15 to 60+95 | 398 cy. @ | \$1.11 per c.y. = \$441.78 | | | | | | | |
| Slope Stabilization Prep. | 21+65 to 21+90 | 233 cy. @ | \$1.73 per c.y. = \$403.09 | | | | | | | |
| Large Fill Removal | 8+10 to 8+60 | 85 cy. @ | \$1.96 per c.y. = \$166.60 | | | | | | | |
| Large Fill Removal | 17+75 to 18+25 | 100 cy. @ | \$1.79 per c.y. = \$179.00 | | | | | | | |
| Spread & Compact Fills | | 875 cy. @ | \$0.45 per c.y. = \$393.75 | | | | | | | |
| Spread & Compact Waste Area (Ditchline Material) | | 1.5 Hrs. @ | \$145.00 per Hour = \$217.50 | | | | | | | |
| Spread & Compact Waste Area | | 1350 cy. @ | \$0.25 per c.y. = \$337.50 | | | | | | | |
| | | | TOTAL ENDHAUL | | | | | | | |
| | | | \$2,731.96 | | | | | | | |
| CULVERTS - MATERIALS & INSTALLATION | | | | | | | | | | |
| | <u>Culverts</u> | | | | | | | | | |
| | 54 LF of 18" | \$918.00 | | | | | | | | |
| | | | 150 LF of 24" \$3,600.00 | | | | | | | |
| | <u>Culvert Markers</u> | | | | | | | | | |
| | 6 markers | \$48.00 | | | | | | | | |
| | | | TOTAL CULVERTS | | | | | | | |
| | | | \$4,566.00 | | | | | | | |
| ROCK | | | | | | | | | | |
| Sta. 0+00 to 65+00 | 941 cy. of | Crushed @ | \$13.25 per c.y. = \$12,468.25 | | | | | | | |
| Culvert Bedding/Backfill (Sta. 1+80, 8+35, & 18+00) | 65 cy. of | Crushed @ | \$11.28 per c.y. = \$733.20 | | | | | | | |
| Junction Rock (Sta. 0+00, 52+05, & 65+00) | 15 cy. of | Crushed @ | \$13.14 per c.y. = \$197.10 | | | | | | | |
| Fill Armor (Sta. 8+35 & 18+00) | 60 cy. of | Riprap @ | \$8.27 per c.y. = \$496.20 | | | | | | | |
| Slope Stabilization (Sta. 21+65 - 21+90) | 200 cy. of | Riprap @ | \$9.08 per c.y. = \$1,816.00 | | | | | | | |
| Energy Dissipator (Sta. 1+80, 8+35, 14+05, & 18+00) | 120 cy. of | Riprap @ | \$8.27 per c.y. = \$992.40 | | | | | | | |
| Sta. 65+00 to 78+80 | 664 cy. of | Pit-Run @ | \$7.74 per c.y. = \$5,139.36 | | | | | | | |
| Sta. 59+15 to 60+95 | 97 cy. of | Pit-Run @ | \$7.57 per c.y. = \$734.29 | | | | | | | |
| Leveling Rock (Sta. 14+05 - 15+50, 17+40 - 18+25, 21+65 - 21+90) | 144 cy. of | Pit-Run @ | \$7.24 per c.y. = \$1,042.56 | | | | | | | |
| Spot Rock (Sta. 1+80, 8+35, & 33+70) | 50 cy. of | Pit-Run @ | \$6.83 per c.y. = \$341.50 | | | | | | | |
| Drain Rock (Sta. 21+65 - 21+90) | 50 cy. of | Pit-Run @ | \$9.63 per c.y. = \$481.50 | | | | | | | |
| Turnout Base Rock (Sta. 13+10, 20+00, & 31+50) | 45 cy. of | Pit-Run @ | \$7.10 per c.y. = \$319.50 | | | | | | | |
| Landing Rock (Sta. 78+80) | 50 cy. of | Pit-Run @ | \$7.73 per c.y. = \$386.50 | | | | | | | |
| | | | TOTAL ROCK | | | | | | | |
| | | | \$25,148.36 | | | | | | | |
| SPECIAL PROJECTS | | | | | | | | | | |
| Construct waste areas - | 2.00 hours @ | \$145.00 per hour | \$290.00 | | | | | | | |
| Construct ditchouts - | 2.00 @ | \$60.00 each | \$120.00 | | | | | | | |
| Non-woven Fabric For Drain & Installation | 234 sq. yd. @ | \$0.95 per sq.yd. | \$222.30 | | | | | | | |
| Grade and shape road (Ditched) - | 70.20 stations @ | \$15.50 per station | \$1,088.10 | | | | | | | |
| Grade and shape road (Outsloped) - | 8.60 stations @ | \$14.00 per station | \$120.40 | | | | | | | |
| Roll subgrade w/ vibratory roller prior to rocking - | 78.80 stations @ | \$13.20 per station | \$1,040.16 | | | | | | | |
| Remove culverts from state lands | | 5 culverts | \$267.90 | | | | | | | |
| Grass seed and fertilize - | 2.05 acres @ | \$220.00 per acre | \$451.00 | | | | | | | |
| Mulching - | 2.050 acres @ | \$600.00 per acre | \$1,230.00 | | | | | | | |
| | | | TOTAL SPECIAL PROJECTS | | | | | | | |
| | | | \$4,829.86 | | | | | | | |
| | | | GRAND TOTAL | | | | | | | |
| | | | \$47,246.71 | | | | | | | |

SUMMARY OF CONSTRUCTION COST

| | | | | | | |
|--|--|--------|---------|------------|------------|---|
| Sale: | <u>Rackheap Falls</u> | | | | | Road: <u>C to D</u> |
| Construction - | <u>10+45</u> stations <u>0.20</u> miles | | | | | <u>1+50</u> stations <u>0.03</u> miles |
| CLEARING AND GRUBBING - | | | | | | |
| Scattering | | 1.060 | acres @ | \$980.00 | per acre = | <u>\$1,038.80</u> |
| | | | | | | TOTAL CLEARING AND GRUBBING |
| | | | | | | \$1,038.80 |
| EXCAVATION - | | | | | | |
| Road Earthwork (0+00 - 1+50) | | 1.50 | sta. @ | \$90.00 | per sta. = | \$135.00 |
| Road Earthwork (1+50 - 11+95) | | 10.45 | cy. @ | \$140.00 | per c.y. = | \$1,463.00 |
| Construct Turnaround (Sta. 1+50) | | 1 | @ | \$75.00 | Each = | \$75.00 |
| Construct Turnouts (Sta. 1+85 & 7+75) | | 2 | @ | \$60.00 | Each = | \$120.00 |
| Construct Landing (Sta. 11+95) | | 1 | @ | \$250.00 | Each = | <u>\$250.00</u> |
| | | | | | | TOTAL EXCAVATION |
| | | | | | | \$2,043.00 |
| ROCK | | | | | | |
| Sta. 0+00 to 11+95 | 595 | cy. of | Pit-Run | | @ | \$7.63 per c.y. = \$4,539.85 |
| Junction Rock (Sta. 0+00) | 15 | cy. of | Pit-Run | | @ | \$7.42 per c.y. = \$111.30 |
| Landing Rock (Sta. 11+95) | 50 | cy. of | Pit-Run | | @ | <u>\$7.60 per c.y. = \$380.00</u> |
| | | | | | | TOTAL ROCK |
| | | | | | | \$5,031.15 |
| SPECIAL PROJECTS | | | | | | |
| Construct ditchouts - | | | 1.00 | @ | \$60.00 | each \$60.00 |
| Grade and shape road (Ditched) - | | | 11.95 | stations @ | \$15.50 | per station \$185.23 |
| Roll subgrade w/ vibratory roller prior to rocking - | | | 11.95 | stations @ | \$13.20 | per station \$157.74 |
| Grass seed and fertilize - | | | 0.71 | acres @ | \$220.00 | per acre \$156.20 |
| Mulching - | | | 0.710 | acres @ | \$600.00 | per acre \$426.00 |
| | | | | | | TOTAL SPECIAL PROJECTS |
| | | | | | | \$985.17 |
| | | | | | | GRAND TOTAL |
| | | | | | | \$9,098.12 |

SUMMARY OF CONSTRUCTION COST

| | | | | | | | | | | | |
|---|---|---------------|--|------|-------|--|--|-------|----------|------|-------|
| Sale: | <u>Rackheep Falls</u> | | Road: <u>E to F</u> | | | | | | | | |
| Construction - | <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">4+45</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">0.08</td> <td style="text-align: center;">miles</td> </tr> </table> | 4+45 | stations | 0.08 | miles | | <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">49+60</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">0.94</td> <td style="text-align: center;">miles</td> </tr> </table> | 49+60 | stations | 0.94 | miles |
| 4+45 | stations | | | | | | | | | | |
| 0.08 | miles | | | | | | | | | | |
| 49+60 | stations | | | | | | | | | | |
| 0.94 | miles | | | | | | | | | | |
| CLEARING AND GRUBBING - | | | | | | | | | | | |
| Roadside Brushing | | 0.94 miles @ | \$800.00 per mile = \$752.00 | | | | | | | | |
| Side cast | | 0.034 acres @ | \$660.00 per acre = \$22.44 | | | | | | | | |
| Scattering | | 0.250 acres @ | \$980.00 per acre = \$245.00 | | | | | | | | |
| | | | TOTAL CLEARING AND GRUBBING | | | | | | | | |
| | | | \$1,019.44 | | | | | | | | |
| EXCAVATION - | | | | | | | | | | | |
| Road Earthwork (Sta. 49+60 - 54+05) | | 4.45 sta. @ | \$90.00 per sta. = \$400.50 | | | | | | | | |
| Pullback | | 200 cy. @ | \$1.40 per c.y. = \$280.00 | | | | | | | | |
| Clean Ditchlines and End-haul Material (2/3 of ditched road length) | | 31.7 sta. @ | \$100.00 per c.y. = \$3,170.00 | | | | | | | | |
| Construct Turnouts (Sta. 8+65, 12+60, 25+80, & 45+45) | | 4 @ | \$60.00 Each = \$240.00 | | | | | | | | |
| Construct Turnaround (Sta. 49+60) | | 1 @ | \$75.00 Each = \$75.00 | | | | | | | | |
| Construct Landing (Sta. 54+05) | | 1 @ | \$250.00 Each = \$250.00 | | | | | | | | |
| | | | TOTAL EXCAVATION | | | | | | | | |
| | | | \$4,415.50 | | | | | | | | |
| ENDHAUL - | | | | | | | | | | | |
| Pullback | 1+55 | to | 2+30 | | | | | | | | |
| Spread & Compact Waste Area (Ditchline Material) | | | 200 cy. @ \$1.24 per c.y. = \$248.00 | | | | | | | | |
| Spread & compact Waste Area | | | 1.5 Hrs. @ \$145.00 per Hour = \$217.50 | | | | | | | | |
| | | | 200 cy. @ \$0.25 per c.y. = \$50.00 | | | | | | | | |
| | | | TOTAL ENDHAUL | | | | | | | | |
| | | | \$515.50 | | | | | | | | |
| CULVERTS - MATERIALS & INSTALLATION | | | | | | | | | | | |
| | <u>Culverts</u> | | | | | | | | | | |
| | 32 LF of 24" | | \$768.00 | | | | | | | | |
| | <u>Culvert Markers</u> | | | | | | | | | | |
| | 1 markers | | \$8.00 | | | | | | | | |
| | | | TOTAL CULVERTS | | | | | | | | |
| | | | \$776.00 | | | | | | | | |
| ROCK | | | | | | | | | | | |
| Sta. 0+00 to 49+60 | 733 | cy. of | Crushed @ \$13.82 per c.y. = \$10,130.06 | | | | | | | | |
| Culvert Bedding/Backfill (Sta. 35+00) | 10 | cy. of | Crushed @ \$12.30 per c.y. = \$123.00 | | | | | | | | |
| Junction Rock (Sta. 0+00) | 5 | cy. of | Crushed @ \$13.34 per c.y. = \$66.70 | | | | | | | | |
| Slope Stabilization (Sta. 1+55 - 2+30) | 130 | cy. of | Riprap @ \$9.63 per c.y. = \$1,251.90 | | | | | | | | |
| Energy Dissipator (Sta. 14+90 & 35+00) | 10 | cy. of | Riprap @ \$9.52 per c.y. = \$95.20 | | | | | | | | |
| Sta. 49+60 to 54+05 | 226 | cy. of | Pit-Run @ \$6.77 per c.y. = \$1,530.02 | | | | | | | | |
| Leveling Rock (Sta. 34+60 - 35+10) | 20 | cy. of | Pit-Run @ \$6.28 per c.y. = \$125.60 | | | | | | | | |
| Turnout Base Rock (Sta. 8+65, 12+60, 25+80, & 45+45) | 60 | cy. of | Pit-Run @ \$6.28 per c.y. = \$376.80 | | | | | | | | |
| Landing Rock (Sta. 54+05) | 50 | cy. of | Pit-Run @ \$6.68 per c.y. = \$334.00 | | | | | | | | |
| | | | TOTAL ROCK | | | | | | | | |
| | | | \$14,033.28 | | | | | | | | |
| SPECIAL PROJECTS | | | | | | | | | | | |
| Construct waste areas - | 1.00 | hours @ | \$145.00 per hour = \$145.00 | | | | | | | | |
| Construct ditchouts - | 1.00 | @ | \$60.00 each = \$60.00 | | | | | | | | |
| Grade and shape road (Ditched) - | 47.55 | stations @ | \$15.50 per station = \$737.03 | | | | | | | | |
| Grade and shape road (Outsloped) - | 6.50 | stations @ | \$14.00 per station = \$91.00 | | | | | | | | |
| Roli subgrade w/ vibratory roller prior to rocking - | 54.05 | stations @ | \$13.20 per station = \$713.46 | | | | | | | | |
| Remove culverts from state lands | | | 2 culverts = \$142.50 | | | | | | | | |
| Grass seed and fertilize - | 1.45 | acres @ | \$220.00 per acre = \$319.00 | | | | | | | | |
| Mulching - | 1.450 | acres @ | \$600.00 per acre = \$870.00 | | | | | | | | |
| | | | TOTAL SPECIAL PROJECTS | | | | | | | | |
| | | | \$3,077.99 | | | | | | | | |
| GRAND TOTAL | | | \$23,837.71 | | | | | | | | |

SUMMARY OF CONSTRUCTION COST

| | | | | | | |
|--|---|------------------|-----------------------------|------------------|------------|---|
| Sale: | <u>Rackheap Falls</u> | | | | | Road: <u>G to H</u> |
| Construction - | <u>0+00</u> stations <u>0.00</u> miles | | | | | Reconstruction - <u>15+20</u> stations <u>0.29</u> miles |
| | | | | | | |
| CLEARING AND GRUBBING - Scattering | | 0.872 acres @ | \$980.00 per acre = | \$854.56 | | |
| | | | TOTAL CLEARING AND GRUBBING | | | \$854.56 |
| | | | | | | |
| EXCAVATION - Road Earthwork | | 15.20 sta. @ | \$90.00 per sta. = | \$1,368.00 | | |
| Construct Landing (Sta. 15+20) | | 1 @ | \$250.00 Each = | \$250.00 | | |
| Construct Turnout (Sta. 2+60) | | 1 @ | \$60.00 Each = | \$60.00 | | |
| | | | TOTAL EXCAVATION | | | \$1,678.00 |
| | | | | | | |
| ROCK | | | | | | |
| Sta. 0+00 to 15+20 | 703 cy. of | Pit-Run | @ | \$6.43 per c.y.= | \$4,520.29 | |
| Junction Rock (Sta. 0+00) | 15 cy. of | Pit-Run | @ | \$6.20 per c.y.= | \$93.00 | |
| Landing Rock (Sta. 15+20) | 50 cy. of | Pit-Run | @ | \$6.42 per c.y.= | \$321.00 | |
| | | | | TOTAL ROCK | | \$4,934.29 |
| | | | | | | |
| SPECIAL PROJECTS | | | | | | |
| Grade and shape road (Outsloped) - | | 15.20 stations @ | \$14.00 per station | \$212.80 | | |
| Construct Rolling Dips - | | 3.00 @ | \$150.00 each | \$450.00 | | |
| Roll subgrade w/ vibratory roller prior to rocking - | | 15.20 stations @ | \$13.20 per station | \$200.64 | | |
| Grass seed and fertilize - | | 0.35 acres @ | \$220.00 per acre | \$77.00 | | |
| Mulching - | | 0.350 acres @ | \$600.00 per acre | \$210.00 | | |
| | | | TOTAL SPECIAL PROJECTS | | | \$1,150.44 |
| GRAND TOTAL | | | | | | \$8,617.29 |

