



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Tres Hembres
Sale TL-341-2016-75-

District: Tillamook

Date: May 17, 2016

Cost Summary

| | Conifer | Hardwood | Total |
|--------------------------------|----------------|--------------------------|----------------|
| Gross Timber Sale Value | \$1,142,514.68 | \$151,732.87 | \$1,294,247.55 |
| | | Project Work: | (\$514,700.00) |
| | | Advertised Value: | \$779,547.55 |



"SUSTAINABLE FORESTRY"

Timber Sale Appraisal
 Tres Hembres
 Sale TL-341-2016-75-

District: Tillamook

Date: May 17, 2016

Timber Description

Location: Portions of Sections 16, 17, 20, and 21, T1S, R7W, W.M., Tillamook County, Oregon.

Stand Stocking: 60%

| Specie Name | AvgDBH | Amortization (%) | Recovery (%) |
|---------------|--------|------------------|--------------|
| Douglas - Fir | 17 | 0 | 95 |
| Alder (Red) | 14 | 0 | 90 |

| Volume by Grade | 2S | 3S | 4S | 8" - 9" | 10" - 11" | 12"+ | 6" - 7" | Total |
|-----------------|-------|-------|-----|---------|-----------|------|---------|-------|
| Douglas - Fir | 1,373 | 1,920 | 558 | 0 | 0 | 0 | 0 | 3,851 |
| Alder (Red) | 0 | 0 | 0 | 135 | 265 | 115 | 536 | 1,051 |
| Total | 1,373 | 1,920 | 558 | 135 | 265 | 115 | 536 | 4,902 |

Comments: Pond Values Used: 1st Quarter Calendar Year 2016 + Local Pond Values.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
\$180/MBF = \$475/MBF - \$295/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
\$890/MBF = \$1,185/MBF - \$295/MBF

Pulp (Conifer and Hardwood) Price = \$25/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

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

Brand and Paint: \$2/MBF x 4,902 MBF = \$9,804

TOTAL Other Costs (with Profit & Risk to be added) = \$9,804

Other Costs (No Profit & Risk added):

Machine Cleaning: \$1,000/machine x 3 machines = \$3,000

Heliport Construction: 6 hours machine loader time for slash moving @ \$110/hour = \$660

Non-Project Road #1: 9+80 stations x \$250/station = \$2,450

Non-Project Road #2: 5+30 stations x \$500/station = \$2,650

Non-Project and Un-Surfaced Road Blocking: \$50/block x 2 roads = \$100

Cover Materials for Piles: \$5/pile x 25 piles = \$125

OHV Trail Filters: 11 x \$75/filter = \$825

Slash Piling and Sorting (Cable Ground): \$5/acre x 206 acre = \$1,030

Ditch Cleaning and Bank Sluff Removal:

Mobilization: two times – dump truck w/ tilt bed & small excavator: \$890 x 2 = \$1,780

Small excavator (Cat 312 or equivalent): 40 hours @ \$95/hour = \$3,800

Dump truck: 40 hours @ \$70/hour = \$2,800

TOTAL Other Costs (No Profit & Risk added) = \$19,220

ROAD MAINTENANCE:

Spot Rocking:

Trask Cut-Off and Hembre Ridge Roads: 30cy/mile x 4.902 MMBF x \$13.00/cy x 6.7 miles / 4,902 MBF = \$2.61/MBF

Grading:

Trask Cut-Off, Hembre Ridge, Kansas Creek and other access roads: \$250/ mile x 11.5 miles x 4 times/ 4,902 MBF = \$2.35/MBF

Final Maintenance Grading: \$500 x 11.5 miles/4,902 MBF = \$1.17/MBF

Final Maintenance Compaction: \$950/mile x 9.6 miles/4,902 MBF = \$1.86/MBF

TOTAL Road Maintenance: \$7.99/MBF



"PROGRESS THROUGH FORESTRY"

Timber Sale Appraisal Tres Hembres Sale TL-341-2016-75-

District: Tillamook

Date: May 17, 2016

Logging Conditions

Combination#: 1 Douglas - Fir 59.85%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6.5 **bd. ft / load:** 3800

cost / mbf: \$242.92

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 40.15%

Logging System: Shovel **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 10 **bd. ft / load:** 3800

cost / mbf: \$83.47

machines: Stroke Delimber (B)

Combination#: 3 Alder (Red) 66.58%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6.75 **bd. ft / load:** 3200

cost / mbf: \$277.78

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

Combination#: 4 Alder (Red) 33.42%

Logging System: Shovel **Process:** Stroke Delimber

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 6.5 **bd. ft / load:** 3200

cost / mbf: \$152.50

machines: Stroke Delimber (B)



"PARTNERSHIP IN FORESTRY"

Timber Sale Appraisal
 Tres Hembres
 Sale TL-341-2016-75-

District: Tillamook

Date: May 17, 2016

Logging Costs

| | |
|------------------------------------|--------------------------------------|
| Operating Seasons: 2.00 | Profit Risk: 12% |
| Project Costs: \$514,700.00 | Other Costs (P/R): \$9,804.00 |
| Slash Disposal: \$0.00 | Other Costs: \$19,220.00 |

Miles of Road

Road Maintenance: \$7.99

| Dirt | Rock (Contractor) | Rock (State) | Paved |
|------|----------------------|-----------------|-------|
| 0.0 | 0.0 | 0.0 | 0.0 |

Hauling Costs

| Species | \$ / MBF | Trips/Day | MBF / Load |
|---------------|----------|-----------|------------|
| Douglas - Fir | \$0.00 | 3.0 | 4.2 |
| Alder (Red) | \$0.00 | 3.0 | 2.8 |



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
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 Sale TL-341-2016-75-

District: Tillamook

Date: May 17, 2016

Logging Costs Breakdown

| Logging | Road Maint | Fire Protect | Hauling | Other P/R appl | Profit & Risk | Slash Disposal | Scaling | Other | Total |
|----------------------|------------|--------------|----------|----------------|---------------|----------------|---------|--------|----------|
| Douglas - Fir | | | | | | | | | |
| \$178.91 | \$8.39 | \$1.79 | \$65.00 | \$2.00 | \$30.73 | \$0.00 | \$5.00 | \$3.92 | \$295.74 |
| Alder (Red) | | | | | | | | | |
| \$235.91 | \$8.79 | \$1.79 | \$102.15 | \$2.00 | \$42.08 | \$0.00 | \$5.00 | \$3.92 | \$401.64 |

| Specie | Amortization | Pond Value | Stumpage | Amortized |
|---------------|--------------|------------|----------|-----------|
| Douglas - Fir | \$0.00 | \$592.42 | \$296.68 | \$0.00 |
| Alder (Red) | \$0.00 | \$546.01 | \$144.37 | \$0.00 |



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Date: May 17, 2016

Summary

Amortized

| Specie | MBF | Value | Total |
|---------------|-----|--------|--------|
| Douglas - Fir | 0 | \$0.00 | \$0.00 |
| Alder (Red) | 0 | \$0.00 | \$0.00 |

Unamortized

| Specie | MBF | Value | Total |
|---------------|-------|----------|----------------|
| Douglas - Fir | 3,851 | \$296.68 | \$1,142,514.68 |
| Alder (Red) | 1,051 | \$144.37 | \$151,732.87 |

Gross Timber Sale Value

Recovery: \$1,294,247.55

Prepared By: David Wells

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Tres Hembres

CONSTRUCTION

| | | | | |
|------------------------------|----------|------|------------|--------------------|
| Point | K to L | 5+70 | stations = | \$13,261.49 |
| Point | M to N | 2+27 | stations = | \$2,131.67 |
| Point | O to P | 2+75 | stations = | \$1,402.03 |
| Point | Q to R | 4+77 | stations = | \$4,733.68 |
| Point | S to T | 9+60 | stations = | \$8,954.32 |
| Point | W to X | 7+85 | stations = | \$6,984.85 |
| Point | Y to Z | 1+25 | stations = | \$1,487.48 |
| Point | CC to DD | 9+00 | stations = | \$9,139.55 |
| SUBTOTAL CONSTRUCTION | | | | \$48,095.07 |

IMPROVEMENT

| | | | | |
|-----------------------------|----------|--------|------------|---------------------|
| Point | A to B | 168+35 | stations = | \$61,186.10 |
| Point | C to D | 390+55 | stations = | \$225,659.98 |
| Point | E to F | 44+55 | stations = | \$59,965.05 |
| Point | G to H | 58+64 | stations = | \$47,268.77 |
| Point | AA to BB | 7+45 | stations = | \$797.02 |
| Point | EE to FF | 7+47 | stations = | \$2,459.58 |
| SUBTOTAL IMPROVEMENT | | | | \$397,336.50 |

RECONSTRUCTION

| | | | | |
|--------------------------------|--------|-------|------------|--------------------|
| Point | I to J | 14+80 | stations = | \$29,211.40 |
| Point | M to N | 5+73 | stations = | \$4,723.97 |
| Point | Q to R | 23+98 | stations = | \$20,833.56 |
| Point | U to V | 2+90 | stations = | \$4,073.43 |
| SUBTOTAL RECONSTRUCTION | | | | \$58,842.36 |

SPECIAL PROJECTS

| | | | | |
|---------------------------------------|--|--|--|-------------------|
| Additional Road Brushing 317 Stations | | | | \$7,804.92 |
| SUBTOTAL SPECIAL PROJECTS | | | | \$7,804.92 |

MOVE IN

\$2,621.15

GRAND TOTAL **\$514,700.00**

SUMMARY OF CONSTRUCTION COST

Sale:

Tres Hembres

Road:

A to B

| | | | | | | | | |
|-----------------------|------|----------|----------------------|--------|----------|-------------------------|------|----------|
| <u>Construction -</u> | 0+00 | stations | <u>Improvement -</u> | 168+35 | stations | <u>Reconstruction -</u> | 0+00 | stations |
| | 0.00 | miles | | 3.19 | miles | | 0.00 | miles |

IMPROVEMENT: CLEARING AND GRUBBING -

| | | | | | |
|------------------------------------|-------|---------|----------|------------|-------------------|
| Roadside Brushing | 2.34 | miles @ | \$800.00 | per mile = | \$1,872.00 |
| Widening | 0.153 | acres @ | \$660.00 | per acre = | \$100.98 |
| TOTAL CLEARING AND GRUBBING | | | | | \$1,972.98 |

IMPROVEMENT: EXCAVATION -

| | | | | | |
|-------------------------|-----|-------|--------|------------|-------------------|
| Widening | 930 | cy. @ | \$1.75 | per c.y. = | \$1,627.50 |
| Remove outside berm | 4 | cy. @ | \$1.40 | per c.y. = | \$5.60 |
| Remove outside berm | 215 | cy. @ | \$1.40 | per c.y. = | \$301.00 |
| TOTAL EXCAVATION | | | | | \$1,934.10 |

