



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Buck N Bales  
Sale 341-11-71

District: Tillamook

Date: February 07, 2011

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**cost summary**

|                                    | <b>Conifer</b> | <b>Hardwood</b>          | <b>Total</b>   |
|------------------------------------|----------------|--------------------------|----------------|
| <b>Gross Timber<br/>Sale Value</b> | \$530,310.00   | \$0.00                   | \$530,310.00   |
|                                    |                | <b>Project Work:</b>     | \$(120,600.00) |
|                                    |                | <b>Advertised Value:</b> | \$409,710.00   |



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**timber description**

**Location:** Portions of Sections 29, 30, 31, and 32, T2S, R7W and portions of Section 5, T3S, R7W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 60%

| SpecieName    | AvgDBH | Amortization (%) | Recovery (%) |
|---------------|--------|------------------|--------------|
| Douglas - Fir | 16     | 0                | 95           |

| Volume by Grade | 2S  | 3S    | 4S  | Total |
|-----------------|-----|-------|-----|-------|
| Douglas - Fir   | 347 | 1,861 | 542 | 2,750 |
| Total           | 347 | 1,861 | 542 | 2,750 |



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comments: Pond Values Used: 4th Quarter Calendar Year 2010.

Western redcedar and Other Cedars Stumpage Price = Pond Value  
minus Logging Costs  
 $\$730/\text{MBF} = \$960/\text{MBF} - \$230/\text{MBF}$

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus  
Logging Costs  
 $\$250/\text{MBF} = \$540/\text{MBF} - \$290/\text{MBF}$  (increased haul cost)

Pulp (Conifer and Hardwood) Price =  $\$55/\text{MBF}$   
(See attached Pulp Appraisal sheet)

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

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

HAULING COST ALLOWANCE  
Hauling cost equivalent to  $\$700$  daily truck cost.

Other Costs (with Profit & Risk to be added):  
Brand and Paint:  $\$2/\text{MBF} \times 2,750 \text{ MBF} = \$5,500$   
TOTAL Other Costs (with Profit & Risk to be added) =  $\$5,500$

Other Costs (No Profit & Risk added):  
Cover Material for Piles: 10 piles  $\times$   $\$5/\text{pile} = \$50$   
Snag Creation by Girdling at Base (Area 2): 116 trees  $\times$   $\$10/\text{tree} =$   
 $\$1,160$

Tank trap installation:

Area 1: Block both ends of ATV Trail:  $4 \times \$75 = \$300$

Area 2: Block access to 2 un-surfaced roads:  $2 \times \$75 = \$150$

Area 3: block access to 3 un-surfaced roads:  $3 \times \$75 = \$225$

Non-project road Area 3: 7 stations @  $\$150/\text{station} = \$1,050$

Move-in costs (additional move-in for 2nd summer season):

$\$300/\text{piece of equipment} \times 3 = \$900$

Road vacating Area 2 (culvert removal, pull back, mulch, grass  
seed, move-in):  $\$1,300$

Trask public Safety Road Fee:  $\$20/\text{MBF} \times 2,750 \text{ MBF}$  (acres in Trask  
Basin) =  $\$55,000$

TOTAL Other Costs (No Profit & Risk added) =  $\$60,135$

ROAD MAINTENANCE

Maintenance Rock:  $(\$12.00/\text{cy} \times 9.9 \text{ miles} \times 20\text{cy}/\text{mile} \times 2.7 \text{ MMBF}) /$   
 $2750 \text{ MBF} = \$ 2.33/\text{MBF}$

Interim Maintenance: Grading -  $\$250/\text{mile} \times 9.9 \text{ miles} \times 2 \text{ times} /$   
 $2750 \text{ MBF} = \$ 1.80/\text{MBF}$

Vibratory Roller:  $\$18/\text{station} \times 138 \text{ stations} / 2750 \text{ MBF} = \$0.90$

Final Maintenance: Grading -  $\$500/\text{mile} \times 9.9 \text{ miles} \times 1 \text{ time} / 2750$   
 $\text{MBF} = \$ 1.80/\text{MBF}$

TOTAL Maintenance Cost:  $\$ 6.83/\text{MBF}$



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**logging conditions**

**combination#: 1** Douglas - Fir 45.39%  
**yarding distance:** Short (400 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:** 3.9 **bd. ft / load:** 3,400  
**cost / mbf:** \$215.40  
  
**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Small)

**combination#: 2** Douglas - Fir 15.63%  
**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Track Skidder **Process:** Stroke Delimber  
**tree size:** Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF  
**loads / day:** 7.0 **bd. ft / load:** 3,400  
**cost / mbf:** \$60.43  
  
**machines:** Stroke Delimber (B)

**combination#: 3** Douglas - Fir 5.85%  
**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Cable: Small Tower <=40 **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 6.0 **bd. ft / load:** 4,000  
**cost / mbf:** \$118.09  
  
**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Small)

**combination#: 4** Douglas - Fir 33.13%  
**yarding distance:** Short (400 ft) **downhill yarding:** No  
**logging system:** Track Skidder **Process:** Stroke Delimber  
**tree size:** Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF  
**loads / day:** 8.0 **bd. ft / load:** 4,000  
**cost / mbf:** \$44.94  
  
**machines:** Stroke Delimber (B)



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**logging costs**

|                    |              |                    |             |
|--------------------|--------------|--------------------|-------------|
| Operating Seasons: | 2.00         | Profit Risk:       | 15.00%      |
| Project Costs:     | \$120,600.00 | Other Costs (P/R): | \$5,500.00  |
| Slash Disposal:    | \$0.00       | Other Costs:       | \$60,135.00 |

**Miles of Road**

Road Maintenance: \$6.83

| Dirt | Rock<br>(Contractor) | Rock<br>(State) | Paved |
|------|----------------------|-----------------|-------|
| 0.0  | 0.0                  | 0.0             | 0.0   |

**Hauling Costs**

| Species       | \$ / MBF | Trips/Day | MBF / Load |
|---------------|----------|-----------|------------|
| Douglas - Fir | \$0.00   | 3.0       | 3.8        |



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**logging costs breakdown**

| Logging              | Road Maint | Fire Protect | Hauling | Other P/R appl | Profit & Risk | Slash Disposal | Scaling | Other   | Total    |
|----------------------|------------|--------------|---------|----------------|---------------|----------------|---------|---------|----------|
| <b>Douglas - Fir</b> |            |              |         |                |               |                |         |         |          |
| \$129.00             | \$7.17     | \$3.19       | \$56.06 | \$2.00         | \$29.61       | \$0.00         | \$5.00  | \$21.87 | \$253.90 |

| Specie        | Amortization | Pond Value | Stumpage | Amortized |
|---------------|--------------|------------|----------|-----------|
| Douglas - Fir | \$0.00       | \$446.74   | \$192.84 | \$0.00    |



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**summary**

**Amortized**

| Specie        | MBF | Value  | Total  |
|---------------|-----|--------|--------|
| Douglas - Fir | 0   | \$0.00 | \$0.00 |

**Unamortized**

| Specie        | MBF   | Value    | Total        |
|---------------|-------|----------|--------------|
| Douglas - Fir | 2,750 | \$192.84 | \$530,310.00 |

**Gross Timber Sale Value**

Recovery: \$530,310.00

Prepared by: David Wells

Phone: 503-842-2545

## Pulp Appraisal

|                  |                     |
|------------------|---------------------|
| <b>Sale Name</b> | <b>Buck N Bales</b> |
|------------------|---------------------|

| Species                  | Douglas-fir |          |        |  |
|--------------------------|-------------|----------|--------|--|
| Stems Per/ac.****        | 71          |          |        |  |
| Acres***                 | 256         |          | 0      |  |
| Total Stems              | 18176       | 0        | 0      |  |
| BF/Stem, Conversion      | 10          | 10       | 10     |  |
| Total MBF Per/Species    | 182         | 0        | 0      |  |
| Pond Value Per/MBF       | \$270       | \$230    | \$0    |  |
| *Logging + Hauling Costs | \$185.06    | \$185.06 | \$0.00 |  |
| Stumpage                 | \$84.94     | \$44.94  | \$0.00 |  |
| Tons Per/MBF, Conversion | 10          | 10       | 10     |  |
| Price Per/Ton            | \$8.49      | \$4.49   | \$0.00 |  |
| Total Tons Per/Species   | 1818        | 0        | 0      |  |
| Total Value              | \$15,438.69 | \$0.00   | \$0.00 |  |
| Less P/R 35%             | \$10,035.15 | \$0.00   | \$0.00 |  |

|                           | Total Price | Price/Ton | Price/MBF |    |
|---------------------------|-------------|-----------|-----------|----|
| <b>Total Price</b>        | \$15,438.69 | \$8.49    | \$84.94   |    |
| <b>Total Less P/R 35%</b> | \$10,035.15 | \$5.52    | \$55.21   | ** |

|                       |                |
|-----------------------|----------------|
| <b>Contract Price</b> | <b>\$55.00</b> |
|-----------------------|----------------|

\*Conifer logging & hauling cost based on the Douglas-fir price.

\*\* Pulp price rounded down to nearest whole dollar

\*\*\* Areas 1, 2, and 3

\*\*\*\* Combination of Areas 1, 2, and 3





**PROJECT SUMMARY SHEET**

Sale: Buck N Bales

**CONSTRUCTION**

|                              |        |       |            |                    |
|------------------------------|--------|-------|------------|--------------------|
| Point                        | C to D | 8+35  | stations = | \$4,583.96         |
| Point                        | E to F | 16+00 | stations = | \$18,767.70        |
| Point                        | G to H | 4+70  | stations = | \$1,629.65         |
| Point                        | I to J | 10+25 | stations = | \$3,569.35         |
| Point                        | K to L | 18+75 | stations = | \$14,246.55        |
| Point                        | O to P | 6+85  | stations = | \$7,071.27         |
| Point                        | Q to R | 9+15  | stations = | \$2,997.08         |
| Point                        | S to T | 3+30  | stations = | \$1,148.46         |
| Point                        | U to V | 1+50  | stations = | \$2,065.89         |
| Point                        | W to X | 4+65  | stations = | \$2,654.92         |
| <b>SUBTOTAL CONSTRUCTION</b> |        |       |            | <b>\$58,734.83</b> |

**IMPROVEMENT**

|                             |          |        |            |                    |
|-----------------------------|----------|--------|------------|--------------------|
| Point                       | A to B   | 210+80 | stations = | \$9,410.16         |
| Point                       | C to D   | 12+60  | stations = | \$5,638.33         |
| Point                       | G to H   | 3+90   | stations = | \$1,064.37         |
| Point                       | Y to Z   | 14+70  | stations = | \$3,041.59         |
| Point                       | AA to BB | 1+60   | stations = | \$796.42           |
| <b>SUBTOTAL IMPROVEMENT</b> |          |        |            | <b>\$19,950.87</b> |

**RECONSTRUCTION**

|                                |        |       |            |                    |
|--------------------------------|--------|-------|------------|--------------------|
| Point                          | I to J | 3+60  | stations = | \$1,225.47         |
| Point                          | M to N | 5+65  | stations = | \$2,094.78         |
| Point                          | U to V | 22+65 | stations = | \$31,798.51        |
| <b>SUBTOTAL RECONSTRUCTION</b> |        |       |            | <b>\$35,118.76</b> |

**SPECIAL PROJECTS**

|                                  |          |  |  |                   |
|----------------------------------|----------|--|--|-------------------|
| Stream Enhancement               | Point CC |  |  | \$3,953.00        |
| <b>SUBTOTAL SPECIAL PROJECTS</b> |          |  |  | <b>\$3,953.00</b> |

**MOVE IN** **\$2,842.54**

**GRAND TOTAL** **\$120,600.00**

| CULVERT NO. | DIAMETER (Inches) | LENGTH (Feet) | ROAD SEGMENT Point to Point | STATION |
|-------------|-------------------|---------------|-----------------------------|---------|
| 1           | 18                | 30            | A to B                      | 10+90   |
| 2           | 18                | 30            | A to B                      | 50+60   |
| 3           | 30                | 34            | K to L                      | 3+30    |
| 4           | 24                | 34            | K to L                      | 12+35   |
| 5           | 48                | 70            | U to V                      | 8+30    |
| 6           |                   |               |                             |         |
| 7           |                   |               |                             |         |
| 8           |                   |               |                             |         |
| 9           |                   |               |                             |         |
| 10          |                   |               |                             |         |
| 11          |                   |               |                             |         |
| 12          |                   |               |                             |         |
| 13          |                   |               |                             |         |
| 14          |                   |               |                             |         |
| 15          |                   |               |                             |         |
| 16          |                   |               |                             |         |
| 17          |                   |               |                             |         |
| 18          |                   |               |                             |         |
| 19          |                   |               |                             |         |
| 20          |                   |               |                             |         |
| 21          |                   |               |                             |         |
| 22          |                   |               |                             |         |
| 23          |                   |               |                             |         |
| 24          |                   |               |                             |         |
| 25          |                   |               |                             |         |
| 26          |                   |               |                             |         |
| 27          |                   |               |                             |         |
| 28          |                   |               |                             |         |
| 29          |                   |               |                             |         |

## SUMMARY OF CONSTRUCTION COST

|                |                     |          |               |        |               |                  |      |          |
|----------------|---------------------|----------|---------------|--------|---------------|------------------|------|----------|
| Sale:          | <b>Buck N Bales</b> |          |               | Road:  | <b>A to B</b> |                  |      |          |
| Construction - | 0+00                | stations | Improvement - | 210+80 | stations      | Reconstruction - | 0+00 | stations |
|                | 0.00                | miles    |               | 3.99   | miles         |                  | 0.00 | miles    |

**CULVERTS - MATERIALS & INSTALLATION**

|                                     |    |           |            |  |   |           |        |                   |
|-------------------------------------|----|-----------|------------|--|---|-----------|--------|-------------------|
| <u>Culverts</u>                     | 60 | LF of 18" | \$1,050.00 |  | 0 | LF of 24" | \$0.00 |                   |
|                                     |    |           | \$1,050.00 |  |   |           | \$0.00 |                   |
| <u>Culvert Stakes &amp; Markers</u> |    |           |            |  |   |           |        |                   |
|                                     | 2  | markers   | \$16.00    |  |   |           |        |                   |
|                                     |    |           | \$16.00    |  |   |           |        |                   |
| <b>TOTAL CULVERTS</b>               |    |           |            |  |   |           |        | <b>\$1,066.00</b> |