SUMMARY OF CONSTRUCTION COST

| Sale: | <u>Rackheep Falls</u> | stations | Road: | <u>I to J</u> | stations |
|---|------------------------|----------|-------------------|------------------------------------|--------------------------------|
| Construction - | 0+00 | miles | Improvement - | 190+55 | miles |
| | 0.00 | | | 3.61 | |
| CLEARING AND GRUBBING - | | | | | |
| Roadside Brushing | | | 3.61 miles @ | \$800.00 per mile = | \$2,888.00 |
| Scattering | | | 0.010 acres @ | \$980.00 per acre = | \$9.80 |
| | | | | TOTAL CLEARING AND GRUBBING | \$2,897.80 |
| EXCAVATION - | | | | | |
| Large Fill Removal (Sta. 38+25 - 38+75 & 53+90 - 54+40) | | | 880 cy. @ | \$1.40 per c.y. = | \$1,232.00 |
| Clean Ditchlines and End-haul Material (1/2 of ditched road length) | | | 87.03 Sta. @ | \$100.00 per Sta. = | \$8,703.00 |
| Construct Turnouts (Sta. 22+60, 24+80, 47+15, 56+35, 81+00, 136+40, & 184+40) | | | 7 @ | \$60.00 Each = | \$420.00 |
| Construct Turnaround (Sta. 190+55) | | | 1 @ | \$75.00 Each = | \$75.00 |
| | | | | TOTAL EXCAVATION | \$10,430.00 |
| ENDHAUL - | | | | | |
| Large Fill Material | 38+25 | to | 38+75 | 425 cy. @ | \$1.11 per c.y. = \$471.75 |
| Large Fill Material | 53+90 | to | 54+40 | 455 cy. @ | \$1.34 per c.y. = \$609.70 |
| Spread & compact Fill material | | | | 795 cy. @ | \$0.45 per c.y. = \$357.75 |
| Spread & compact Waste Areas (Ditchline Material) | | | | 2.0 Hr. @ | \$145.00 per Hour = \$290.00 |
| Spread & compact Waste Areas | | | | 85 cy. @ | \$0.25 per c.y. = \$21.25 |
| | | | | TOTAL ENDHAUL | \$1,750.45 |
| CULVERTS - MATERIALS & INSTALLATION | | | | | |
| | <u>Culverts</u> | | | | |
| | 208 | | LF of 24" | \$4,992.00 | |
| | 32 | | LF of 30" | \$1,056.00 | |
| | <u>Culvert Markers</u> | | | | |
| | 8 | markers | | \$64.00 | |
| | | | | TOTAL CULVERTS | \$6,112.00 |
| ROCK | | | | | |
| Sta. 0+00 to 141+20 | 4,201 | cy. of | Crushed | @ | \$14.33 per c.y. = \$60,200.33 |
| Culvert Bedding/Backfill (Sta. 9+60, 12+65, 23+75, 28+90, 38+50, 54+15, 118+95) | 105 | cy. of | Crushed | @ | \$11.64 per c.y. = \$1,222.20 |
| Junctions (Sta. 77+55, 92+00, 107+75, 110+55, 141+20) | 60 | cy. of | Crushed | @ | \$13.75 per c.y. = \$825.00 |
| Energy Dissipator (Sta. 9+60, 12+65, 23+75, 26+00, 28+90, 38+50, 54+15) | 65 | cy. of | Riprap | @ | \$8.09 per c.y. = \$525.85 |
| Sta. 141+20 to 190+55 | 2,274 | cy. of | Pit-Run | @ | \$4.89 per c.y. = \$11,119.86 |
| Turnout Base Rock (Sta. 22+60, 24+80, 47+15, 56+35, 81+00, 136+40) | 90 | cy. of | Pit-Run | @ | \$6.10 per c.y. = \$549.00 |
| Junctions (Sta. 142+05, 153+60, 165+70, 167+05) | 60 | cy. of | Pit-Run | @ | \$4.86 per c.y. = \$291.60 |
| Spot Rock (Sta. 9+60, 12+65, 23+75, 28+90, 38+50, 54+15, 118+95) | 70 | cy. of | Pit-Run | @ | \$6.35 per c.y. = \$444.50 |
| | | | | TOTAL ROCK | \$75,178.34 |
| SPECIAL PROJECTS | | | | | |
| Construct waste areas - | | | 3.00 hours @ | \$145.00 per hour | \$435.00 |
| Construct ditchouts - | | | 8.00 @ | \$60.00 each | \$480.00 |
| Grade and shape road (Ditched) - | | | 174.05 stations @ | \$15.50 per station | \$2,697.78 |
| Grade and shape road (Outsloped) - | | | 16.50 stations @ | \$14.00 per station | \$231.00 |
| Construct Rolling Dip (Sta. 181+65) - | | | 1.00 @ | \$150.00 each | \$150.00 |
| Roll subgrade w/ vibratory roller prior to rocking - | | | 190.55 stations @ | \$13.20 per station | \$2,515.26 |
| Remove culverts from state lands | | | | 5 Culverts | \$267.90 |
| Grass seed and fertilize - | 4.38 | acres @ | | \$220.00 per acre | \$963.60 |
| Mulching - | 4.380 | acres @ | | \$600.00 per acre | \$2,628.00 |
| | | | | TOTAL SPECIAL PROJECTS | \$10,368.54 |
| GRAND TOTAL | | | | | \$106,737.13 |

SUMMARY OF CONSTRUCTION COST

| | | | |
|--|---|---------------|--|
| Sale: | <u>Rackheap Falls</u> | | Road: <u>K to L</u> |
| Construction - | <u>0+00</u> stations <u>0.00</u> miles | | Improvement - <u>21+60</u> stations <u>0.41</u> miles |
| CLEARING AND GRUBBING - | | | |
| Roadside Brushing | | 0.41 miles @ | \$800.00 per mile = \$328.00 |
| Widening Areas | | 0.165 acres @ | \$660.00 per acre = \$108.90 |
| | | | TOTAL CLEARING AND GRUBBING \$436.90 |
| EXCAVATION - | | | |
| Widening (Common) | | 232 cy. @ | \$1.28 per c.y. = \$296.96 |
| Widening (Rippable) | | 97 cy. @ | \$2.25 per c.y. = \$218.25 |
| Widening (Solid) | | 5 cy. @ | \$4.90 per c.y. = \$24.50 |
| Construct Turnouts (Sta. 11+90 & 16+70) | | 2 @ | \$60.00 each = \$120.00 |
| Clean Ditchlines and End-haul Material | | 21.6 sta. @ | \$100.00 per Sta. = \$2,160.00 |
| | | | TOTAL EXCAVATION \$2,819.71 |
| ENDHAUL - | | | |
| Widening 7+80 to 9+30 | | 125 cy. @ | \$1.23 per c.y. = \$153.75 |
| Widening 14+05 to 15+35 | | 209 cy. @ | \$1.38 per c.y. = \$288.42 |
| Spread & Compact Waste Area (ditchline material) | | 1.5 Hrs. @ | \$145.00 per Hour = \$217.50 |
| Spread & Compact Waste Area | | 334 cy. @ | \$0.25 per c.y. = \$83.50 |
| | | | TOTAL ENDHAUL \$743.17 |
| CULVERTS - MATERIALS & INSTALLATION | | | |
| | <u>Culverts</u> | | |
| | 102 LF of 18" | | \$1,734.00 |
| | <u>Culvert Markers</u> | | |
| | 3 markers | | \$24.00 |
| | | | TOTAL CULVERTS \$1,758.00 |
| ROCK | | | |
| Sta. 0+00 to 21+60 | 317 | cy. of | Crushed @ \$12.98 per c.y. = \$4,114.66 |
| Junction Rock (Sta. 0+00 & 21+60) | 15 | cy. of | Crushed @ \$12.98 per c.y. = \$194.70 |
| Energy Dissipator (Sta. 6+95, 10+20 & 17+85) | 15 | cy. of | Riprap @ \$8.35 per c.y. = \$125.25 |
| Leveling Rock (Sta. 9+95 - 10+45, 14+80 - 15+60) | 40 | cy. of | Pit-Run @ \$5.78 per c.y. = \$231.20 |
| Spot Rock (Sta. 0+00 & 6+95) | 20 | cy. of | Pit-Run @ \$5.94 per c.y. = \$118.80 |
| | | | TOTAL ROCK \$4,784.61 |
| SPECIAL PROJECTS | | | |
| Grade and shape road (Ditched) - | 21.60 | stations @ | \$15.50 per station \$334.80 |
| Roll subgrade w/ vibratory roller prior to rocking - | 21.60 | stations @ | \$13.20 per station \$285.12 |
| Remove culverts from state lands | | 4 culverts | \$225.00 |
| Grass seed and fertilize - | 0.67 | acres @ | \$220.00 per acre \$147.40 |
| Mulching - | 0.670 | acres @ | \$600.00 per acre \$402.00 |
| | | | TOTAL SPECIAL PROJECTS \$1,394.32 |
| | | | GRAND TOTAL \$11,936.71 |

SUMMARY OF CONSTRUCTION COST

| | | | |
|--|---|---|--|
| Sale: | <u>Rackheap Falls</u> | | Road: <u>M to N</u> |
| Construction - | <u>1+50</u> stations <u>0.03</u> miles | | Improvement - <u>42+30</u> stations <u>0.80</u> miles |
| CLEARING AND GRUBBING - | | | |
| Roadside Brushing | 0.80 miles @ | | \$800.00 per mile = \$640.00 |
| Side cast Pullback areas | 0.213 acres @ | | \$660.00 per acre = \$140.58 |
| Widening areas | 0.180 acres @ | | \$660.00 per acre = \$118.80 |
| Scattering | 0.100 acres @ | | \$980.00 per acre = \$98.00 |
| | | | TOTAL CLEARING AND GRUBBING |
| | | | \$997.38 |
| EXCAVATION - | | | |
| Road Earthwork | 1.50 sta. @ | | \$90.00 per sta. = \$135.00 |
| Clean Ditchlines and End-haul Material | 33.95 sta. @ | | \$100.00 per sta. = \$3,395.00 |
| Pullback | 819 cy. @ | | \$1.40 per c.y. = \$1,146.60 |
| Widening (common) | 327 cy. @ | | \$1.28 per c.y. = \$418.56 |
| Widening (solid) | 59 cy. @ | | \$4.90 per c.y. = \$289.10 |
| Construct Landing (Sta. 43+80) | 1 @ | | \$250.00 each = \$250.00 |
| Construct Turnaround (Sta. 42+30) | 1 @ | | \$75.00 each = \$75.00 |
| Construct Turnouts (Sta. 7+65 & 37+30) | 2 @ | | \$60.00 each = \$120.00 |
| | | | TOTAL EXCAVATION |
| | | | \$5,829.26 |
| ENDHAUL - | | | |
| Pullback 9+35 to 12+05 | 360 cy. @ | | \$1.71 per c.y. = \$615.60 |
| Pullback 12+05 to 13+30 | 334 cy. @ | | \$1.66 per c.y. = \$554.44 |
| Pullback 13+30 to 14+00 | 125 cy. @ | | \$1.63 per c.y. = \$203.75 |
| Widening 9+35 to 11+30 | 283 cy. @ | | \$1.72 per c.y. = \$486.76 |
| Widening 12+05 to 14+00 | 103 cy. @ | | \$1.65 per c.y. = \$169.95 |
| Spread & compact Waste Area (ditchline material) | 1.5 Hrs. @ | | \$145.00 per Hour = \$217.50 |
| Spread & compact Waste Area | 1205 cy. @ | | \$0.25 per c.y. = \$301.25 |
| | | | TOTAL ENDHAUL |
| | | | \$2,549.25 |
| CULVERTS - MATERIALS & INSTALLATION | | | |
| <u>Culverts</u> | 26 LF of 18" | | \$442.00 |
| <u>Culvert Markers</u> | 3 markers | | \$24.00 |
| | | | TOTAL CULVERTS |
| | | | \$466.00 |
| ROCK | | | |
| Energy Dissipator (Sta. 17+00) | 5 cy. of Riprap | @ | \$8.92 per c.y. = \$44.60 |
| Sta. 0+00 to 43+80) | 2,037 cy. of Pit-Run | @ | \$6.82 per c.y. = \$13,892.34 |
| Leveling Rock (Sta. 17+00 - 18+50 & 24+20 - 24+70) | 70 cy. of Pit-Run | @ | \$6.68 per c.y. = \$467.60 |
| Landing Rock (Sta. 43+80) | 50 cy. of Pit-Run | @ | \$7.09 per c.y. = \$354.50 |
| Junction Rock (Sta. 0+00) | 15 cy. of Pit-Run | @ | \$6.08 per c.y. = \$91.20 |
| | | | TOTAL ROCK |
| | | | \$14,850.24 |
| SPECIAL PROJECTS | | | |
| Construct waste areas - | 2.00 hours @ | | \$145.00 per hour = \$290.00 |
| Construct ditchouts - | 1.00 @ | | \$60.00 each = \$60.00 |
| Grade and Shape Road (Ditched)- | 33.95 stations @ | | \$15.50 per station = \$526.23 |
| Grade and Shape Road (Outsloped) - | 9.85 stations @ | | \$14.00 per station = \$137.90 |
| Roll subgrade w/ vibratory roller prior to rocking - | 43.80 stations @ | | \$13.20 per station = \$578.16 |
| Remove culverts from state lands | 1 culvert | | \$102.90 |
| Grass seed and fertilize - | 1.67 acres @ | | \$220.00 per acre = \$367.40 |
| Mulching - | 1.670 acres @ | | \$600.00 per acre = \$1,002.00 |
| | | | TOTAL SPECIAL PROJECTS |
| | | | \$3,064.59 |
| GRAND TOTAL | | | \$27,756.72 |

SUMMARY OF CONSTRUCTION COST

| Sale: | <u>Rackheap Falls</u> | Road: | <u>O to P</u> | | | | | | | | |
|--|---|-----------------------------|--------------------------------|------|-------|---------------|--|-------|----------|------|-------|
| Construction - | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">0+00</td> <td style="text-align: right;">stations</td> </tr> <tr> <td style="text-align: center;">0.00</td> <td style="text-align: right;">miles</td> </tr> </table> | 0+00 | stations | 0.00 | miles | Improvement - | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">60+70</td> <td style="text-align: right;">stations</td> </tr> <tr> <td style="text-align: center;">1.15</td> <td style="text-align: right;">miles</td> </tr> </table> | 60+70 | stations | 1.15 | miles |
| 0+00 | stations | | | | | | | | | | |
| 0.00 | miles | | | | | | | | | | |
| 60+70 | stations | | | | | | | | | | |
| 1.15 | miles | | | | | | | | | | |
| CLEARING AND GRUBBING - | | | | | | | | | | | |
| Roadside Brushing | 1.15 miles @ | \$800.00 per mile = | \$920.00 | | | | | | | | |
| | | TOTAL CLEARING AND GRUBBING | \$920.00 | | | | | | | | |
| EXCAVATION - | | | | | | | | | | | |
| Construct Turnouts (Sta. 17+15, 34+80, & 53+15) | 3 @ | \$60.00 Each = | \$180.00 | | | | | | | | |
| Clean Ditchlines and endhaul material | 60.7 sta. @ | \$80.00 per sta. = | \$4,856.00 | | | | | | | | |
| Excavate Fill (Sta. 52+15) | 35 cy. @ | \$1.28 per c.y. = | \$44.80 | | | | | | | | |
| | | TOTAL EXCAVATION | \$5,080.80 | | | | | | | | |
| Spread & compact | 1.5 hrs. @ | \$145.00 per hour = | \$217.50 | | | | | | | | |
| | | TOTAL ENDHAUL | \$1,011.72 | | | | | | | | |
| CULVERTS - MATERIALS & INSTALLATION | | | | | | | | | | | |
| | <u>Culverts</u> | | | | | | | | | | |
| | 132 LF of 18" | \$2,244.00 | | | | | | | | | |
| | | | 30 LF of 24" \$720.00 | | | | | | | | |
| | <u>Culvert Markers</u> | | | | | | | | | | |
| | 5 markers | \$40.00 | | | | | | | | | |
| | | | TOTAL CULVERTS | | | | | | | | |
| | | | \$3,004.00 | | | | | | | | |
| ROCK | | | | | | | | | | | |
| Sta. 0+00 to 60+70 | 1,810 cy. of | Crushed @ | \$14.48 per c.y. = \$26,208.80 | | | | | | | | |
| Culvert Bedding/Backfill (Sta. 8+95) | 10 cy. of | Crushed @ | \$13.19 per c.y. = \$131.90 | | | | | | | | |
| Junction Rock (Sta. 0+00, 30+10, 47+95, & 60+70) | 50 cy. of | Crushed @ | \$11.08 per c.y. = \$554.00 | | | | | | | | |
| Energy Dissipator (Sta. 8+95) | 5 cy. of | Riprap @ | \$7.82 per c.y. = \$39.10 | | | | | | | | |
| Leveling Rock (Sta. 10+55 - 11+85 & 25+60 - 26+50) | 100 cy. of | Pit-Run @ | \$5.54 per c.y. = \$554.00 | | | | | | | | |
| Spot Rock (Sta. 8+95, 17+00 - 17+30, 34+65 - 34+95, 37+95, 52+15, & 60+70) | 60 cy. of | Pit-Run @ | \$5.77 per c.y. = \$346.20 | | | | | | | | |
| Turnout Base Rock (Sta. 17+15, 34+80, & 53+15) | 45 cy. of | Pit-Run @ | \$5.55 per c.y. = \$249.75 | | | | | | | | |
| | | | TOTAL ROCK | | | | | | | | |
| | | | \$28,083.75 | | | | | | | | |
| SPECIAL PROJECTS | | | | | | | | | | | |
| Construct sediment catch basin w/ straw bale (Sta. 11+10)- -straw bale | 0.50 hours @ | \$145.00 per hour | \$72.50 | | | | | | | | |
| Construct ditchouts - | 15.00 @ | \$60.00 each | \$900.00 | | | | | | | | |
| Grade and shape road (Ditched) - | 60.70 stations @ | \$15.50 per station | \$940.85 | | | | | | | | |
| Roll subgrade w/ vibratory roller prior to rocking - | 60.70 stations @ | \$13.20 per station | \$801.24 | | | | | | | | |
| Remove culverts from state lands | 5 culverts | | \$267.90 | | | | | | | | |
| Grass seed and fertilize - | 1.60 acres @ | \$220.00 per acre | \$352.00 | | | | | | | | |
| Mulching - | 1.393 acres @ | \$600.00 per acre | \$835.80 | | | | | | | | |
| | | | TOTAL SPECIAL PROJECTS | | | | | | | | |
| | | | \$4,174.79 | | | | | | | | |
| GRAND TOTAL | | | \$42,275.06 | | | | | | | | |

SUMMARY OF CONSTRUCTION COST

| | | | |
|---|---|--|---|
| Sale: | <u>Rackheap Falls</u> | | Road: <u>Q to R</u> |
| Construction - | <u>0+00</u> stations <u>0.00</u> miles | | Reconstruction - <u>10+00</u> stations <u>0.19</u> miles |
| CLEARING AND GRUBBING - Scattering | | 0.460 acres @ | \$980.00 per acre = <u>\$450.80</u> TOTAL CLEARING AND GRUBBING \$450.80 |
| EXCAVATION - Road Earthwork (0+00 - 2+30) Road Earthwork (2+30 - 10+00) Construct Landing Construct Turnaround Construct Turnout | | 2.30 sta. @ 7.70 sta. @ 1 @ 1 @ 1 @ | \$140.00 per sta. = \$322.00 \$90.00 per sta. = \$693.00 \$250.00 each = \$250.00 \$75.00 each = \$75.00 \$60.00 each = \$60.00 TOTAL EXCAVATION \$1,400.00 |
| ROCK Sta. 0+00 to 10+00 Landing Rock (Sta. 10+00) Junctions (Sta. 0+00) | 499 cy. of 50 cy. of 15 cy. of | Pit-Run @ Pit-Run @ Pit-Run @ | \$4.74 per c.y. = \$2,365.26 \$4.72 per c.y. = \$236.00 \$4.54 per c.y. = \$68.10 TOTAL ROCK \$2,669.36 |
| SPECIAL PROJECTS Grade and shape road (Outsloped) - Roll subgrade w/ vibratory roller prior to rocking - Grass seed and fertilize - | | 10.00 stations @ 10.00 stations @ 0.44 acres @ | \$14.00 per station = \$140.00 \$13.20 per station = \$132.00 \$220.00 per acre = \$96.80 TOTAL SPECIAL PROJECTS \$368.80 |
| | | | GRAND TOTAL \$4,888.96 |