IMPROVEMENT: ENDHAUL -

| | | | | | | | | |
|----------------------|--------|----|--------|------|-------|--------|------------|-------------------|
| Widening | 104+14 | to | 106+11 | 475 | cy. @ | \$0.93 | per c.y. = | \$441.75 |
| Widening | 111+67 | to | 114+03 | 455 | cy. @ | \$1.01 | per c.y. = | \$459.55 |
| Remove outside berm | 98+18 | to | 99+18 | 4 | cy. @ | \$1.38 | per c.y. = | \$5.52 |
| Remove outside berm | 120+04 | to | 168+35 | 215 | cy. @ | \$0.93 | per c.y. = | \$199.95 |
| Spread & compact | | | | 1149 | cy. @ | \$0.25 | per c.y. = | \$287.25 |
| TOTAL ENDHAUL | | | | | | | | \$1,394.02 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | |
|-----------------|-----------|----------|---------|-----------|---------|
| <u>Culverts</u> | | | | | |
| 700 | LF of 18" | \$12,250 | 132 | LF of 24" | \$3,564 |
| 70 | LF of 30" | \$2,520 | 0 | LF of 36" | \$0 |
| | | \$14,770 | | | |
| | | | \$3,564 | | |

| | | | |
|-------------------------------------|---------|-------|--|
| <u>Culvert Stakes & Markers</u> | | | |
| 0 | stakes | \$0 | |
| 23 | markers | \$184 | |
| | | \$184 | |

TOTAL CULVERTS \$18,518

ROCK

| | | | | | | | | |
|-----------------------------------|-----------|-----|--------|---------|---|---------|------------|-----------------|
| Cross Drain Backfill/bedding | 20cy/x-dr | 360 | cy. of | Crushed | @ | \$12.56 | per c.y. = | \$4,522 |
| Cross Drain energy dissipator | 5cy/x-dr | 90 | cy. of | Riprap | @ | \$12.15 | per c.y. = | \$1,094 |
| Stream Crossing backfill/bedding | As Marked | 150 | cy. of | Crushed | @ | \$12.56 | per c.y. = | \$1,884 |
| Stream Crossing Energy Dissipator | As Marked | 25 | cy. of | Riprap | @ | \$12.15 | per c.y. = | \$304 |
| Stream Crossing Pitrun | As Marked | 160 | cy. of | Pit-Run | @ | \$13.06 | per c.y. = | \$2,090 |
| Ditch Armor | 69+10 | 50 | cy. of | Pit-Run | @ | \$12.56 | per c.y. = | \$628 |
| Ditch Armor | 91+20 | 15 | cy. of | Pit-Run | @ | \$12.56 | per c.y. = | \$188 |
| Ditch Armor | 115+32 | 200 | cy. of | Pit-Run | @ | \$12.56 | per c.y. = | \$2,512 |
| Road Widening | Widenings | 25 | cy. of | Crushed | @ | \$14.41 | per c.y. = | \$360 |
| Road Widening | Widenings | 75 | cy. of | Pit-Run | @ | \$14.41 | per c.y. = | \$1,081 |
| TOTAL ROCK | | | | | | | | \$14,663 |

SPECIAL PROJECTS

| | | | | | |
|----------------------------------|--------|------------|----------|-------------|-----------------|
| Construct Ditchouts | 1.00 | hours @ | \$125.00 | per hour | \$125 |
| Construct waste areas - | 8.00 | hours @ | \$130.00 | per hour | \$1,040 |
| Clean Ditchlines | 95.55 | stations @ | \$100.00 | each | \$9,555 |
| Remove culverts from state lands | 5.00 | @ | \$337.90 | each | \$1,690 |
| Culvert Cleanout | 1.00 | @ | \$20.00 | each | \$20 |
| Grade and shape road - | 168.35 | stations @ | \$15.50 | per station | \$2,609 |
| Install conveyor belt berms | 2.58 | stations @ | \$165.00 | per station | \$426 |
| Roll Road following grading - | 168.35 | stations @ | \$13.20 | per station | \$2,222 |
| Grass seed and fertilize - | 6.23 | acres @ | \$220.00 | per acre | \$1,371 |
| Mulching - | 6.076 | acres @ | \$600.00 | per acre | \$3,646 |
| TOTAL SPECIAL PROJECTS | | | | | \$22,704 |

GRAND TOTAL \$61,186

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres** Road: **C to D**

| | | | | | | | | |
|----------------|------|----------|---------------|--------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 390+55 | stations | Reconstruction - | 0+00 | stations |
| | 0.00 | miles | | 7.40 | miles | | 0.00 | miles |

IMPROVEMENT: CLEARING AND GRUBBING -

| | | | | | | |
|------------------------------------|-------|-------|---|----------|------------|-------------------|
| Roadside Brushing | 2.57 | miles | @ | \$900.00 | per mile = | \$2,313.00 |
| Side cast | 0.041 | acres | @ | \$660.00 | per acre = | \$27.06 |
| Widening | 0.447 | acres | @ | \$660.00 | per acre = | \$295.02 |
| TOTAL CLEARING AND GRUBBING | | | | | | \$2,635.08 |

IMPROVEMENT: EXCAVATION -

| | | | | | | |
|-------------------------|------|-----|---|--------|-----------|-------------------|
| Pullback | 764 | cy. | @ | \$1.40 | per c.y.= | \$1,069.60 |
| Widening | 2158 | cy. | @ | \$1.40 | per c.y.= | \$3,021.20 |
| TOTAL EXCAVATION | | | | | | \$4,090.80 |

IMPROVEMENT: ENDHAUL -

| | | | | | | | | | |
|----------------------|--------|----|--------|------|-----|---|--------|-----------|-------------------|
| Pullback | 363+52 | to | 364+04 | 211 | cy. | @ | \$2.11 | per c.y.= | \$445.21 |
| Pullback | 365+12 | to | 366+02 | 553 | cy. | @ | \$2.15 | per c.y.= | \$1,188.95 |
| Widening | 51+64 | to | 54+50 | 413 | cy. | @ | \$1.79 | per c.y.= | \$739.27 |
| Widening | 65+54 | to | 67+43 | 164 | cy. | @ | \$0.93 | per c.y.= | \$152.52 |
| Widening | 79+50 | to | 80+79 | 150 | cy. | @ | \$0.96 | per c.y.= | \$144.00 |
| Widening | 98+09 | to | 101+12 | 234 | cy. | @ | \$1.46 | per c.y.= | \$341.64 |
| Widening | 106+35 | to | 107+78 | 259 | cy. | @ | \$1.13 | per c.y.= | \$292.67 |
| Widening | 109+41 | to | 111+41 | 482 | cy. | @ | \$1.05 | per c.y.= | \$506.10 |
| Widening | 120+36 | to | 122+70 | 338 | cy. | @ | \$1.14 | per c.y.= | \$385.32 |
| Widening | 124+61 | to | 125+22 | 118 | cy. | @ | \$1.22 | per c.y.= | \$143.96 |
| Spread & compact | | | | 2922 | cy. | @ | \$0.25 | per c.y.= | \$730.50 |
| TOTAL ENDHAUL | | | | | | | | | \$5,070.14 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | |
|-------------------------------------|--|-----|-----------|-------------|----|-----------|--------------------|
| <u>Culverts</u> | | 560 | LF of 18" | \$9,800.00 | 80 | LF of 24" | \$2,160.00 |
| | | 60 | LF of 30" | \$2,160.00 | 0 | LF of 36" | \$0.00 |
| | | | | \$11,960.00 | | | \$2,160.00 |
| <u>Half Rounds</u> | | 20 | LF of 18" | \$325.00 | 0 | LF of 30" | \$0.00 |
| | | | | \$325.00 | | | \$0.00 |
| <u>Culvert Stakes & Markers</u> | | | | 4 stakes | | | \$32.00 |
| | | | | 21 markers | | | \$168.00 |
| | | | | \$200.00 | | | |
| TOTAL CULVERTS | | | | | | | \$14,645.00 |

ROCK

| | | | | | | | | |
|--------------------------|--------------|-------|--------|---------|---|---------|-----------|---------------------|
| 0+00 to | 178+80 | 4,600 | cy. of | Crushed | @ | \$12.71 | per c.y.= | \$58,466.00 |
| 178+80 to | 390+55 | 5,450 | cy. of | Crushed | @ | \$12.83 | per c.y.= | \$69,923.50 |
| Approach | As Marked | 10 | cy. of | Crushed | @ | \$11.94 | per c.y.= | \$119.40 |
| Culvert Backfill/bedding | As Marked | 30 | cy. of | Crushed | @ | \$10.59 | per c.y.= | \$317.70 |
| Road Widening | Widenings | 125 | cy. of | Crushed | @ | \$12.53 | per c.y.= | \$1,566.25 |
| Road Widening | Widenings | 250 | cy. of | Jaw Run | @ | \$12.53 | per c.y.= | \$3,132.50 |
| Culvert Backfill/bedding | 15cy/X drain | 225 | cy. of | Crushed | @ | \$10.82 | per c.y.= | \$2,434.50 |
| Energy Dissipator | 5cy/Culvert | 50 | cy. of | Riprap | @ | \$10.96 | per c.y.= | \$548.00 |
| Spot Rock | As Marked | 405 | cy. of | Crushed | @ | \$10.97 | per c.y.= | \$4,442.85 |
| Spot Rock | 241+63 | 15 | cy. of | Riprap | @ | \$11.22 | per c.y.= | \$168.30 |
| Riprap Toe | 270+69 | 370 | cy. of | Riprap | @ | \$12.01 | per c.y.= | \$4,443.70 |
| Riprap Toe | 379+49 | 40 | cy. of | Riprap | @ | \$11.89 | per c.y.= | \$475.60 |
| Riprap Toe | 380+26 | 30 | cy. of | Riprap | @ | \$18.94 | per c.y.= | \$568.20 |
| Bedding/Cover | 249+77 | 20 | cy. of | Crushed | @ | \$11.58 | per c.y.= | \$231.60 |
| Energy Dissipator | 249+77 | 10 | cy. of | Rip Rap | @ | \$11.59 | per c.y.= | \$115.90 |
| Backfill | 268+06 | 200 | cy. of | Pitrun | @ | \$11.45 | per c.y.= | \$2,290.00 |
| Bedding/Cover | 268+06 | 30 | cy. of | Crushed | @ | \$11.55 | per c.y.= | \$346.50 |
| Energy Dissipator | 268+06 | 20 | cy. of | Rip Rap | @ | \$11.72 | per c.y.= | \$234.40 |
| Turnout | 361+56 | 10 | cy. of | Crushed | @ | \$12.01 | per c.y.= | \$120.10 |
| Turnout | 372+55 | 10 | cy. of | Crushed | @ | \$11.89 | per c.y.= | \$118.90 |
| TOTAL ROCK | | | | | | | | \$150,063.90 |