**ROCK**

|                   |         |     |        |         |   |                   |                   |
|-------------------|---------|-----|--------|---------|---|-------------------|-------------------|
| Spot Rock         | Various | 100 | cy. of | Crushed | @ | \$12.73 per c.y.= | \$1,273.00        |
| Base Rock         | 35+40   | 20  | cy. of | Jaw-Run | @ | \$13.78 per c.y.= | \$275.60          |
| <b>TOTAL ROCK</b> |         |     |        |         |   |                   | <b>\$1,609.30</b> |

**SPECIAL PROJECTS**

|  |        |            |          |             |                   |
|--|--------|------------|----------|-------------|-------------------|
| Construct ditch / ditchouts to restore drainage -    | 2.00   | hours @    | \$145.00 | per hour    | \$290.00          |
| Grade and shape road -                               | 210.80 | stations @ | \$15.50  | per station | \$3,267.40        |
| Roll subgrade w/ vibratory roller prior to rocking - | 210.80 | stations @ | \$13.20  | per station | \$2,782.56        |
| Remove culvert from 51+30 -                          | 1.00   | lump sum @ | \$312.90 | total       | \$312.90          |
| Grass seed and fertilize -                           | 0.10   | acres @    | \$220.00 | per acre    | \$22.00           |
| Mulching -   | 0.100  | acres @    | \$600.00 | per acre    | \$60.00           |
| <b>TOTAL SPECIAL PROJECTS</b>                        |        |            |          |             | <b>\$6,734.86</b> |
| <b>GRAND TOTAL</b>                                   |        |            |          |             | <b>\$9,410.16</b> |

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**C to D**

|                       |      |          |                      |       |          |                         |      |          |
|-----------------------|------|----------|----------------------|-------|----------|-------------------------|------|----------|
| <u>Construction -</u> | 8+35 | stations | <u>Improvement -</u> | 12+60 | stations | <u>Reconstruction -</u> | 0+00 | stations |
|                       | 0.16 | miles    |                      | 0.24  | miles    |                         | 0.00 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station |   |          |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|----------|-------------------|
| 12+60        |    | 12+95   | 25%            |                             | Outslope       | \$165            | = | \$57.75  |                   |
| 12+95        |    | 15+55   | 15%            |                             | Outslope       | \$107            | = | \$278.20 |                   |
| 15+55        |    | 16+05   | 0%             |                             | Outslope       | \$55             | = | \$27.50  |                   |
| 16+05        |    | 16+95   | 20%            |                             | Outslope       | \$139            | = | \$125.10 |                   |
| 16+95        |    | 19+25   | 35%            |                             | Outslope       | \$191            | = | \$439.30 |                   |
| 19+25        |    | 20+95   | 25%            |                             | Outslope       | \$165            | = | \$280.50 |                   |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   |          | <b>\$1,208.35</b> |

**IMPROVEMENT:** CLEARING AND GRUBBING -

|                                    |       |       |   |          |            |          |                 |
|------------------------------------|-------|-------|---|----------|------------|----------|-----------------|
| Scattering                         | 0.170 | acres | @ | \$980.00 | per acre = | \$166.60 |                 |
| <b>TOTAL CLEARING AND GRUBBING</b> |       |       |   |          |            |          | <b>\$166.60</b> |

**IMPROVEMENT:** EXCAVATION -

|                         |       |      |   |         |            |          |                 |
|-------------------------|-------|------|---|---------|------------|----------|-----------------|
| Road Earthwork          | 12.60 | sta. | @ | \$30.00 | per sta. = | \$378.00 |                 |
| <b>TOTAL EXCAVATION</b> |       |      |   |         |            |          | <b>\$378.00</b> |

**ROCK**

|                   |             |     |        |         |   |         |            |                   |
|-------------------|-------------|-----|--------|---------|---|---------|------------|-------------------|
| 0+00 to           | 7+75        | 430 | cy. of | Jaw-Run | @ | \$14.21 | per c.y. = | \$6,110.30        |
| Junction Rock     | 0+00        | 20  | cy. of | Jaw-Run | @ | \$14.15 | per c.y. = | \$283.00          |
| Base Rock         | 0+00 - 0+60 | 50  | cy. of | Jaw-Run | @ | \$14.16 | per c.y. = | \$708.00          |
| <b>TOTAL ROCK</b> |             |     |        |         |   |         |            | <b>\$7,101.30</b> |

**SPECIAL PROJECTS**

|  |       |            |          |             |  |          |                   |
|--|-------|------------|----------|-------------|--|----------|-------------------|
| Construct Turnaround -                               | 1.00  | @          | \$75.00  | each        |  | \$75.00  |                   |
| Construct landing -                                  | 1.00  | @          | \$250.00 | each        |  | \$250.00 |                   |
| Construct ditchouts -                                | 3.00  | @          | \$60.00  | each        |  | \$180.00 |                   |
| Grade and shape road -                               | 20.95 | stations @ | \$14.00  | per station |  | \$293.30 |                   |
| Roil subgrade w/ vibratory roller prior to rocking - | 20.95 | stations @ | \$13.20  | per station |  | \$276.54 |                   |
| Remove large stumps -                                | 1.00  | lump sum @ | \$225.00 |             |  | \$225.00 |                   |
| Grass seed and fertilize -                           | 0.31  | acres @    | \$220.00 | per acre    |  | \$68.20  |                   |
| <b>TOTAL SPECIAL PROJECTS</b>                        |       |            |          |             |  |          | <b>\$1,368.04</b> |

|                    |                    |
|--------------------|--------------------|
| <b>GRAND TOTAL</b> | <b>\$10,222.29</b> |
|--------------------|--------------------|

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**E to F**

|                |       |          |               |      |          |                  |      |          |
|----------------|-------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 16+00 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|                | 0.30  | miles    |               | 0.00 | miles    |                  | 0.00 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 0+00         |    | 0+50    | 30%            |                             | Outslope       | \$191            | = | \$95.50           |
| 0+50         |    | 1+00    | 55%            |                             | Outslope       | \$689            | = | \$344.50          |
| 1+00         |    | 1+40    | 35%            |                             | Outslope       | \$191            | = | \$76.40           |
| 1+40         |    | 2+00    | 40%            |                             | Outslope       | \$243            | = | \$145.80          |
| 2+00         |    | 3+80    | 30%            |                             | Outslope       | \$191            | = | \$343.80          |
| 3+80         |    | 4+80    | 25%            |                             | Outslope       | \$165            | = | \$165.00          |
| 4+80         |    | 6+00    | 20%            |                             | Outslope       | \$139            | = | \$166.80          |
| 6+00         |    | 7+00    | 15%            |                             | Outslope       | \$107            | = | \$107.00          |
| 7+00         |    | 9+80    | 30%            |                             | Outslope       | \$191            | = | \$534.80          |
| 9+80         |    | 10+30   | 40%            |                             | Outslope       | \$243            | = | \$121.50          |
| 10+30        |    | 11+50   | 30%            |                             | Outslope       | \$191            | = | \$229.20          |
| 11+50        |    | 13+50   | 40%            |                             | Outslope       | \$243            | = | \$486.00          |
| 13+50        |    | 15+15   | 45%            |                             | Outslope       | \$269            | = | \$443.85          |
| 15+15        |    | 16+00   | 35%            |                             | Outslope       | \$191            | = | \$162.35          |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$3,422.50</b> |

**ROCK**

|                   |       |            |         |   |                   |                    |
|-------------------|-------|------------|---------|---|-------------------|--------------------|
| 0+00 to           | 16+00 | 890 cy. of | Jaw-Run | @ | \$14.38 per c.y.= | \$12,798.20        |
| Landing Rock      | 16+00 | 70 cy. of  | Jaw-Run | @ | \$14.50 per c.y.= | \$1,015.00         |
| <b>TOTAL ROCK</b> |       |            |         |   |                   | <b>\$13,813.20</b> |

**SPECIAL PROJECTS**

|  |       |            |          |             |                   |
|--|-------|------------|----------|-------------|-------------------|
| Grade and shape road -                               | 16.00 | stations @ | \$14.00  | per station | \$224.00          |
| Construct Turnaround -                               | 1.00  | @          | \$75.00  | each        | \$75.00           |
| Construct landing -                                  | 1.00  | @          | \$250.00 | each        | \$250.00          |
| Roll subgrade w/ vibratory roller prior to rocking - | 16.00 | stations @ | \$13.20  | per station | \$211.20          |
| Remove large stumps -                                | 1.00  | lump sum @ | \$675.00 |             | \$675.00          |
| Grass seed and fertilize -                           | 0.44  | acres @    | \$220.00 | per acre    | \$96.80           |
| <b>TOTAL SPECIAL PROJECTS</b>                        |       |            |          |             | <b>\$1,532.00</b> |

**GRAND TOTAL** **\$18,767.70**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**G to H**

|                       |      |          |                      |      |          |                         |      |          |
|-----------------------|------|----------|----------------------|------|----------|-------------------------|------|----------|
| <u>Construction -</u> | 4+70 | stations | <u>Improvement -</u> | 3+90 | stations | <u>Reconstruction -</u> | 0+00 | stations |
|                       | 0.09 | miles    |                      | 0.07 | miles    |                         | 0.00 | miles    |

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

| Station | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station |   |              |                 |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-----------------|
| 3+90    |    | 4+45    | 25%            |                             | Outslope       | \$165            | = | \$90.75      |                 |
| 4+45    |    | 5+40    | 0%             |                             | Outslope       | \$55             | = | \$52.25      |                 |
| 5+40    |    | 6+95    | 15%            |                             | Outslope       | \$107            | = | \$165.85     |                 |
| 6+95    |    | 8+60    | 20%            |                             | Outslope       | \$139            | = | \$229.35     |                 |
|         |    |         |                |                             |                |                  |   | <b>TOTAL</b> | <b>\$538.20</b> |

**IMPROVEMENT:** CLEARING AND GRUBBING -

|                                    |       |         |          |            |                |
|------------------------------------|-------|---------|----------|------------|----------------|
| Widening                           | 0.005 | acres @ | \$660.00 | per acre = | \$3.30         |
| Scattering                         | 0.080 | acres @ | \$980.00 | per acre = | \$78.40        |
| <b>TOTAL CLEARING AND GRUBBING</b> |       |         |          |            | <b>\$81.70</b> |

**IMPROVEMENT:** EXCAVATION -

|                         |    |       |        |            |                |
|-------------------------|----|-------|--------|------------|----------------|
| Widening                | 55 | cy. @ | \$1.40 | per c.y. = | \$77.00        |
| <b>TOTAL EXCAVATION</b> |    |       |        |            | <b>\$77.00</b> |

**ROCK**

|                   |      |           |         |   |                    |                   |
|-------------------|------|-----------|---------|---|--------------------|-------------------|
| 0+00 to           | 1+00 | 60 cy. of | Jaw-Run | @ | \$14.24 per c.y. = | \$854.40          |
| Junction Rock     | 0+00 | 20 cy. of | Jaw-Run | @ | \$14.24 per c.y. = | \$284.80          |
| <b>TOTAL ROCK</b> |      |           |         |   |                    | <b>\$1,139.20</b> |

**SPECIAL PROJECTS**

|  |      |            |          |             |                 |
|--|------|------------|----------|-------------|-----------------|
| Fill roadway @ area of 1+60 -                        | 1.00 | hours @    | \$130.00 | per hour    | \$130.00        |
| Construct Turnaround -                               | 1.00 | @          | \$75.00  | each        | \$75.00         |
| Grade and shape road -                               | 8.60 | stations @ | \$14.00  | per station | \$120.40        |
| Roll subgrade w/ vibratory roller prior to rocking - | 8.60 | stations @ | \$13.20  | per station | \$113.52        |
| Remove large stumps -                                | 1.00 | lump sum @ | \$375.00 |             | \$375.00        |
| Grass seed and fertilize -                           | 0.20 | acres @    | \$220.00 | per acre    | \$44.00         |
| <b>TOTAL SPECIAL PROJECTS</b>                        |      |            |          |             | <b>\$857.92</b> |

**GRAND TOTAL** **\$2,694.02**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**I to J**

|                |       |          |               |      |          |                  |      |          |
|----------------|-------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 10+25 | stations | Improvement - | 0+00 | stations | Reconstruction - | 3+60 | stations |
|                | 0.19  | miles    |               | 0.00 | miles    |                  | 0.07 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 3+60         |    | 4+00    | 20%            |                             | Outslope       | \$139            | = | \$55.60           |
| 4+00         |    | 4+50    | 15%            |                             | Outslope       | \$107            | = | \$53.50           |
| 4+50         |    | 5+30    | 10%            |                             | Outslope       | \$90             | = | \$72.00           |
| 5+30         |    | 6+00    | 20%            |                             | Outslope       | \$139            | = | \$97.30           |
| 6+00         |    | 6+40    | 45%            |                             | Outslope       | \$269            | = | \$107.60          |
| 6+40         |    | 7+00    | 25%            |                             | Outslope       | \$165            | = | \$99.00           |
| 7+00         |    | 7+40    | 40%            |                             | Outslope       | \$243            | = | \$97.20           |
| 7+40         |    | 10+00   | 10%            |                             | Outslope       | \$90             | = | \$234.00          |
| 10+00        |    | 11+40   | 20%            |                             | Outslope       | \$139            | = | \$194.60          |
| 11+40        |    | 13+85   | 10%            |                             | Outslope       | \$90             | = | \$220.50          |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$1,231.30</b> |

**RECONSTRUCTION:** CLEARING AND GRUBBING -

|                                    |       |         |                     |                 |  |
|------------------------------------|-------|---------|---------------------|-----------------|--|
| Scattering                         | 0.310 | acres @ | \$980.00 per acre = | \$303.80        |  |
| <b>TOTAL CLEARING AND GRUBBING</b> |       |         |                     | <b>\$303.80</b> |  |

**RECONSTRUCTION:** EXCAVATION -

|                         |      |        |                    |                |  |
|-------------------------|------|--------|--------------------|----------------|--|
| Road Earthwork          | 3.60 | sta. @ | \$10.00 per sta. = | \$36.00        |  |
| Remove outside berm     | 25   | cy. @  | \$1.40 per c.y. =  | \$35.00        |  |
| <b>TOTAL EXCAVATION</b> |      |        |                    | <b>\$71.00</b> |  |