SUMMARY OF CONSTRUCTION COST

| | | | | |
|--|---|------------------------------------|--|--|
| Sale: | <u>Rackheap Falls</u> | | Road: | <u>Point "S"</u> |
| Construction - | <u>0+00</u> stations <u>0.00</u> miles | | Improvement - | <u>0+00</u> stations <u>0.00</u> miles |
| CLEARING AND GRUBBING - Scattering | | 0.100 acres @ | \$980.00 per acre = | <u>\$98.00</u> |
| | | | TOTAL CLEARING AND GRUBBING | \$98.00 |
| EXCAVATION - Remove Fill Construct and level Waste Area | | 370 cy. @ 2 hours @ | \$1.28 per c.y.= \$145.00 per c.y.= | <u>\$473.60</u> <u>\$290.00</u> |
| | | | TOTAL EXCAVATION | \$763.60 |
| ENDHAUL - Fill Material to waste area Spread & compact waste area | | 370 cy. @ 829 cy. @ | \$1.26 per c.y.= \$0.25 per c.y.= | <u>\$466.20</u> <u>\$207.25</u> |
| | | | TOTAL ENDHAUL | \$673.45 |
| ROCK Road Barrier | 15 cy. of | Riprap | @ | \$8.74 per c.y.= |
| | | | | <u>\$131.10</u> |
| | | | TOTAL ROCK | \$131.10 |
| SPECIAL PROJECTS Remove culverts from state lands Grass seed and fertilize - Mulching - | | @ 0.25 acres @ 0.250 acres @ | \$102.90 total \$220.00 per acre \$600.00 per acre | <u>\$102.90</u> <u>\$55.00</u> <u>\$150.00</u> |
| | | | TOTAL SPECIAL PROJECTS | \$307.90 |
| GRAND TOTAL | | | | \$1,974.05 |

SUMMARY OF CONSTRUCTION COST

| | | | |
|--|---|---------------|--|
| Sale: | <u>Rackheap Falls</u> | Road: | <u>Point "T"</u> |
| Construction - | <u>0+00</u> stations <u>0.00</u> miles | Improvement - | <u>0+00</u> stations <u>0.00</u> miles |
| CLEARING AND GRUBBING - | | | TOTAL CLEARING AND GRUBBING |
| | | | \$0.00 |
| EXCAVATION - | | | |
| Remove existing culvert | 1.00 | hour @ | \$145.00 per sta. = <u>\$145.00</u> |
| | | | TOTAL EXCAVATION |
| | | | \$145.00 |
| CULVERTS - MATERIALS & INSTALLATION | | | |
| | <u>Culverts</u> | | |
| | 30 | LF of 18" | From I to J Sta. 118+95 |
| | | | Transportation of culvert from I to J to Point "T" |
| | | | \$102.90 |
| | <u>Culvert Stakes & Markers</u> | | |
| | 1 | markers | \$8.00 |
| | | | TOTAL CULVERTS |
| | | | \$110.90 |
| ROCK | | | |
| Cap: Spot Rock | 10 | cy. of | Crushed @ \$13.53 per c.y. = \$135.30 |
| Energy Dissipator | 10 | cy. of | Riprap @ \$9.10 per c.y. = \$91.00 |
| Base: Spot Rock | 10 | cy. of | Pit-Run @ \$7.31 per c.y. = <u>\$73.10</u> |
| | | | TOTAL ROCK |
| | | | \$299.40 |
| SPECIAL PROJECTS | | | |
| Installation of culvert | 0.50 | hours @ | \$30.00 per hour \$15.00 |
| Remove culverts from state lands | 1.00 | @ | \$102.90 total \$102.90 |
| Grass seed and fertilize - | 0.10 | acres @ | \$220.00 per acre \$22.00 |
| Mulching - | 0.100 | acres @ | \$600.00 per acre <u>\$60.00</u> |
| | | | TOTAL SPECIAL PROJECTS |
| | | | \$199.90 |
| | | | GRAND TOTAL |
| | | | \$1,721.62 |

ROCK DEVELOPMENT COST SUMMARY

| | | | |
|-------------|-----------------------|--------------------|----------------------------------|
| Pit: | Rackheap Rockheap | Location: | SE 1/4 of Sec. 9, T3N, R9W, W.M. |
| Sale: | Rackheap Falls | Pit-Run | 3529 c.y. |
| Swell: | 1.40 | RipRap: | 10 c.y. |
| Shrinkage | 1.16 | Total Truck Loads: | 3539 c.y. |
| Drill Pct.: | 25% | In Place Total: | 2528 c.y. |

| | |
|--|--|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | \$3,459.49 |
| Drill & Shoot: | \$2.50 /cu.yd. x 632 cu.yds. = \$1,580.00 |
| Rip Rock | \$1.90 /cu.yd. x 1896 cu.yds. = \$3,602.40 |
| Load Dump Truck: | \$0.70 /cu.yd. x 3529 cu.yds. = \$2,470.30 |
| Load RipRap into Truck: | \$1.40 /cu.yd. x 10 cu.yds. = \$14.00 |
| Subtotal | \$11,126.19 |

| | | | | | |
|---|---|--------------------------|----------|---|----------|
| Move In and set up Drill and Compressor | 1 | @ | \$240.04 | = | \$240.04 |
| Move in D-8 | | (Within Area: 1.5 Miles) | | = | \$22.65 |
| Move in Loader | | (Within Area: 1.5 Miles) | | = | \$5.33 |
| Move in Excavator | | (Within Area: 1.5 Miles) | | = | \$67.20 |
| Move in Trucks | | (Within Area: 1.5 Miles) | | = | \$12.83 |
| Move in Water Truck | | (Within Area: 1.5 Miles) | | = | \$4.28 |
| Subtotal | | | | | \$352.33 |

TOTAL PRODUCTION COSTS \$11,478.52

| | | |
|--------------------|--------|------------|
| Pit-Run Base Cost= | \$3.24 | Per Cu.Yd. |
| RipRap Base Cost= | \$3.94 | Per Cu.Yd. |

| Road Segment | Haul Cost /cu.yd. | Proc Cost /cu.yd. | Base Cst. /cu.yd. | Cost /cu.yd. | Number Cu. Yds | ROCK COST |
|----------------------------|----------------------|----------------------|----------------------|-----------------|-------------------|--------------|
| K to L Leveling Rock | \$1.44 | \$1.10 | \$3.24 | \$5.78 | 40 | \$231.20 |
| K to L Spot Rock | \$1.60 | \$1.10 | \$3.24 | \$5.94 | 20 | \$118.80 |
| M to N (Sta. 0+00 - 43+80) | \$2.48 | \$1.10 | \$3.24 | \$6.82 | 2037 | \$13,892.34 |
| M to N Energy Dissipator | \$3.58 | \$1.40 | \$3.94 | \$8.92 | 5 | \$44.60 |
| M to N Leveling Rock | \$2.34 | \$1.10 | \$3.24 | \$6.68 | 70 | \$467.60 |
| M to N Junctions | \$1.74 | \$1.10 | \$3.24 | \$6.08 | 15 | \$91.20 |
| M to N Landing | \$2.75 | \$1.10 | \$3.24 | \$7.09 | 50 | \$354.50 |
| O to P Energy Dissipator | \$2.48 | \$1.40 | \$3.94 | \$7.82 | 5 | \$39.10 |
| O to P Spot Rock | \$1.43 | \$1.10 | \$3.24 | \$5.77 | 60 | \$346.20 |
| O to P Leveling Rock | \$1.20 | \$1.10 | \$3.24 | \$5.54 | 100 | \$554.00 |
| O to P Turnouts | \$1.21 | \$1.10 | \$3.24 | \$5.55 | 45 | \$249.75 |
| Point "T" | \$2.97 | \$1.10 | \$3.24 | \$7.31 | 10 | \$73.10 |
| Stockpile | \$0.91 | \$0.70 | \$3.24 | \$4.85 | 737 | \$3,574.45 |
| | | | | Total C.Y. | 3539 | Sub Total |
| | | | | | | \$21,819.99 |

TOTAL ROCKING COSTS \$21,819.99

ROCK DEVELOPMENT COST SUMMARY

| | | | |
|-------------|-----------------------|--------------------|-----------------------------------|
| Pit: | Nehalem Ridge Road | Location: | SE 1/4 of Sec. 14, T3N, R9W, W.M. |
| Sale: | Rackheap Falls | Road: | 6092 c.y. |
| Swell: | 1.40 | Stockpile: | 964 c.y. |
| Shrinkage: | 1.16 | Total Truck Loads: | 7056 c.y. |
| Drill Pct.: | 50% | In Place Total: | 5040 c.y. |

| | |
|--|--|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | \$1,719.88 |
| Drill & Shoot: | \$2.50 /cu.yd. x 2520 cu.yds. = \$6,300.00 |
| Rip Rock | \$1.90 /cu.yd. x 2520 cu.yds. = \$4,788.00 |
| Load Dump Truck: | \$0.70 /cu.yd. x 7056 cu.yds. = \$4,939.20 |
| Subtotal | \$17,747.08 |

| | | |
|---|---|----------|
| Move In and set up Drill and Compressor (Within Area: 4.13 Miles) | = | \$189.98 |
| Move in D-8 (Within Area: 0.5 Miles) | = | \$7.55 |
| Move in Loader (Within Area: 4.13 Miles) | = | \$37.17 |
| Move in Excavator (Within Area: 0.5 Miles) | = | \$22.40 |
| Move in Trucks (Within Area: 4.13 Miles) | = | \$35.31 |
| Subtotal | = | \$292.41 |

TOTAL PRODUCTION COSTS \$18,039.49

Base Cost= \$2.56 Per Cu.Yd.

| Road Segment | Haul Cost /cu.yd. | Proc Cost /cu.yd. | Base Cst. /cu.yd. | Cost /cu.yd. | Number Cu. Yds | ROCK COST |
|---------------------------------------|-------------------|-------------------|-------------------|--------------|----------------|-------------|
| A to B: (Sta. 65+00 - 78+80) | \$4.08 | \$1.10 | \$2.56 | \$7.74 | 664 | \$5,139.36 |
| A to B: (Sta. 59+15 - 60+95) | \$3.91 | \$1.10 | \$2.56 | \$7.57 | 97 | \$734.29 |
| A to B: Base/Leveling | \$3.58 | \$1.10 | \$2.56 | \$7.24 | 144 | \$1,042.56 |
| A to B: Backfill (sta. 21+65 - 21+90) | \$3.23 | \$0.90 | \$2.56 | \$6.69 | 50 | \$334.50 |
| A to B: Spot Rock | \$3.17 | \$1.10 | \$2.56 | \$6.83 | 50 | \$341.50 |
| A to B: Turnouts (0+00 - 65+00) | \$3.44 | \$1.10 | \$2.56 | \$7.10 | 45 | \$319.50 |
| A to B: Landing | \$4.07 | \$1.10 | \$2.56 | \$7.73 | 50 | \$386.50 |
| C to D: (Sta. 0+00 - 11+95) | \$3.97 | \$1.10 | \$2.56 | \$7.63 | 595 | \$4,539.85 |
| C to D: Junctions | \$3.76 | \$1.10 | \$2.56 | \$7.42 | 15 | \$111.30 |
| C to D: Landing | \$3.94 | \$1.10 | \$2.56 | \$7.60 | 50 | \$380.00 |
| E to F: (49+60 - 54+05) | \$3.11 | \$1.10 | \$2.56 | \$6.77 | 226 | \$1,530.02 |
| E to F: Leveling Rock | \$2.62 | \$1.10 | \$2.56 | \$6.28 | 20 | \$125.60 |
| E to F: Turnouts (0+00 - 49+60) | \$2.62 | \$1.10 | \$2.56 | \$6.28 | 60 | \$376.80 |
| E to F: Landing | \$3.02 | \$1.10 | \$2.56 | \$6.68 | 50 | \$334.00 |
| G to H: (Sta. 0+00 - 15+20) | \$2.77 | \$1.10 | \$2.56 | \$6.43 | 703 | \$4,520.29 |
| G to H: Junctions | \$2.54 | \$1.10 | \$2.56 | \$6.20 | 15 | \$93.00 |
| G to H: Landing | \$2.76 | \$1.10 | \$2.56 | \$6.42 | 50 | \$321.00 |
| I to J: (Sta. 141+20 - 190+55) | \$1.23 | \$1.10 | \$2.56 | \$4.89 | 2274 | \$11,119.86 |
| I to J: Turnouts (0+00 - 141+20) | \$2.44 | \$1.10 | \$2.56 | \$6.10 | 90 | \$549.00 |
| I to J: Junctions | \$1.20 | \$1.10 | \$2.56 | \$4.86 | 60 | \$291.60 |
| I to J: Spot Rock | \$2.69 | \$1.10 | \$2.56 | \$6.35 | 70 | \$444.50 |
| Q to R: (Sta. 0+00 - 10+00) | \$1.08 | \$1.10 | \$2.56 | \$4.74 | 499 | \$2,365.26 |
| Q to R: Junctions | \$0.88 | \$1.10 | \$2.56 | \$4.54 | 15 | \$68.10 |
| Q to R: Landing | \$1.06 | \$1.10 | \$2.56 | \$4.72 | 50 | \$236.00 |
| Stockpile | \$0.00 | \$0.70 | \$2.56 | \$3.26 | 964 | \$3,142.64 |
| | | | | Total C.Y. | 7056 | Sub Total |
| | | | | | | \$39,460.53 |

TOTAL ROCKING COSTS \$39,460.53

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|-------------|-----------------------|--------------------|--|
| Pit: | <u>Hanson Pit</u> | Location: | <u>SE 1/4 of Sec.9, T3N, R9W, W.M.</u> |
| Sale: | <u>Rackheep Falls</u> | Crushed: | <u>9977 c.y.</u> |
| Swell: | <u>1.40</u> | RipRap: | <u>625 c.y.</u> |
| Shrinkage: | <u>1.16</u> | Total Truck Loads: | <u>10602 c.y.</u> |
| Drill Pct.: | <u>100%</u> | In Place Total: | <u>7573 c.y.</u> |

| | | | | | |
|--|---------------------------------|---|----------------------|------------|--------------------|
| Pit Development & Cleanup including Clearing and grubbing of | | | | \$8,927.91 | |
| Waste Area @ adjacent to pit, place overburden | | | | | |
| In Waste Area, spread and compact. | | | | | |
| Drill & Shoot: | <u> \$2.50 /cu.yd.</u> | x | <u>7573 cu.yds.</u> | = | <u>\$18,932.50</u> |
| Dig Rock: | <u> \$0.70 /cu.yd.</u> | x | <u>10602 cu.yds.</u> | = | <u>\$7,421.40</u> |
| Transport to Crushing Site: | <u> \$1.03 /cu.yd.</u> | x | <u>9977 cu.yds.</u> | = | <u>\$10,276.31</u> |
| Load Crusher: | <u> \$0.70 /cu.yd.</u> | x | <u>9977 cu.yds.</u> | = | <u>\$6,983.90</u> |
| Crust 1-1/2"-0" Rock | <u> \$3.00 /cu.yd.</u> | x | <u>9977 cu.yds.</u> | = | <u>\$29,931.00</u> |
| Load Dump Truck: | <u> \$0.70 /cu.yd.</u> | x | <u>9977 cu.yds.</u> | = | <u>\$6,983.90</u> |
| Load RipRap: | <u> \$1.40 /cu.yd.</u> | x | <u>625 cu.yds.</u> | = | <u>\$875.00</u> |
| Screen Drain Rock: | <u> \$3.40 /cu.yd.</u> | x | <u>50 cu.yds.</u> | = | <u>\$170.00</u> |
| Subtotal | | | | | <u>\$89,626.92</u> |

| | | | | | |
|---|---------------------------|---|----------|---|-------------------|
| Move In/Set-up Crusher | | | | | \$2,520.00 |
| Move In and set up Drill and Compressor | (within area: 3.01 Miles) | | | | \$138.46 |
| Setup Screening Plant | 1 | @ | \$395.00 | = | \$395.00 |
| Move in D-8 | (within area: 3.01 Miles) | | | | \$45.45 |
| Move in Loader | 2 | @ | \$324.76 | = | \$649.52 |
| Move in Excavator | (within area: 3.01 Miles) | | | | \$134.85 |
| Move in Trucks | (within area: 3.01 Miles) | | | | \$25.74 |
| Move in Water Truck | (within area: 3.01 Miles) | | | | \$8.58 |
| Subtotal | | | | | <u>\$3,917.60</u> |

TOTAL PRODUCTION COSTS \$93,544.52

| | | |
|---------------------|-------------------------|------------|
| Crushed Base Cost = | <u> \$9.14</u> | Per Cu.Yd. |
| RipRap Base Cost = | <u> \$4.76</u> | Per Cu.Yd. |
| Drain Rock Cost = | <u> \$5.76</u> | Per Cu.Yd. |

| Road Segment | Haul Cost /cu.yd. | Proc Cost /cu.yd. | Base Cst. /cu.yd. | Cost /cu.yd. | Number Cu. Yds | ROCK COST | |
|--|-------------------|-------------------|-------------------|--------------|----------------|-----------|------------|
| A to B: (Sta. 0+00 - 65+00) | 1.66 | 2.45 | 9.14 | 13.25 | 941 | 12,468.25 | |
| A to B Culvert Bedding/Backfill (Sta. 1+80, 8+35, & 18+00) | 1.24 | 0.90 | 9.14 | 11.28 | 65 | 733.20 | |
| A to B: Junctions | 1.55 | 2.45 | 9.14 | 13.14 | 15 | 197.10 | |
| A to B: Drain Rock | 1.47 | 1.40 | 6.76 | 9.63 | 50 | 481.50 | |
| A to B Fill Armor (Sta. 8+35 & 18+00) | 2.11 | 1.40 | 4.76 | 8.27 | 60 | 496.20 | |
| A to B Slope Stabilization (Sta. 21+65 - 21+90) | 2.32 | 2.00 | 4.76 | 9.08 | 200 | 1,816.00 | |
| A to B Energy Dissipator (Sta. 1+80, 8+35, 14+05, & 18+00) | 2.11 | 1.40 | 4.76 | 8.27 | 120 | 992.40 | |
| E to F (Sta. 0+00 - 49+60) | 2.23 | 2.45 | 9.14 | 13.82 | 733 | 10,130.06 | |
| E to F Culvert Bedding/Backfill (Sta. 35+00) | 2.26 | 0.90 | 9.14 | 12.30 | 10 | 123.00 | |
| E to F Junctions | 1.75 | 2.45 | 9.14 | 13.34 | 5 | 66.70 | |
| E to F Slope Stabilization (Sta. 1+55 - 2+30) | 2.87 | 2.00 | 4.76 | 9.63 | 130 | 1,251.90 | |
| E to F Energy Dissipator (Sta. 14+90 & 35+00) | 3.36 | 1.40 | 4.76 | 9.52 | 10 | 95.20 | |
| I to J (Sta. 0+00 - 141+20) | 2.74 | 2.45 | 9.14 | 14.33 | 4201 | 60,200.33 | |
| I to J Culvert Bedding/Backfill | 1.60 | 0.90 | 9.14 | 11.64 | 105 | 1,222.20 | |
| I to J Junctions | 2.16 | 2.45 | 9.14 | 13.75 | 60 | 825.00 | |
| I to J Energy Dissipator (Sta. 9+60, 12+65, 23+75, 26+00, | 1.93 | 1.40 | 4.76 | 8.09 | 65 | 525.85 | |
| K to L (Sta. 0+00 - 21+60) | 1.39 | 2.45 | 9.14 | 12.98 | 317 | 4,114.66 | |
| K to L Junctions | 1.39 | 2.45 | 9.14 | 12.98 | 15 | 194.70 | |
| K to L Energy Dissipator | 2.19 | 1.40 | 4.76 | 8.35 | 15 | 125.25 | |
| O to P (Sta. 0+00 - 60+70) | 2.89 | 2.45 | 9.14 | 14.48 | 1810 | 26,208.80 | |
| O to P Culvert Bedding | 3.15 | 0.90 | 9.14 | 13.19 | 10 | 131.90 | |
| O to P Junctions | 3.67 | 2.45 | 4.76 | 11.08 | 50 | 554.00 | |
| Point "S": Road Blockage | 2.58 | 1.40 | 4.76 | 8.74 | 15 | 131.10 | |
| Point "T": Spot Rock | 1.94 | 2.45 | 9.14 | 13.53 | 10 | 135.30 | |
| Point "T": Energy Dissipator | 2.94 | 1.40 | 4.76 | 9.10 | 10 | 91.00 | |
| Stockpile | 2.13 | 0.70 | 9.14 | 11.97 | 1500 | 17,955.00 | |
| Total C.Y. | | | | | 10602 | Sub Total | 141,629.10 |