SPECIAL PROJECTS

| | | | | | |
|--|--------|------------|----------|-------------|--------------------|
| Construct Waterbars | 2.00 | @ | \$25.00 | each | \$50.00 |
| Clean Culverts | 10.00 | @ | \$88.00 | each | \$880.00 |
| Construct waste areas - | 16.00 | hours @ | \$145.00 | per hour | \$2,320.00 |
| Construct ditchouts - | 4.60 | @ | \$60.00 | each | \$276.00 |
| Clean Ditches | 312.00 | @ | \$72.50 | each | \$22,620.00 |
| Install Conveyor Belt Berm | 1.73 | stations @ | \$165.00 | per station | \$285.45 |
| Reinstall Culvert at 51+64 | 0.50 | hours @ | \$145.00 | per hour | \$72.50 |
| Grade and shape road - | 344.38 | stations @ | \$15.50 | per station | \$5,337.89 |
| Deep fill excavation and removal | 12.00 | hours @ | \$378.75 | per hour | \$4,545.00 |
| Deep fill excavation and removal | 10.00 | @ | \$378.75 | each | \$3,787.50 |
| Roll subgrade w/ vibratory roller prior to rocking - | 344.38 | stations @ | \$13.20 | per station | \$4,545.82 |
| Remove culverts from state lands | 1.00 | @ | \$172.90 | total | \$172.90 |
| Grass seed and fertilize - | 7.10 | acres @ | \$220.00 | per acre | \$1,562.00 |
| Mulching - | 4.500 | acres @ | \$600.00 | per acre | \$2,700.00 |
| TOTAL SPECIAL PROJECTS | | | | | \$49,155.06 |

GRAND TOTAL **\$225,659.98**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **E to F**

| | | | | | | | | |
|----------------|------|----------|---------------|-------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 44+55 | stations | Reconstruction - | 0+00 | stations |
| | 0.00 | miles | | 0.84 | miles | | 0.00 | miles |

IMPROVEMENT: CLEARING AND GRUBBING -

| | | | | | |
|-------------------|------|---------|------------------------------------|----------|-----------------|
| Roadside Brushing | 0.84 | miles @ | \$900.00 per mile = | \$756.00 | |
| | | | TOTAL CLEARING AND GRUBBING | | \$756.00 |

IMPROVEMENT: EXCAVATION -

| | | | | | |
|----------------|-------|--------|-------------------------|----------|-----------------|
| Road Earthwork | 44.55 | sta. @ | \$10.00 per sta. = | \$445.50 | |
| | | | TOTAL EXCAVATION | | \$445.50 |

CULVERTS - MATERIALS & INSTALLATION

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

ROCK

| | | | | | | | |
|------------------|--------------|-------|--------|---------|---|-------------------|--------------------|
| 0+00 to | 44+55 | 2,340 | cy. of | Jaw Run | @ | \$18.94 per c.y.= | \$44,319.60 |
| Culvert Removal | 0+05 | 50 | cy. of | Crushed | @ | \$11.58 per c.y.= | \$579.00 |
| Landing Rock | Landings | 250 | cy. of | Jaw Run | @ | \$11.59 per c.y.= | \$2,897.50 |
| Turnout | 7+83 | 50 | cy. of | Jaw Run | @ | \$11.45 per c.y.= | \$572.50 |
| Leveling | 17+18 On | 275 | cy. of | Jaw Run | @ | \$11.55 per c.y.= | \$3,176.25 |
| Spot Rock | 9+34 | 20 | cy. of | Jaw Run | @ | \$11.72 per c.y.= | \$234.40 |
| Culvert Backfill | 15cy/Culvert | 30 | cy. of | Jaw Run | @ | \$10.92 per c.y.= | \$327.60 |
| Spot Rock | 23+34 | 30 | cy. of | Jaw Run | @ | \$11.66 per c.y.= | \$349.80 |
| | | | | | | TOTAL ROCK | \$52,456.65 |

SPECIAL PROJECTS

| | | | | | |
|----------------------------------|-------|------------|----------|-------------------------------|-------------------|
| Develop Waste Area | 6.00 | hours @ | \$145.00 | per hour | \$870.00 |
| Develop Landing #1 | 2.00 | hours @ | \$145.00 | per hour | \$290.00 |
| Clean Ditches | 38.02 | stations @ | \$100.00 | per station | \$3,802.00 |
| Construct ditchouts - | 1.00 | @ | \$20.00 | each | \$20.00 |
| Clean Culvert | 1.00 | @ | \$20.00 | each | \$20.00 |
| Remove culverts from state lands | 1.00 | @ | \$172.90 | total | \$172.90 |
| Grass seed and fertilize - | 0.30 | acres @ | \$220.00 | per acre | \$66.00 |
| | | | | TOTAL SPECIAL PROJECTS | \$5,240.90 |

GRAND TOTAL **\$59,965.05**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **G to H**

| | | | | | | | | |
|----------------|------|----------|---------------|-------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 58+64 | stations | Reconstruction - | 0+00 | stations |
| | 0.00 | miles | | 1.11 | miles | | 0.00 | miles |

IMPROVEMENT: CLEARING AND GRUBBING -

| | | | | | |
|-------------------|------|---------|------------------------------------|----------|-----------------|
| Roadside Brushing | 1.11 | miles @ | \$700.00 per mile = | \$777.00 | |
| | | | TOTAL CLEARING AND GRUBBING | | \$777.00 |

IMPROVEMENT: EXCAVATION -

| | | | | | |
|----------------|-------|--------|-------------------------|----------|-----------------|
| Road Earthwork | 58.64 | sta. @ | \$10.00 per sta. = | \$586.40 | |
| | | | TOTAL EXCAVATION | | \$586.40 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | |
|-------------------------------------|-----|-----------|------------|-----------------------|----------------------|
| <u>Culverts</u> | | | | | |
| | 180 | LF of 18" | \$3,150.00 | 0 | LF of 24" \$0.00 |
| <u>Culvert Stakes & Markers</u> | | | | | |
| | 6 | markers | \$48.00 | | |
| | | | \$48.00 | | |
| | | | | TOTAL CULVERTS | \$3,198.00 |

ROCK

| | | | | | | | |
|-------------------|--------------|-------|--------|---------|---|-------------------|--------------------|
| 41+70 to | 58+65 | 1,160 | cy. of | Jaw Run | @ | \$14.59 per c.y.= | \$16,924.40 |
| 0+00 to | 41+70 | 1,340 | cy. of | Crushed | @ | \$12.46 per c.y.= | \$16,696.40 |
| Landing Rock | 50cy/Landing | 150 | cy. of | Pit-Run | @ | \$7.87 per c.y.= | \$1,180.50 |
| Junction Rock | 0+00 | 30 | cy. of | Jaw Run | @ | \$13.81 per c.y.= | \$414.30 |
| Energy Dissipator | 5cy/X drain | 10 | cy. of | Riprap | @ | \$11.46 per c.y.= | \$114.60 |
| Energy Dissipator | 5cy/X drain | 20 | cy. of | Riprap | @ | \$11.46 per c.y.= | \$229.20 |
| Bedding/Backfill | 15cy/X drain | 90 | cy. of | Crushed | @ | \$12.28 per c.y.= | \$1,105.20 |
| | | | | | | | TOTAL ROCK |
| | | | | | | | \$36,664.60 |

SPECIAL PROJECTS

| | | | | | |
|--|-------|------------|----------|-------------------------------|-------------------|
| Clean Ditchlines(endhaul) | 20.09 | stations @ | \$100.00 | per station | \$2,009.00 |
| Clean Ditchlines(scatter) | 19.24 | stations @ | \$60.00 | per station | \$1,154.40 |
| Construct waterbar- | 1.00 | @ | \$25.00 | each | \$25.00 |
| Construct ditchouts - | 2.00 | @ | \$60.00 | each | \$120.00 |
| Construct Landings | 3.00 | @ | \$250.00 | each | \$750.00 |
| Grade and shape road - | 58.64 | stations @ | \$15.50 | per station | \$908.92 |
| Install Conveyor Belt Berm - | 0.76 | stations @ | \$165.00 | per station | \$125.40 |
| Roll subgrade w/ vibratory roller prior to rocking - | 58.64 | stations @ | \$13.20 | per station | \$774.05 |
| Grass seed and fertilize - | 0.80 | acres @ | \$220.00 | per acre | \$176.00 |
| | | | | TOTAL SPECIAL PROJECTS | \$6,042.77 |

GRAND TOTAL **\$47,268.77**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **I to J**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|-------|----------|
| Construction - | 0+00 | stations | Improvement - | 0+00 | stations | Reconstruction - | 14+80 | stations |
| | 0.00 | miles | | 0.00 | miles | | 0.28 | miles |

RECONSTRUCTION: CLEARING AND GRUBBING -

| | | | | | | |
|------------------------------------|-------|---------|----------|------------|----------|-----------------|
| Side cast | 0.015 | acres @ | \$660.00 | per acre = | \$9.90 | |
| Widening | 0.311 | acres @ | \$660.00 | per acre = | \$205.26 | |
| Scattering | 0.410 | acres @ | \$980.00 | per acre = | \$401.80 | |
| TOTAL CLEARING AND GRUBBING | | | | | | \$616.96 |

RECONSTRUCTION: EXCAVATION -

| | | | | | | |
|-------------------------|------|-------|--------|------------|------------|-------------------|
| Pullback | 98 | cy. @ | \$1.40 | per c.y. = | \$137.20 | |
| Widening | 1764 | cy. @ | \$1.75 | per c.y. = | \$3,087.00 | |
| TOTAL EXCAVATION | | | | | | \$3,224.20 |

RECONSTRUCTION: ENDHAUL -

| | | | | | | | | | |
|----------------------|-------|----|-------|------|-------|--------|------------|------------|-------------------|
| Pullback | 10+94 | to | 11+78 | 98 | cy. @ | \$1.23 | per c.y. = | \$120.54 | |
| Widening | 3+35 | to | 10+94 | 1188 | cy. @ | \$1.07 | per c.y. = | \$1,271.16 | |
| Widening | 10+94 | to | 11+78 | 246 | cy. @ | \$1.23 | per c.y. = | \$302.58 | |
| Widening | 11+78 | to | 13+89 | 330 | cy. @ | \$1.25 | per c.y. = | \$412.50 | |
| Spread & compact | | | | 1862 | cy. @ | \$0.25 | per c.y. = | \$465.50 | |
| TOTAL ENDHAUL | | | | | | | | | \$2,572.28 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | |
|-------------------------------------|----|-----------|------------|-----------------------|-----------|--------|-------------------|
| <u>Culverts</u> | 80 | LF of 18" | \$1,400.00 | 0 | LF of 24" | \$0.00 | |
| <u>Culvert Stakes & Markers</u> | | | | | | | |
| | 2 | markers | \$16.00 | | | | |
| | | | \$16.00 | TOTAL CULVERTS | | | \$1,416.00 |