**ROCK**

|                   |    |      |           |         |   |                    |          |                   |
|-------------------|----|------|-----------|---------|---|--------------------|----------|-------------------|
| 0+00              | to | 1+00 | 60 cy. of | Jaw-Run | @ | \$12.96 per c.y. = | \$777.60 |                   |
| 4+90              | to | 5+30 | 20 cy. of | Jaw-Run | @ | \$13.03 per c.y. = | \$260.60 | (low spot)        |
| 7+70              | to | 9+15 | 70 cy. of | Jaw-Run | @ | \$13.07 per c.y. = | \$914.90 | (low spot)        |
| <b>TOTAL ROCK</b> |    |      |           |         |   |                    |          | <b>\$1,953.10</b> |

**SPECIAL PROJECTS**

|  |       |            |                      |                   |  |
|--|-------|------------|----------------------|-------------------|--|
| Cut/Drift to remove irregularity -                   | 0.70  | stations @ | \$140.00 per station | \$98.00           |  |
| Construct turnaround -                               | 1.00  | @          | \$75.00 each         | \$75.00           |  |
| Grade and shape road -                               | 13.85 | stations @ | \$14.00 per station  | \$193.90          |  |
| Construct landing at 13+85 -                         | 1.00  | @          | \$200.00 each        | \$200.00          |  |
| Roll subgrade w/ vibratory roller prior to rocking - | 13.85 | stations @ | \$13.20 per station  | \$182.82          |  |
| Remove large stumps -                                | 1.00  | lump sum @ | \$375.00             | \$375.00          |  |
| Grass seed and fertilize -                           | 0.37  | acres @    | \$220.00 per acre    | \$81.40           |  |
| <b>TOTAL SPECIAL PROJECTS</b>                        |       |            |                      | <b>\$1,206.12</b> |  |

**GRAND TOTAL** **\$4,794.82**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**K to L**

|                |       |          |               |      |          |                  |      |          |
|----------------|-------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 18+75 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|                | 0.36  | miles    |               | 0.00 | miles    |                  | 0.00 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 0+00         |    | 0+70    | 20%            |                             | Outslope       | \$139            | = | \$97.30           |
| 0+70         |    | 1+90    | 0%             |                             | Outslope       | \$55             | = | \$66.00           |
| 1+90         |    | 5+50    | 15%            |                             | Outslope       | \$107            | = | \$385.20          |
| 5+50         |    | 7+60    | 10%            |                             | Outslope       | \$90             | = | \$189.00          |
| 7+60         |    | 8+25    | 30%            |                             | Outslope       | \$191            | = | \$124.15          |
| 8+25         |    | 9+40    | 10%            |                             | Outslope       | \$90             | = | \$103.50          |
| 9+40         |    | 10+35   | 20%            |                             | Outslope       | \$139            | = | \$132.05          |
| 10+35        |    | 11+50   | 30%            |                             | Outslope       | \$191            | = | \$219.65          |
| 11+50        |    | 12+00   | 15%            |                             | Outslope       | \$107            | = | \$53.50           |
| 12+00        |    | 12+20   | 25%            |                             | Outslope       | \$165            | = | \$33.00           |
| 12+20        |    | 13+70   | 10%            |                             | Outslope       | \$90             | = | \$135.00          |
| 13+70        |    | 14+00   | 30%            |                             | Outslope       | \$191            | = | \$57.30           |
| 14+00        |    | 15+35   | 55%            |                             | Outslope       | \$689            | = | \$930.15          |
| 15+35        |    | 15+80   | 75%            | 0.1                         | Outslope       | \$2,772          | = | \$1,247.40        |
| 15+80        |    | 16+10   | 85%            | 0.1                         | Outslope       | \$4,023          | = | \$1,206.90        |
| 16+10        |    | 16+45   | 75%            | 0.1                         | Outslope       | \$2,772          | = | \$970.20          |
| 16+45        |    | 16+65   | 65%            | 0.1                         | Outslope       | \$1,931          | = | \$386.20          |
| 16+65        |    | 17+10   | 30%            |                             | Outslope       | \$191            | = | \$85.95           |
| 17+10        |    | 18+75   | 10%            |                             | Outslope       | \$90             | = | \$148.50          |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$6,570.95</b> |

**CULVERTS - MATERIALS & INSTALLATION**

Culverts

|  |    |           |            |  |    |           |          |
|--|----|-----------|------------|--|----|-----------|----------|
|  | 0  | LF of 18" | \$0.00     |  | 34 | LF of 24" | \$918.00 |
|  | 34 | LF of 30" | \$1,224.00 |  | 0  | LF of 36" | \$0.00   |
|  |    |           | \$1,224.00 |  |    |           | \$918.00 |

Culvert Stakes & Markers

|           |  |  |         |  |  |  |  |
|-----------|--|--|---------|--|--|--|--|
| 2 markers |  |  |         |  |  |  |  |
|           |  |  | \$16.00 |  |  |  |  |
|           |  |  | \$16.00 |  |  |  |  |

**TOTAL CULVERTS      \$2,158.00**

**ROCK**

|                   |    |       |     |        |         |   |                   |                   |
|-------------------|----|-------|-----|--------|---------|---|-------------------|-------------------|
| 0+00              | to | 3+55  | 230 | cy. of | Jaw-Run | @ | \$12.87 per c.y.= | \$2,960.10        |
| 11+85             | to | 12+60 | 50  | cy. of | Jaw-Run | @ | \$13.01 per c.y.= | \$650.50          |
| <b>TOTAL ROCK</b> |    |       |     |        |         |   |                   | <b>\$3,610.60</b> |

**SPECIAL PROJECTS**

|  |       |            |          |             |          |                   |
|--|-------|------------|----------|-------------|----------|-------------------|
| Construct ditch from 11+85 to 12+60 -                | 0.75  | stations @ | \$60.00  | per station | \$45.00  |                   |
| Construct waste areas -                              | 1.50  | hours @    | \$130.00 | per hour    | \$195.00 |                   |
| Construct ditchout @ 4+15 -                          | 1.00  | @          | \$60.00  | each        | \$60.00  |                   |
| Construct landing @ 18+75 -                          | 1.00  | @          | \$200.00 | each        | \$200.00 |                   |
| Grade and shape road -                               | 18.75 | stations @ | \$14.00  | per station | \$262.50 |                   |
| Construct turnaround -                               | 1.00  | @          | \$75.00  | each        | \$75.00  |                   |
| Roll subgrade w/ vibratory roller prior to rocking - | 18.75 | stations @ | \$13.20  | per station | \$247.50 |                   |
| Remove large stumps -                                | 1.00  | lump sum @ | \$600.00 |             | \$600.00 |                   |
| Grass seed and fertilize -                           | 0.54  | acres @    | \$220.00 | per acre    | \$118.80 |                   |
| Mulching -   | 0.172 | acres @    | \$600.00 | per acre    | \$103.20 |                   |
| <b>TOTAL SPECIAL PROJECTS</b>                        |       |            |          |             |          | <b>\$1,907.00</b> |

**GRAND TOTAL      \$14,246.55**



## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**M to N**

|                |      |          |               |      |          |                  |      |          |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 0+00 | stations | Reconstruction - | 5+65 | stations |
|                | 0.00 | miles    |               | 0.00 | miles    |                  | 0.11 | miles    |

**RECONSTRUCTION: CLEARING AND GRUBBING -**

|            |     |         |                                    |          |                 |
|------------|-----|---------|------------------------------------|----------|-----------------|
| Scattering | 0.5 | acres @ | \$980.00 per acre =                | \$490.00 |                 |
|            |     |         | <b>TOTAL CLEARING AND GRUBBING</b> |          | <b>\$490.00</b> |

**RECONSTRUCTION: EXCAVATION -**

|                |      |        |                         |          |                 |
|----------------|------|--------|-------------------------|----------|-----------------|
| Road Earthwork | 5.65 | sta. @ | \$20.00 per sta. =      | \$113.00 |                 |
|                |      |        | <b>TOTAL EXCAVATION</b> |          | <b>\$113.00</b> |

**ROCK**

|               |      |           |         |   |                    |                   |
|---------------|------|-----------|---------|---|--------------------|-------------------|
| 0+00 to       | 1+00 | 60 cy. of | Jaw-Run | @ | \$12.01 per c.y. = | \$720.60          |
| Junction Rock | 0+00 | 30 cy. of | Jaw-Run | @ | \$12.01 per c.y. = | \$360.30          |
|               |      |           |         |   | <b>TOTAL ROCK</b>  | <b>\$1,080.90</b> |

**SPECIAL PROJECTS**

|  |      |            |                               |             |                 |
|--|------|------------|-------------------------------|-------------|-----------------|
| Construct landing @ 5+40 -                           | 1.00 | @          | \$200.00                      | each        | \$200.00        |
| Grade and shape road -                               | 5.65 | stations @ | \$14.00                       | per station | \$79.10         |
| Roll subgrade w/ vibratory roller prior to rocking - | 5.65 | stations @ | \$13.20                       | per station | \$74.58         |
| Grass seed and fertilize -                           | 0.26 | acres @    | \$220.00                      | per acre    | \$57.20         |
|  |      |            | <b>TOTAL SPECIAL PROJECTS</b> |             | <b>\$410.88</b> |

|                    |                   |
|--------------------|-------------------|
| <b>GRAND TOTAL</b> | <b>\$2,094.78</b> |
|--------------------|-------------------|

## SUMMARY OF CONSTRUCTION COST

|                       |                     |                   |                      |              |                   |                         |              |                   |
|-----------------------|---------------------|-------------------|----------------------|--------------|-------------------|-------------------------|--------------|-------------------|
| Sale:                 | <b>Buck N Bales</b> |                   |                      | Road:        | <b>O to P</b>     |                         |              |                   |
| <u>Construction -</u> | 6+85<br>0.13        | stations<br>miles | <u>Improvement -</u> | 0+00<br>0.00 | stations<br>miles | <u>Reconstruction -</u> | 0+00<br>0.00 | stations<br>miles |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 0+00         |    | 0+13    | 0%             |                             | Outslope       | \$55             | = | \$7.15            |
| 0+13         |    | 0+53    | 30%            |                             | Outslope       | \$191            | = | \$76.40           |
| 0+53         |    | 2+65    | 60%            |                             | Outslope       | \$1,493          | = | \$3,165.16        |
| 2+65         |    | 3+34    | 45%            |                             | Outslope       | \$269            | = | \$185.61          |
| 3+34         |    | 4+49    | 10%            |                             | Outslope       | \$90             | = | \$103.50          |
| 4+49         |    | 5+96    | 18%            |                             | Outslope       | \$129            | = | \$189.63          |
| 5+96         |    | 6+85    | 10%            |                             | Outslope       | \$90             | = | \$80.10           |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$3,807.55</b> |

|                   |      |    |      |    |        |         |   |                   |                 |
|-------------------|------|----|------|----|--------|---------|---|-------------------|-----------------|
| <b>ROCK</b>       | 0+00 | to | 1+00 | 60 | cy. of | Jaw-Run | @ | \$12.01 per c.y.= | \$720.60        |
| <b>TOTAL ROCK</b> |      |    |      |    |        |         |   |                   | <b>\$720.60</b> |

**SPECIAL PROJECTS**

|  |      |            |            |             |                   |
|--|------|------------|------------|-------------|-------------------|
| Cut/Drift between 2+25 and 6+85 -                    | 4.60 | stations @ | \$140.00   | per station | \$644.00          |
| Construct Waste Area @ 0+00                          | 2.00 | hours @    | \$145.00   | each        | \$290.00          |
| Construct landing @ 6+50                             | 1.00 | @          | \$200.00   | each        | \$200.00          |
| Grade and shape road -                               | 6.85 | stations @ | \$14.00    | per station | \$95.90           |
| Roll subgrade w/ vibratory roller prior to rocking - | 6.85 | stations @ | \$13.20    | per station | \$90.42           |
| Remove large stumps -                                | 1.00 | lump sum @ | \$1,060.00 |             | \$1,060.00        |
| Grass seed and fertilize -                           | 0.74 | acres @    | \$220.00   | per acre    | \$162.80          |
| <b>TOTAL SPECIAL PROJECTS</b>                        |      |            |            |             | <b>\$2,543.12</b> |

**GRAND TOTAL** **\$7,071.27**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**Q to R**

|                |      |          |               |      |          |                  |      |          |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 9+15 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|                | 0.17 | miles    |               | 0.00 | miles    |                  | 0.00 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                   |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 0+00         |    | 0+45    | 10%            |                             | Outslope       | \$90             | = | \$40.50           |
| 0+45         |    | 0+75    | 15%            |                             | Outslope       | \$107            | = | \$32.10           |
| 0+75         |    | 1+55    | 30%            |                             | Outslope       | \$191            | = | \$152.80          |
| 1+55         |    | 2+25    | 45%            |                             | Outslope       | \$269            | = | \$188.30          |
| 2+25         |    | 2+75    | 30%            |                             | Outslope       | \$191            | = | \$95.50           |
| 2+75         |    | 3+35    | 45%            |                             | Outslope       | \$269            | = | \$161.40          |
| 3+35         |    | 4+30    | 30%            |                             | Outslope       | \$191            | = | \$181.45          |
| 4+30         |    | 5+10    | 10%            |                             | Outslope       | \$90             | = | \$72.00           |
| 5+10         |    | 5+55    | 20%            |                             | Outslope       | \$139            | = | \$62.55           |
| 5+55         |    | 6+00    | 30%            |                             | Outslope       | \$191            | = | \$85.95           |
| 6+00         |    | 7+75    | 15%            |                             | Outslope       | \$107            | = | \$187.25          |
| 7+75         |    | 8+50    | 30%            |                             | Outslope       | \$191            | = | \$143.25          |
| 8+50         |    | 9+15    | 15%            |                             | Outslope       | \$107            | = | \$69.55           |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$1,472.60</b> |

|                   |      |    |      |    |        |         |   |                   |                 |
|-------------------|------|----|------|----|--------|---------|---|-------------------|-----------------|
| <b>ROCK</b>       | 0+00 | to | 1+00 | 60 | cy. of | Jaw-Run | @ | \$12.01 per c.y.= | \$720.60        |
| <b>TOTAL ROCK</b> |      |    |      |    |        |         |   |                   | <b>\$720.60</b> |