TOTAL ROCKING COSTS 141,629.10

Move-In Calculations

Sale: Rackheap Falls

| LOWBOY HAUL (Round Trip) | | |
|--------------------------|--------------|-----------------|
| DIST. (mi) | ROADWAY | AVE SPEED (mph) |
| 30.8 | Pavement | 30 |
| 1.5 | 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 | Drill & Compressor | \$205.50 | | \$46.00 | 0.00 | 3.00 | 3 | \$138.00 | \$343.50 |
| 1 | Brush Cutter | \$199.79 | | \$4.00 | 0.00 | 2.60 | 2.6 | \$10.40 | \$210.19 |
| 1 | Graders | \$223.37 | | \$3.65 | 0.00 | 2.60 | 2.6 | \$9.49 | \$232.86 |
| 0 | Loader (Small) | \$0.00 | 1 | \$3.55 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Loader (Med. & Large) | \$0.00 | 1 | \$9.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 2 | Rollers (smooth/grid) & Compactors | \$480.09 | | \$5.00 | 0.00 | 2.60 | 2.6 | \$26.00 | \$506.09 |
| 0 | Excavators (Small) | \$0.00 | | \$22.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Excavators (Med.) | \$0.00 | | \$35.50 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 2 | Excavators (Large) | \$726.58 | 1 | \$44.80 | 0.00 | 1.60 | 1.6 | \$143.36 | \$869.94 |
| 1 | Tired Backhoes/Skidders | \$240.04 | | \$3.00 | 0.00 | 2.60 | 2.6 | \$7.80 | \$247.84 |
| 0 | Tractors (D6) | \$0.00 | 2 | \$7.10 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Tractors (D7) | \$0.00 | 2 | \$11.30 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 1 | Tractor (D8) | \$364.07 | 2 | \$15.10 | 0.00 | 2.60 | 2.6 | \$39.26 | \$403.33 |
| 3 | Dump Truck (10 cy +) | \$260.60 | | \$2.85 | 0.00 | 2.60 | 2.6 | \$22.23 | \$282.83 |
| 0 | Dump Truck (Off Hiway) | \$0.00 | 1 | \$4.75 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Water Truck (1500 Gal) | \$0.00 | | \$2.85 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 1 | Water Truck (2500 Gal) | \$83.14 | | \$2.85 | 0.00 | 2.60 | 2.6 | \$7.41 | \$90.55 |
| 0 | Jaw | \$1,066.00 | | | | | | | |
| 0 | 2-Stage Crusher | \$1,597.00 | | | | | | | |
| 0 | 3-Stage Crusher | \$2,489.00 | | | | | | | |

| | |
|-----------------------------|-------------------|
| TOTAL MOVE-IN COSTS: | \$3,187.13 |
|-----------------------------|-------------------|



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Rackheap Falls*

1. Type of Sale

Partial cut, Recovery

2. Legal Description

Sections 10, 14, 15, 16, and 23, T 3 N, R 9 W, W.M. Tillamook County, Oregon

3. Sale Acreage

| ACRES | | |
|----------------------|-------------|------------|
| | <u>Sale</u> | <u>Net</u> |
| Area 1 (Partial Cut) | 92 | 83 |
| Area 2 (Partial Cut) | 195 | 89 |
| Area 3 (Partial Cut) | 75 | 70 |
| Area 4 (Partial Cut) | 30 | 25 |
| Area 5 (Partial Cut) | 44 | 42 |
| Total | 436 | 309 |

Sale Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Clearcut - Sale acres, less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

Partial Cut - Sale acres minus "non-required" thinning areas, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

A total of 82 variable radius plots were taken across the sale area. Plots were spaced on a square grid pattern in all sale areas.

| Area | Grid Pattern | # Plots |
|-------|--------------|---------|
| 1 | 450 x 450 | 17 |
| 2 | 450 x 450 | 20 |
| 3 | 400 x 400 | 20 |
| 4 | 300 x 300 | 11 |
| 5 | 350 x 350 | 14 |
| Total | | 82 |

All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. Species were recorded on all trees and they were graded and measured for merchantable height, diameter, and form factor. For net board feet/acre, the coefficient of variation was 53.4% and the standard error was 5.9%.

B. Plot size

A basal area factor of 40 was used in Areas 1, 2, 3 and 4. A basal area factor of 54.54 was used in Area 5. The point of observation was at 4.5 feet.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Tree heights were recorded to a top diameter of 7 inch outside bark for hemlock, Sitka spruce, and Noble fir; six inch outside bark for Douglas-fir; nine inches outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet. Height and diameter measurement standards were to the nearest foot and inch, respectively. All diameters were taken at a height of 4.5 feet. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, stand tables, diameters, and volume to basal area ratio for each species and type. This data was then entered into the Volume Summary Worksheet to compute sale volumes.

6. Hidden Defect and Breakage

A 5% deduction was applied to conifer and 10% on hardwood volume to account for the defect and breakage.

7. Timber Description

Portions of the sale area burned in the 1933 Tillamook Fire. Portions of Area 2 were planted in 1964. A portion of Area 4 was commercially thinned in the late 1970's. Area 1 was precommercially thinned. The remaining areas have had no prior stand management.

Area 1: Predominately a conifer stand of hemlock with patches of Douglas-fir and scattered alder. The timber is 40-45 years old.

Area 2: Predominately a conifer stand of Douglas-fir and hemlock with scattered alder. The timber is 50-75 years old.

Area 3: A mixed stand of alder and conifer. Douglas-fir is the dominant conifer species over the sale area, however there is a component of hemlock, spruce, and cedar as well. The timber is 50-65 years old.

Area 4: Predominately a conifer stands of hemlock with patches of Douglas-fir and scattered alder. The timber is 40-60 years old.

Area 5: The stand is dominated by Douglas-fir with a hemlock component. The timber is 65-80 years old. This stand was previously thinned in 1977.

8. Cruiser Names/Dates

Phillips/Wells October 2005, January, and February 2006

Revenue Distribution

FDF: 100%

Tax Code: 56-1

Deed Numbers: 35, 70, 441, 96

0% Rehabilitation Obligated

9. Attachments

Stand Table

Volume Summaries

Logging Plan

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|--------|-----|-----------------|-----------|-----------------|----------------|--------------|--------------|---------------------|---------------|----------------------|-----------------------|-----------------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0100 | | | | | | Area 1 | | | T03N R09W S14 T0100 | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | Page: | 1 | | | | | | |
| 03N | 09W | 14 | THIN_120 | 0100 | 77.00 | 17 | 114 | | Date: | 03/08/201 | | | | | | |
| | | | | | | | | | Time: | 12:56:16PM | | | | | | |
| S Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| WH | | 9 | 1 | 83 | 68 | 5.971 | 2.35 | 5.97 | 9.0 | 50.0 | 1.72 | 54 | 299 | 132 | 41 | 23 |
| WH | | 10 | 1 | 85 | 142 | 4.492 | 2.35 | 8.98 | 11.5 | 55.0 | 3.30 | 103 | 494 | 254 | 79 | 38 |
| WH | | 11 | 3 | 85 | 89 | 10.198 | 7.06 | 13.64 | 14.8 | 59.9 | 6.48 | 202 | 817 | 499 | 156 | 63 |
| WH | | 12 | 4 | 86 | 92 | 12.210 | 9.41 | 18.57 | 14.7 | 59.8 | 8.75 | 273 | 1,110 | 673 | 210 | 85 |
| WH | | 13 | 7 | 85 | 104 | 17.941 | 16.47 | 33.41 | 17.6 | 72.9 | 18.84 | 589 | 2,435 | 1,451 | 453 | 188 |
| WH | | 14 | 3 | 86 | 90 | 6.362 | 7.06 | 10.52 | 22.1 | 88.0 | 7.44 | 232 | 926 | 573 | 179 | 71 |
| WH | | 15 | 5 | 86 | 98 | 9.683 | 11.76 | 19.37 | 21.3 | 87.9 | 13.19 | 412 | 1,702 | 1,016 | 317 | 131 |
| WH | | 16 | 7 | 85 | 105 | 11.663 | 16.47 | 23.33 | 27.5 | 111.8 | 20.50 | 641 | 2,608 | 1,578 | 493 | 201 |
| WH | | 17 | 6 | 85 | 89 | 9.094 | 14.12 | 16.69 | 27.1 | 102.4 | 14.49 | 453 | 1,709 | 1,116 | 349 | 132 |
| WH | | 18 | 3 | 84 | 82 | 3.985 | 7.06 | 6.68 | 30.8 | 102.5 | 6.58 | 206 | 685 | 507 | 158 | 53 |
| WH | | 19 | 3 | 87 | 97 | 3.523 | 7.06 | 7.05 | 37.1 | 133.3 | 8.37 | 262 | 939 | 644 | 201 | 72 |
| WH | | 20 | 1 | 86 | 101 | 1.079 | 2.35 | 2.16 | 41.9 | 150.0 | 2.89 | 90 | 324 | 223 | 70 | 25 |
| WH | | 23 | 1 | 88 | 108 | .852 | 2.35 | 1.70 | 54.4 | 225.0 | 2.97 | 93 | 383 | 229 | 71 | 30 |
| WH | Totals | | 45 | 85 | 97 | 97.052 | 105.88 | 168.06 | 21.5 | 85.9 | 115.52 | 3,610 | 14,432 | 8,895 | 2,780 | 1,111 |
| WL | | 9 | 1 | 84 | 50 | 5.210 | 2.35 | 5.21 | 7.7 | 30.0 | 1.28 | 40 | 156 | 98 | 31 | 12 |
| WL | | 12 | 2 | 84 | 56 | 6.050 | 4.71 | 6.05 | 16.0 | 54.8 | 3.11 | 97 | 331 | 239 | 75 | 26 |
| WL | | 13 | 1 | 87 | 75 | 2.553 | 2.35 | 2.55 | 23.8 | 70.0 | 1.94 | 61 | 179 | 150 | 47 | 14 |
| WL | | 14 | 1 | 87 | 112 | 2.110 | 2.35 | 4.22 | 22.4 | 100.0 | 3.03 | 95 | 422 | 233 | 73 | 32 |
| WL | | 16 | 1 | 85 | 108 | 1.664 | 2.35 | 3.33 | 28.3 | 120.0 | 3.01 | 94 | 399 | 232 | 72 | 31 |
| WL | | 17 | 6 | 85 | 100 | 9.195 | 14.12 | 18.39 | 28.4 | 108.4 | 16.73 | 523 | 1,994 | 1,288 | 402 | 154 |
| WL | | 18 | 4 | 86 | 110 | 5.387 | 9.41 | 10.77 | 35.2 | 132.4 | 12.14 | 379 | 1,427 | 935 | 292 | 110 |
| WL | | 19 | 4 | 87 | 94 | 4.759 | 9.41 | 9.52 | 35.3 | 131.9 | 10.74 | 336 | 1,256 | 827 | 259 | 97 |
| WL | | 20 | 8 | 87 | 96 | 8.654 | 18.82 | 17.31 | 40.9 | 153.9 | 22.63 | 707 | 2,664 | 1,743 | 545 | 205 |
| WL | | 22 | 3 | 87 | 84 | 2.603 | 7.06 | 5.21 | 47.2 | 176.5 | 7.86 | 245 | 919 | 605 | 189 | 71 |
| WL | | 23 | 1 | 85 | 68 | .795 | 2.35 | .79 | 76.1 | 240.0 | 1.94 | 61 | 191 | 149 | 47 | 15 |
| WL | | 25 | 2 | 86 | 99 | 1.409 | 4.71 | 2.82 | 64.3 | 258.2 | 5.80 | 181 | 727 | 447 | 140 | 56 |
| WL | | 26 | 1 | 83 | 86 | .628 | 2.35 | 1.26 | 66.0 | 195.0 | 2.66 | 83 | 245 | 205 | 64 | 19 |
| WL | | 28 | 1 | 86 | 109 | .539 | 2.35 | 1.08 | 88.8 | 360.0 | 3.06 | 96 | 388 | 236 | 74 | 30 |
| WL | | 32 | 1 | 86 | 106 | .421 | 2.35 | .84 | 115.0 | 445.0 | 3.11 | 97 | 375 | 239 | 75 | 29 |
| WL | Totals | | 37 | 86 | 88 | 51.976 | 87.06 | 89.34 | 34.6 | 130.7 | 99.04 | 3,094 | 11,673 | 7,626 | 2,383 | 899 |
| DF | | 10 | 1 | 85 | 54 | 4.492 | 2.35 | 4.49 | 9.3 | 30.0 | 1.18 | 42 | 135 | 91 | 32 | 10 |
| DF | | 12 | 4 | 83 | 81 | 11.364 | 9.41 | 17.12 | 14.9 | 50.0 | 7.26 | 255 | 856 | 559 | 196 | 66 |
| DF | | 13 | 1 | 86 | 113 | 2.592 | 2.35 | 5.18 | 15.7 | 65.0 | 2.32 | 81 | 337 | 179 | 63 | 26 |
| DF | | 14 | 1 | 85 | 87 | 2.233 | 2.35 | 4.47 | 15.3 | 55.0 | 1.94 | 68 | 246 | 150 | 52 | 19 |
| DF | | 15 | 3 | 85 | 89 | 5.728 | 7.06 | 11.46 | 19.2 | 68.2 | 6.27 | 220 | 781 | 483 | 169 | 60 |
| DF | | 16 | 2 | 86 | 103 | 3.439 | 4.71 | 6.88 | 24.8 | 95.0 | 4.86 | 170 | 653 | 374 | 131 | 50 |
| DF | | 17 | 2 | 84 | 86 | 3.022 | 4.71 | 6.04 | 23.9 | 82.2 | 4.12 | 145 | 497 | 317 | 111 | 38 |
| DF | | 18 | 1 | 85 | 93 | 1.302 | 2.35 | 2.60 | 30.8 | 110.0 | 2.29 | 80 | 287 | 176 | 62 | 22 |
| DF | | 19 | 1 | 72 | 55 | 1.221 | 2.35 | 1.22 | 29.1 | 40.0 | 1.01 | 36 | 49 | 78 | 27 | 4 |
| DF | Totals | | 16 | 84 | 84 | 35.393 | 37.65 | 59.46 | 18.4 | 64.6 | 31.26 | 1,097 | 3,840 | 2,407 | 845 | 296 |
| DL | | 14 | 1 | 84 | 67 | 2.080 | 2.35 | 2.08 | 26.7 | 70.0 | 1.53 | 56 | 146 | 118 | 43 | 11 |
| DL | | 15 | 1 | 85 | 87 | 1.843 | 2.35 | 3.69 | 20.2 | 75.0 | 2.04 | 74 | 276 | 157 | 57 | 21 |
| DL | | 17 | 4 | 87 | 92 | 6.120 | 9.41 | 12.24 | 25.2 | 94.7 | 8.47 | 308 | 1,160 | 652 | 237 | 89 |
| DL | | 18 | 3 | 87 | 102 | 4.040 | 7.06 | 8.08 | 31.7 | 121.9 | 7.05 | 256 | 985 | 542 | 197 | 76 |
| DL | | 21 | 1 | 83 | 103 | .951 | 2.35 | 1.90 | 44.5 | 150.0 | 2.32 | 85 | 285 | 179 | 65 | 22 |
| DL | | 23 | 1 | 85 | 99 | .795 | 2.35 | 1.59 | 55.4 | 210.0 | 2.42 | 88 | 334 | 186 | 68 | 26 |
| DL | | 33 | 1 | 89 | 130 | .401 | 2.35 | .80 | 119.3 | 590.0 | 2.63 | 96 | 473 | 203 | 74 | 36 |
| DL | Totals | | 12 | 86 | 93 | 16.230 | 28.24 | 30.38 | 31.7 | 120.4 | 26.46 | 962 | 3,658 | 2,037 | 741 | 282 |
| RA | | 16 | 1 | 80 | 74 | 1.685 | 2.35 | 1.69 | 40.4 | 120.0 | 1.87 | 68 | 202 | 144 | 52 | 16 |