ROCK

| | | | | | | | | | |
|-------------------|----------|-------|--------|---------|---|---------|------------|------------|-------------------|
| 0+00 to | 14+80 | 1,080 | cy. of | Pitrun | @ | \$6.52 | per c.y. = | \$7,041.60 | |
| Culvert Backfill | 9+86 | 15 | cy. of | Pitrun | @ | \$6.08 | per c.y. = | \$91.20 | |
| Landing Rock | Landings | 150 | cy. of | Pitrun | @ | \$6.46 | per c.y. = | \$969.00 | |
| Approach | 0+00 | 40 | cy. of | Pitrun | @ | \$6.43 | per c.y. = | \$257.20 | |
| Junction Rock | 0+00 | 50 | cy. of | Crushed | @ | \$12.95 | per c.y. = | \$647.50 | |
| Spot Rock | 7+30 | 10 | cy. of | Pitrun | @ | \$6.54 | per c.y. = | \$65.40 | |
| Energy Dissipator | 9+86 | 5 | cy. of | Riprap | @ | \$12.02 | per c.y. = | \$60.10 | |
| Spot Rock | 12+29 | 30 | cy. of | Pitrun | @ | \$6.62 | per c.y. = | \$198.60 | |
| Spot Rock | 12+02 | 50 | cy. of | Pitrun | @ | \$6.62 | per c.y. = | \$331.00 | |
| TOTAL ROCK | | | | | | | | | \$9,661.60 |
| | | | | | | | | | \$9,661.60 |

SPECIAL PROJECTS

| | | | | | | |
|--|-------|------------|----------|-------------|------------|-------------------|
| Endhaul Material To Waste Area | 6.00 | hours @ | \$265.00 | per hour | \$1,590.00 | |
| Grade and shape road - | 14.80 | stations @ | \$15.50 | per station | \$229.40 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 14.80 | stations @ | \$13.20 | per station | \$195.36 | |
| Grass seed and fertilize - | 0.20 | acres @ | \$220.00 | per acre | \$44.00 | |
| TOTAL SPECIAL PROJECTS | | | | | | \$2,058.76 |

GRAND TOTAL **\$29,211.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **K to L**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 5+70 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
| | 0.11 | 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. To W.A. (mi.) | Outslope/Ditch | Cost per Station | Endhaul | = | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---------|---|-------------------|
| 0+00 | | 5+70 | 45% | | Ditch | \$367 | \$5,830 | | \$7,921.90 |
| | | | | | | | | | TOTAL |
| | | | | | | | | | \$7,921.90 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | | | |
|-------------------------------------|----|-----------|------------|---|-----------|--------|-----------------------|-------------------|--|
| <u>Culverts</u> | 80 | LF of 18" | \$1,400.00 | 0 | LF of 24" | \$0.00 | TOTAL CULVERTS | \$1,416.00 | |
| <u>Culvert Stakes & Markers</u> | 2 | markers | \$16.00 | | | | | | |
| | | | \$16.00 | | | | | | |

ROCK

| | | | | | | | | |
|---------------|----|------|-----|--------|--------|---|------------------|-------------------|
| 0+00 | to | 5+70 | 440 | cy. of | Pitrun | @ | \$6.51 per c.y.= | \$2,864.40 |
| Landing Rock | | 0+00 | 80 | cy. of | Pitrun | @ | \$6.35 per c.y.= | \$508.00 |
| Junction Rock | | 0+00 | 60 | cy. of | Pitrun | @ | \$6.46 per c.y.= | \$387.60 |
| | | | | | | | | TOTAL ROCK |
| | | | | | | | | \$3,760.00 |

SPECIAL PROJECTS

| | | | | | |
|--|------|------------|---------|-------------|-------------------------------|
| Grade and shape road - | 5.70 | stations @ | \$15.50 | per station | \$88.35 |
| Roll subgrade w/ vibratory roller prior to rocking - | 5.70 | stations @ | \$13.20 | per station | \$75.24 |
| | | | | | TOTAL SPECIAL PROJECTS |
| | | | | | \$163.59 |

GRAND TOTAL **\$13,261.49**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **M to N**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 2+27 | stations | Improvement - | 0+00 | stations | Reconstruction - | 5+73 | stations |
| | 0.04 | miles | | 0.00 | miles | | 0.11 | miles |

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

| Station | to | Station | Avg. Sideslope | Avg. Dist. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-----------------|
| 5+73 | | 8+00 | 15% | 0.0 | Ditch | \$152 | | \$345.04 | |
| | | | | | | | | TOTAL | \$345.04 |

RECONSTRUCTION: CLEARING AND GRUBBING -
Scattering

| | | | | |
|-------|---------|---------------------|--|------------------------------------|
| 0.160 | acres @ | \$980.00 per acre = | | \$156.80 |
| | | | | TOTAL CLEARING AND GRUBBING |
| | | | | \$156.80 |

RECONSTRUCTION: EXCAVATION -
Road Earthwork

| | | | | |
|------|--------|--------------------|--|-------------------------|
| 5.73 | sta. @ | \$10.00 per sta. = | | \$57.30 |
| | | | | TOTAL EXCAVATION |
| | | | | \$57.30 |

CULVERTS - MATERIALS & INSTALLATION

| Culverts | Qty | Description | Unit Price | Total |
|----------|-----|-------------|------------|-----------------------|
| | 80 | LF of 18" | \$1,400.00 | \$1,400.00 |
| | 0 | LF of 24" | \$0.00 | \$0.00 |
| | | | | TOTAL CULVERTS |
| | | | | \$1,416.00 |

| Culvert Stakes & Markers | Qty | Unit Price | Total |
|--------------------------|-----------|------------|---------|
| | 2 markers | \$16.00 | \$16.00 |

ROCK

| | | | | | | |
|-------------------|-------------|------------|---------|---|--------------------|-------------------|
| 0+00 to | 8+00 | 550 cy. of | Pitrun | @ | \$6.41 per c.y. = | \$3,525.50 |
| Landing Rock | 14+12 | 100 cy. of | Pitrun | @ | \$6.22 per c.y. = | \$622.00 |
| Junction Rock | 0+00 | 30 cy. of | Crushed | @ | \$12.76 per c.y. = | \$382.80 |
| Energy Dissipator | 5CY/Culvert | 10 cy. of | Riprap | @ | \$12.06 per c.y. = | \$120.60 |
| | | | | | | TOTAL ROCK |
| | | | | | | \$4,650.90 |

SPECIAL PROJECTS

| | | | | | | |
|--|------|------------|---------|-------------|--|-------------------------------|
| Grade and shape road - | 8.00 | stations @ | \$15.50 | per station | | \$124.00 |
| Roll subgrade w/ vibratory roller prior to rocking - | 8.00 | stations @ | \$13.20 | per station | | \$105.60 |
| | | | | | | TOTAL SPECIAL PROJECTS |
| | | | | | | \$229.60 |

GRAND TOTAL **\$6,855.64**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hombres** Road: **O to P**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 2+75 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
| | 0.05 | miles | | 0.00 | miles | | 0.00 | miles |

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

| <u>Station</u> | <u>to</u> | <u>Station</u> | <u>Avg. Sideslope</u> | <u>Avg. Dist.</u> <u>To W.A. (mi.)</u> | <u>Outslope/Ditch</u> | <u>Cost per Station</u> | = | \$247.50 | |
|----------------|-----------|----------------|-----------------------|---|-----------------------|-------------------------|---|--------------|-----------------|
| 0+00 | | 2+75 | 10% | | outslope | \$90 | | | |
| | | | | | | | | TOTAL | \$247.50 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | | |
|-------------------------------------|----|-----------|----------|---|-----------|--------|-----------------------|-----------------|
| <u>Culverts</u> | 50 | LF of 18" | \$875.00 | 0 | LF of 24" | \$0.00 | | |
| | | | \$875.00 | | | \$0.00 | | |
| <u>Culvert Stakes & Markers</u> | | | | | | | | |
| | 1 | markers | \$8.00 | | | | | |
| | | | \$8.00 | | | | | |
| | | | | | | | TOTAL CULVERTS | \$883.00 |

ROCK

| | | | | | | | | |
|---------------|------|----|--------|--------|---|------------------|-------------------|-----------------|
| Junction Rock | 0+00 | 30 | cy. of | Pitrun | @ | \$6.42 per c.y.= | \$192.60 | |
| | | | | | | | TOTAL ROCK | \$192.60 |

SPECIAL PROJECTS

| | | | | | | |
|--|------|------------|---------|-------------|-------------------------------|----------------|
| Grade and shape road - | 2.75 | stations @ | \$15.50 | per station | \$42.63 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 2.75 | stations @ | \$13.20 | per station | \$36.30 | |
| | | | | | TOTAL SPECIAL PROJECTS | \$78.93 |

GRAND TOTAL **\$1,402.03**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **Q to R**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|-------|----------|
| Construction - | 4+77 | stations | Improvement - | 0+00 | stations | Reconstruction - | 23+98 | stations |
| | 0.09 | miles | | 0.00 | miles | | 0.45 | miles |

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

| Station | to | Station | Avg. Sideslope | Avg. Dist. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-------------------|
| 23+98 | | 28+75 | 26% | | Ditch | \$219 | | \$1,044.63 | |
| | | | | | | | | TOTAL | \$1,044.63 |

RECONSTRUCTION: CLEARING AND GRUBBING -

| | | | | | | | |
|------------|-------|-------|---|----------|------------|------------------------------------|-------------------|
| Scattering | 2.310 | acres | @ | \$980.00 | per acre = | \$2,263.80 | |
| | | | | | | TOTAL CLEARING AND GRUBBING | \$2,263.80 |

RECONSTRUCTION: EXCAVATION -

| | | | | | | | |
|----------------|-------|------|---|--------|------------|-------------------------|----------------|
| Road Earthwork | 23.98 | sta. | @ | \$1.00 | per sta. = | \$23.98 | |
| | | | | | | TOTAL EXCAVATION | \$23.98 |