**SPECIAL PROJECTS**

|  |      |            |          |             |                 |
|--|------|------------|----------|-------------|-----------------|
| Construct landing @ 9+15 -                           | 1.00 | @          | \$200.00 | each        | \$200.00        |
| Grade and shape road -                               | 9.15 | stations @ | \$14.00  | per station | \$128.10        |
| Roll subgrade w/ vibratory roller prior to rocking - | 9.15 | stations @ | \$13.20  | per station | \$120.78        |
| Remove large stumps -                                | 1.00 | lump sum @ | \$300.00 |             | \$300.00        |
| Grass seed and fertilize -                           | 0.25 | acres @    | \$220.00 | per acre    | \$55.00         |
| <b>TOTAL SPECIAL PROJECTS</b>                        |      |            |          |             | <b>\$803.88</b> |

**GRAND TOTAL** **\$2,997.08**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**S to T**

|                |      |          |               |      |          |                  |      |          |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 3+30 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|                | 0.06 | miles    |               | 0.00 | miles    |                  | 0.00 | miles    |

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

| Station      | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |                 |
|--------------|----|---------|----------------|-----------------------------|----------------|------------------|---|-----------------|
| 0+00         |    | 0+46    | 40%            |                             | Outslope       | \$243            | = | \$111.78        |
| 0+46         |    | 1+18    | 15%            |                             | Outslope       | \$107            | = | \$77.04         |
| 1+18         |    | 1+80    | 40%            |                             | Outslope       | \$243            | = | \$150.66        |
| 1+80         |    | 2+58    | 20%            |                             | Outslope       | \$139            | = | \$108.42        |
| 2+58         |    | 3+30    | 10%            |                             | Outslope       | \$90             | = | \$64.80         |
| <b>TOTAL</b> |    |         |                |                             |                |                  |   | <b>\$512.70</b> |

**SPECIAL PROJECTS**

|  |      |            |          |             |                 |
|--|------|------------|----------|-------------|-----------------|
| Construct landing @ 3+00 -                                       | 1.00 | @          | \$200.00 | each        | \$200.00        |
| Cut 2' @ 0+90 to keep grade below 20% and drift material ahead - | 2.00 | stations @ | \$140.00 | per station | \$280.00        |
| Grade and shape road -   | 3.30 | stations @ | \$14.00  | per station | \$46.20         |
| Roll subgrade w/ vibratory roller                                | 3.30 | stations @ | \$13.20  | per station | \$43.56         |
| Grass seed and fertilize -                                       | 0.30 | acres @    | \$220.00 | per acre    | \$66.00         |
| <b>TOTAL SPECIAL PROJECTS</b>                                    |      |            |          |             | <b>\$635.76</b> |

**GRAND TOTAL** **\$1,148.46**

## SUMMARY OF CONSTRUCTION COST

Sale: **Buck N Bales**

Road: **U to V**

|                |      |            |               |      |          |                  |       |          |
|----------------|------|------------|---------------|------|----------|------------------|-------|----------|
| Construction - | 1+50 | stations - | Improvement - | 0+00 | stations | Reconstruction - | 22+65 | stations |
|                | 0.03 | miles      |               | 0.00 | miles    |                  | 0.43  | miles    |

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

| Station | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch<br>Outslope | Cost per Station | = | \$208.50 | TOTAL | \$208.50 |
|---------|----|---------|----------------|-----------------------------|----------------------------|------------------|---|----------|-------|----------|
| 22+65   |    | 24+15   | 20%            |                             |                            | \$139            |   |          |       |          |

**RECONSTRUCTION:** CLEARING AND GRUBBING -

|            |       |         |          |            |            |  |  |                                    |                   |
|------------|-------|---------|----------|------------|------------|--|--|------------------------------------|-------------------|
| Widening   | 0.104 | acres @ | \$660.00 | per acre = | \$68.64    |  |  |                                    |                   |
| Scattering | 1.660 | acres @ | \$980.00 | per acre = | \$1,626.80 |  |  |                                    |                   |
|            |       |         |          |            |            |  |  | <b>TOTAL CLEARING AND GRUBBING</b> | <b>\$1,695.44</b> |

**RECONSTRUCTION:** EXCAVATION -

|                |       |        |         |            |          |  |  |                         |                   |
|----------------|-------|--------|---------|------------|----------|--|--|-------------------------|-------------------|
| Road Earthwork | 22.65 | sta. @ | \$25.00 | per sta. = | \$566.25 |  |  |                         |                   |
| Widening       | 489   | cy. @  | \$1.40  | per c.y. = | \$684.60 |  |  |                         |                   |
|                |       |        |         |            |          |  |  | <b>TOTAL EXCAVATION</b> | <b>\$1,250.85</b> |

**RECONSTRUCTION:** ENDHAUL -

|                  |       |    |       |     |       |        |            |                      |                 |
|------------------|-------|----|-------|-----|-------|--------|------------|----------------------|-----------------|
| Widening         | 0+00  | to | 3+50  | 135 | cy. @ | \$1.50 | per c.y. = | \$202.50             |                 |
| Widening         | 4+70  | to | 6+85  | 208 | cy. @ | \$1.61 | per c.y. = | \$334.88             |                 |
| Widening         | 19+65 | to | 20+65 | 146 | cy. @ | \$1.00 | per c.y. = | \$146.00             |                 |
| Spread & compact |       |    |       | 489 | cy. @ | \$0.25 | per c.y. = | \$122.25             |                 |
|                  |       |    |       |     |       |        |            | <b>TOTAL ENDHAUL</b> | <b>\$805.63</b> |

**CULVERTS - MATERIALS**

Culverts

|    |           |                   |                       |                   |  |
|----|-----------|-------------------|-----------------------|-------------------|--|
| 70 | LF of 48" | \$3,671.00        |                       |                   |  |
| 3  | Bands     | \$186.00          |                       |                   |  |
| 1  | Bevel     | \$138.00          |                       |                   |  |
|    |           | <u>\$3,995.00</u> |                       |                   |  |
|    |           |                   | <b>TOTAL CULVERTS</b> | <b>\$3,995.00</b> |  |

**ROCK**

|                    |       |       |        |         |   |         |            |                   |                    |
|--------------------|-------|-------|--------|---------|---|---------|------------|-------------------|--------------------|
| 0+00 to            | 24+15 | 1,320 | cy. of | Jaw-Run | @ | \$12.48 | per c.y. = | \$16,473.60       |                    |
| Bedding / Backfill | 8+30  | 20    | cy. of | Crushed | @ | \$12.25 | per c.y. = | \$245.00          |                    |
| Landing Rock       | 24+15 | 70    | cy. of | Jaw-Run | @ | \$12.65 | per c.y. = | \$885.50          |                    |
| Armor / Dissipator | 8+30  | 30    | cy. of | Riprap  | @ | \$4.71  | per c.y. = | \$141.30          |                    |
|                    |       |       |        |         |   |         |            | <b>TOTAL ROCK</b> | <b>\$17,745.40</b> |

**SPECIAL PROJECTS**

|  |       |            |          |             |            |  |  |                               |                   |
|--|-------|------------|----------|-------------|------------|--|--|-------------------------------|-------------------|
| Construct landing @ 24+85 -                          | 1.00  | @          | \$200.00 | each        | \$200.00   |  |  |                               |                   |
| Construct waste areas -                              | 1.00  | hours @    | \$130.00 | per hour    | \$130.00   |  |  |                               |                   |
| Construct ditchouts -                                | 1.00  | @          | \$60.00  | each        | \$60.00    |  |  |                               |                   |
| <b>Install 48" x 70' culv. w/</b> Excavator / Cat    | 36.00 | hours @    | \$145.00 | per hour    | \$5,220.00 |  |  |                               |                   |
| Dump Truck   | 12.00 | hours @    | \$70.00  | per hour    | \$840.00   |  |  |                               |                   |
| Laborer  | 12.00 | hours @    | \$30.00  | per hour    | \$360.00   |  |  |                               |                   |
| Handheld vib. compacter                              | 1.50  | days @     | \$45.00  | per day     | \$67.50    |  |  |                               |                   |
| Grade and shape road -                               | 24.15 | stations @ | \$14.00  | per station | \$338.10   |  |  |                               |                   |
| Construct turnaround -                               | 1.00  | @          | \$75.00  | each        | \$75.00    |  |  |                               |                   |
| Roll subgrade w/ vibratory roller prior to rocking - | 24.15 | stations @ | \$13.20  | per station | \$318.78   |  |  |                               |                   |
| Drift material from 22+00 to 24+00 -                 | 2.00  | stations @ | \$140.00 | per station | \$280.00   |  |  |                               |                   |
| Grass seed and fertilize -                           | 1.11  | acres @    | \$220.00 | per acre    | \$244.20   |  |  |                               |                   |
| Mulching -   | 0.05  | acres @    | \$600.00 | per acre    | \$30.00    |  |  |                               |                   |
|  |       |            |          |             |            |  |  | <b>TOTAL SPECIAL PROJECTS</b> | <b>\$8,163.58</b> |

**GRAND TOTAL** **\$33,864.40**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**W to X**

|                       |                             |                      |                             |                         |                             |
|-----------------------|-----------------------------|----------------------|-----------------------------|-------------------------|-----------------------------|
| <u>Construction -</u> | 4+65 stations<br>0.09 miles | <u>Improvement -</u> | 0+00 stations<br>0.00 miles | <u>Reconstruction -</u> | 0+00 stations<br>0.00 miles |
|-----------------------|-----------------------------|----------------------|-----------------------------|-------------------------|-----------------------------|

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

| Station | to | Station | Avg. Sideslope | Avg. Dist.<br>To W.A. (mi.) | Outslope/Ditch | Cost per Station | = |              |                 |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-----------------|
| 0+00    |    | 0+95    | 5%             |                             | Outslope       | \$74             | = | \$70.30      |                 |
| 0+95    |    | 4+36    | 40%            |                             | Outslope       | \$243            | = | \$828.63     |                 |
| 4+36    |    | 4+65    | 20%            |                             | Outslope       | \$139            | = | \$40.31      |                 |
|         |    |         |                |                             |                |                  |   | <b>TOTAL</b> | <b>\$939.24</b> |

**ROCK**

|      |    |      |    |        |         |   |                   |  |                   |                 |
|------|----|------|----|--------|---------|---|-------------------|--|-------------------|-----------------|
| 0+00 | to | 1+00 | 60 | cy. of | Jaw-Run | @ | \$12.41 per c.y.= |  | \$744.60          |                 |
|      |    |      |    |        |         |   |                   |  | <b>TOTAL ROCK</b> | <b>\$744.60</b> |

**SPECIAL PROJECTS**

|  |      |            |          |             |  |                               |                 |
|--|------|------------|----------|-------------|--|-------------------------------|-----------------|
| Construct landing @ 8+90 -                           | 1.00 | @          | \$200.00 | each        |  | \$200.00                      |                 |
| Construct waste areas -                              | 2.00 | hours @    | \$130.00 | per hour    |  | \$260.00                      |                 |
| End-haul at junction -                               | 1.00 | hours @    | \$290.00 | per hour    |  | \$290.00                      |                 |
| Grade and shape road -                               | 4.65 | stations @ | \$14.00  | per station |  | \$65.10                       |                 |
| Roll subgrade w/ vibratory roller prior to rocking - | 4.65 | stations @ | \$13.20  | per station |  | \$61.38                       |                 |
| Grass seed and fertilize -                           | 0.43 | acres @    | \$220.00 | per acre    |  | \$94.60                       |                 |
|  |      |            |          |             |  | <b>TOTAL SPECIAL PROJECTS</b> | <b>\$971.08</b> |

**GRAND TOTAL** **\$2,654.92**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**Y to Z**

|                       |             |          |                      |              |          |                         |             |          |
|-----------------------|-------------|----------|----------------------|--------------|----------|-------------------------|-------------|----------|
| <u>Construction -</u> | <u>0+00</u> | stations | <u>Improvement -</u> | <u>14+70</u> | stations | <u>Reconstruction -</u> | <u>0+00</u> | stations |
|                       | 0.00        | miles    |                      | 0.28         | miles    |                         | 0.00        | miles    |

**ROCK**

|               |       |     |        |         |   |                   |                   |                   |
|---------------|-------|-----|--------|---------|---|-------------------|-------------------|-------------------|
| 0+00 to       | 14+70 | 200 | cy. of | Crushed | @ | \$12.48 per c.y.= | \$2,496.00        |                   |
| Junction Rock | 0+00  | 10  | cy. of | Crushed | @ | \$12.37 per c.y.= | \$123.70          |                   |
|               |       |     |        |         |   |                   | <b>TOTAL ROCK</b> | <b>\$2,619.70</b> |

**SPECIAL PROJECTS**

|  |       |            |         |             |                               |                 |
|--|-------|------------|---------|-------------|-------------------------------|-----------------|
| Grade and shape road -                               | 14.70 | stations @ | \$15.50 | per station | \$227.85                      |                 |
| Roll subgrade w/ vibratory roller prior to rocking - | 14.70 | stations @ | \$13.20 | per station | \$194.04                      |                 |
|  |       |            |         |             | <b>TOTAL SPECIAL PROJECTS</b> | <b>\$421.89</b> |

**GRAND TOTAL** **\$3,041.59**

## SUMMARY OF CONSTRUCTION COST

Sale:

**Buck N Bales**

Road:

**AA to BB**

|                       |             |          |                      |             |          |                         |             |          |
|-----------------------|-------------|----------|----------------------|-------------|----------|-------------------------|-------------|----------|
| <u>Construction -</u> | <u>0+00</u> | stations | <u>Improvement -</u> | <u>1+60</u> | stations | <u>Reconstruction -</u> | <u>0+00</u> | stations |
|                       | 0.00        | miles    |                      | 0.03        | miles    |                         | 0.00        | miles    |

**ROCK**

|                   |      |           |         |   |                   |                 |
|-------------------|------|-----------|---------|---|-------------------|-----------------|
| 0+00 to           | 1+60 | 50 cy. of | Crushed | @ | \$12.51 per c.y.= | \$625.50        |
| Junction Rock     | 0+00 | 10 cy. of | Crushed | @ | \$12.50 per c.y.= | \$125.00        |
| <b>TOTAL ROCK</b> |      |           |         |   |                   | <b>\$750.50</b> |