| Stand Table Summary | | | | | | | | | | | | | | | | | |
|---------------------|---|---|--------|-------|----|-------|---------|--------|--------------|---------------|-------|------------------|---------------------|------------------|--------|-------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0100 | | | | | | | | | | <i>Area 1</i> | | | T03N R09W S14 T0100 | | | | |
| Twp Rge Sec Tract | | | | Type | | Acres | | Plots | Sample Trees | | | Page: 2 | | Date: 03/08/2001 | | | |
| 03N 09W 14 THIN_120 | | | | 0100 | | 77.00 | | 17 | 114 | | | Time: 12:56:16PM | | | | | |
| Sp | S | T | Sample | | FF | Ht | Trees/ | BA/ | Logs | Average Log | | Net | Net | Totals | | | |
| | | | DBH | Trees | | | | | | 16' | Tot | | | Acre | Acre | Acre | Net |
| RA | | | 19 | 1 | 80 | 67 | 1.260 | 2.35 | 1.26 | 34.0 | 90.0 | 1.18 | 43 | 113 | 91 | 33 | 9 |
| RA | | | Totals | 2 | 80 | 71 | 2.946 | 4.71 | 2.95 | 37.7 | 107.2 | 3.05 | 111 | 316 | 235 | 85 | 24 |
| RC | | | 52 | 1 | 75 | 83 | .160 | 2.35 | .32 | 255.4 | 800.0 | 1.92 | 81 | 255 | 147 | 63 | 20 |
| RC | | | Totals | 1 | 75 | 83 | .160 | 2.35 | .32 | 255.4 | 800.0 | 1.92 | 81 | 255 | 147 | 63 | 20 |
| SS | | | 50 | 1 | 80 | 64 | .173 | 2.35 | | | | | | | | | |
| SS | | | Totals | 1 | 80 | 64 | .173 | 2.35 | | | | | | | | | |
| Totals | | | | 114 | 85 | 91 | 203.928 | 268.24 | 350.51 | 25.6 | 97.5 | 277.25 | 8956 | 34,175 | 21,348 | 6,896 | 2,631 |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|--------|-----|--------------|--------|-----------|-------------|----------|--------------|-------------|---------------------|----------------|-----------------|-----------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0200 | | | | | | | | | | T03N R09W S14 T0200 | | | | | | |
| Area 2 | | | | | | | | | | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | | Plots | Sample Trees | | Page: | I | | | | | |
| 03N | 09W | 14 | THIN__160 | 0200 | 103.00 | | 22 | 208 | | Date: | 03/09/201 | | | | | |
| | | | | | | | | | | Time: | 8:22:36AM | | | | | |
| Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| DF | | 9 | 1 | 86 | 36 | 3.939 | 1.82 | 3.94 | 5.6 | 20.0 | .63 | 22 | 79 | 65 | 23 | 8 |
| DF | | 10 | 1 | 86 | 79 | 3.543 | 1.82 | 3.54 | 11.6 | 40.0 | 1.17 | 41 | 142 | 120 | 42 | 15 |
| DF | | 11 | 1 | 87 | 68 | 2.658 | 1.82 | 2.66 | 14.8 | 60.0 | 1.12 | 39 | 159 | 116 | 41 | 16 |
| DF | | 12 | 4 | 87 | 76 | 9.428 | 7.27 | 16.42 | 11.2 | 45.7 | 5.25 | 184 | 751 | 541 | 190 | 77 |
| DF | | 13 | 2 | 88 | 82 | 3.799 | 3.64 | 5.74 | 16.8 | 63.2 | 2.75 | 96 | 363 | 283 | 99 | 37 |
| DF | | 14 | 2 | 88 | 91 | 3.402 | 3.64 | 6.80 | 17.4 | 75.0 | 3.37 | 118 | 510 | 347 | 122 | 53 |
| DF | | 15 | 2 | 88 | 114 | 3.067 | 3.64 | 4.55 | 24.2 | 99.8 | 3.14 | 110 | 454 | 323 | 113 | 47 |
| DF | | 16 | 2 | 85 | 97 | 2.627 | 3.64 | 5.25 | 24.3 | 91.5 | 3.63 | 127 | 481 | 374 | 131 | 50 |
| DF | | 17 | 4 | 88 | 84 | 4.617 | 7.27 | 8.02 | 26.5 | 97.0 | 6.07 | 213 | 778 | 625 | 219 | 80 |
| DF | | 18 | 2 | 88 | 115 | 2.072 | 3.64 | 5.14 | 29.4 | 122.3 | 4.31 | 151 | 628 | 444 | 156 | 65 |
| DF | | 19 | 3 | 88 | 103 | 2.850 | 5.45 | 6.64 | 31.6 | 125.6 | 5.99 | 210 | 834 | 617 | 217 | 86 |
| DF | | 20 | 1 | 89 | 126 | .850 | 1.82 | 2.55 | 32.4 | 143.3 | 2.36 | 83 | 366 | 243 | 85 | 38 |
| DF | | 21 | 5 | 89 | 115 | 3.759 | 9.09 | 9.02 | 40.0 | 170.7 | 10.29 | 361 | 1,540 | 1,060 | 372 | 159 |
| DF | | 22 | 5 | 89 | 115 | 3.396 | 9.09 | 8.83 | 42.2 | 187.1 | 10.63 | 373 | 1,653 | 1,095 | 384 | 170 |
| DF | | 23 | 12 | 87 | 123 | 7.533 | 21.82 | 19.47 | 47.3 | 211.8 | 26.28 | 922 | 4,125 | 2,707 | 950 | 425 |
| DF | | 24 | 2 | 89 | 159 | 1.177 | 3.64 | 4.71 | 41.3 | 216.0 | 5.54 | 194 | 1,017 | 570 | 200 | 105 |
| DF | | 25 | 5 | 87 | 135 | 2.676 | 9.09 | 7.49 | 57.6 | 268.6 | 12.31 | 432 | 2,013 | 1,268 | 445 | 207 |
| DF | | 26 | 3 | 89 | 124 | 1.495 | 5.45 | 3.48 | 66.9 | 306.3 | 6.63 | 233 | 1,065 | 683 | 240 | 110 |
| DF | | 27 | 3 | 85 | 140 | 1.359 | 5.45 | 5.85 | 42.1 | 208.1 | 7.01 | 246 | 1,218 | 723 | 254 | 125 |
| DF | | 28 | 3 | 89 | 145 | 1.273 | 5.45 | 3.82 | 73.3 | 386.1 | 7.98 | 280 | 1,474 | 822 | 288 | 152 |
| DF | | 29 | 2 | 85 | 133 | .798 | 3.64 | 2.39 | 69.7 | 321.7 | 4.76 | 167 | 770 | 490 | 172 | 79 |
| DF | | 30 | 3 | 89 | 147 | 1.124 | 5.45 | 3.74 | 75.4 | 402.1 | 8.04 | 282 | 1,505 | 828 | 291 | 155 |
| DF | | 31 | 1 | 89 | 173 | .342 | 1.82 | 1.37 | 78.1 | 440.0 | 3.05 | 107 | 603 | 314 | 110 | 62 |
| DF | | 32 | 1 | 89 | 124 | .326 | 1.82 | .98 | 86.6 | 453.3 | 2.41 | 85 | 443 | 248 | 87 | 46 |
| DF | | 34 | 1 | 90 | 155 | .288 | 1.82 | .87 | 115.1 | 613.3 | 2.83 | 100 | 531 | 292 | 103 | 55 |
| DF | | 35 | 1 | 90 | 178 | .272 | 1.82 | 1.09 | 103.3 | 580.0 | 3.20 | 112 | 631 | 330 | 116 | 65 |
| DF | Totals | 72 | 87 | 100 | | 68.669 | 130.91 | 144.38 | 36.6 | 167.1 | 150.75 | 5,289 | 24,132 | 15,527 | 5,448 | 2,486 |
| DL | | 13 | 1 | 82 | 82 | 2.133 | 1.82 | 4.27 | 11.7 | 45.0 | 1.38 | 50 | 192 | 142 | 52 | 20 |
| DL | | 15 | 1 | 85 | 89 | 1.522 | 1.82 | 3.04 | 18.7 | 75.0 | 1.57 | 57 | 228 | 161 | 59 | 24 |
| DL | | 16 | 3 | 84 | 81 | 4.057 | 5.45 | 6.76 | 24.0 | 80.0 | 4.45 | 162 | 541 | 459 | 167 | 56 |
| DL | | 17 | 1 | 87 | 89 | 1.210 | 1.82 | 2.42 | 24.4 | 90.0 | 1.62 | 59 | 218 | 167 | 61 | 22 |
| DL | | 18 | 2 | 87 | 87 | 2.093 | 3.64 | 4.19 | 25.9 | 97.4 | 2.99 | 109 | 408 | 308 | 112 | 42 |
| DL | | 19 | 1 | 83 | 100 | .953 | 1.82 | 1.91 | 34.5 | 120.0 | 1.81 | 66 | 229 | 186 | 68 | 24 |
| DL | | 20 | 1 | 88 | 85 | .859 | 1.82 | 1.72 | 31.7 | 115.0 | 1.50 | 55 | 198 | 154 | 56 | 20 |
| DL | | 24 | 4 | 89 | 119 | 2.321 | 7.27 | 5.78 | 48.9 | 218.1 | 7.79 | 283 | 1,261 | 802 | 292 | 130 |
| DL | | 25 | 1 | 89 | 130 | .546 | 1.82 | 1.64 | 50.1 | 230.0 | 2.26 | 82 | 377 | 233 | 85 | 39 |
| DL | | 26 | 2 | 90 | 126 | .995 | 3.64 | 2.50 | 63.8 | 304.8 | 4.39 | 160 | 763 | 452 | 164 | 79 |
| DL | | 27 | 2 | 89 | 156 | .901 | 3.64 | 3.62 | 47.8 | 260.8 | 4.75 | 173 | 944 | 489 | 178 | 97 |
| DL | | 28 | 3 | 89 | 121 | 1.246 | 5.45 | 3.32 | 72.6 | 361.2 | 6.64 | 241 | 1,201 | 684 | 249 | 124 |
| DL | | 29 | 3 | 90 | 130 | 1.184 | 5.45 | 3.55 | 72.0 | 353.1 | 7.03 | 256 | 1,254 | 724 | 263 | 129 |
| DL | | 30 | 3 | 90 | 144 | 1.116 | 5.45 | 3.35 | 84.2 | 418.8 | 7.75 | 282 | 1,403 | 798 | 290 | 144 |
| DL | | 31 | 1 | 90 | 129 | .351 | 1.82 | 1.05 | 79.6 | 423.3 | 2.31 | 84 | 446 | 238 | 86 | 46 |
| DL | | 32 | 5 | 89 | 129 | 1.616 | 9.09 | 4.21 | 98.1 | 501.8 | 11.35 | 413 | 2,112 | 1,169 | 425 | 217 |
| DL | | 33 | 9 | 89 | 152 | 2.759 | 16.36 | 9.49 | 91.7 | 499.3 | 23.92 | 870 | 4,737 | 2,464 | 896 | 488 |
| DL | | 34 | 4 | 88 | 146 | 1.161 | 7.27 | 3.77 | 94.8 | 490.6 | 9.84 | 358 | 1,851 | 1,014 | 369 | 191 |
| DL | | 36 | 2 | 89 | 140 | .514 | 3.64 | 1.54 | 118.4 | 638.3 | 5.02 | 183 | 985 | 518 | 188 | 101 |
| DL | | 37 | 2 | 89 | 150 | .494 | 3.64 | 1.72 | 113.7 | 645.5 | 5.39 | 196 | 1,113 | 555 | 202 | 115 |
| DL | | 38 | 1 | 90 | 116 | .231 | 1.82 | .46 | 136.8 | 695.0 | 1.74 | 63 | 321 | 179 | 65 | 33 |
| DL | | 39 | 1 | 89 | 185 | .219 | 1.82 | .88 | 131.3 | 772.5 | 3.16 | 115 | 677 | 326 | 119 | 70 |
| DL | | 41 | 1 | 90 | 153 | .198 | 1.82 | .59 | 156.0 | 873.3 | 2.55 | 93 | 520 | 263 | 96 | 54 |
| DL | | 45 | 1 | 89 | 108 | .165 | 1.82 | .49 | 149.4 | 810.0 | 2.03 | 74 | 400 | 209 | 76 | 41 |
| DL | | 72 | 1 | 91 | 122 | .064 | 1.82 | .19 | 436.6 | 2563.3 | 2.32 | 84 | 495 | 239 | 87 | 51 |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|--------|-----|-----------------|-----------|-----------------|-----------------|--------------|---------------|---------------|---------------------|---------------|---------------|---------------|--------|--------|-----|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0200 | | | | | | | | | | T03N R09W S14 T0200 | | | | | | |
| Area 2 | | | | | | | | | | Page: 2 | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | Date: | Time: | | | | | | | |
| 03N | 09W | 14 | THIN__160 | 0200 | 103.00 | 22 | 208 | 03/09/2001 | 8:22:36AM | | | | | | | |
| S Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acres | BA/ Acres | Logs Acres | Average Log | | Net Cu.Ft. | Net Cu.Ft. | Net Bd.Ft. | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| DL | Totals | 56 | 87 | 114 | 28.908 | 101.82 | 72.48 | 63.0 | 315.5 | 125.55 | 4,566 | 22,872 | 12,932 | 4,703 | 2,356 | |
| WH | 9 | 1 | 84 | 52 | 4.614 | 1.82 | 4.61 | 6.8 | 30.0 | 1.01 | 31 | 138 | 104 | 32 | 14 | |
| WH | 14 | 1 | 85 | 119 | 1.829 | 1.82 | 3.66 | 19.2 | 85.0 | 2.25 | 70 | 311 | 232 | 72 | 32 | |
| WH | 15 | 3 | 92 | 64 | 4.451 | 5.45 | 4.45 | 29.1 | 102.3 | 4.14 | 129 | 455 | 426 | 133 | 47 | |
| WH | 17 | 3 | 89 | 85 | 3.503 | 5.45 | 5.85 | 30.2 | 113.4 | 5.65 | 177 | 664 | 582 | 182 | 68 | |
| WH | 18 | 1 | 88 | 109 | 1.006 | 1.82 | 2.01 | 36.1 | 135.0 | 2.32 | 73 | 272 | 239 | 75 | 28 | |
| WH | 19 | 8 | 89 | 105 | 7.286 | 14.55 | 14.60 | 39.4 | 159.5 | 18.40 | 575 | 2,329 | 1,896 | 592 | 240 | |
| WH | 20 | 4 | 87 | 83 | 3.335 | 7.27 | 6.61 | 36.2 | 125.7 | 7.68 | 240 | 831 | 791 | 247 | 86 | |
| WH | 21 | 3 | 88 | 99 | 2.226 | 5.45 | 5.18 | 41.1 | 152.7 | 6.83 | 213 | 791 | 703 | 219 | 81 | |
| WH | 22 | 4 | 89 | 96 | 2.695 | 7.27 | 5.39 | 45.7 | 193.4 | 7.87 | 246 | 1,042 | 811 | 253 | 107 | |
| WH | 23 | 1 | 93 | 109 | .614 | 1.82 | 1.23 | 62.2 | 220.0 | 2.45 | 76 | 270 | 252 | 79 | 28 | |
| WH | 24 | 3 | 92 | 132 | 1.771 | 5.45 | 5.31 | 52.2 | 256.8 | 8.88 | 278 | 1,364 | 915 | 286 | 140 | |
| WH | 26 | 2 | 87 | 131 | 1.006 | 3.64 | 4.04 | 42.8 | 210.5 | 5.54 | 173 | 851 | 570 | 178 | 88 | |
| WH | Totals | 34 | 88 | 90 | 34.336 | 61.82 | 62.95 | 36.2 | 148.0 | 73.02 | 2,281 | 9,319 | 7,521 | 2,349 | 960 | |
| WL | 13 | 1 | 85 | 38 | 1.913 | 1.82 | 1.91 | 15.7 | 30.0 | .96 | 30 | 57 | 99 | 31 | 6 | |
| WL | 18 | 1 | 85 | 85 | 1.052 | 1.82 | 2.10 | 29.4 | 105.0 | 1.98 | 62 | 221 | 204 | 64 | 23 | |
| WL | 19 | 2 | 85 | 78 | 1.897 | 3.64 | 3.79 | 29.8 | 105.2 | 3.62 | 113 | 399 | 373 | 117 | 41 | |
| WL | 23 | 3 | 88 | 108 | 1.880 | 5.45 | 3.76 | 59.8 | 248.4 | 7.19 | 225 | 934 | 740 | 231 | 96 | |
| WL | 25 | 1 | 93 | 92 | .533 | 1.82 | 1.07 | 67.6 | 290.0 | 2.30 | 72 | 309 | 237 | 74 | 32 | |
| WL | 26 | 1 | 88 | 140 | .493 | 1.82 | 1.48 | 64.8 | 313.3 | 3.07 | 96 | 464 | 316 | 99 | 48 | |
| WL | 27 | 2 | 90 | 134 | .939 | 3.64 | 2.82 | 65.8 | 326.8 | 5.92 | 185 | 920 | 610 | 191 | 95 | |
| WL | 28 | 1 | 88 | 126 | .422 | 1.82 | 1.27 | 55.5 | 276.7 | 2.25 | 70 | 350 | 232 | 72 | 36 | |
| WL | 29 | 1 | 88 | 109 | .394 | 1.82 | .79 | 96.1 | 440.0 | 2.42 | 76 | 346 | 249 | 78 | 36 | |
| WL | 30 | 1 | 92 | 69 | .375 | 1.82 | .75 | 69.1 | 290.0 | 1.66 | 52 | 218 | 171 | 53 | 22 | |
| WL | 34 | 2 | 93 | 114 | .582 | 3.64 | 1.46 | 108.7 | 582.3 | 5.08 | 159 | 851 | 523 | 164 | 88 | |
| WL | 35 | 1 | 93 | 142 | .272 | 1.82 | 1.09 | 51.4 | 257.5 | 1.79 | 56 | 280 | 185 | 58 | 29 | |
| WL | 42 | 1 | 93 | 125 | .191 | 1.82 | 1.14 | 56.5 | 281.7 | 2.07 | 65 | 322 | 213 | 67 | 33 | |
| WL | 45 | 1 | 92 | 148 | .165 | 1.82 | .49 | 137.7 | 776.7 | 2.18 | 68 | 384 | 224 | 70 | 40 | |
| WL | Totals | 19 | 88 | 93 | 11.108 | 34.55 | 23.93 | 55.5 | 253.1 | 42.49 | 1,328 | 6,056 | 4,377 | 1,368 | 624 | |
| RA | 11 | 1 | 80 | 62 | 2.755 | 1.82 | 2.76 | 11.1 | 40.0 | .84 | 31 | 110 | 87 | 31 | 11 | |
| RA | 17 | 2 | 80 | 53 | 2.349 | 3.64 | 2.35 | 27.7 | 65.1 | 1.79 | 65 | 153 | 184 | 67 | 16 | |
| RA | 18 | 1 | 86 | 48 | 1.076 | 1.82 | 1.08 | 33.7 | 80.0 | 1.00 | 36 | 86 | 103 | 37 | 9 | |
| RA | 19 | 4 | 86 | 58 | 3.784 | 7.27 | 3.78 | 45.3 | 120.2 | 4.71 | 171 | 455 | 485 | 176 | 47 | |
| RA | 20 | 1 | 80 | 50 | .833 | 1.82 | .83 | 46.8 | 80.0 | 1.07 | 39 | 67 | 111 | 40 | 7 | |
| RA | 21 | 2 | 84 | 45 | 1.512 | 3.64 | 1.51 | 48.2 | 75.0 | 2.00 | 73 | 113 | 206 | 75 | 12 | |
| RA | 23 | 1 | 80 | 51 | .641 | 1.82 | .64 | 64.7 | 90.0 | 1.14 | 41 | 58 | 117 | 43 | 6 | |
| RA | 25 | 1 | 79 | 57 | .542 | 1.82 | .54 | 87.0 | 150.0 | 1.30 | 47 | 81 | 133 | 49 | 8 | |
| RA | 26 | 1 | 88 | 36 | .493 | 1.82 | .49 | 58.2 | 60.0 | .79 | 29 | 30 | 81 | 30 | 3 | |
| RA | Totals | 14 | 83 | 54 | 13.985 | 25.45 | 13.99 | 38.1 | 82.4 | 14.64 | 532 | 1,153 | 1,508 | 548 | 119 | |
| RC | 14 | 4 | 81 | 29 | 6.932 | 7.27 | 6.93 | 13.4 | 25.1 | 2.19 | 93 | 174 | 226 | 96 | 18 | |
| RC | 16 | 1 | 80 | 48 | 1.352 | 1.82 | 1.35 | 27.9 | 50.0 | .89 | 38 | 68 | 91 | 39 | 7 | |
| RC | 17 | 1 | 81 | 46 | 1.153 | 1.82 | 1.15 | 31.0 | 50.0 | .84 | 36 | 58 | 87 | 37 | 6 | |
| RC | 22 | 2 | 84 | 70 | 1.371 | 3.64 | 2.74 | 37.9 | 117.5 | 2.44 | 104 | 322 | 251 | 107 | 33 | |
| RC | 37 | 1 | 81 | 98 | .246 | 1.82 | .49 | 145.1 | 530.0 | 1.68 | 71 | 261 | 173 | 74 | 27 | |
| RC | Totals | 9 | 81 | 40 | 11.055 | 16.36 | 12.67 | 27.0 | 69.6 | 8.03 | 342 | 882 | 828 | 352 | 91 | |
| SS | 16 | 1 | 88 | 76 | 1.302 | 1.82 | 2.60 | 22.2 | 85.0 | 1.50 | 58 | 221 | 155 | 60 | 23 | |
| SS | 20 | 1 | 85 | 124 | .877 | 1.82 | 1.75 | 43.7 | 165.0 | 1.99 | 77 | 289 | 205 | 79 | 30 | |
| SS | Totals | 2 | 87 | 95 | 2.179 | 3.64 | 4.36 | 30.9 | 117.2 | 3.50 | 135 | 511 | 360 | 139 | 53 | |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|-----|--------|--------------|--------|-----------|---------------|--------------|-----------|---------------------|------------|----------------|-----------------|-----------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0200 | | | | | | <i>Area Z</i> | | | T03N R09W S14 T0200 | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | Page: | 3 | | | | | | |
| 03N | 09W | 14 | THIN__160 | 0200 | 103.00 | 22 | 208 | | Date: | 03/09/201 | | | | | | |
| | | | | | | | | | Time: | 8:22:36AM | | | | | | |
| Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| BM | | 13 | 1 | 99 | 24 | 1.973 | 1.82 | 1.97 | 10.8 | 40.0 | .56 | 21 | 79 | 58 | 22 | 8 |
| BM | | 28 | 1 | 86 | 30 | .425 | 1.82 | .43 | 57.4 | 60.0 | .65 | 24 | 26 | 67 | 25 | 3 |
| BM | | Totals | 2 | 97 | 25 | 2.398 | 3.64 | 2.40 | 19.1 | 43.5 | 1.21 | 46 | 104 | 125 | 47 | 11 |
| Totals | | | 208 | 87 | 91 | 172.638 | 378.18 | 337.16 | 43.1 | 192.9 | 419.20 | 14519 | 65,030 | 43,177 | 14,954 | 6,698 |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|-----|--------|--------------|--------|-----------|-------------|--------------|-----------|-------------|---------------------|----------------|-----------------|-----------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T 600 | | | | | | | Area 3 | | | T03N R09W S14 T 600 | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | | Page: | 1 | | | | | |
| 03N | 09W | 14 | THIN 160 &AL | 600 | 71.00 | 20 | 171 | | | Date: | 03/02/20 | | | | | |
| | | | | | | | | | | Time: | 1:22:51PM | | | | | |
| Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| DL | | 20 | 1 | 89 | 105 | .945 | 2.00 | 1.89 | 40.1 | 150.0 | 2.08 | 76 | 283 | 148 | 54 | 20 |
| DL | | 22 | 1 | 89 | 114 | .758 | 2.00 | 1.52 | 53.2 | 220.0 | 2.21 | 81 | 333 | 157 | 57 | 24 |
| DL | | 24 | 2 | 89 | 131 | 1.273 | 4.00 | 3.82 | 49.0 | 226.7 | 5.15 | 187 | 866 | 365 | 133 | 61 |