CULVERTS - MATERIALS & INSTALLATION

| <u>Culverts</u> | Qty | Description | Unit | Cost | Total | |
|-------------------------------------|-----|-------------|------|------------|-----------------------|-------------------|
| | 60 | LF of 18" | | \$1,050.00 | | |
| | | | | \$1,050.00 | | |
| | | LF of 24" | | \$0.00 | | |
| | | | | \$0.00 | | |
| <u>Culvert Stakes & Markers</u> | | | | | | |
| | 2 | markers | | \$16.00 | | |
| | | | | \$16.00 | | |
| | | | | | TOTAL CULVERTS | \$1,066.00 |

ROCK

| | | | | | | | | | | |
|-------------------|----|--------------|-------|--------|---------|---|---------|------------|-------------------|--------------------|
| 0+00 | to | 28+75 | 2,120 | cy. of | Pitrun | @ | \$6.86 | per c.y. = | \$14,543.20 | |
| Approach | | 0+00 | 20 | cy. of | Crushed | @ | \$12.52 | per c.y. = | \$250.40 | |
| Landing Rock | | 50CY/Landing | 150 | cy. of | Pitrun | @ | \$6.88 | per c.y. = | \$1,032.00 | |
| Tank Trap | | 1+97 | 20 | cy. of | Pitrun | @ | \$6.66 | per c.y. = | \$133.20 | |
| Junction Rock | | 0+00 | 30 | cy. of | Pitrun | @ | \$6.63 | per c.y. = | \$198.90 | |
| Energy Dissipator | | 5CY/X drain | 10 | cy. of | Riprap | @ | \$12.66 | per c.y. = | \$126.60 | |
| Bedding/Backfill | | 15CY/X drain | 30 | cy. of | Pitrun | @ | \$6.48 | per c.y. = | \$194.40 | |
| | | | | | | | | | TOTAL ROCK | \$16,478.70 |

SPECIAL PROJECTS

| | | | | | | | |
|--|-------|----------|---|----------|-------------|-------------------------------|-------------------|
| Construct Ditchlines | 10.55 | stations | @ | \$60.00 | per station | \$633.00 | |
| Construct ditchouts - | 1.00 | @ | | \$60.00 | each | \$60.00 | |
| Grade and shape road - | 28.75 | stations | @ | \$15.50 | per station | \$445.63 | |
| Construct Landing | 1.00 | @ | | \$250.00 | each | \$250.00 | |
| Construct waste areas - | 20.00 | hours | @ | \$145.00 | per hour | \$2,900.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 28.75 | stations | @ | \$13.20 | per station | \$379.50 | |
| Grass seed and fertilize - | 0.10 | acres | @ | \$220.00 | per acre | \$22.00 | |
| | | | | | | TOTAL SPECIAL PROJECTS | \$4,690.13 |

GRAND TOTAL **\$25,567.24**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **S to T**

| | | | | | | | | |
|----------------|--------------|-------------------|---------------|--------------|-------------------|------------------|--------------|-------------------|
| Construction - | 9+60 0.18 | stations miles | Improvement - | 0+00 0.00 | stations miles | Reconstruction - | 0+00 0.00 | stations miles |
|----------------|--------------|-------------------|---------------|--------------|-------------------|------------------|--------------|-------------------|

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

| Station | to | Station | Avg. Sideslope | Avg. Dist. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|-------------------|
| 0+00 | | 9+60 | 10% | | Ditch | \$143 | | \$1,372.80 |
| | | | | | | | | TOTAL |
| | | | | | | | | \$1,372.80 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | | |
|-------------------------------------|----|-----------|----------|---|-----------|--------|-----------------------|-----------------|
| <u>Culverts</u> | 30 | LF of 18" | \$525.00 | 0 | LF of 24" | \$0.00 | | |
| | | | \$525.00 | | | \$0.00 | | |
| <u>Culvert Stakes & Markers</u> | | | | | | | | |
| | 1 | markers | \$8.00 | | | | | |
| | | | \$8.00 | | | | | |
| | | | | | | | TOTAL CULVERTS | \$533.00 |

ROCK

| | | | | | | | | | |
|-------------------|----|----------|-----|--------|--------|---|---------|-----------|-------------------|
| 0+00 | to | 9+60 | 760 | cy. of | Pitrun | @ | \$6.99 | per c.y.= | \$5,312.40 |
| Landing Rock | | Landings | 180 | cy. of | Pitrun | @ | \$6.87 | per c.y.= | \$1,236.60 |
| Junction Rock | | 0+00 | 20 | cy. of | Pitrun | @ | \$6.92 | per c.y.= | \$138.40 |
| Energy Dissipator | | 9+06 | 5 | cy. of | Riprap | @ | \$12.72 | per c.y.= | \$63.60 |
| | | | | | | | | | TOTAL ROCK |
| | | | | | | | | | \$6,751.00 |

SPECIAL PROJECTS

| | | | | | |
|--|------|------------|----------|-------------|-------------------------------|
| Grade and shape road - | 9.60 | stations @ | \$15.50 | per station | \$148.80 |
| Roll subgrade w/ vibratory roller prior to rocking - | 9.60 | stations @ | \$13.20 | per station | \$126.72 |
| Grass seed and fertilize - | 0.10 | acres @ | \$220.00 | per acre | \$22.00 |
| | | | | | TOTAL SPECIAL PROJECTS |
| | | | | | \$297.52 |

GRAND TOTAL **\$8,954.32**

8954.32

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **U to V**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 0+00 | stations | Reconstruction - | 2+90 | stations |
| | 0.00 | miles | | 0.00 | miles | | 0.05 | miles |

RECONSTRUCTION: CLEARING AND GRUBBING -
Scattering

0.210 acres @ \$980.00 per acre = \$205.80

TOTAL CLEARING AND GRUBBING \$205.80

RECONSTRUCTION: EXCAVATION -
Road Earthwork

2.90 sta. @ \$30.00 per sta. = \$87.00

TOTAL EXCAVATION \$87.00

ROCK

| | | | | | | |
|---------------|------|------------|--------|---|------------------|------------|
| 0+00 to | 2+90 | 230 cy. of | Pitrun | @ | \$7.03 per c.y.= | \$1,616.90 |
| Junction Rock | 0+00 | 100 cy. of | Pitrun | @ | \$6.50 per c.y.= | \$650.00 |
| Landing Rock | 1+15 | 100 cy. of | Pitrun | @ | \$6.82 per c.y.= | \$682.00 |
| Landing Rock | 2+90 | 50 cy. of | Pitrun | @ | \$6.85 per c.y.= | \$342.50 |

TOTAL ROCK \$3,291.40

SPECIAL PROJECTS

| | | | | | |
|--|------|------------|----------|-------------|----------|
| Construct Ditchlines | 2.60 | stations @ | \$60.00 | per station | \$156.00 |
| Construct Landing - | 1.00 | @ | \$250.00 | each | \$250.00 |
| Grade and shape road - | 2.90 | stations @ | \$15.50 | per station | \$44.95 |
| Roll subgrade w/ vibratory roller prior to rocking - | 2.90 | stations @ | \$13.20 | per station | \$38.28 |

TOTAL SPECIAL PROJECTS \$489.23

GRAND TOTAL \$4,073.43

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **W to X**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 7+85 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
| | 0.15 | 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. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-------------------|
| 0+00 | | 7+85 | 25% | | Ditch | \$219 | = | \$1,719.15 | |
| | | | | | | | | TOTAL | \$1,719.15 |

ROCK

| | | | | | | | | | |
|---------------|----|------|-----|--------|--------|---|------------------|-------------------|-------------------|
| 0+00 | to | 7+85 | 650 | cy. of | Pitrun | @ | \$6.88 per c.y.= | \$4,472.00 | |
| Landing Rock | | 7+85 | 50 | cy. of | Pitrun | @ | \$6.80 per c.y.= | \$340.00 | |
| Junction Rock | | 0+00 | 30 | cy. of | Pitrun | @ | \$6.88 per c.y.= | \$206.40 | |
| | | | | | | | | TOTAL ROCK | \$5,018.40 |

SPECIAL PROJECTS

| | | | | | | |
|--|------|------------|----------|-------------|-------------------------------|-----------------|
| Grade and shape road - | 7.85 | stations @ | \$15.50 | per station | \$121.68 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 7.85 | stations @ | \$13.20 | per station | \$103.62 | |
| Grass seed and fertilize - | 0.10 | acres @ | \$220.00 | per acre | \$22.00 | |
| | | | | | TOTAL SPECIAL PROJECTS | \$247.30 |

GRAND TOTAL **\$6,984.85**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **Y to Z**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 1+25 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
| | 0.02 | 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. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-----------------|
| 0+00 | | 1+25 | 10% | 0.0 | Outslope | \$90 | = | \$112.50 | |
| | | | | | | | | TOTAL | \$112.50 |

ROCK

| | | | | | | | | |
|-------------------|----|------|-----|--------|---------|---|-------------------|-------------------|
| 0+00 | to | 1+25 | 100 | cy. of | Pitrun | @ | \$6.80 per c.y.= | \$680.00 |
| Landing Rock | | 1+25 | 50 | cy. of | Pitrun | @ | \$6.61 per c.y.= | \$330.50 |
| Junction Rock | | 0+00 | 10 | cy. of | Crushed | @ | \$12.49 per c.y.= | \$124.90 |
| Junction Rock | | 0+00 | 30 | cy. of | Pitrun | @ | \$6.79 per c.y.= | \$203.70 |
| TOTAL ROCK | | | | | | | | \$1,339.10 |

SPECIAL PROJECTS

| | | | | | |
|--|------|------------|---------|-------------|----------------|
| Grade and shape road - | 1.25 | stations @ | \$15.50 | per station | \$19.38 |
| Roll subgrade w/ vibratory roller prior to rocking - | 1.25 | stations @ | \$13.20 | per station | \$16.50 |
| TOTAL SPECIAL PROJECTS | | | | | \$35.88 |

GRAND TOTAL **\$1,487.48**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **AA to BB**

| | | |
|--|---|--|
| Construction - $\frac{0+00}{0.00}$ stations miles | Improvement - $\frac{7+45}{0.14}$ stations miles | Reconstruction - $\frac{0+00}{0.00}$ stations miles |
|--|---|--|

IMPROVEMENT: CLEARING AND GRUBBING -

| | | | | | | |
|------------------------------------|------|-------|---|---------------------|---------|----------------|
| Roadside Brushing | 0.14 | miles | @ | \$600.00 per mile = | \$84.00 | |
| TOTAL CLEARING AND GRUBBING | | | | | | \$84.00 |

ROCK

| | | | | | | | | |
|-------------------|------|----|--------|---------|---|-------------------|----------|-----------------|
| Junction Rock | 0+00 | 10 | cy. of | Crushed | @ | \$12.42 per c.y.= | \$124.20 | |
| TOTAL ROCK | | | | | | | | \$124.20 |