**SPECIAL PROJECTS**

|  |      |            |         |             |                |
|--|------|------------|---------|-------------|----------------|
| Grade and shape road -                               | 1.60 | stations @ | \$15.50 | per station | \$24.80        |
| Roll subgrade w/ vibratory roller prior to rocking - | 1.60 | stations @ | \$13.20 | per station | \$21.12        |
| <b>TOTAL SPECIAL PROJECTS</b>                        |      |            |         |             | <b>\$45.92</b> |

**GRAND TOTAL** **\$796.42**



## SUMMARY OF CONSTRUCTION COST

Sale:

Buck N Bales

Road:

Point CC  
Stream Enhancement

**SPECIAL PROJECTS**

|   |       |         |          |          |                               |
|---|-------|---------|----------|----------|-------------------------------|
| Uproot 25 trees and cut to length -               | 8.00  | hours @ | \$145.00 | per hour | \$1,160.00                    |
| Load trees -                                      | 2.50  | hours @ | \$145.00 | per hour | \$362.50                      |
| Haul trees to site -                              | 5.00  | hours @ | \$70.00  | per hour | \$350.00                      |
| Unload trees -                                    | 2.50  | hours @ | \$145.00 | per hour | \$362.50                      |
| Place trees in stream -                           | 8.00  | hours @ | \$145.00 | per hour | \$1,160.00                    |
| Loosen areas of compacted soil and block access - | 3.00  | hours @ | \$145.00 | per hour | \$435.00                      |
| Grass seed -                                      | 0.15  | acres @ | \$220.00 | per acre | \$33.00                       |
| Mulching -  | 0.150 | acres @ | \$600.00 | per acre | \$90.00                       |
|   |       |         |          |          | <b>TOTAL SPECIAL PROJECTS</b> |
|   |       |         |          |          | <b>\$3,953.00</b>             |
|   |       |         |          |          | <b>GRAND TOTAL</b>            |
|   |       |         |          |          | <b>\$3,953.00</b>             |

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

|             |                     |                    |                                      |
|-------------|---------------------|--------------------|--------------------------------------|
| Pit:        | Jaw_run             | Location:          | NE1/4, SW1/4, Sec. 4, T3S, R7W, W.M. |
| Sale:       | <b>Buck N Bales</b> | Road:              | 3690 c.y.                            |
| Swell:      | 1.40                | Stockpile:         | c.y.                                 |
| Shrinkage:  | 1.16                | Total Truck Loads: | 3690 c.y.                            |
| Drill Pct.: | 50%                 | In Place Total:    | 2636 c.y.                            |

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$2,088.10

|                  |                |   |              |   |             |
|------------------|----------------|---|--------------|---|-------------|
| Drill & Shoot:   | \$4.60 /cu.yd. | x | 1318 cu.yds. | = | \$6,062.80  |
| Rip Rock:        | \$1.90 /cu.yd. | x | 1318 cu.yds. | = | \$2,504.20  |
| Load Crusher:    | \$0.60 /cu.yd. | x | 3690 cu.yds. | = | \$2,214.00  |
| Crush Rock:      | \$3.00 /cu.yd. | x | 3690 cu.yds. | = | \$11,070.00 |
| Load Dump Truck: | \$0.70 /cu.yd. | x | 3690 cu.yds. | = | \$2,583.00  |

Subtotal \$26,522.10

|   |   |   |            |   |            |
|---|---|---|------------|---|------------|
| Move In/Set-up Jaw                      | 1 | @ | \$1,066.00 | = | \$1,066.00 |
| Move In and set up Drill and Compressor | 1 | @ | \$625.98   | = | \$625.98   |
| Move in Roller and Compactor            | 1 | @ | \$625.98   | = | \$625.98   |
| Move in Grader                          | 1 | @ | \$198.32   | = | \$198.32   |
| Move in Loader                          | 1 | @ | \$806.46   | = | \$806.46   |
| Move in Excavator                       | 1 | @ | \$1,057.67 | = | \$1,057.67 |
| Move in Trucks                          | 3 | @ | \$207.37   | = | \$622.11   |
| Move in Water Truck                     | 1 | @ | \$243.75   | = | \$243.75   |

Subtotal \$5,246.27

Base Cost= \$8.61 Per Cu.Yd.

**TOTAL PRODUCTION COSTS \$31,768.37**

| Road Segment                       | Haul Cost<br>\$/cu.yd. | Proc Cost<br>\$/cu.yd. | Base Cost.<br>\$/cu.yd. | Cost<br>\$/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST                  |
|------------------------------------|------------------------|------------------------|-------------------------|-------------------|-------------------|-------------------------------|
| A to B Base Rock (Jaw-Run)         | 4.07                   | 1.10                   | 8.61                    | 13.78             | 20                | \$275.60                      |
| A to B Energy Dissipators (Riprap) | 4.07                   | 1.40                   | 0.60                    | 6.07              | 10                | \$60.70                       |
| C to D 0 775 (Jaw-Run)             | 4.50                   | 1.10                   | 8.61                    | 14.21             | 430               | \$6,110.30                    |
| C to D Junction Rock (Jaw-Run)     | 4.44                   | 1.10                   | 8.61                    | 14.15             | 20                | \$283.00                      |
| C to D Base Rock (Jaw-Run)         | 4.45                   | 1.10                   | 8.61                    | 14.16             | 50                | \$708.00                      |
| E to F 0 1600 (Jaw-Run)            | 4.67                   | 1.10                   | 8.61                    | 14.38             | 890               | \$12,798.20                   |
| E to F Landing Rock (Jaw-Run)      | 4.79                   | 1.10                   | 8.61                    | 14.50             | 70                | \$1,015.00                    |
| G to H 0 100 (Jaw-Run)             | 4.53                   | 1.10                   | 8.61                    | 14.24             | 60                | \$854.40                      |
| G to H Junction Rock (Jaw-Run)     | 4.53                   | 1.10                   | 8.61                    | 14.24             | 20                | \$284.80                      |
| I to J 0 100 (Jaw-Run)             | 3.25                   | 1.10                   | 8.61                    | 12.96             | 60                | \$777.60                      |
| I to J 490 530 (Jaw-Run)           | 3.32                   | 1.10                   | 8.61                    | 13.03             | 20                | \$260.60                      |
| I to J 770 915 (Jaw-Run)           | 3.36                   | 1.10                   | 8.61                    | 13.07             | 70                | \$914.90                      |
| K to L 0 355 (Jaw-Run)             | 3.16                   | 1.10                   | 8.61                    | 12.87             | 230               | \$2,960.10                    |
| K to L 1185 1260 (Jaw-Run)         | 3.30                   | 1.10                   | 8.61                    | 13.01             | 50                | \$650.50                      |
| M to N 0 100 (Jaw-Run)             | 2.30                   | 1.10                   | 8.61                    | 12.01             | 60                | \$720.60                      |
| M to N Junction Rock (Jaw-Run)     | 2.30                   | 1.10                   | 8.61                    | 12.01             | 30                | \$360.30                      |
| O to P 0 100 (Jaw-Run)             | 2.30                   | 1.10                   | 8.61                    | 12.01             | 60                | \$720.60                      |
| Q to R 0 100 (Jaw-Run)             | 2.30                   | 1.10                   | 8.61                    | 12.01             | 60                | \$720.60                      |
| U to V 0 2415 (Jaw-Run)            | 2.77                   | 1.10                   | 8.61                    | 12.48             | 1320              | \$16,473.60                   |
| U to V Landing Rock (Jaw-Run)      | 2.94                   | 1.10                   | 8.61                    | 12.65             | 70                | \$885.50                      |
| U to V Armor / Dissipator (Riprap) | 2.71                   | 1.40                   | 0.60                    | 4.71              | 30                | \$141.30                      |
| W to X 0 100 (Jaw-Run)             | 2.70                   | 1.10                   | 8.61                    | 12.41             | 60                | \$744.60                      |
| <b>Total Cubic Yards</b>           |                        |                        |                         |                   | <b>3690</b>       | <b>Total Cost \$48,720.80</b> |

## CRUSHED ROCK STOCKPILE USE SUMMARY

|            |                     |                    |                                       |
|------------|---------------------|--------------------|---------------------------------------|
| Stockpile: | Crushed             | Location:          | SE1/4, SE1/4, Sec. 25, T1S, R8W, W.M. |
| Sale:      | <b>Buck N Bales</b> | Road:              | 390 c.y.                              |
|            |                     | Total Truck Loads: | 390 c.y.                              |
|            |                     |                    |                                       |

|                  |                |   |             |   |          |
|------------------|----------------|---|-------------|---|----------|
| Load Dump Truck: | \$0.70 /cu.yd. | x | 390 cu.yds. | = | \$273.00 |
|                  |                |   | Subtotal    |   | \$273.00 |

|                                       |   |   |          |          |          |
|---------------------------------------|---|---|----------|----------|----------|
| Within Area Move in Roller (10 miles) | 1 | @ | \$50.00  | =        | \$50.00  |
| Within Area Move in Grader (10 miles) | 1 | @ | \$36.50  | =        | \$36.50  |
| Within Area Move in Loader (10 miles) | 1 | @ | \$90.00  | =        | \$90.00  |
| Move in Trucks                        | 2 | @ | \$207.37 | =        | \$414.74 |
|                                       |   |   |          | Subtotal | \$591.24 |

|            |        |            |  |  |                        |          |
|------------|--------|------------|--|--|------------------------|----------|
| Base Cost= | \$2.22 | Per Cu.Yd. |  |  | TOTAL PRODUCTION COSTS | \$864.24 |
|------------|--------|------------|--|--|------------------------|----------|

| Road Segment                        | Haul Cost<br>\$/cu.yd. | Proc Cost<br>\$/cu.yd. | Base Cost.<br>\$/cu.yd. | Cost<br>\$/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST |
|-------------------------------------|------------------------|------------------------|-------------------------|-------------------|-------------------|--------------|
| A to B Spot Rock (Crushed)          | 9.41                   | 1.10                   | 2.22                    | 12.73             | 100               | \$1,273.00   |
| U to V Bedding / Backfill (Crushed) | 9.43                   | 0.60                   | 2.22                    | 12.25             | 20                | \$245.00     |
| Y to Z 0 1470 (Crushed)             | 7.81                   | 2.45                   | 2.22                    | 12.48             | 200               | \$2,496.00   |
| Y to Z Junction Rock (Crushed)      | 7.70                   | 2.45                   | 2.22                    | 12.37             | 10                | \$123.70     |
| AA to BB 0 160 (Crushed)            | 7.84                   | 2.45                   | 2.22                    | 12.51             | 50                | \$625.50     |
| AA to BB Junction Rock (Crushed)    | 7.83                   | 2.45                   | 2.22                    | 12.50             | 10                | \$125.00     |
|                                     |                        |                        |                         | Total Cubic Yards | 390               | Total Cost   |
|                                     |                        |                        |                         |                   |                   | \$4,888.20   |

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

Sale: **Buck N Bales**

| LOWBOY HAUL (Round Trip) |              |                 |
|--------------------------|--------------|-----------------|
| DIST. (mi)               | ROADWAY      | AVE SPEED (mph) |
| 32.0                     | Pavement     | 30              |
| 13.0                     | Main Lines   | 7               |
| 5.0                      | 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                           | Excavators (Large)     | \$1,082.20   | 1          | \$44.80                    | 0.00          | 0.00        | 0           | \$0.00           | \$1,082.20        |
| 1                           | Tractor (D8)           | \$1,006.94   | 2          | \$15.10                    | 0.00          | 0.00        | 0           | \$0.00           | \$1,006.94        |
| 2                           | Dump Truck (10 cy +)   | \$509.65     |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$509.65          |
| 1                           | Water Truck (2500 Gal) | \$243.75     |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$243.75          |
| <b>TOTAL MOVE-IN COSTS:</b> |                        |              |            |                            |               |             |             |                  | <b>\$2,842.54</b> |



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Buck N Bales*

**1. Type of Sale**

Partial Cut and Regeneration harvest, Recovery

**2. Legal Description**

Sections 29, 30, 31, and 32, T2S, R7W, and Section 5, T3S, R7W, W.M. Tillamook County, Oregon

**3. Sale Acreage**

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

|                             | <b>ACRES</b> |            |
|-----------------------------|--------------|------------|
|                             | <u>Gross</u> | <u>Net</u> |
| <b>Area 1 (Partial Cut)</b> | 162          | 107        |
| <b>Area 2 (Clearcut)</b>    | 68           | 58         |
| <b>Area 3 (Partial Cut)</b> | 105          | 91         |

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

*Used for calculating the advertised volume.*

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

**4. Cruising Procedures**

**A. Cruise Method**

A total of 54 variable radius plots were taken on a 400' x 400' square grid. All conifers 8 inches DBH and greater containing 20 net board feet and all hardwoods 10 inches DBH and greater containing 30 net board feet were recorded on all plots. Species were recorded on all trees, and they were measured for merchantable height, diameter, and form factor.

| Cruise Statistics (Net BF/Acre) |         |      |      |
|---------------------------------|---------|------|------|
| Area                            | # Plots | CV%  | SE%  |
| 1                               | 30      | 27.5 | 5.1  |
| 2                               | 18      | 45.0 | 10.9 |
| 3                               | 21      | 42.3 | 9.5  |
| Project (all areas)             | 69      | 39.9 | 4.8  |

## **B. Plot size**

A basal area factor of 40 BAF was used, and the point of tree observation was 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 6 inch top outside bark for all conifers and 7 inches outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet for all species. Height and diameter measurement standards were to the nearest foot or inch respectively.

## **5. Computation Procedure**

Plot data was entered into SuperAce for computation of stand information and volume. Snag volume in Area 2 was accounted for by designating Douglas-fir leave trees. Area 1 and 3 take and leave trees were determined from the plot data to meet prescription targets.

## **6. Hidden and Visual Defect and Breakage**

A 5% reduction for hidden defect and breakage was applied to conifers. The total defect and breakage for conifers was:

Area 1: 6.4%

Area 2: 6.1%

Area 3: 5.7%

## **7. Timber Description**

The entire area was burned in the 1939 fire and re-burned again in the 1951 except for a small part in the SE corner of Area 1. The area was seeded in 1965-67 and now all the trees are about 40 years old. Understory is mostly vine maple, Oregon grape, and sword fern.