| DL | | 25 | 4 | 90 | 130 | 2.334 | 8.00 | 7.00 | 53.1 | 254.6 | 10.23 | 372 | 1,783 | 726 | 264 | 127 |
| DL | | 26 | 6 | 88 | 137 | 3.290 | 12.00 | 9.87 | 58.9 | 278.9 | 15.99 | 581 | 2,753 | 1,135 | 413 | 195 |
| DL | | 27 | 2 | 86 | 155 | 1.006 | 4.00 | 3.02 | 68.2 | 331.4 | 5.66 | 206 | 1,000 | 402 | 146 | 71 |
| DL | | 28 | 4 | 86 | 135 | 1.885 | 8.00 | 5.65 | 64.8 | 314.3 | 10.06 | 366 | 1,774 | 715 | 260 | 126 |
| DL | | 29 | 4 | 83 | 144 | 1.760 | 8.00 | 5.28 | 68.8 | 326.7 | 9.99 | 363 | 1,725 | 710 | 258 | 122 |
| DL | | 30 | 2 | 89 | 142 | .823 | 4.00 | 2.47 | 81.9 | 420.0 | 5.56 | 202 | 1,037 | 395 | 144 | 74 |
| DL | | 31 | 2 | 88 | 149 | .771 | 4.00 | 2.31 | 88.8 | 455.2 | 5.65 | 205 | 1,052 | 401 | 146 | 75 |
| DL | | 32 | 1 | 90 | 75 | .358 | 2.00 | .36 | 137.6 | 600.0 | 1.35 | 49 | 215 | 96 | 35 | 15 |
| DL | | 33 | 1 | 90 | 152 | .347 | 2.00 | 1.04 | 103.6 | 563.3 | 2.97 | 108 | 587 | 211 | 77 | 42 |
| DL | | 34 | 1 | 90 | 149 | .310 | 2.00 | .93 | 115.2 | 563.3 | 2.95 | 107 | 524 | 209 | 76 | 37 |
| DL | | 37 | 1 | 84 | 130 | .266 | 2.00 | .80 | 112.6 | 506.7 | 2.47 | 90 | 405 | 175 | 64 | 29 |
| DL | | 38 | 2 | 87 | 161 | .509 | 4.00 | 1.78 | 124.4 | 639.9 | 6.10 | 222 | 1,141 | 433 | 158 | 81 |
| DL | | 39 | 1 | 90 | 184 | .239 | 2.00 | .95 | 131.4 | 795.0 | 3.45 | 125 | 759 | 245 | 89 | 54 |
| DL | | Totals | 35 | 88 | 136 | 16.874 | 70.00 | 48.69 | 68.6 | 333.5 | 91.87 | 3,341 | 16,237 | 6,523 | 2,372 | 1,153 |
| WH | | 8 | 1 | 87 | 41 | 5.589 | 2.00 | 5.59 | 4.6 | 20.0 | .83 | 26 | 112 | 59 | 18 | 8 |
| WH | | 9 | 3 | 89 | 50 | 13.007 | 6.00 | 13.01 | 7.9 | 33.3 | 3.27 | 102 | 433 | 232 | 73 | 31 |
| WH | | 11 | 2 | 90 | 49 | 6.117 | 4.00 | 6.12 | 11.3 | 44.9 | 2.21 | 69 | 274 | 157 | 49 | 19 |
| WH | | 12 | 1 | 92 | 87 | 2.546 | 2.00 | 5.09 | 12.5 | 60.0 | 2.01 | 64 | 306 | 143 | 45 | 22 |
| WH | | 13 | 1 | 91 | 99 | 2.170 | 2.00 | 4.34 | 16.3 | 75.0 | 2.26 | 71 | 325 | 160 | 50 | 23 |
| WH | | 14 | 2 | 92 | 94 | 3.856 | 4.00 | 7.71 | 18.5 | 84.3 | 4.56 | 143 | 651 | 324 | 101 | 46 |
| WH | | 15 | 2 | 93 | 99 | 3.220 | 4.00 | 6.44 | 23.0 | 104.4 | 4.74 | 148 | 672 | 337 | 105 | 48 |
| WH | | 16 | 7 | 91 | 101 | 9.819 | 14.00 | 19.64 | 27.3 | 114.7 | 17.17 | 537 | 2,252 | 1,219 | 381 | 160 |
| WH | | 17 | 5 | 88 | 89 | 6.562 | 10.00 | 11.78 | 27.4 | 102.1 | 10.33 | 323 | 1,202 | 734 | 229 | 85 |
| WH | | 18 | 2 | 92 | 106 | 2.280 | 4.00 | 4.56 | 34.3 | 146.6 | 5.00 | 156 | 669 | 355 | 111 | 47 |
| WH | | 19 | 4 | 92 | 90 | 4.175 | 8.00 | 7.35 | 38.5 | 144.9 | 9.06 | 284 | 1,066 | 643 | 201 | 76 |
| WH | | 20 | 4 | 93 | 109 | 3.641 | 8.00 | 8.20 | 41.7 | 192.9 | 10.94 | 342 | 1,582 | 777 | 243 | 112 |
| WH | | 21 | 3 | 92 | 110 | 2.519 | 6.00 | 5.88 | 44.6 | 201.2 | 8.40 | 262 | 1,183 | 596 | 186 | 84 |
| WH | | 22 | 1 | 93 | 104 | .765 | 2.00 | 1.53 | 55.5 | 245.0 | 2.71 | 85 | 375 | 193 | 60 | 27 |
| WH | | 23 | 4 | 90 | 121 | 2.817 | 8.00 | 7.76 | 49.1 | 209.7 | 12.21 | 381 | 1,627 | 867 | 271 | 115 |
| WH | | 24 | 4 | 90 | 111 | 2.543 | 8.00 | 6.38 | 51.5 | 210.5 | 10.51 | 329 | 1,342 | 746 | 233 | 95 |
| WH | | Totals | 46 | 90 | 82 | 71.627 | 92.00 | 121.37 | 27.4 | 115.9 | 106.22 | 3,321 | 14,069 | 7,542 | 2,358 | 999 |
| DF | | 11 | 1 | 85 | 76 | 2.976 | 2.00 | 2.98 | 17.1 | 60.0 | 1.45 | 51 | 179 | 103 | 36 | 13 |
| DF | | 12 | 1 | 85 | 60 | 2.679 | 2.00 | 2.68 | 15.9 | 40.0 | 1.22 | 43 | 107 | 86 | 30 | 8 |
| DF | | 17 | 2 | 88 | 104 | 2.526 | 4.00 | 5.05 | 28.5 | 117.8 | 4.11 | 144 | 595 | 292 | 102 | 42 |
| DF | | 21 | 4 | 88 | 124 | 3.336 | 8.00 | 9.15 | 38.1 | 173.1 | 9.93 | 348 | 1,584 | 705 | 247 | 112 |
| DF | | 22 | 4 | 89 | 130 | 3.102 | 8.00 | 8.53 | 41.9 | 195.5 | 10.17 | 357 | 1,667 | 722 | 253 | 118 |
| DF | | 23 | 4 | 85 | 124 | 2.757 | 8.00 | 6.92 | 48.6 | 205.0 | 9.58 | 336 | 1,418 | 680 | 239 | 101 |
| DF | | 24 | 2 | 89 | 121 | 1.317 | 4.00 | 3.95 | 43.8 | 208.3 | 4.93 | 173 | 823 | 350 | 123 | 58 |
| DF | | 26 | 4 | 90 | 147 | 2.188 | 8.00 | 7.13 | 56.7 | 292.4 | 11.52 | 404 | 2,085 | 818 | 287 | 148 |
| DF | | 27 | 1 | 87 | 130 | .503 | 2.00 | 1.51 | 61.6 | 293.3 | 2.65 | 93 | 443 | 188 | 66 | 31 |
| DF | | 37 | 1 | 89 | 159 | .272 | 2.00 | 1.09 | 99.6 | 575.0 | 3.09 | 108 | 626 | 219 | 77 | 44 |
| DF | | Totals | 24 | 87 | 111 | 21.655 | 48.00 | 48.98 | 42.0 | 194.5 | 58.66 | 2,058 | 9,526 | 4,165 | 1,461 | 676 |
| WL | | 14 | 1 | 86 | 46 | 1.926 | 2.00 | 1.93 | 19.0 | 50.0 | 1.17 | 37 | 96 | 83 | 26 | 7 |
| WL | | 17 | 3 | 87 | 95 | 3.765 | 6.00 | 6.31 | 34.0 | 128.1 | 6.87 | 215 | 807 | 487 | 152 | 57 |
| WL | | 18 | 2 | 90 | 94 | 2.328 | 4.00 | 3.47 | 39.5 | 163.5 | 4.39 | 137 | 568 | 312 | 98 | 40 |
| WL | | 21 | 1 | 86 | 101 | .808 | 2.00 | 1.62 | 47.4 | 175.0 | 2.45 | 77 | 283 | 174 | 54 | 20 |
| WL | | 22 | 1 | 86 | 109 | .772 | 2.00 | 2.31 | 37.0 | 160.0 | 2.75 | 86 | 370 | 195 | 61 | 26 |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|--------|-----|-----------------|-----------|-----------------|----------------|--------------|--------------|---------------|---------------------|----------------------|-----------------------|-----------------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T 600 | | | | | Area 3 | | | | | T03N R09W S14 T 600 | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | | Page: | 2 | | | | | |
| 03N | 09W | 14 | THIN 160 & AL | 600 | 71.00 | 20 | 171 | | | Date: | 03/02/20 | | | | | |
| | | | | | | | | | | Time: | 1:22:51PM | | | | | |
| Spec | S T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| WL | | 23 | 2 | 90 | 104 | 1.386 | 4.00 | 2.77 | 59.8 | 267.5 | 5.31 | 166 | 742 | 377 | 118 | 53 |
| WL | | 24 | 3 | 93 | 141 | 1.943 | 6.00 | 5.83 | 57.3 | 281.9 | 10.68 | 334 | 1,644 | 758 | 237 | 117 |
| WL | | 25 | 1 | 84 | 112 | .587 | 2.00 | 1.17 | 73.8 | 305.0 | 2.77 | 87 | 358 | 197 | 62 | 25 |
| WL | | 26 | 3 | 93 | 119 | 1.624 | 6.00 | 3.80 | 68.0 | 310.9 | 8.25 | 258 | 1,182 | 586 | 183 | 84 |
| WL | | 27 | 1 | 92 | 95 | .492 | 2.00 | .98 | 78.5 | 310.0 | 2.47 | 77 | 305 | 176 | 55 | 22 |
| WL | | 28 | 1 | 92 | 96 | .468 | 2.00 | .47 | 69.0 | 180.0 | 1.03 | 32 | 84 | 73 | 23 | 6 |
| WL | | 29 | 1 | 84 | 133 | .430 | 2.00 | 1.29 | 74.8 | 326.7 | 3.09 | 97 | 421 | 219 | 69 | 30 |
| WL | | 30 | 2 | 94 | 124 | .823 | 4.00 | 2.05 | 97.3 | 510.5 | 6.38 | 199 | 1,046 | 453 | 142 | 74 |
| WL | | 31 | 1 | 93 | 85 | .392 | 2.00 | .78 | 92.0 | 340.0 | 2.30 | 72 | 266 | 164 | 51 | 19 |
| WL | | 33 | 2 | 92 | 117 | .676 | 4.00 | 1.36 | 104.3 | 469.3 | 4.55 | 142 | 639 | 323 | 101 | 45 |
| WL | | 34 | 1 | 93 | 111 | .317 | 2.00 | .32 | 102.0 | 320.0 | 1.03 | 32 | 102 | 73 | 23 | 7 |
| WL | | 35 | 1 | 82 | 113 | .308 | 2.00 | .62 | 137.6 | 590.0 | 2.71 | 85 | 364 | 193 | 60 | 26 |
| WL | Totals | | 27 | 89 | 102 | 19.045 | 54.00 | 37.08 | 57.5 | 250.2 | 68.21 | 2,132 | 9,277 | 4,843 | 1,514 | 659 |
| RA | | 11 | 2 | 82 | 36 | 5.954 | 4.00 | 5.95 | 9.1 | 30.0 | 1.49 | 54 | 179 | 106 | 38 | 13 |
| RA | | 13 | 5 | 84 | 47 | 10.432 | 10.00 | 10.43 | 17.0 | 50.0 | 4.87 | 177 | 522 | 346 | 126 | 37 |
| RA | | 14 | 3 | 88 | 59 | 5.537 | 6.00 | 5.54 | 23.1 | 84.0 | 3.52 | 128 | 465 | 250 | 91 | 33 |
| RA | | 15 | 4 | 87 | 60 | 6.765 | 8.00 | 6.77 | 25.5 | 90.0 | 4.75 | 173 | 609 | 337 | 123 | 43 |
| RA | | 17 | 2 | 90 | 63 | 2.538 | 4.00 | 3.81 | 25.8 | 93.3 | 2.71 | 98 | 355 | 192 | 70 | 25 |
| RA | | 18 | 2 | 85 | 79 | 2.264 | 4.00 | 4.53 | 26.4 | 94.8 | 3.29 | 119 | 429 | 234 | 85 | 30 |
| RA | | 19 | 2 | 80 | 90 | 1.979 | 4.00 | 3.96 | 32.9 | 110.1 | 3.58 | 130 | 436 | 255 | 93 | 31 |
| RA | | 20 | 1 | 92 | 63 | .935 | 2.00 | .94 | 52.6 | 180.0 | 1.35 | 49 | 168 | 96 | 35 | 12 |
| RA | | 21 | 1 | 80 | 86 | .864 | 2.00 | 1.73 | 39.6 | 120.0 | 1.88 | 69 | 207 | 134 | 49 | 15 |
| RA | | 22 | 2 | 80 | 73 | 1.468 | 4.00 | 2.94 | 37.6 | 132.5 | 3.03 | 110 | 389 | 215 | 78 | 28 |
| RA | | 23 | 1 | 90 | 81 | .693 | 2.00 | 1.39 | 47.7 | 200.0 | 1.82 | 66 | 277 | 129 | 47 | 20 |
| RA | | 28 | 1 | 92 | 70 | .468 | 2.00 | .94 | 65.1 | 285.0 | 1.67 | 61 | 267 | 119 | 43 | 19 |
| RA | Totals | | 26 | 85 | 57 | 39.898 | 52.00 | 48.90 | 25.3 | 88.0 | 33.98 | 1,235 | 4,304 | 2,412 | 877 | 306 |
| PP SL | | 24 | 1 | 90 | 121 | .621 | 2.00 | 1.24 | 59.8 | 275.0 | 1.78 | 74 | 342 | 127 | 53 | 24 |
| PP SL | | 28 | 1 | 91 | 116 | .485 | 2.00 | .97 | 78.9 | 375.0 | 1.84 | 77 | 364 | 130 | 54 | 26 |
| PP SL | | 33 | 1 | 89 | 92 | .329 | 2.00 | .66 | 72.0 | 290.0 | 1.14 | 47 | 191 | 81 | 34 | 14 |
| PP | Totals | | 3 | 90 | 113 | 1.435 | 6.00 | 2.87 | 69.1 | 312.2 | 4.76 | 198 | 896 | 338 | 141 | 64 |
| RC | | 13 | 1 | 81 | 24 | 2.310 | 2.00 | 2.31 | 9.3 | 20.0 | .51 | 22 | 46 | 36 | 15 | 3 |
| RC | | 18 | 2 | 80 | 68 | 2.289 | 4.00 | 4.58 | 22.5 | 75.0 | 2.42 | 103 | 343 | 172 | 73 | 24 |
| RC | | 22 | 1 | 71 | 98 | .731 | 2.00 | 1.46 | 50.3 | 125.0 | 1.73 | 74 | 183 | 123 | 52 | 13 |
| RC | | 24 | 2 | 81 | 70 | 1.273 | 4.00 | 1.27 | 53.8 | 120.0 | 1.62 | 68 | 153 | 115 | 49 | 11 |
| RC | | 40 | 1 | 81 | 99 | .229 | 2.00 | .23 | 127.0 | 450.0 | .68 | 29 | 103 | 49 | 21 | 7 |
| RC | Totals | | 7 | 80 | 58 | 6.832 | 14.00 | 9.85 | 30.0 | 84.1 | 6.95 | 296 | 828 | 494 | 210 | 59 |
| SS | | 9 | 1 | 34 | 37 | 4.428 | 2.00 | 4.43 | | | | | | | | |
| SS | | 14 | 1 | 83 | 81 | 1.844 | 2.00 | 3.69 | 15.3 | 55.0 | 1.47 | 56 | 203 | 104 | 40 | 14 |
| SS | | 17 | 1 | 88 | 103 | 1.331 | 2.00 | 2.66 | 29.8 | 95.0 | 2.05 | 79 | 253 | 146 | 56 | 18 |
| SS | Totals | | 3 | 55 | 59 | 7.603 | 6.00 | 10.78 | 12.6 | 42.3 | 3.52 | 136 | 456 | 250 | 96 | 32 |
| Totals | | | 171 | 87 | 85 | 184.968 | 342.00 | 328.52 | 38.7 | 169.2 | 374.16 | 12717 | 55,593 | 26,566 | 9,029 | 3,947 |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|--------|--------|-----------------|-----------|-----------------|----------------|--------------|-----------------|---------------|---------------------|----------------------|-----------------------|-----------------------|--------|--------|-------|
| TC TSTNDSUM | | | | | | | | | | | | | | | | |
| Project RACKHEAP | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0400 | | | | | Area 4 | | | | | T03N R09W S14 T0400 | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | Page: 1 | | | | | | | | |
| 03N | 09W | 14 | THIN | 0400 | 28.00 | 9 | 76 | Date: 04/03/201 | | | | | | | | |
| | | | | | | | | Time: 3:46:12PM | | | | | | | | |
| Spec | S T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| WH | | 9 | 1 | 91 | 23 | 10.060 | 4.44 | | 12.3 | 57.3 | 12.82 | 401 | 1,869 | 359 | 112 | 52 |
| WH | | 10 | 4 | 91 | 77 | 32.609 | 17.78 | 32.61 | 14.0 | 59.9 | 14.91 | 466 | 1,998 | 418 | 130 | 56 |
| WH | | 11 | 4 | 90 | 78 | 26.865 | 17.78 | 33.36 | 18.5 | 70.0 | 6.72 | 210 | 792 | 188 | 59 | 22 |
| WH | | 12 | 2 | 92 | 73 | 11.318 | 8.89 | 11.32 | 22.5 | 76.9 | 10.48 | 328 | 1,119 | 293 | 92 | 31 |
| WH | | 13 | 3 | 89 | 73 | 14.549 | 13.33 | 14.55 | 19.0 | 83.0 | 24.91 | 779 | 3,404 | 698 | 218 | 95 |
| WH | | 14 | 5 | 89 | 98 | 20.496 | 22.22 | 40.99 | 21.6 | 89.9 | 15.20 | 474 | 1,973 | 426 | 133 | 55 |
| WH | | 15 | 3 | 88 | 95 | 10.972 | 13.33 | 21.94 | 24.7 | 102.3 | 20.43 | 638 | 2,639 | 572 | 179 | 74 |
| WH | | 16 | 4 | 90 | 95 | 12.901 | 17.78 | 25.80 | 30.4 | 126.2 | 22.53 | 704 | 2,924 | 631 | 197 | 82 |
| WH | | 17 | 4 | 91 | 106 | 11.586 | 17.78 | 23.17 | 27.7 | 105.0 | 4.67 | 146 | 552 | 131 | 41 | 15 |
| WH | | 18 | 1 | 87 | 87 | 2.631 | 4.44 | 5.26 | 25.6 | 95.0 | 3.89 | 122 | 452 | 109 | 34 | 13 |
| WH | | 19 | 1 | 85 | 80 | 2.381 | 4.44 | 4.76 | 38.5 | 160.4 | 25.15 | 786 | 3,271 | 704 | 220 | 92 |
| WH | | 20 | 5 | 91 | 101 | 10.168 | 22.22 | 20.40 | 43.3 | 147.9 | 15.76 | 491 | 1,678 | 441 | 138 | 47 |
| WH | | 21 | 3 | 88 | 99 | 5.671 | 13.33 | 11.34 | 54.3 | 255.0 | 5.22 | 163 | 766 | 146 | 46 | 21 |
| WH | | 23 | 1 | 92 | 110 | 1.501 | 4.44 | 3.00 | 42.0 | 160.0 | 3.97 | 124 | 472 | 111 | 35 | 13 |
| WH | | 24 | 1 | 93 | 85 | 1.476 | 4.44 | 2.95 | 34.3 | 110.0 | 2.98 | 93 | 299 | 84 | 26 | 8 |
| WH | | 25 | 1 | 93 | 99 | 1.358 | 4.44 | 2.72 | | | | | | | | |
| WH | | Totals | 43 | 90 | 83 | 176.541 | 191.11 | 254.18 | 23.3 | 95.2 | 189.64 | 5,924 | 24,208 | 5,310 | 1,659 | 678 |
| WL | | 14 | 2 | 85 | 107 | 7.915 | 8.89 | 15.83 | 21.2 | 89.9 | 10.76 | 336 | 1,424 | 301 | 94 | 40 |
| WL | | 16 | 2 | 86 | 97 | 6.373 | 8.89 | 12.75 | 25.1 | 96.5 | 10.25 | 320 | 1,230 | 287 | 90 | 34 |
| WL | | 18 | 2 | 93 | 101 | 5.064 | 8.89 | 10.13 | 35.5 | 150.2 | 11.49 | 359 | 1,521 | 322 | 101 | 43 |
| WL | | 21 | 3 | 91 | 100 | 5.652 | 13.33 | 11.30 | 44.2 | 187.9 | 15.98 | 499 | 2,124 | 448 | 140 | 59 |
| WL | | 22 | 2 | 93 | 85 | 3.342 | 8.89 | 6.68 | 33.2 | 119.2 | 7.09 | 222 | 797 | 199 | 62 | 22 |
| WL | | 23 | 2 | 90 | 105 | 3.150 | 8.89 | 6.30 | 55.7 | 229.9 | 11.23 | 351 | 1,448 | 314 | 98 | 41 |
| WL | | 24 | 2 | 89 | 101 | 2.890 | 8.89 | 5.78 | 61.7 | 239.3 | 11.40 | 357 | 1,383 | 319 | 100 | 39 |
| WL | | 26 | 2 | 93 | 101 | 2.411 | 8.89 | 4.82 | 61.9 | 265.0 | 9.56 | 299 | 1,278 | 268 | 84 | 36 |
| WL | | 27 | 2 | 93 | 100 | 2.219 | 8.89 | 4.44 | 63.9 | 280.2 | 9.08 | 284 | 1,244 | 254 | 79 | 35 |
| WL | | 28 | 3 | 92 | 98 | 3.142 | 13.33 | 6.28 | 66.9 | 309.3 | 13.45 | 420 | 1,943 | 377 | 118 | 54 |
| WL | | 33 | 1 | 92 | 88 | .748 | 4.44 | .75 | 129.8 | 860.0 | 3.11 | 97 | 644 | 87 | 27 | 18 |
| WL | | 35 | 1 | 92 | 115 | .665 | 4.44 | 1.33 | 149.1 | 650.0 | 6.35 | 198 | 865 | 178 | 56 | 24 |
| WL | | Totals | 24 | 90 | 100 | 43.572 | 106.67 | 86.40 | 43.3 | 184.0 | 119.74 | 3,743 | 15,900 | 3,353 | 1,048 | 445 |
| DF | | 19 | 1 | 89 | 109 | 2.330 | 4.44 | 4.66 | 35.3 | 130.0 | 4.69 | 165 | 606 | 131 | 46 | 17 |
| DF | | 22 | 1 | 88 | 129 | 1.715 | 4.44 | 5.14 | 38.6 | 180.0 | 5.66 | 199 | 926 | 159 | 56 | 26 |
| DF | | Totals | 2 | 89 | 117 | 4.045 | 8.89 | 9.80 | 37.1 | 156.2 | 10.36 | 363 | 1,532 | 290 | 102 | 43 |
| DL | | 21 | 1 | 86 | 113 | 1.813 | 4.44 | 3.63 | 48.9 | 190.0 | 4.88 | 177 | 689 | 137 | 50 | 19 |
| DL | | 27 | 1 | 85 | 120 | 1.118 | 4.44 | 2.24 | 72.8 | 290.0 | 4.48 | 163 | 648 | 125 | 46 | 18 |
| DL | | Totals | 2 | 86 | 116 | 2.931 | 8.89 | 5.86 | 58.0 | 228.1 | 9.36 | 340 | 1,337 | 262 | 95 | 37 |
| BM | | 11 | 1 | 82 | 50 | 6.382 | 4.44 | 6.38 | 12.1 | 40.0 | 2.05 | 77 | 255 | 57 | 22 | 7 |
| BM | | 13 | 1 | 80 | 54 | 4.748 | 4.44 | 4.75 | 16.5 | 50.0 | 2.08 | 78 | 237 | 58 | 22 | 7 |
| BM | | Totals | 2 | 81 | 52 | 11.130 | 8.89 | 11.13 | 14.0 | 44.3 | 4.13 | 156 | 493 | 116 | 44 | 14 |
| RA | | 14 | 1 | 80 | 76 | 4.158 | 4.44 | 4.16 | 29.2 | 80.0 | 3.33 | 121 | 333 | 93 | 34 | 9 |
| RA | | 21 | 1 | 80 | 41 | 1.848 | 4.44 | 1.85 | 44.1 | 70.0 | 2.24 | 81 | 129 | 63 | 23 | 4 |
| RA | | Totals | 2 | 80 | 65 | 6.005 | 8.89 | 6.01 | 33.7 | 76.9 | 5.57 | 203 | 462 | 156 | 57 | 13 |
| RC | | 10 | 1 | 59 | 54 | 8.149 | 4.44 | 8.15 | 12.0 | 30.0 | 2.29 | 98 | 244 | 64 | 27 | 7 |
| RC | | Totals | 1 | 59 | 54 | 8.149 | 4.44 | 8.15 | 12.0 | 30.0 | 2.29 | 98 | 244 | 64 | 27 | 7 |
| Totals | | | 76 | 88 | 84 | 252.373 | 337.78 | 381.53 | 28.4 | 115.8 | 341.09 | 10827 | 44,176 | 9,551 | 3,031 | 1,237 |