SPECIAL PROJECTS

| | | | | | | | |
|--|------|----------|---|----------|-------------|-----------------|--|
| Clean Ditchline | 3.00 | hours | @ | \$125.00 | per hour | \$375.00 | |
| Grade and shape road - | 7.45 | stations | @ | \$15.50 | per station | \$115.48 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 7.45 | stations | @ | \$13.20 | per station | \$98.34 | |
| TOTAL SPECIAL PROJECTS | | | | | | \$588.82 | |

| | |
|--------------------|-----------------|
| GRAND TOTAL | \$797.02 |
|--------------------|-----------------|

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **CC to DD**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 9+00 | 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. To W.A. (mi.) | Outslope/Ditch | Cost per Station | = | | |
|---------|----|---------|----------------|-----------------------------|----------------|------------------|---|--------------|-------------------|
| 0+00 | | 9+00 | 30% | 0.0 | Ditch | \$256 | = | \$2,304.00 | |
| | | | | | | | | TOTAL | \$2,304.00 |

CULVERTS - MATERIALS & INSTALLATION

| | | | | | | | | |
|-------------------------------------|----|-----------|----------|---|-----------|--------|-----------------------|-----------------|
| <u>Culverts</u> | 30 | LF of 18" | \$525.00 | 0 | LF of 24" | \$0.00 | | |
| | | | \$525.00 | | | \$0.00 | | |
| <u>Culvert Stakes & Markers</u> | | | | | | | | |
| | 1 | markers | \$8.00 | | | | | |
| | | | \$8.00 | | | | | |
| | | | | | | | TOTAL CULVERTS | \$533.00 |

ROCK

| | | | | | | | | |
|-------------------|----------|-----|--------|---------|---|------------------|-------------------|-------------------|
| 0+00 to | 9+00 | 680 | cy. of | Pitrun | @ | \$6.74 per c.y.= | \$4,583.20 | |
| Landing Rock | Landings | 180 | cy. of | Pit-Run | @ | \$6.61 per c.y.= | \$1,189.80 | |
| Energy Dissipator | 7+21 | 5 | cy. of | Riprap | @ | \$9.89 per c.y.= | \$49.45 | |
| Junction Rock | 0+00 | 30 | cy. of | Pitrun | @ | \$6.66 per c.y.= | \$199.80 | |
| | | | | | | | TOTAL ROCK | \$6,022.25 |

SPECIAL PROJECTS

| | | | | | | |
|--|------|------------|----------|-------------|-------------------------------|-----------------|
| Grade and shape road - | 9.00 | stations @ | \$15.50 | per station | \$139.50 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 9.00 | stations @ | \$13.20 | per station | \$118.80 | |
| Grass seed and fertilize - | 0.10 | acres @ | \$220.00 | per acre | \$22.00 | |
| | | | | | TOTAL SPECIAL PROJECTS | \$280.30 |

GRAND TOTAL **\$9,139.55**

SUMMARY OF CONSTRUCTION COST

Sale: **Tres Hembres**

Road: **EE to FF**

| | | | | | | | | |
|----------------|------|----------|---------------|------|----------|------------------|------|----------|
| Construction - | 0+00 | stations | Improvement - | 7+47 | stations | Reconstruction - | 0+00 | stations |
| | 0.00 | miles | | 0.14 | miles | | 0.00 | miles |

IMPROVEMENT: EXCAVATION -

| | | | | | | |
|----------|-----|-------|--------|------------|-------------------------|-------------------|
| Pullback | 867 | cy. @ | \$1.40 | per c.y. = | \$1,213.80 | |
| | | | | | TOTAL EXCAVATION | \$1,213.80 |

IMPROVEMENT: ENDHAUL -

| | | | | | | | | | |
|----------|------|----|------|-----|-------|--------|------------|----------------------|-------------------|
| Pullback | 4+47 | to | 7+47 | 867 | cy. @ | \$1.09 | per c.y. = | \$945.03 | |
| | | | | | | | | TOTAL ENDHAUL | \$1,161.78 |

| | |
|--------------------|-------------------|
| GRAND TOTAL | \$2,459.58 |
|--------------------|-------------------|

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|-------------|---------------------|--------------------|-------------------------|
| Pit: | North Fork Trask | Location: | Sec. 25, T1S, R8W, W.M. |
| Sale: | Tres Hembres | Road: | 5015 c.y. |
| Swell: | 1.40 | Stockpile: | c.y. |
| Shrinkage | 1.16 | Total Truck Loads: | 5015 c.y. |
| Drill Pct.: | 0% | In Place Total: | 3582 c.y. |

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$725.00

| | | | | | |
|---------------------|----------------|---|--------------|---|-------------|
| Rip Rock: | \$1.90 /cu.yd. | x | 3582 cu.yds. | = | \$6,805.80 |
| Endhaul Reject | \$2.00 | x | 752 cu.yds. | = | \$1,504.00 |
| Push Rock: | \$0.70 /cu.yd. | x | 5015 cu.yds. | = | \$3,510.50 |
| Load Crusher: | \$0.80 /cu.yd. | x | 5015 cu.yds. | = | \$4,012.00 |
| Crush Rock: | \$2.70 /cu.yd. | x | 5015 cu.yds. | = | \$13,540.50 |
| Load Dump Truck: | \$0.70 /cu.yd. | x | 5015 cu.yds. | = | \$3,510.50 |
| Oversize Reduction: | \$4.50 /cu.yd. | x | 251 cu.yds. | = | \$1,129.50 |

Subtotal \$34,737.80

| | | | | | |
|------------------------------|---|---|----------|---|------------|
| Move In/Set-up Crusher | | | | | \$3,782.46 |
| Move in Roller and Compactor | 1 | @ | \$334.65 | = | \$334.65 |
| Move in Grader | 1 | @ | \$87.60 | = | \$87.60 |
| Move in Loader | 1 | @ | \$388.27 | = | \$388.27 |
| Move in Excavator | 2 | @ | \$550.03 | = | \$1,100.06 |
| Move in Trucks | 3 | @ | \$104.23 | = | \$312.69 |
| Move in Water Truck | 1 | @ | \$122.51 | = | \$122.51 |
| Change Gradation | | | | | |

Subtotal \$6,128.24

TOTAL PRODUCTION COSTS \$40,866.04

Base Cost= \$8.15 Per Cu.Yd.

| Road Segment | Haul Cost \$/cu.yd. | Proc Cost \$/cu.yd. | Base Cost. \$/cu.yd. | Cost \$/cu.yd. | Number Cu. Yds | ROCK COST |
|---|------------------------|------------------------|-------------------------|-------------------|-------------------|-----------------------|
| C to D 0 17880 (Crushed) | 2.11 | 2.45 | 8.15 | 12.71 | 4600 | \$58,466.00 |
| C to D Approach (Crushed) | 1.34 | 2.45 | 8.15 | 11.94 | 10 | \$119.40 |
| C to D Culvert Backfill/bedding (Crushed) | 1.54 | 0.90 | 8.15 | 10.59 | 30 | \$317.70 |
| C to D Road Widening (Crushed) | 1.93 | 2.45 | 8.15 | 12.53 | 125 | \$1,566.25 |
| C to D Road Widening (Jaw Run) | 1.93 | 2.45 | 8.15 | 12.53 | 250 | \$3,132.50 |
| | | | | Total C.Y. | 5015 | Sub Total \$63,601.85 |

TOTAL ROCKING COSTS \$63,601.85

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|-------------|---------------------|--------------------|-------------------------|
| Pit: | Hembre Ridge | Location: | Sec. 20, T1S, R7W, W.M. |
| Sale: | Tres Hombres | Road: | 4170 c.y. |
| Swell: | 1.40 | Stockpile: | c.y. |
| Shrinkage: | 1.16 | Total Truck Loads: | 4170 c.y. |
| Drill Pct.: | 0% | In Place Total: | 2979 c.y. |

| | | | | |
|--|----------------|---|--------------|--------------|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | | | | \$12,802.50 |
| Drill & Shoot: | \$2.50 /cu.yd. | x | 0 cu.yds. | = \$0.00 |
| Rip Rock: | \$1.90 /cu.yd. | x | 2979 cu.yds. | = \$5,660.10 |
| Push Rock: | \$0.75 /cu.yd. | x | 4170 cu.yds. | = \$3,127.50 |
| Load Crusher: | \$0.70 /cu.yd. | x | 4170 cu.yds. | = \$2,919.00 |
| Crush Rock: | \$2.35 /cu.yd. | x | 2995 cu.yds. | = \$7,038.25 |
| Load Dump Truck: | \$0.70 /cu.yd. | x | 4170 cu.yds. | = \$2,919.00 |
| Oversize Reduction: | \$4.50 /cu.yd. | x | 417 cu.yds. | = \$1,876.50 |

Subtotal \$36,342.85

| | | | | |
|---|---|---|----------|------------|
| Move In/Set-up Crusher | | | | \$1,625.23 |
| Move In and set up Drill and Compressor | 0 | @ | \$334.65 | = \$0.00 |
| Move in Roller and Compactor | 0 | @ | \$334.65 | = \$0.00 |
| Move in Grader | 0 | @ | \$87.60 | = \$0.00 |
| Move in D-8 | 0 | @ | \$503.24 | = \$0.00 |
| Move in Loader | 0 | @ | \$388.27 | = \$0.00 |
| Move in Excavator | 0 | @ | \$550.03 | = \$0.00 |
| Move in Trucks | 0 | @ | \$104.23 | = \$0.00 |
| Move in Water Truck | 0 | @ | \$122.51 | = \$0.00 |
| Change Gradation | 0 | | | |