Area 1 (Partial Cut) – The Douglas-fir averages 16" DBH with a merchantable height of 67 feet to a merchantable top (5" d.i.b.). In 1977 about 40% of the area was sprayed to control alder which mostly resulted in patches of zombie alder and persistent vine maple patches now designated as "thinning not required". In 1986 the area was pre-commercially thinned.

Area 2 (Modified Clearcut) – The Douglas-fir averages 16" DBH with a merchantable height of 70 feet to a merchantable top (5" d.i.b.). Scattered trees have been snow damaged at about 50 feet. In 1990 the area was pre-commercially thinned.

Area 3 (Partial Cut) - The Douglas-fir averages 15" DBH with a merchantable height of 67 feet to a merchantable top (5" d.i.b.). In 1977 about 35% of the area was sprayed to control alder which has resulted in increased conifer stocking and

scattered zombie alder. In 1986 the area was pre-commercially thinned.

**8. Cruiser Names/Dates**

Cruised by ODF Contracts Unit staff in 2010

**9. Revenue Distribution**

FDF 100%

Tax Code: 8: 3%, 8-1: 97%

Deed Numbers: 169, 194, and 295

**10. Attachments**

Volume Summary

Stand Tables

Log Stock Tables

Logging Plan

**11. Stand and Log Stock Tables Species Key**

DF – Douglas-fir take

RA – Red alder take

DL – Douglas-fir leave

NL – Noble fir leave

RL – Red alder leave

WL – Western hemlock leave



STEWARDSHIP IN FORESTRY

## Buck N Bales

### Volume Summary

| Area 1-Partial Cut |                 |           |                      |             |
|--------------------|-----------------|-----------|----------------------|-------------|
| 107 acres          |                 |           |                      |             |
| SPECIES            | Gross MBF/ Acre | Gross MBF | Hidden & Visible D&B | Net Vol MBF |
| Douglas-fir        | 8.9             | 948       | 6.4%                 | 891         |
| <b>TOTAL</b>       | 8.9             | 948       |                      | 891         |

| Areas 2-Modified Clear-cut |                 |           |                      |             |
|----------------------------|-----------------|-----------|----------------------|-------------|
| 58 acres                   |                 |           |                      |             |
| SPECIES                    | Gross MBF/ Acre | Gross MBF | Hidden & Visible D&B | Net Vol MBF |
| Douglas-fir                | 19.6            | 1137      | 6.1%                 | 1072        |
| <b>TOTAL</b>               | 19.6            | 1137      |                      | 1072        |

| Areas 3-Partial Cut |                 |           |                      |             |
|---------------------|-----------------|-----------|----------------------|-------------|
| 91 acres            |                 |           |                      |             |
| SPECIES             | Gross MBF/ Acre | Gross MBF | Hidden & Visible D&B | Net Vol MBF |
| Douglas-fir         | 9.1             | 832       | 5.7%                 | 787         |
| <b>TOTAL</b>        | 9.1             | 832       |                      | 787         |

| TOTAL SALE VOLUME |                  |                | 256 acres |  |
|-------------------|------------------|----------------|-----------|--|
| SPECIES           | Gross Vol. (MBF) | Net Vol. (MBF) |           |  |
| Douglas-fir       | 2917             | 2750           |           |  |
| <b>TOTAL</b>      | 2917             | 2750           |           |  |



| TC                  |        | TSTNDSUM |        | Stand Table Summary |           |                |              |              |               |                     |               |                       |                       |        |        |       |
|---------------------|--------|----------|--------|---------------------|-----------|----------------|--------------|--------------|---------------|---------------------|---------------|-----------------------|-----------------------|--------|--------|-------|
| Project             |        |          |        |                     |           |                |              |              |               |                     |               |                       |                       | BUCKNB |        |       |
| T02S R07W S30 TSALE |        |          |        |                     |           |                |              |              |               | T02S R07W S30 TSALE |               |                       |                       |        |        |       |
| Twp                 | Rge    | Sec      | Tract  | Type                | Acres     | Plots          | Sample Trees |              |               | Page:               | 1             |                       |                       |        |        |       |
| 02S                 | 07W    | 30       | AREA_1 | SALE                | 107.00    | 30             | 148          |              |               | Date:               | 12/08/2010    |                       |                       |        |        |       |
|                     |        |          |        |                     |           |                |              |              |               | Time:               | 9:37:05AM     |                       |                       |        |        |       |
| Spc                 | S<br>T | Sample   |        | Av                  |           | Trees/<br>Acre | BA/<br>Acre  | Logs<br>Acre | Average Log   |                     | Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |       |
|                     |        | DBH      | Trees  | FF<br>16'           | Ht<br>Tot |                |              |              | Net<br>Cu.Ft. | Net<br>Bd.Ft.       |               |                       |                       | Tons   | Cunits | MBF   |
| DL                  |        | 14       | 1      | 87                  | 101       | 1.247          | 1.33         | 2.49         | 18.3          | 75.0                | 1.25          | 46                    | 187                   | 134    | 49     | 20    |
| DL                  |        | 15       | 1      | 87                  | 113       | 1.086          | 1.33         | 2.17         | 23.0          | 95.0                | 1.37          | 50                    | 206                   | 147    | 53     | 22    |
| DL                  |        | 16       | 2      | 83                  | 108       | 1.910          | 2.67         | 3.82         | 26.1          | 100.0               | 2.74          | 100                   | 382                   | 293    | 107    | 41    |
| DL                  |        | 17       | 6      | 84                  | 103       | 5.075          | 8.00         | 10.15        | 28.0          | 103.3               | 7.81          | 284                   | 1,049                 | 836    | 304    | 112   |
| DL                  |        | 18       | 10     | 85                  | 106       | 7.545          | 13.33        | 17.35        | 28.0          | 105.2               | 13.38         | 487                   | 1,826                 | 1,431  | 521    | 195   |
| DL                  |        | 19       | 14     | 84                  | 107       | 9.481          | 18.67        | 21.67        | 32.1          | 113.4               | 19.10         | 695                   | 2,458                 | 2,044  | 744    | 263   |
| DL                  |        | 20       | 16     | 83                  | 110       | 9.778          | 21.33        | 23.22        | 35.0          | 123.7               | 22.38         | 813                   | 2,872                 | 2,394  | 870    | 307   |
| DL                  |        | 21       | 18     | 85                  | 109       | 9.978          | 24.00        | 21.62        | 42.6          | 159.0               | 25.35         | 922                   | 3,437                 | 2,712  | 986    | 368   |
| DL                  |        | 22       | 10     | 86                  | 101       | 5.051          | 13.33        | 10.61        | 44.9          | 162.9               | 13.10         | 476                   | 1,727                 | 1,402  | 510    | 185   |
| DL                  |        | 23       | 7      | 84                  | 109       | 3.235          | 9.33         | 7.86         | 45.5          | 172.4               | 9.82          | 357                   | 1,354                 | 1,051  | 382    | 145   |
| DL                  |        | 24       | 3      | 83                  | 106       | 1.273          | 4.00         | 2.55         | 58.9          | 221.7               | 4.12          | 150                   | 564                   | 441    | 160    | 60    |
| DL                  |        | 26       | 1      | 80                  | 118       | .362           | 1.33         | 1.08         | 49.7          | 190.0               | 1.48          | 54                    | 206                   | 159    | 58     | 22    |
| DL                  |        | Totals   | 89     | 84                  | 107       | 56.022         | 118.67       | 124.60       | 35.6          | 130.6               | 121.92        | 4,433                 | 16,270                | 13,045 | 4,743  | 1,741 |
| DF                  |        | 12       | 4      | 83                  | 60        | 6.791          | 5.33         | 8.49         | 12.6          | 41.8                | 3.04          | 107                   | 355                   | 325    | 114    | 38    |
| DF                  |        | 13       | 5      | 85                  | 102       | 7.233          | 6.67         | 14.47        | 15.6          | 53.2                | 6.46          | 226                   | 770                   | 691    | 242    | 82    |
| DF                  |        | 14       | 4      | 83                  | 84        | 4.989          | 5.33         | 7.48         | 21.4          | 69.7                | 4.55          | 160                   | 521                   | 487    | 171    | 56    |
| DF                  |        | 15       | 6      | 80                  | 74        | 6.519          | 8.00         | 10.86        | 19.3          | 55.1                | 5.99          | 210                   | 599                   | 641    | 225    | 64    |
| DF                  |        | 16       | 8      | 85                  | 93        | 7.639          | 10.67        | 15.28        | 22.7          | 80.7                | 9.91          | 347                   | 1,234                 | 1,060  | 372    | 132   |
| DF                  |        | 17       | 7      | 87                  | 94        | 5.921          | 9.33         | 12.69        | 24.2          | 89.9                | 8.76          | 307                   | 1,141                 | 937    | 329    | 122   |
| DF                  |        | 18       | 12     | 84                  | 94        | 9.054          | 16.00        | 17.35        | 30.1          | 100.4               | 14.89         | 523                   | 1,742                 | 1,594  | 559    | 186   |
| DF                  |        | 19       | 11     | 86                  | 103       | 7.449          | 14.67        | 16.25        | 32.5          | 111.6               | 15.03         | 528                   | 1,814                 | 1,609  | 565    | 194   |
| DF                  |        | 21       | 1      | 81                  | 100       | .554           | 1.33         | 1.11         | 43.9          | 133.0               | 1.39          | 49                    | 147                   | 148    | 52     | 16    |
| DF                  |        | Totals   | 58     | 84                  | 89        | 56.149         | 77.33        | 103.98       | 23.6          | 80.0                | 70.02         | 2,456                 | 8,323                 | 7,492  | 2,628  | 891   |
| RL                  |        | 12       | 1      | 79                  | 44        | 1.698          | 1.33         | 1.70         | 11.9          | 40.0                | .56           | 20                    | 68                    | 60     | 22     | 7     |
| RL                  |        | Totals   | 1      | 79                  | 44        | 1.698          | 1.33         | 1.70         | 11.9          | 40.0                | 0.56          | 20                    | 68                    | 60     | 22     | 7     |
| Totals              |        |          | 148    | 84                  | 97        | 113.869        | 197.33       | 230.28       | 30.0          | 107.1               | 192.50        | 6910                  | 24,660                | 20,597 | 7,394  | 2,639 |



TC TLOGSTVB

**Log Stock Table - MBF**

Project: BUCKNB

T02S R07W S30 TSALE

T02S R07W S30 TSALE

|     |     |     |        |      |        |       |              |      |           |
|-----|-----|-----|--------|------|--------|-------|--------------|------|-----------|
| Twp | Rge | Sec | Tract  | Type | Acres  | Plots | Sample Trees | Page | 2         |
| 02S | 07W | 30  | AREA_1 | SALE | 107.00 | 30    | 148          | Date | 12/8/2010 |
|     |     |     |        |      |        |       |              | Time | 9:39:31AM |

| Spp               | T | S      | So | Gr | Log | Gross | %   | Net   | %     | Net Volume by Scaling Diameter in Inches |     |     |     |     |     |     |     |       |       |       |       |       |       |
|-------------------|---|--------|----|----|-----|-------|-----|-------|-------|--|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|-------|
|                   |   |        |    |    |     |       |     |       |       | MBF                                      | Def | MBF | Sp  | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 | 20-23 | 24-29 |
| DF                |   | CO     | 4  | 38 |     | 21    | 5.0 | 20    | 2.2   |  |     | 20  |     |     |     |     |     |       |       |       |       |       |       |
| DF                |   | CO     | 4  | 40 |     | 37    | 5.0 | 35    | 3.9   |  |     | 16  | 19  |     |     |     |     |       |       |       |       |       |       |
| DF                |   | Totals |    |    |     | 948   | 6.1 | 891   | 33.7  |  |     | 142 | 63  | 216 | 288 | 182 |     |       |       |       |       |       |       |
| RL                |   | H      | 4  | 21 |     | 7     |     | 7     | 100.0 |  |     |     | 7   |     |     |     |     |       |       |       |       |       |       |
| RL                |   | Totals |    |    |     | 7     |     | 7     | .3    |  |     |     | 7   |     |     |     |     |       |       |       |       |       |       |
| Total All Species |   |        |    |    |     | 2,704 | 2.4 | 2,639 | 100.0 |  |     | 258 | 193 | 378 | 579 | 724 | 491 | 15    |       |       |       |       |       |