| TC TSTNDSUM | | | | | | | | | | | | | | Stand Table Summary | | | | | |
|---------------------|-----|---------------|--------------|---------------|---------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|----------------|---------------------|---------------|---------------|--------|--------|-----|
| Project RACKHEAP | | | | | | | | | | | | | | | | | | | |
| T03N R09W S14 T0500 | | | | | | Area 5 | | | | | | T03N R09W S14 T0500 | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | Page: | | | | | | | | | | | |
| 03N | 09W | 14 | THIN_120 | 0500 | 45.00 | 14 | 89 | 1 | Date: | 03/19/201 | | | | | | | | | |
| | | | | | | | | | Time: | 9:40:27AM | | | | | | | | | |
| Spc | T | DBH | Trees | FF | Ht | Av | Tot | Trees/ | BA/ | Logs | Average Log | | Net | | | Totals | | | |
| | | | | | | | | | | | Net | Net | Tons/ | Cu.Ft. | Net | Bd.Ft. | Tons | Cunits | MBF |
| | | | | | | | | Acres | Acres | Acres | Cu.Ft. | Bd.Ft. | Acres | Acres | Acres | Tons | Cunits | MBF | |
| DF | | 22 | 3 | 89 | 124 | 4.420 | 11.67 | 11.79 | 42.4 | 197.5 | 14.24 | 500 | 2,328 | 641 | 225 | 105 | | | |
| DF | | 23 | 3 | 90 | 122 | 4.140 | 11.67 | 11.04 | 44.1 | 196.0 | 13.88 | 487 | 2,163 | 624 | 219 | 97 | | | |
| DF | | 24 | 7 | 89 | 135 | 8.605 | 27.23 | 25.82 | 50.2 | 235.2 | 36.95 | 1,297 | 6,072 | 1,663 | 583 | 273 | | | |
| DF | | 25 | 4 | 90 | 138 | 4.492 | 15.56 | 13.48 | 50.6 | 232.2 | 19.42 | 681 | 3,130 | 874 | 307 | 141 | | | |
| DF | | 26 | 5 | 90 | 155 | 5.274 | 19.45 | 15.82 | 65.5 | 344.7 | 29.55 | 1,037 | 5,454 | 1,330 | 467 | 245 | | | |
| DF | | 27 | 2 | 89 | 141 | 1.971 | 7.78 | 5.91 | 67.0 | 322.9 | 11.29 | 396 | 1,909 | 508 | 178 | 86 | | | |
| DF | | 28 | 4 | 89 | 144 | 3.638 | 15.56 | 10.91 | 69.4 | 354.2 | 21.59 | 758 | 3,866 | 972 | 341 | 174 | | | |
| DF | | 29 | 4 | 90 | 142 | 3.340 | 15.56 | 10.02 | 73.7 | 389.6 | 21.05 | 738 | 3,903 | 947 | 332 | 176 | | | |
| DF | | 30 | 2 | 89 | 143 | 1.606 | 7.78 | 4.00 | 88.8 | 454.7 | 10.13 | 355 | 1,821 | 456 | 160 | 82 | | | |
| DF | | 31 | 2 | 90 | 133 | 1.479 | 7.78 | 4.44 | 82.4 | 435.0 | 10.43 | 366 | 1,930 | 469 | 165 | 87 | | | |
| DF | | 32 | 5 | 89 | 155 | 3.483 | 19.45 | 10.45 | 97.7 | 536.4 | 29.10 | 1,021 | 5,604 | 1,309 | 459 | 252 | | | |
| DF | | 33 | 1 | 89 | 158 | .655 | 3.89 | 1.96 | 107.4 | 590.0 | 6.01 | 211 | 1,159 | 271 | 95 | 52 | | | |
| DF | | 34 | 1 | 90 | 159 | .603 | 3.89 | 1.81 | 117.1 | 676.7 | 6.03 | 212 | 1,223 | 272 | 95 | 55 | | | |
| DF | | Totals | 43 | 89 | 139 | 43.707 | 167.24 | 127.45 | 63.2 | 318.3 | 229.67 | 8,058 | 40,562 | 10,335 | 3,626 | 1,825 | | | |
| DL | | 27 | 1 | 87 | 152 | .993 | 3.89 | 2.98 | 68.5 | 350.0 | 5.61 | 204 | 1,042 | 252 | 92 | 47 | | | |
| DL | | 29 | 1 | 90 | 157 | .836 | 3.89 | 2.51 | 83.5 | 396.7 | 5.75 | 209 | 995 | 259 | 94 | 45 | | | |
| DL | | 30 | 2 | 85 | 158 | 1.595 | 7.78 | 7.99 | 50.6 | 250.6 | 11.12 | 404 | 2,002 | 500 | 182 | 90 | | | |
| DL | | 32 | 4 | 89 | 157 | 2.821 | 15.56 | 8.45 | 91.3 | 494.6 | 21.24 | 772 | 4,181 | 956 | 347 | 188 | | | |
| DL | | 33 | 4 | 89 | 162 | 2.648 | 15.56 | 8.60 | 100.8 | 546.2 | 23.83 | 867 | 4,696 | 1,073 | 390 | 211 | | | |
| DL | | 34 | 2 | 89 | 166 | 1.227 | 7.78 | 3.68 | 119.8 | 690.0 | 12.13 | 441 | 2,539 | 546 | 198 | 114 | | | |
| DL | | 35 | 1 | 90 | 164 | .599 | 3.89 | 1.80 | 123.1 | 716.7 | 6.08 | 221 | 1,288 | 274 | 100 | 58 | | | |
| DL | | 36 | 4 | 89 | 161 | 2.229 | 15.56 | 7.80 | 111.3 | 646.1 | 23.86 | 868 | 5,039 | 1,074 | 390 | 227 | | | |
| DL | | 37 | 3 | 88 | 171 | 1.560 | 11.67 | 5.20 | 124.6 | 713.0 | 17.83 | 648 | 3,708 | 802 | 292 | 167 | | | |
| DL | | 38 | 1 | 89 | 191 | .494 | 3.89 | 1.98 | 131.1 | 775.0 | 7.12 | 259 | 1,531 | 320 | 117 | 69 | | | |
| DL | | 39 | 1 | 89 | 162 | .469 | 3.89 | 1.41 | 158.3 | 900.0 | 6.12 | 223 | 1,266 | 275 | 100 | 57 | | | |
| DL | | 44 | 2 | 87 | 190 | .745 | 7.78 | 2.98 | 164.1 | 948.1 | 13.45 | 489 | 2,826 | 605 | 220 | 127 | | | |
| DL | | Totals | 26 | 88 | 163 | 16.215 | 101.12 | 55.37 | 101.2 | 562.0 | 154.15 | 5,605 | 31,113 | 6,937 | 2,522 | 1,400 | | | |
| WH | | 13 | 1 | 90 | 91 | 4.155 | 3.89 | 8.31 | 15.5 | 70.0 | 4.11 | 129 | 582 | 185 | 58 | 26 | | | |
| WH | | 15 | 1 | 87 | 83 | 3.007 | 3.89 | 6.01 | 19.7 | 70.0 | 3.79 | 119 | 421 | 171 | 53 | 19 | | | |
| WH | | 16 | 1 | 84 | 68 | 2.651 | 3.89 | 2.65 | 36.8 | 120.0 | 3.12 | 97 | 318 | 140 | 44 | 14 | | | |
| WH | | 17 | 1 | 89 | 111 | 2.527 | 3.89 | 5.05 | 32.3 | 135.0 | 5.23 | 163 | 682 | 235 | 74 | 31 | | | |
| WH | | 18 | 2 | 90 | 75 | 4.354 | 7.78 | 6.55 | 34.0 | 136.3 | 7.13 | 223 | 894 | 321 | 100 | 40 | | | |
| WH | | 20 | 1 | 91 | 76 | 1.819 | 3.89 | 3.64 | 32.7 | 115.0 | 3.81 | 119 | 418 | 171 | 54 | 19 | | | |
| WH | | 21 | 1 | 92 | 109 | 1.557 | 3.89 | 3.11 | 49.9 | 225.0 | 4.97 | 155 | 701 | 224 | 70 | 32 | | | |
| WH | | 23 | 1 | 89 | 88 | 1.302 | 3.89 | 2.60 | 33.9 | 115.0 | 2.82 | 88 | 300 | 127 | 40 | 13 | | | |
| WH | | 25 | 1 | 86 | 79 | 1.159 | 3.89 | 2.32 | 55.3 | 200.0 | 4.11 | 128 | 464 | 185 | 58 | 21 | | | |
| WH | | 26 | 1 | 92 | 138 | 1.055 | 3.89 | 3.16 | 60.6 | 303.3 | 6.13 | 192 | 960 | 276 | 86 | 43 | | | |
| WH | | 27 | 2 | 90 | 153 | 1.956 | 7.78 | 6.85 | 65.3 | 348.6 | 14.31 | 447 | 2,387 | 644 | 201 | 107 | | | |
| WH | | 28 | 1 | 93 | 112 | .936 | 3.89 | 2.81 | 64.3 | 356.7 | 5.78 | 181 | 1,002 | 260 | 81 | 45 | | | |
| WH | | 30 | 1 | 94 | 155 | .792 | 3.89 | 2.38 | 93.4 | 500.0 | 7.11 | 222 | 1,188 | 320 | 100 | 53 | | | |
| WH | | Totals | 15 | 89 | 95 | 27.271 | 58.34 | 55.46 | 40.8 | 186.0 | 72.42 | 2,263 | 10,316 | 3,259 | 1,018 | 464 | | | |
| WL | | 11 | 1 | 87 | 48 | 5.788 | 3.89 | 5.79 | 11.1 | 40.0 | 2.06 | 64 | 232 | 93 | 29 | 10 | | | |
| WL | | 30 | 1 | 94 | 154 | .792 | 3.89 | 2.38 | 99.6 | 553.3 | 7.58 | 237 | 1,315 | 341 | 107 | 59 | | | |
| WL | | 32 | 1 | 87 | 146 | .705 | 3.89 | 2.12 | 96.0 | 490.0 | 6.50 | 203 | 1,037 | 292 | 91 | 47 | | | |
| WL | | 34 | 1 | 94 | 164 | .617 | 3.89 | 1.85 | 133.8 | 803.3 | 7.93 | 248 | 1,487 | 357 | 111 | 67 | | | |
| WL | | Totals | 4 | 88 | 76 | 7.902 | 15.56 | 12.13 | 62.0 | 335.5 | 24.07 | 752 | 4,070 | 1,083 | 338 | 183 | | | |
| RC | | 15 | 1 | 84 | 61 | 3.392 | 3.89 | 3.39 | 19.0 | 40.0 | 1.51 | 64 | 136 | 68 | 29 | 6 | | | |
| RC | | Totals | 1 | 84 | 61 | 3.392 | 3.89 | 3.39 | 19.0 | 40.0 | 1.51 | 64 | 136 | 68 | 29 | 6 | | | |