Subtotal \$1,625.23

Base Cost= \$9.11 Per Cu.Yd. TOTAL PRODUCTION COSTS \$37,968.08

| Road Segment | Haul Cost \$/cu.yd. | Proc Cost \$/cu.yd. | Base Cost. \$/cu.yd. | Cost \$/cu.yd. | Number Cu. Yds | ROCK COST |
|---|------------------------|------------------------|-------------------------|-------------------|-------------------|------------------------------|
| A to B Cross Drain energy dissipator (Riprap) | 2.44 | 0.60 | 9.11 | 12.15 | 90 | \$1,093.50 |
| A to B Stream Crossing Energy Dissipator (Riprap) | 2.44 | 0.60 | 9.11 | 12.15 | 25 | \$303.75 |
| C to D Energy Dissipator (Riprap) | 1.25 | 0.60 | 9.11 | 10.96 | 50 | \$548.00 |
| C to D Spot Rock (Riprap) | 1.51 | 0.60 | 9.11 | 11.22 | 15 | \$168.30 |
| C to D Riprap Toe (Riprap) | 1.08 | 0.60 | 9.11 | 10.79 | 370 | \$3,992.30 |
| C to D Riprap Toe (Riprap) | 1.53 | 0.60 | 9.11 | 11.24 | 40 | \$449.60 |
| C to D Riprap Toe (Riprap) | 3.23 | 0.60 | 9.11 | 12.94 | 30 | \$388.20 |
| C to D Backfill (Pitrun) | 3.24 | 0.90 | 9.11 | 13.25 | 260 | \$3,445.00 |
| C to D Energy Dissipator (Rip Rap) | 1.21 | 0.60 | 9.11 | 10.92 | 10 | \$109.20 |
| C to D Backfill (Pitrun) | 1.49 | 0.90 | 9.11 | 11.50 | 200 | \$2,300.00 |
| C to D Energy Dissipator (Rip Rap) | 1.49 | 0.60 | 9.11 | 11.20 | 20 | \$224.00 |
| E to F 0 4455 (Jaw Run) | 8.73 | 1.10 | 9.11 | 18.94 | 2340 | \$44,319.60 |
| E to F Landing Rock (Jaw Run) | 1.58 | 0.90 | 9.11 | 11.59 | 250 | \$2,897.50 |
| E to F Turnout (Jaw Run) | 1.24 | 1.10 | 9.11 | 11.45 | 50 | \$572.50 |
| E to F Leveling (Jaw Run) | 1.34 | 1.10 | 9.11 | 11.55 | 275 | \$3,176.25 |
| E to F Spot Rock (Jaw Run) | 1.51 | 1.10 | 9.11 | 11.72 | 20 | \$234.40 |
| E to F Culvert Backfill (Jaw Run) | 1.21 | 0.60 | 9.11 | 10.92 | 30 | \$327.60 |
| E to F Spot Rock (Jaw Run) | 1.45 | 1.10 | 9.11 | 11.66 | 30 | \$349.80 |
| G to H Energy Dissipator (Riprap) | 1.75 | 0.60 | 9.11 | 11.46 | 10 | \$114.60 |
| G to H Energy Dissipator (Riprap) | 1.75 | 0.60 | 9.11 | 11.46 | 20 | \$229.20 |
| I to J Energy Dissipator (Riprap) | 2.31 | 0.60 | 9.11 | 12.02 | 5 | \$60.10 |
| M to N Energy Dissipator (Riprap) | 2.35 | 0.60 | 9.11 | 12.06 | 10 | \$120.60 |
| Q to R Energy Dissipator (Riprap) | 2.95 | 0.60 | 9.11 | 12.66 | 10 | \$126.60 |
| S to T Energy Dissipator (Riprap) | 3.01 | 0.60 | 9.11 | 12.72 | 5 | \$63.60 |
| CC to DD Energy Dissipator (Riprap) | 2.48 | 0.60 | 9.11 | 12.19 | 5 | \$60.95 |
| Total C.Y. | | | | | 4170 | Sub Total \$65,675.15 |

TOTAL ROCKING COSTS \$65,675.15

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|-------------|---------------------|--------------------|-------------------------|
| Pit: | Pitrun | Location: | Sec. 17, T1S, R7W, W.M. |
| Sale: | Tres Hembres | Road: | 8375 c.y. |
| Swell: | 1.40 | Stockpile: | c.y. |
| Shrinkage: | 1.16 | Total Truck Loads: | 8375 c.y. |
| Drill Pct.: | 0% | In Place Total: | 5982 c.y. |

| | |
|--|---|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | \$8,535.00 |
| Rip Rock: | \$1.90 /cu.yd. x 5982 cu.yds. = \$11,365.80 |
| Push Rock: | \$1.20 /cu.yd. x 8375 cu.yds. = \$10,050.00 |
| Load Dump Truck: | \$0.70 /cu.yd. x 8375 cu.yds. = \$5,862.50 |

Subtotal \$35,813.30

| | | | | |
|---|---|---|----------|----------|
| Move In/Set-up Crusher | | | | \$0.00 |
| Move In and set up Drill and Compressor | 0 | @ | \$334.65 | = \$0.00 |
| Move in Roller and Compactor | 0 | @ | \$334.65 | = \$0.00 |
| Move in Grader | 0 | @ | \$87.60 | = \$0.00 |
| Move in D-8 | 0 | @ | \$503.24 | = \$0.00 |
| Move in Loader | 0 | @ | \$388.27 | = \$0.00 |
| Move in Excavator | 0 | @ | \$550.03 | = \$0.00 |
| Move in Trucks | 0 | @ | \$104.23 | = \$0.00 |
| Move in Water Truck | 0 | @ | \$122.51 | = \$0.00 |
| Change Gradation | | | | |

Subtotal \$0.00

TOTAL PRODUCTION COSTS \$35,813.30

Base Cost Pitrun/rip rap= \$4.28 Per Cu.Yd.

| Road Segment | Haul Cost \$/cu.yd. | Proc Cost \$/cu.yd. | Base Cost. \$/cu.yd. | Cost \$/cu.yd. | Number Cu. Yds | ROCK COST |
|----------------------------------|------------------------|------------------------|-------------------------|-------------------|-------------------|--------------|
| G to H Landing Rock (Pit-Run) | 2.69 | 0.90 | 4.28 | 7.87 | 150 | \$1,180.50 |
| I to J 0 1480 (Pitrun) | 1.14 | 1.10 | 4.28 | 6.52 | 1080 | \$7,041.60 |
| I to J Culvert Backfill (Pitrun) | 1.20 | 0.60 | 4.28 | 6.08 | 15 | \$91.20 |
| I to J Landing Rock (Pitrun) | 1.28 | 0.90 | 4.28 | 6.46 | 150 | \$969.00 |
| I to J Approach (Pitrun) | 1.05 | 1.10 | 4.28 | 6.43 | 40 | \$257.20 |
| I to J Spot Rock (Pitrun) | 1.16 | 1.10 | 4.28 | 6.54 | 10 | \$65.40 |
| I to J Spot Rock (Pitrun) | 1.24 | 1.10 | 4.28 | 6.62 | 30 | \$198.60 |
| I to J Spot Rock (Pitrun) | 1.24 | 1.10 | 4.28 | 6.62 | 50 | \$331.00 |
| K to L 0 570 (Pitrun) | 1.13 | 1.10 | 4.28 | 6.51 | 440 | \$2,864.40 |
| K to L Landing Rock (Pitrun) | 1.17 | 0.90 | 4.28 | 6.35 | 80 | \$508.00 |
| K to L Junction Rock (Pitrun) | 1.08 | 1.10 | 4.28 | 6.46 | 60 | \$387.60 |
| M to N 0 800 (Pitrun) | 1.03 | 1.10 | 4.28 | 6.41 | 550 | \$3,525.50 |
| M to N Landing Rock (Pitrun) | 1.04 | 0.90 | 4.28 | 6.22 | 100 | \$622.00 |
| O to P Junction Rock (Pitrun) | 1.04 | 1.10 | 4.28 | 6.42 | 30 | \$192.60 |
| Q to R 0 2875 (Pitrun) | 1.48 | 1.10 | 4.28 | 6.86 | 2120 | \$14,543.20 |
| Q to R Landing Rock (Pitrun) | 1.70 | 0.90 | 4.28 | 6.88 | 150 | \$1,032.00 |
| Q to R Tank Trap (Pitrun) | 1.28 | 1.10 | 4.28 | 6.66 | 20 | \$133.20 |
| Q to R Junction Rock (Pitrun) | 1.25 | 1.10 | 4.28 | 6.63 | 30 | \$198.90 |
| Q to R Bedding/Backfill (Pitrun) | 1.60 | 0.60 | 4.28 | 6.48 | 30 | \$194.40 |
| S to T 0 960 (Pitrun) | 1.61 | 1.10 | 4.28 | 6.99 | 760 | \$5,312.40 |
| S to T Landing Rock (Pitrun) | 1.69 | 0.90 | 4.28 | 6.87 | 180 | \$1,236.60 |
| S to T Junction Rock (Pitrun) | 1.54 | 1.10 | 4.28 | 6.92 | 20 | \$138.40 |
| U to V 0 290(Pitrun) | 1.65 | 1.10 | 4.28 | 7.03 | 230 | \$1,616.90 |
| U to V Junction Rock (Pitrun) | 1.62 | 0.60 | 4.28 | 6.50 | 100 | \$650.00 |
| U to V Landing Rock (Pitrun) | 1.64 | 0.90 | 4.28 | 6.82 | 100 | \$682.00 |
| U to V Landing Rock (Pitrun) | 1.67 | 0.90 | 4.28 | 6.85 | 50 | \$342.50 |
| W to X 0 785 (Pitrun) | 1.50 | 1.10 | 4.28 | 6.88 | 650 | \$4,472.00 |
| W to X Landing Rock (Pitrun) | 1.62 | 0.90 | 4.28 | 6.80 | 50 | \$340.00 |
| W to X Junction Rock (Pitrun) | 1.50 | 1.10 | 4.28 | 6.88 | 30 | \$206.40 |
| Y to Z 0 125 (Pitrun) | 1.42 | 1.10 | 4.28 | 6.80 | 100 | \$680.00 |
| Y to Z Landing Rock (Pitrun) | 1.43 | 0.90 | 4.28 | 6.61 | 50 | \$330.50 |
| Y to Z Junction Rock (Pitrun) | 1.41 | 1.10 | 4.28 | 6.79 | 30 | \$203.70 |
| CC to DD 0 900 (Pitrun) | 1.34 | 1.10 | 4.28 | 6.72 | 680 | \$4,569.60 |
| CC to DD Landing Rock (Pitrun) | 1.41 | 0.90 | 4.28 | 6.59 | 180 | \$1,186.20 |
| CC to DD Junction Rock (Pitrun) | 1.26 | 1.10 | 4.28 | 6.64 | 30 | \$199.20 |

Total C.Y. 8375 Sub Total \$56,502.70

TOTAL ROCKING COSTS \$56,502.70

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|-------------|---------------------|--------------------|-------------------------|
| Pit: | Clear Creek | Location: | Sec. 15, T1S, R7W, W.M. |
| Sale: | <u>Tres Hombres</u> | Road: | 9925 c.y. |
| Swell: | 1.40 | Stockpile: | c.y. |
| Shrinkage | 1.16 | Total Truck Loads: | 9925 c.y. |
| Drill Pct.: | 100% | In Place Total: | 7089 c.y. |

| | | | | | |
|--|----------------|---|--------------|---|-------------|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | | | | | \$12,250.00 |
| Drill & Shoot: | \$2.50 /cu.yd. | x | 7089 cu.yds. | = | \$17,722.50 |
| Push Rock: | \$0.70 /cu.yd. | x | 9925 cu.yds. | = | \$6,947.50 |
| Load Crusher: | \$0.70 /cu.yd. | x | 9925 cu.yds. | = | \$6,947.50 |
| Crush Rock(2 1/2"): | \$2.70 /cu.yd. | x | 6895 cu.yds. | = | \$18,616.50 |
| Crush Rock(4"): | \$2.35 /cu.yd. | x | 1190 cu.yds. | = | \$2,796.50 |
| Load Dump Truck: | \$0.70 /cu.yd. | x | 9925 cu.yds. | = | \$6,947.50 |
| Oversize Reduction: | \$4.50 /cu.yd. | x | 993 cu.yds. | = | \$4,468.50 |