| TC                  |        | TSTNDSUM |                 | Stand Table Summary |                 |                |              |              |               |                     |               |                       |                       |        |        |       |
|---------------------|--------|----------|-----------------|---------------------|-----------------|----------------|--------------|--------------|---------------|---------------------|---------------|-----------------------|-----------------------|--------|--------|-------|
| Project             |        |          |                 |                     |                 |                |              |              |               |                     |               |                       |                       | BUCKNB |        |       |
| T02S R07W S30 TSALE |        |          |                 |                     |                 |                |              |              |               | T02S R07W S30 TSALE |               |                       |                       |        |        |       |
| Twp                 | Rge    | Sec      | Tract           | Type                | Acres           | Plots          | Sample Trees | Page:        | 1             |                     |               | Date:                 | 12/08/2010            |        |        |       |
| 02S                 | 07W    | 30       | AREA_2          | SALE                | 58.00           | 18             | 78           | Time:        | 9:42:40AM     |                     |               |                       |                       |        |        |       |
| Spc                 | S<br>T | DBH      | Sample<br>Trees | FF<br>16'           | Av<br>Ht<br>Tot | Trees/<br>Acre | BA/<br>Acre  | Logs<br>Acre | Average Log   |                     | Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |       |
|                     |        |          |                 |                     |                 |                |              |              | Net<br>Cu.Ft. | Net<br>Bd.Ft.       |               |                       |                       | Tons   | Cunits | MBF   |
| DF                  |        | 11       | 1               | 85                  | 101             | 3.367          | 2.22         | 6.73         | 10.1          | 42.7                | 1.95          | 68                    | 288                   | 113    | 40     | 17    |
| DF                  |        | 12       | 3               | 83                  | 60              | 8.488          | 6.67         | 8.49         | 16.8          | 38.0                | 4.06          | 142                   | 323                   | 235    | 83     | 19    |
| DF                  |        | 13       | 2               | 83                  | 85              | 4.822          | 4.44         | 7.23         | 17.5          | 60.2                | 3.61          | 127                   | 435                   | 209    | 73     | 25    |
| DF                  |        | 14       | 10              | 85                  | 85              | 20.788         | 22.22        | 37.42        | 17.1          | 59.1                | 18.23         | 640                   | 2,212                 | 1,058  | 371    | 128   |
| DF                  |        | 15       | 11              | 85                  | 97              | 19.919         | 24.44        | 39.84        | 19.3          | 69.5                | 21.88         | 768                   | 2,770                 | 1,269  | 445    | 161   |
| DF                  |        | 16       | 9               | 84                  | 99              | 14.324         | 20.00        | 30.24        | 23.2          | 83.5                | 20.02         | 703                   | 2,525                 | 1,161  | 408    | 146   |
| DF                  |        | 17       | 10              | 85                  | 97              | 14.098         | 22.22        | 28.20        | 26.8          | 93.1                | 21.55         | 755                   | 2,625                 | 1,250  | 438    | 152   |
| DF                  |        | 18       | 13              | 83                  | 102             | 16.348         | 28.89        | 36.47        | 27.8          | 97.0                | 28.85         | 1,013                 | 3,536                 | 1,673  | 587    | 205   |
| DF                  |        | 19       | 6               | 84                  | 100             | 6.772          | 13.33        | 15.80        | 30.4          | 102.5               | 13.66         | 480                   | 1,619                 | 792    | 278    | 94    |
| DF                  |        | 20       | 3               | 85                  | 103             | 3.056          | 6.67         | 7.13         | 34.3          | 112.6               | 6.97          | 245                   | 803                   | 404    | 142    | 47    |
| DF                  |        | 21       | 2               | 82                  | 101             | 1.848          | 4.44         | 3.70         | 42.7          | 128.2               | 4.48          | 158                   | 474                   | 260    | 91     | 27    |
| DF                  |        | 23       | 2               | 83                  | 101             | 1.540          | 4.44         | 3.08         | 51.9          | 163.9               | 4.56          | 160                   | 505                   | 265    | 93     | 29    |
| DF                  |        | 24       | 2               | 80                  | 90              | 1.415          | 4.44         | 2.83         | 43.0          | 130.6               | 3.47          | 122                   | 370                   | 201    | 71     | 21    |
| DF                  |        | Totals   | 74              | 84                  | 93              | 116.784        | 164.44       | 227.15       | 23.7          | 81.4                | 153.30        | 5,380                 | 18,484                | 8,891  | 3,120  | 1,072 |
| DL                  |        | 16       | 1               | 81                  | 101             | 1.592          | 2.22         | 3.18         | 25.2          | 95.0                | 2.21          | 80                    | 302                   | 128    | 47     | 18    |
| DL                  |        | Totals   | 1               | 81                  | 101             | 1.592          | 2.22         | 3.18         | 25.2          | 95.0                | 2.21          | 80                    | 302                   | 128    | 47     | 18    |
| WL                  |        | 26       | 1               | 88                  | 83              | .603           | 2.22         | 1.21         | 62.2          | 225.0               | 2.40          | 75                    | 271                   | 139    | 43     | 16    |
| WL                  |        | Totals   | 1               | 88                  | 83              | .603           | 2.22         | 1.21         | 62.2          | 225.0               | 2.40          | 75                    | 271                   | 139    | 43     | 16    |
| NL                  |        | 19       | 1               | 84                  | 97              | 1.129          | 2.22         | 2.26         | 36.1          | 120.0               | 1.95          | 81                    | 271                   | 113    | 47     | 16    |
| NL                  |        | Totals   | 1               | 84                  | 97              | 1.129          | 2.22         | 2.26         | 36.1          | 120.0               | 1.95          | 81                    | 271                   | 113    | 47     | 16    |
| RA                  |        | 19       | 1               | 80                  | 64              | 1.129          | 2.22         | 1.13         | 52.5          | 99.0                | 1.63          | 59                    | 112                   | 94     | 34     | 6     |
| RA                  |        | Totals   | 1               | 80                  | 64              | 1.129          | 2.22         | 1.13         | 52.5          | 99.0                | 1.63          | 59                    | 112                   | 94     | 34     | 6     |
| Totals              |        |          | 78              | 84                  | 93              | 121.236        | 173.33       | 234.93       | 24.2          | 82.7                | 161.49        | 5676                  | 19,440                | 9,366  | 3,292  | 1,128 |

TC TLOGSTVB

**Log Stock Table - MBF**  
Project: **BUCKNB**

T02S R07W S30 TSALE

T02S R07W S30 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page  
 02S 07W 30 AREA\_2 SALE 58.00 18 78 1  
 Date 12/8/2010  
 Time 9:44:27AM

| SPP               | S      | So | Gr | Log | Gross | %     | Net  | %     | Net Volume by Scaling Diameter in Inches |    |    |     |     |     |     |     |     |     |     |     |       |       |       |       |
|-------------------|--------|----|----|-----|-------|-------|------|-------|--|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|
|                   |        |    |    |     |       |       |      |       | T  | rt | de | Len | MBF | Def | MBF | Spc | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 |
| DF                | CO     | 2  | 22 |     | 9     | 5.0   | 9    | .8    |  |    |    |     |     |     | 9   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 2  | 28 |     | 11    | 10.6  | 10   | .9    |  |    |    |     |     |     | 10  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 2  | 40 |     | 156   | 5.3   | 147  | 13.7  |  |    |    |     |     |     | 111 | 36  |     |     |     |     |       |       |       |       |
| DF                | CO     | 3  | 22 |     | 6     | 16.9  | 5    | .5    |  |    |    |     |     |     | 5   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 3  | 32 |     | 50    | 6.4   | 47   | 4.4   |  |    |    |     | 26  |     | 21  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 3  | 36 |     | 13    | 5.0   | 12   | 1.2   |  |    |    |     |     |     | 12  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 3  | 40 |     | 654   | 5.6   | 618  | 57.6  |  |    |    |     | 38  | 200 | 359 | 22  |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 13 |     | 1     | 5.0   | 1    | .1    |  |    | 1  |     |     |     |     |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 14 |     | 3     | 5.0   | 3    | .3    |  |    |    |     |     |     | 3   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 16 |     | 1     | 5.0   | 1    | .1    |  |    | 1  |     |     |     |     |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 17 |     | 1     | 5.0   | 1    | .1    |  |    | 1  |     |     |     |     |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 18 |     | 4     | 5.0   | 3    | .3    |  |    |    | 3   |     |     |     |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 19 |     | 4     | 5.0   | 4    | .4    |  |    |    |     |     |     |     |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 20 |     | 10    | 5.0   | 10   | .9    |  |    |    |     |     |     | 5   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 21 |     | 5     | 5.0   | 5    | .5    |  |    |    |     |     | 1   |     | 4   |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 22 |     | 6     | 5.0   | 6    | .6    |  |    |    |     |     |     | 6   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 23 |     | 5     | 5.0   | 4    | .4    |  |    |    |     |     |     | 4   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 24 |     | 7     | 5.0   | 6    | .6    |  |    |    |     |     |     | 4   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 25 |     | 8     | 5.0   | 7    | .7    |  |    |    |     |     |     | 7   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 26 |     | 9     | 16.3  | 7    | .7    |  |    |    |     |     |     | 3   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 27 |     | 3     | 5.0   | 3    | .3    |  |    |    |     |     |     | 3   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 28 |     | 6     | 5.0   | 6    | .6    |  |    |    |     |     |     | 6   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 29 |     | 5     | 5.0   | 5    | .4    |  |    |    |     |     |     | 5   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 30 |     | 8     | 5.0   | 8    | .7    |  |    |    |     |     |     | 8   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 31 |     | 8     | 5.0   | 8    | .7    |  |    |    |     |     |     | 8   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 32 |     | 3     | 5.0   | 3    | .2    |  |    |    |     |     |     | 3   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 33 |     | 13    | 11.8  | 11   | 1.1   |  |    |    |     |     |     | 11  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 34 |     | 22    | 5.0   | 21   | 2.0   |  |    |    |     |     |     | 21  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 35 |     | 9     | 5.0   | 9    | .8    |  |    |    |     |     |     | 9   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 36 |     | 10    | 5.0   | 10   | .9    |  |    |    |     |     |     | 10  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 37 |     | 14    | 5.0   | 13   | 1.2   |  |    |    |     |     |     | 13  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 38 |     | 10    | 5.0   | 9    | .9    |  |    |    |     |     |     | 9   |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 40 |     | 58    | 5.0   | 56   | 5.2   |  |    |    |     |     |     | 39  |     |     |     |     |     |       |       |       |       |
| DF                | CO     | 4  | 41 |     | 4     | 5.0   | 4    | .4    |  |    |    |     |     |     | 4   |     |     |     |     |     |       |       |       |       |
| DF                | Totals |    |    |     |       | 1,137 | 5.7  | 1,072 | 95.1                                     |    |    |     | 185 | 57  | 237 | 405 | 152 | 36  |     |     |       |       |       |       |
| DL                | CO     | 3  | 40 |     | 14    |       | 14   | 78.9  |  |    |    |     |     |     | 14  |     |     |     |     |     |       |       |       |       |
| DL                | CO     | 4  | 34 |     | 4     |       | 4    | 21.1  |  |    |    |     |     |     | 4   |     |     |     |     |     |       |       |       |       |
| DL                | Totals |    |    |     |       | 18    |      | 18    | 1.6                                      |    |    |     |     |     | 4   |     |     | 14  |     |     |       |       |       |       |
| RA                | H      | 4  | 40 |     | 8     | 17.5  | 6    | 100.0 |  |    |    |     |     |     | 6   |     |     |     |     |     |       |       |       |       |
| RA                | Totals |    |    |     |       | 8     | 17.5 | 6     | .6                                       |    |    |     |     |     | 6   |     |     |     |     |     |       |       |       |       |
| WL                | CO     | 4  | 26 |     | 2     |       | 2    | 11.1  |  |    |    |     |     |     | 2   |     |     |     |     |     |       |       |       |       |
| WL                | CO     | 4  | 40 |     | 14    |       | 14   | 88.9  |  |    |    |     |     |     |     |     |     |     |     |     |       |       |       | 14    |
| WL                | Totals |    |    |     |       | 16    |      | 16    | 1.4                                      |    |    |     |     |     | 2   |     |     |     |     |     |       |       |       | 14    |
| NL                | CO     | 2  | 40 |     | 13    |       | 13   | 83.3  |  |    |    |     |     |     |     |     |     |     |     |     |       |       |       | 13    |
| NL                | CO     | 4  | 37 |     | 3     |       | 3    | 16.7  |  |    |    |     |     |     |     |     |     |     |     |     |       |       |       | 3     |
| NL                | Totals |    |    |     |       | 16    |      | 16    | 1.4                                      |    |    |     |     |     |     |     |     |     |     |     |       |       |       | 13    |
| Total All Species |        |    |    |     |       | 1,194 | 5.6  | 1,128 | 100.0                                    |    |    |     | 191 | 57  | 245 | 419 | 165 | 36  | 14  |     |       |       |       |       |

| TC                  |        | TSINDSUM |                 | Stand Table Summary |                 |                |              |              |               |                     |               |                       |                       |        |        |       |       |
|---------------------|--------|----------|-----------------|---------------------|-----------------|----------------|--------------|--------------|---------------|---------------------|---------------|-----------------------|-----------------------|--------|--------|-------|-------|
| Project             |        |          |                 |                     |                 |                |              |              |               |                     |               |                       |                       | BUCKNB |        |       |       |
| T02S R07W S30 TSALE |        |          |                 |                     |                 |                |              |              |               | T02S R07W S30 TSALE |               |                       |                       |        |        |       |       |
| Twp                 | Rge    | Sec      | Tract           | Type                | Acres           | Plots          | Sample Trees |              |               | Page:               | I             |                       |                       |        |        |       |       |
| 02S                 | 07W    | 30       | AREA_3          | SALE                | 91.00           | 21             | 99           |              |               | Date:               | 12/08/2011    |                       |                       |        |        |       |       |
|                     |        |          |                 |                     |                 |                |              |              |               | Time:               | 9:46:58AM     |                       |                       |        |        |       |       |
| Spec                | S<br>T | DBH      | Sample<br>Trees | FF<br>16'           | Av<br>Ht<br>Tot | Trees/<br>Acre | BA/<br>Acre  | Logs<br>Acre | Average Log   |                     | Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |       |       |
|                     |        |          |                 |                     |                 |                |              |              | Net<br>Cu.Ft. | Net<br>Bd.Ft.       |               |                       |                       | Tons   | Cunits | MBF   |       |
| DL                  |        | 11       | 2               | 79                  | 59              | 5.772          | 3.81         | 5.77         | 14.1          | 45.0                | 2.21          | 81                    | 260                   | 201    | 74     | 24    |       |
| DL                  |        | 13       | 1               | 82                  | 122             | 2.066          | 1.90         | 4.13         | 17.6          | 65.0                | 2.00          | 73                    | 269                   | 182    | 66     | 24    |       |
| DL                  |        | 15       | 4               | 86                  | 91              | 6.209          | 7.62         | 12.42        | 19.8          | 71.3                | 6.76          | 245                   | 885                   | 615    | 223    | 81    |       |
| DL                  |        | 16       | 8               | 84                  | 95              | 10.913         | 15.24        | 23.19        | 22.4          | 82.9                | 14.27         | 519                   | 1,924                 | 1,298  | 472    | 175   |       |
| DL                  |        | 17       | 9               | 83                  | 101             | 10.876         | 17.14        | 22.96        | 25.8          | 94.7                | 16.29         | 593                   | 2,175                 | 1,482  | 540    | 198   |       |
| DL                  |        | 18       | 7               | 84                  | 102             | 7.545          | 13.33        | 17.25        | 27.3          | 99.4                | 12.95         | 471                   | 1,714                 | 1,178  | 428    | 156   |       |
| DL                  |        | 19       | 7               | 84                  | 100             | 6.772          | 13.33        | 14.51        | 31.9          | 114.7               | 12.74         | 463                   | 1,664                 | 1,159  | 421    | 151   |       |
| DL                  |        | 20       | 7               | 84                  | 107             | 6.112          | 13.33        | 13.10        | 37.4          | 131.3               | 13.50         | 490                   | 1,720                 | 1,229  | 446    | 157   |       |
| DL                  |        | 21       | 6               | 86                  | 103             | 4.751          | 11.43        | 11.09        | 37.7          | 138.6               | 11.49         | 418                   | 1,536                 | 1,046  | 380    | 140   |       |
| DL                  |        | 22       | 7               | 83                  | 97              | 5.051          | 13.33        | 10.10        | 44.9          | 149.3               | 12.48         | 453                   | 1,508                 | 1,136  | 413    | 137   |       |
| DL                  |        | 24       | 2               | 86                  | 119             | 1.213          | 3.81         | 3.03         | 53.5          | 224.0               | 4.46          | 162                   | 679                   | 406    | 148    | 62    |       |
| DL                  |        | Totals   |                 | 60                  | 84              | 97             | 67.280       | 114.29       | 137.55        | 28.9                | 104.2         | 109.15                | 3,968                 | 14,333 | 9,932  | 3,611 | 1,304 |
| DF                  |        | 11       | 1               | 87                  | 93              | 2.886          | 1.90         | 5.77         | 9.8           | 42.7                | 1.62          | 57                    | 247                   | 147    | 52     | 22    |       |
| DF                  |        | 12       | 3               | 85                  | 88              | 7.276          | 5.71         | 12.13        | 13.3          | 51.3                | 4.59          | 161                   | 622                   | 417    | 146    | 57    |       |
| DF                  |        | 13       | 1               | 85                  | 90              | 2.066          | 1.90         | 4.13         | 13.9          | 52.3                | 1.64          | 57                    | 216                   | 149    | 52     | 20    |       |
| DF                  |        | 14       | 7               | 85                  | 90              | 12.473         | 13.33        | 23.16        | 17.9          | 65.0                | 11.83         | 414                   | 1,507                 | 1,076  | 377    | 137   |       |
| DF                  |        | 15       | 8               | 83                  | 86              | 12.417         | 15.24        | 23.28        | 20.0          | 67.8                | 13.30         | 466                   | 1,578                 | 1,210  | 424    | 144   |       |
| DF                  |        | 16       | 5               | 84                  | 105             | 6.821          | 9.52         | 13.64        | 25.9          | 89.3                | 10.05         | 353                   | 1,218                 | 915    | 321    | 111   |       |
| DF                  |        | 17       | 7               | 85                  | 95              | 8.459          | 13.33        | 16.92        | 26.3          | 94.3                | 12.69         | 445                   | 1,596                 | 1,155  | 405    | 145   |       |
| DF                  |        | 18       | 2               | 84                  | 114             | 2.156          | 3.81         | 4.31         | 31.6          | 114.0               | 3.88          | 136                   | 492                   | 353    | 124    | 45    |       |
| DF                  |        | 19       | 4               | 84                  | 94              | 3.870          | 7.62         | 7.74         | 32.8          | 109.3               | 7.23          | 254                   | 846                   | 658    | 231    | 77    |       |
| DF                  |        | 21       | 1               | 87                  | 121             | .792           | 1.90         | 2.38         | 33.5          | 136.2               | 2.27          | 80                    | 323                   | 206    | 72     | 29    |       |
| DF                  |        | Totals   |                 | 39                  | 84              | 93             | 59.215       | 74.29        | 113.46        | 21.4                | 76.2          | 69.09                 | 2,423                 | 8,643  | 6,287  | 2,205 | 787   |
| Totals              |        |          | 99              | 84                  | 95              | 126.495        | 188.57       | 251.01       | 25.5          | 91.5                | 178.23        | 6391                  | 22,976                | 16,219 | 5,816  | 2,091 |       |