| Stand Table Summary | | | | | | | | | | | | | | | | |
|---------------------|-----|-----|------------------|-----------|-----------------|----------------|--------------|--------------|---------------------|---------------|----------------------|-----------------------|-----------------------|--------|--------|-------|
| TC TSTNDSUM | | | Project RACKHEAP | | | | | | | | | | | | | |
| T03N R09W S14 T0500 | | | | Area 5 | | | | | T03N R09W S14 T0500 | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | | Page: | 2 | | | | | |
| 03N | 09W | 14 | THIN_120 | 0500 | 45.00 | 14 | 89 | | | Date: | 03/19/200 | | | | | |
| | | | | | | | | | | Time: | 9:40:27AM | | | | | |
| S Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| Totals | | | 89 | 89 | 123 | 98.486 | 346.15 | 253.79 | 66.0 | 339.6 | 481.82 | 16743 | 86,196 | 21,682 | 7,534 | 3,879 |



"STEWARDSHIP IN FORESTRY"

Rackheap Falls

Volume Summary

| Area 1 | | | | | | |
|--------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 83 acres | | | | | | |
| SPECIES | Basal Area Per Acre | V-BAR | Vol/Acre MBF | Volume MBF | D & B | Net Vol MBF |
| Douglas-fir | 37 | 102 | 3.8 | 315 | 5% | 299 |
| Hemlock | 106 | 136 | 14.4 | 1195 | 5% | 1135 |
| Alder | 5 | 67 | 0.3 | 25 | 10% | 23 |
| TOTAL | | | | 1535 | | 1457 |

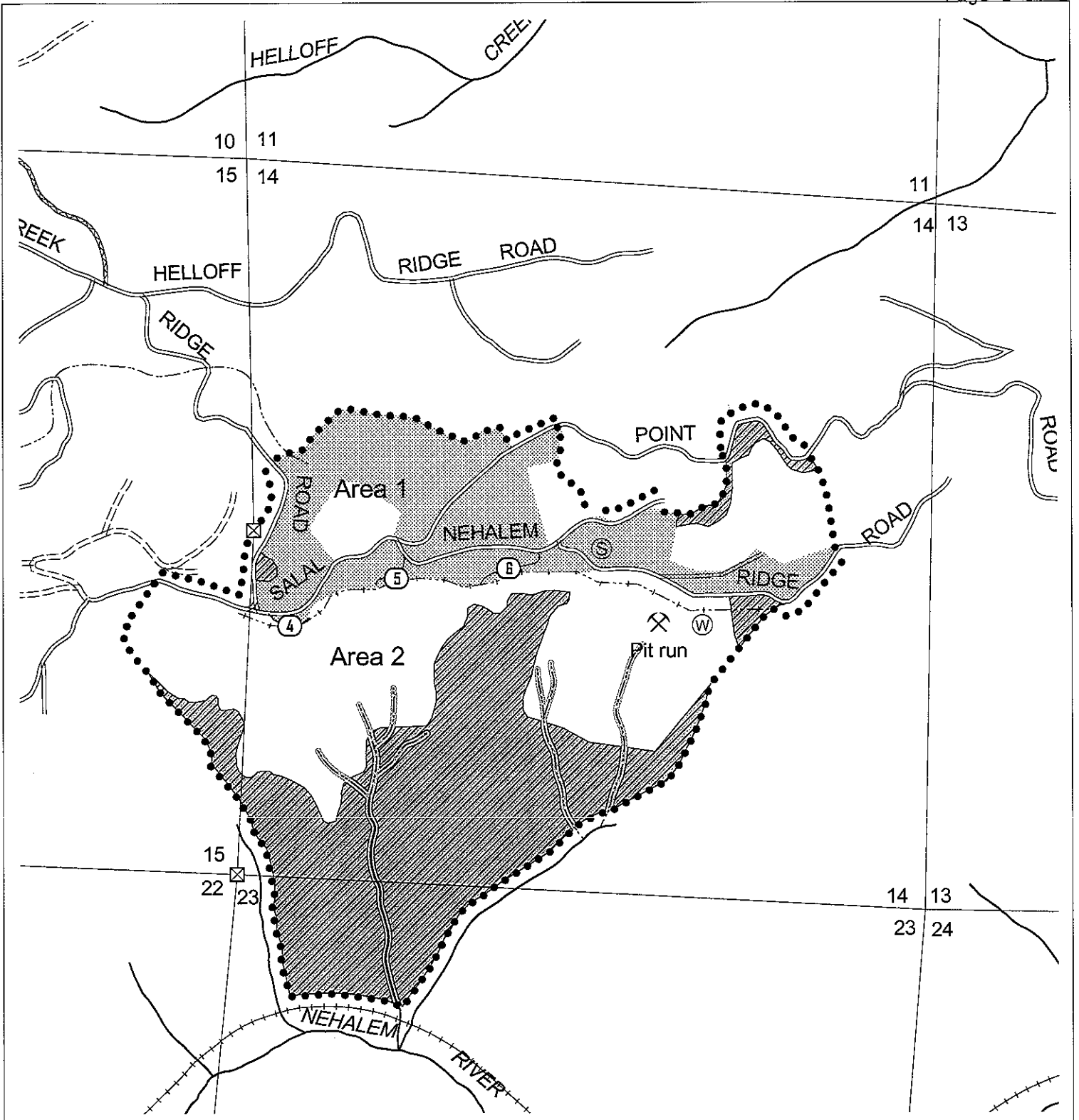
| Area 2 | | | | | | |
|--------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 89 acres | | | | | | |
| SPECIES | Basal Area Per Acre | V-BAR | Vol/Acre MBF | Volume MBF | D & B | Net Vol MBF |
| Douglas-fir | 131 | 184 | 24.1 | 2145 | 5% | 2038 |
| Hemlock | 62 | 151 | 9.4 | 837 | 5% | 795 |
| Alder | 25 | 45 | 1.1 | 98 | 10% | 88 |
| TOTAL | | | | 3080 | | 2921 |

| Area 3 | | | | | | |
|--------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 70 acres | | | | | | |
| SPECIES | Basal Area Per Acre | V-BAR | Vol/Acre MBF | Volume MBF | D & B | Net Vol MBF |
| Douglas-fir | 48 | 199 | 9.6 | 672 | 5% | 638 |
| Hemlock | 92 | 153 | 14.1 | 987 | 5% | 938 |
| Sitka Spruce | 6 | 150 | 0.9 | 63 | 5% | 60 |
| Alder | 52 | 83 | 4.3 | 301 | 10% | 271 |
| TOTAL | | | | 2023 | | 1907 |

| Area 4 | | | | | | |
|--------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 25 acres | | | | | | |
| SPECIES | Basal Area Per Acre | V-BAR | Vol/Acre MBF | Volume MBF | D & B | Net Vol MBF |
| Douglas-fir | 9 | 172 | 1.5 | 38 | 5% | 36 |
| Hemlock | 191 | 127 | 24.3 | 608 | 5% | 578 |
| Alder | 9 | 52 | 0.5 | 13 | 10% | 12 |
| TOTAL | | | | 659 | | 626 |

| Area 5 | | | | | | |
|--------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 42 acres | | | | | | |
| SPECIES | Basal Area Per Acre | V-BAR | Vol/Acre MBF | Volume MBF | D & B | Net Vol MBF |
| Douglas-fir | 167 | 243 | 40.6 | 1705 | 5% | 1620 |
| Hemlock | 58 | 177 | 10.3 | 433 | 5% | 411 |
| TOTAL | | | | 2138 | | 2031 |

| TOTAL SALE VOLUME | | |
|-------------------|------------------|----------------|
| SPECIES | Gross Vol. (MBF) | Net Vol. (MBF) |
| Douglas-fir | 4875 | 4631 |
| Hemlock | 4060 | 3857 |
| Sitka Spruce | 63 | 60 |
| Alder | 437 | 394 |
| TOTAL | 9435 | 8942 |



- Landing
- Ⓧ Domestic water supply intake
- Ⓜ Helicopter landing zone
- Ⓣ Truck turn-around
- ⓧ Survey corner
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▦ Buffer
- ▧ Non-required thinning
- - - - Area boundary
- Sale boundary
- - - - Ownership boundary
- Perennial Type-F stream
- - - - Perennial Type-N stream
- == Surfaced road
- === Unsurfaced road
- State/Federal highway
- County road
- ② Non-project road
- - - - Swing road
- ▨ Legacy road
- xxx Blocked road
- ⊖ OHV trail
- ⋯ Non-motorized trail
- ++++ Railroad tracks

LOGGING PLAN
 Timber Sale Contract No. 341-07-22
 Rackheap Falls
 Portions of Sections 10, 14, 15,
 16, and 23
 T3N, R9W, W. M.
 Tillamook County, Oregon

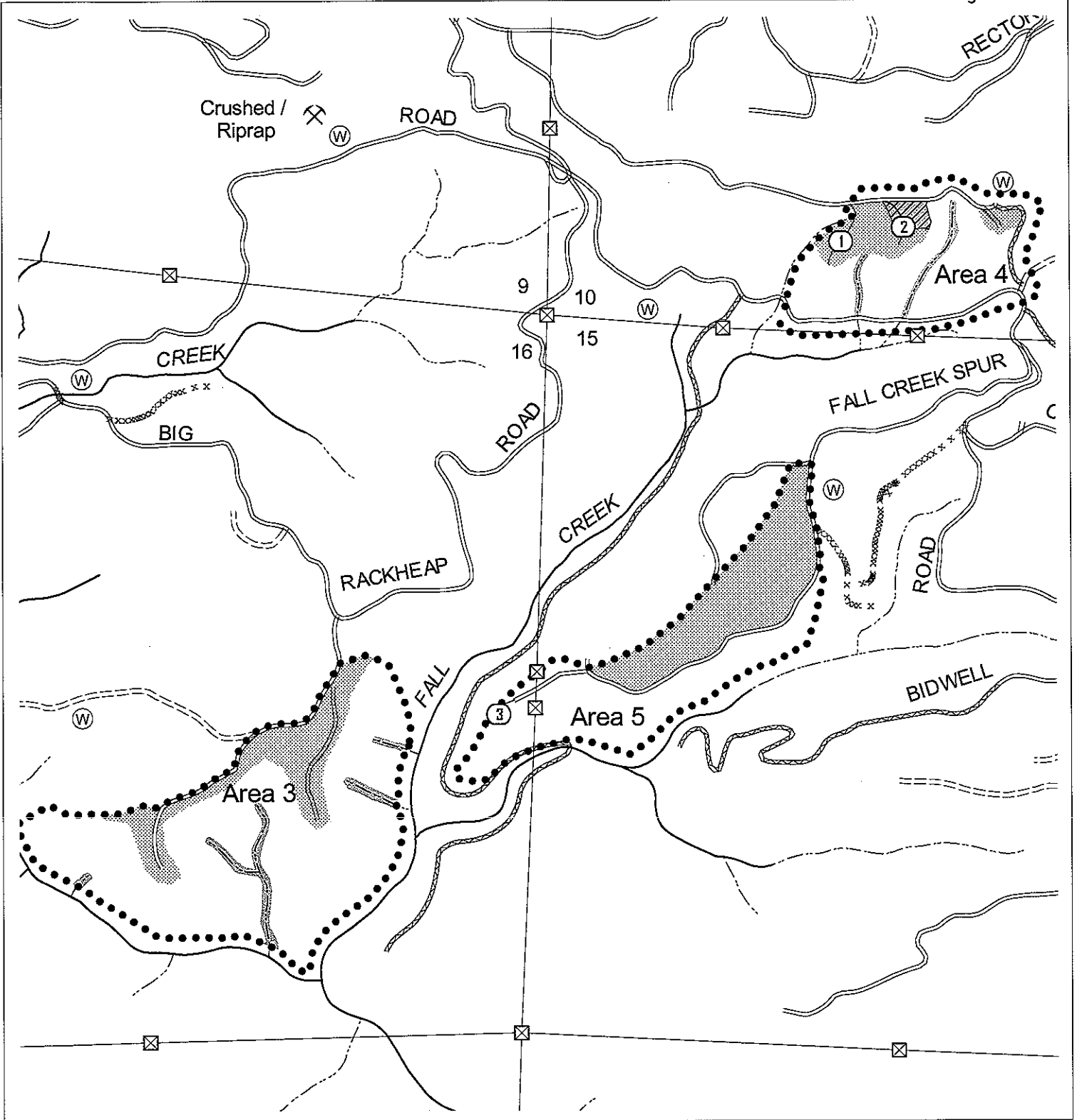
| Area | Type of Operation | Acres | |
|--------------|-------------------|------------|------------|
| | | Gross | Net |
| 1 | Partial Cut | 92 | 83 |
| 2 | Partial Cut | 195 | 89 |
| 3 | Partial Cut | 75 | 70 |
| 4 | Partial Cut | 30 | 25 |
| 5 | Partial Cut | 44 | 42 |
| Total | | 436 | 309 |



Tillamook District GIS
 4-10-2006

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

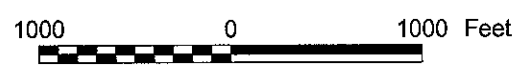




- Landing
- Ⓧ Domestic water supply intake
- Ⓜ Helicopter landing zone
- Ⓣ Truck turn-around
- ⓧ Survey corner
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▦ Buffer
- ▤ Non-required thinning
- · - · - Area boundary
- · · · · Sale boundary
- - - - - Ownership boundary
- Perennial Type-F stream
- · - · - Perennial Type-N stream
- == Surfacd road
- - - - - Unsurfaced road
- State/Federal highway
- County road
- ② Non-project road
- · - · - Swing road
- ▬ Legacy road
- xxx Blocked road
- OHV trail
- Non-motorized trail
- T T Transmission line

LOGGING PLAN
 Timber Sale Contract No. 341-07-22
 Rackheap Falls
 Portions of Sections 10, 14, 15,
 16, and 23
 T3N, R9W, W. M.
 Tillamook County, Oregon

| Area | Type of Operation | Acres | |
|--------------|-------------------|------------|------------|
| | | Gross | Net |
| 1 | Partial Cut | 92 | 83 |
| 2 | Partial Cut | 195 | 89 |
| 3 | Partial Cut | 75 | 70 |
| 4 | Partial Cut | 30 | 25 |
| 5 | Partial Cut | 44 | 42 |
| Total | | 436 | 309 |



Tillamook District GIS
 4-10-2006
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