TC TLOGSTVB

**Log Stock Table - MBF**  
Project: **BUCKNB**

T02S R07W S30 TSALE

T02S R07W S30 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees  
02S 07W 30 AREA\_3 SALE 91.00 21 99

Page 1  
Date 12/8/2010  
Time 9:48:59AM

| Spp | T | S      | So | Gr | Log | Gross | % Def | Net   | % Spc | Net Volume by Scaling Diameter in Inches |     |     |     |     |     |       |       |       |       |
|-----|---|--------|----|----|-----|-------|-------|-------|-------|--|-----|-----|-----|-----|-----|-------|-------|-------|-------|
|     |   |        |    |    |     |       |       |       |       | MBF                                      | MBF | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 |
| DL  |   | CO     | 2  |    | 40  | 473   | 1.0   | 468   | 35.9  |  |     |     |     | 327 | 116 | 25    |       |       |       |
| DL  |   | CO     | 3  |    | 26  | 12    |       | 12    | .9    |  |     |     |     | 12  |     |       |       |       |       |
| DL  |   | CO     | 3  |    | 29  | 11    | 8.3   | 10    | .7    |  |     |     |     | 10  |     |       |       |       |       |
| DL  |   | CO     | 3  |    | 31  | 9     | 7.7   | 8     | .6    |  |     |     |     | 8   |     |       |       |       |       |
| DL  |   | CO     | 3  |    | 32  | 31    |       | 31    | 2.3   |  |     |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 3  |    | 40  | 629   | 1.2   | 622   | 47.7  |  |     | 81  | 194 | 276 | 70  |       |       |       |       |
| DL  |   | CO     | 4  |    | 12  | 1     |       | 1     | .1    |  | 1   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 13  | 2     |       | 2     | .1    |  | 2   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 14  | 1     |       | 1     | .1    |  | 1   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 15  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 16  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 18  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 19  | 10    |       | 10    | .7    |  | 10  |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 20  | 2     |       | 2     | .2    |  | 2   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 22  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 27  | 8     |       | 8     | .6    |  | 8   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 28  | 6     |       | 6     | .5    |  | 4   | 2   |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 30  | 8     |       | 8     | .6    |  | 8   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 31  | 11    |       | 11    | .8    |  | 11  |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 33  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 34  | 14    |       | 14    | 1.1   |  | 14  |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 36  | 9     |       | 9     | .7    |  | 9   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 37  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 38  | 4     |       | 4     | .3    |  | 4   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 39  | 8     |       | 8     | .6    |  | 8   |     |     |     |     |       |       |       |       |
| DL  |   | CO     | 4  |    | 40  | 46    |       | 46    | 3.5   |  | 27  | 7   | 12  |     |     |       |       |       |       |
| DL  |   | Totals |    |    |     | 1,318 | 1.0   | 1,304 | 62.4  |  | 133 | 90  | 237 | 306 | 396 | 116   | 25    |       |       |
| DF  |   | CO     | 2  |    | 40  | 56    | 5.0   | 53    | 6.8   |  |     |     |     | 33  | 20  |       |       |       |       |
| DF  |   | CO     | 3  |    | 32  | 27    | 5.0   | 26    | 3.3   |  |     |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 3  |    | 37  | 18    | 5.0   | 17    | 2.1   |  |     |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 3  |    | 38  | 16    | 5.0   | 15    | 1.9   |  |     |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 3  |    | 40  | 549   | 5.5   | 519   | 66.0  |  |     | 63  | 183 | 255 | 19  |       |       |       |       |
| DF  |   | CO     | 4  |    | 16  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 17  | 5     | 5.0   | 5     | .6    |  | 5   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 18  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 20  | 3     | 5.0   | 3     | .3    |  | 3   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 21  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 22  | 11    | 5.0   | 10    | 1.3   |  | 10  |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 24  | 14    | 5.0   | 13    | 1.7   |  | 9   | 4   |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 25  | 3     | 5.0   | 3     | .4    |  | 3   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 26  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 27  | 5     | 5.0   | 5     | .6    |  | 5   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 28  | 13    | 5.0   | 12    | 1.6   |  | 12  |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 31  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 32  | 10    | 5.0   | 9     | 1.2   |  | 9   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 33  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 34  | 10    | 5.0   | 9     | 1.2   |  |     | 9   |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 35  | 8     | 5.0   | 8     | 1.0   |  |     | 8   |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 36  | 13    | 5.0   | 12    | 1.6   |  | 12  |     |     |     |     |       |       |       |       |
| DF  |   | CO     | 4  |    | 37  | 4     | 5.0   | 4     | .5    |  | 4   |     |     |     |     |       |       |       |       |

TC TLOGSTVB

**Log Stock Table - MBF**  
**Project: BUCKNB**

T02S R07W S30 TSALE

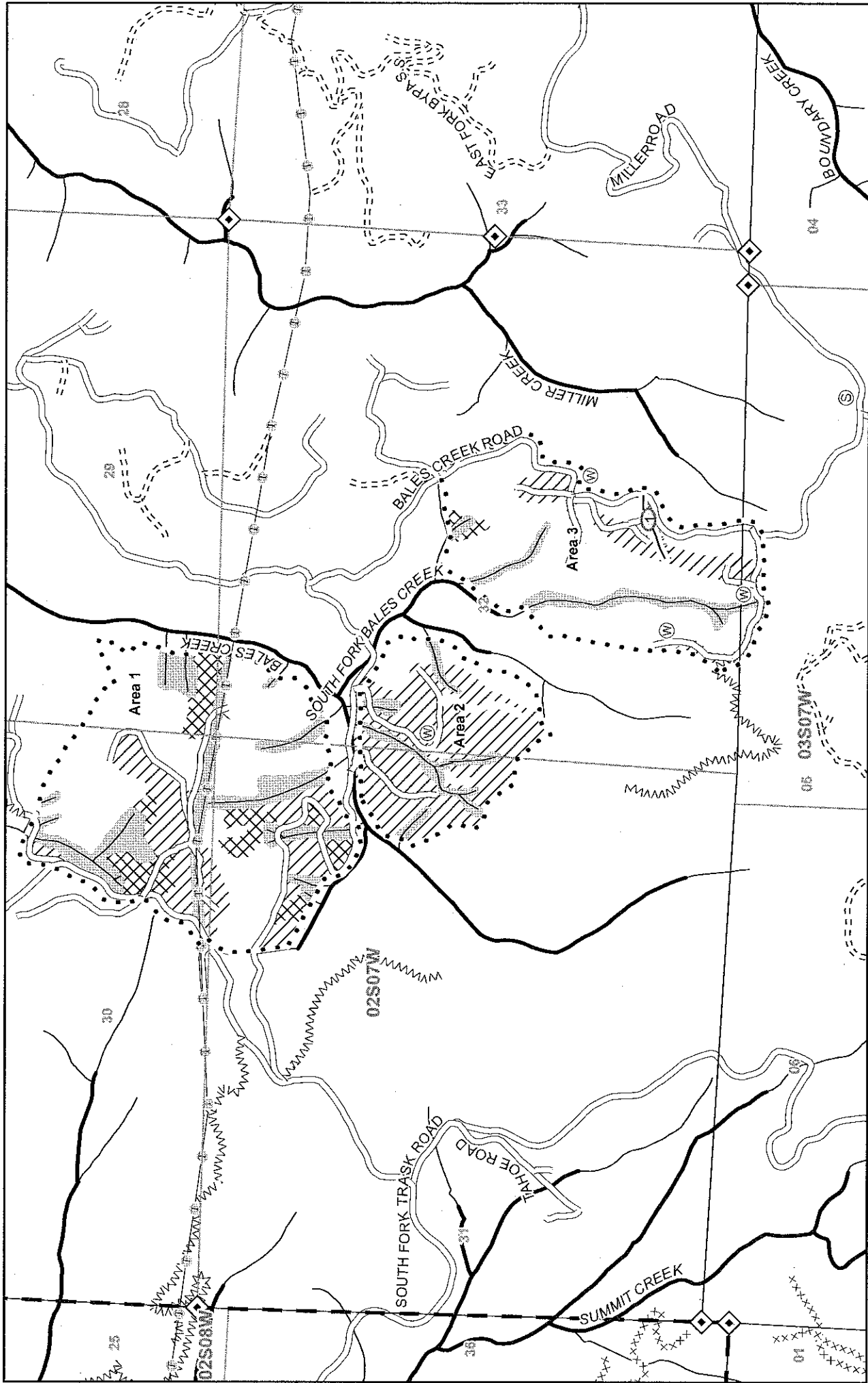
T02S R07W S30 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees  
 02S 07W 30 AREA\_3 SALE 91.00 21 99

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 Date 12/8/2010  
 Time 9:48:59AM

| Spp               | T | S      | So | Gr | Log | Gross | %   | Net   | %     | Net Volume by Scaling Diameter in Inches |     |     |     |     |     |     |     |       |       |       |       |       |       |
|-------------------|---|--------|----|----|-----|-------|-----|-------|-------|--|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|-------|
|                   |   |        |    |    |     |       |     |       |       | MBF                                      | Def | MBF | Spc | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 | 20-23 | 24-29 |
| DF                |   | CO     | 4  | 38 |     | 9     | 5.0 | 9     | 1.1   |  | 9   |     |     |     |     |     |     |       |       |       |       |       |       |
| DF                |   | CO     | 4  | 40 |     | 32    | 8.3 | 29    | 3.7   |  | 15  |     |     | 15  |     |     |     |       |       |       |       |       |       |
| DF                |   | Totals |    |    |     | 832   | 5.5 | 787   | 37.6  |  | 128 | 67  | 250 | 270 | 52  | 20  |     |       |       |       |       |       |       |
| Total All Species |   |        |    |    |     | 2,150 | 2.8 | 2,091 | 100.0 |  | 262 | 157 | 487 | 576 | 449 | 136 | 25  |       |       |       |       |       |       |





### LOGGING PLAN

Timber Sale Contract No. 341-11-71  
BUCK 'N BALES  
Portions of Sections 29, 30, 31 and 32  
T2S, R7W, and Section 5, T3S, R7W, W.M.,  
Tillamook County, Oregon

**Rock source**  
Stock pile  
Waste area  
Bridge  
Gate  
Survey corner  
Domestic water supply intake  
Truck turn-around  
Helicopter landing zone  
Cultural site

**Landing**  
Buffer  
Non-required thinning  
Cable yarding  
Ground yarding  
Helicopter yarding  
Downhill yarding  
Green tree retention area

**Area boundary**  
Sale boundary  
Ownership boundary  
Perennial Type-F stream  
Perennial Type-N stream  
Unsurfaced road  
Paved road  
Abandoned road

**Road**  
Swing road  
Non-project road  
Blocked road  
OHV trail  
Non-motorized trail  
Transmission line  
Railroad

**Area Operation**

| Area         | Operation         | Gross      | Net        |
|--------------|-------------------|------------|------------|
| 1            | Partial cut       | 162        | 107        |
| 2            | Modified clearcut | 68         | 58         |
| 3            | Partial cut       | 105        | 91         |
| <b>Total</b> |                   | <b>335</b> | <b>256</b> |

Tillamook District GIS  
12/22/2010  
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.

1,000 0 1,000 Feet