Subtotal \$76,696.50

| | | | | | |
|---|---|---|----------|---|------------|
| Move In/Set-up Crusher | | | | | \$3,781.46 |
| Move In and set up Drill and Compressor | 1 | @ | \$334.65 | = | \$334.65 |
| Move in Roller and Compactor | 1 | @ | \$334.65 | = | \$334.65 |
| Move in Grader | 1 | @ | \$87.60 | = | \$87.60 |
| Move in Loader | 1 | @ | \$388.27 | = | \$388.27 |
| Move in Excavator | 1 | @ | \$550.03 | = | \$550.03 |
| Move in Trucks | 3 | @ | \$104.23 | = | \$312.69 |
| Move in Water Truck | 1 | @ | \$122.51 | = | \$122.51 |
| Change Gradation | | | | | |

Subtotal \$5,911.86

TOTAL PRODUCTION COSTS \$82,608.36

Base Cost= \$8.32 Per Cu.Yd.

| Road Segment | Haul Cost \$/cu.yd. | Proc Cost \$/cu.yd. | Base Cost. \$/cu.yd. | Cost \$/cu.yd. | Number Cu. Yds | ROCK COST |
|--|---------------------|---------------------|----------------------|----------------|----------------|--------------|
| A to B Cross Drain Backfill/bedding (Cru | 3.64 | 0.60 | 8.32 | 12.56 | 360 | \$4,521.60 |
| A to B Stream Crossing backfill/bedding | 3.64 | 0.60 | 8.32 | 12.56 | 150 | \$1,884.00 |
| A to B Stream Crossing Pitrun (Pit-Run) | 3.64 | 1.10 | 8.32 | 13.06 | 160 | \$2,089.60 |
| A to B Ditch Armor (Pit-Run) | 3.64 | 0.60 | 8.32 | 12.56 | 50 | \$628.00 |
| A to B Ditch Armor (Pit-Run) | 3.64 | 0.60 | 8.32 | 12.56 | 15 | \$188.40 |
| A to B Ditch Armor (Pit-Run) | 3.64 | 0.60 | 8.32 | 12.56 | 200 | \$2,512.00 |
| A to B Road Widening (Crushed) | 3.64 | 2.45 | 8.32 | 14.41 | 25 | \$360.25 |
| A to B Road Widening (Pit-Run) | 3.64 | 2.45 | 8.32 | 14.41 | 75 | \$1,080.75 |
| C to D 17880 39055 (Crushed) | 2.06 | 2.45 | 8.32 | 12.83 | 5450 | \$69,923.50 |
| C to D Culvert Backfill/bedding (Crusher | 1.90 | 0.60 | 8.32 | 10.82 | 225 | \$2,434.50 |
| C to D Spot Rock (Crushed) | 1.90 | 0.75 | 8.32 | 10.97 | 405 | \$4,442.85 |
| C to D Turnout (Crushed) | 1.24 | 2.45 | 8.32 | 12.01 | 10 | \$120.10 |
| C to D Turnout (Crushed) | 1.12 | 2.45 | 8.32 | 11.89 | 10 | \$118.90 |
| E to F Culvert Removal (Crushed) | 2.51 | 0.75 | 8.32 | 11.58 | 50 | \$579.00 |
| G to H 4170 5865 (Jaw Run) | 3.82 | 2.45 | 8.32 | 14.59 | 1160 | \$16,924.40 |
| G to H Junction Rock (Jaw Run) | 3.04 | 2.45 | 8.32 | 13.81 | 30 | \$414.30 |
| G to H Bedding/Backfill (Crushed) | 3.36 | 0.60 | 8.32 | 12.28 | 90 | \$1,105.20 |
| I to J Junction Rock (Crushed) | 2.18 | 2.45 | 8.32 | 12.95 | 50 | \$647.50 |
| M to N Junction Rock (Crushed) | 1.99 | 2.45 | 8.32 | 12.76 | 30 | \$382.80 |
| Q to R Approach (Crushed) | 1.75 | 2.45 | 8.32 | 12.52 | 20 | \$250.40 |
| Y to Z Junction Rock (Crushed) | 1.72 | 2.45 | 8.32 | 12.49 | 10 | \$124.90 |
| AA to BB Junction Rock (Crushed) | 1.65 | 2.45 | 8.32 | 12.42 | 10 | \$124.20 |
| Total C.Y. | | | | 9925 | Sub Total | \$127,553.55 |

TOTAL ROCKING COSTS \$127,553.55

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

Sale: **Tres Hembres**

| LOWBOY HAUL (Round Trip) | | |
|--------------------------|--------------|-----------------|
| DIST. (mi) | ROADWAY | AVE SPEED (mph) |
| 12.0 | Pavement | 30 |
| 8.0 | Main Lines | 7 |
| 2.0 | 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 |
|-----|------------------------------------|--------------|------------|----------------------------|---------------|-------------|-------------|------------------|------------|
| 0 | Drill & Compressor | \$0.00 | | \$46.00 | 0.00 | 0.41 | 0.41 | \$0.00 | \$0.00 |
| 1 | Brush Cutter | \$351.90 | | \$4.00 | 0.00 | 0.28 | 0.28 | \$1.12 | \$353.02 |
| 0 | Graders | \$0.00 | | \$3.65 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Loader (Small) | \$0.00 | 1 | \$3.55 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Loader (Med. & Large) | \$0.00 | 1 | \$9.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Rollers (smooth/grid) & Compactors | \$0.00 | | \$5.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Excavators (Small) | \$0.00 | | \$22.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Excavators (Med.) | \$0.00 | | \$35.50 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 1 | Excavators (Large) | \$559.23 | 1 | \$44.80 | 0.00 | 4.24 | 4.24 | \$189.95 | \$749.18 |
| 0 | Tired Backhoes/Skidders | \$0.00 | | \$3.00 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 1 | Tractors (D6) | \$424.05 | 0 | \$7.10 | 0.00 | 4.24 | 4.24 | \$30.10 | \$454.15 |
| 0 | Tractors (D7) | \$0.00 | 2 | \$11.30 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Tractor (D8) | \$0.00 | 2 | \$15.10 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Dump Truck (10 cy +) | \$0.00 | | \$2.85 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 2 | Dump Truck (Off Hiway) | \$908.21 | 1 | \$4.75 | 0.00 | 4.24 | 4.24 | \$40.28 | \$948.49 |
| 1 | Water Truck (1500 Gal) | \$104.23 | | \$2.85 | 0.00 | 4.24 | 4.24 | \$12.08 | \$116.31 |
| 0 | Water Truck (2500 Gal) | \$0.00 | | \$2.85 | 0.00 | 0.00 | 0 | \$0.00 | \$0.00 |
| 0 | Jaw | \$1,066.00 | | | | | | | |
| 0 | 2-Stage Crusher | \$1,597.00 | | | | | | | |
| 0 | 3-Stage Crusher | \$2,489.00 | | | | | | | |

| | |
|-----------------------------|-------------------|
| TOTAL MOVE-IN COSTS: | \$2,621.15 |
|-----------------------------|-------------------|



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Tres Hembres

1. Type of Sale

Regeneration harvest, Recovery.

2. Legal Description

Portions of Sections 16, 17, 20 and 21, T1S, R7W, W.M. Tillamook County, Oregon.

3. Sale Acreage

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

| | ACRES | |
|-----------------------------------|--------------|------------|
| | <u>Gross</u> | <u>Net</u> |
| Area 1 (Modified Clearcut) | 126 | 114 |
| Area 2 (Modified Clearcut) | 116 | 102 |
| Area 3 (Modified Clearcut) | 134 | 115 |

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

The timber sale areas were variable plot cruised. Plot and line spacing was 350' and 700' respectively on different azimuths for the units to provide the uniform coverage. All conifers 8" DBH and greater containing 20 board feet and all hardwoods 10" DBH and greater containing 30 board feet were recorded. Species, DBH (to the nearest inch), merchantable bole length (to the nearest foot), form factor, and defect were recorded on all trees. Merchantable heights were recorded to 6" and 7" outside bark for conifers and hardwoods respectively.

B. Plot size

Plot size varied between areas because different BAFs were used for each area. BAFs used were as follows; Area 1-27.78 BAF, Area 2-20 BAF, and Area 3-22.5 BAF. Point of tree observation was 04'.

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock tables, and stand tables for each species and type.

Net sale acreage was used for volume calculation. Net acreage is the gross acreage (the area within the posted sale boundary) minus the posted buffer areas and roads.

The cruise data was grown forward with adjustments made for the reduced growth effects of Swiss Needle Cast. Area 1 was cruised in 2014 and Areas 2 and 3 were cruised in 2013. All Areas were grown forward to June, 2016.

| Cruise Statistics (Board Foot Volumes) | | | |
|--|-----------------|--------|--------|
| Area | Number of Plots | SE (%) | CV (%) |
| 1 | 18 | 6.7 | 27.7 |
| 2 | 16 | 12.7 | 49.3 |
| 3 | 16 | 8.1 | 31.3 |
| Total | 50 | 5.2 | 36.9 |

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 10% reduction to hardwood volumes for hidden defect and breakage.

7. Timber Description

Area 1 and the west $\frac{3}{4}$ of Area 2 were burned in the 1933 Tillamook Fire. These areas and the remainder of Area 2 and all of Area 3 were burned in the 1945 Wilson River/Salmonberry Fire. The west $\frac{2}{3}$ of Area 1 was planted in 1958-59 and the remainder of the areas were re-forested by either planting or seeding between 1958 and 1964. Past spraying to control alder was observed in all of the Areas which caused multiple tops in most of the red alder. The other forest management activity was a commercial thin (Ziggy Bob) completed in 2000 that operated in portions of Areas 1, 2, and 3.

| Sale Area | Species | DBH | Merchantable Bole Height (feet) | Merchantable top (inches inside bark) |
|-----------|-------------|------|---------------------------------|---------------------------------------|
| 1 | Douglas-fir | 17.9 | 73 | 5 |
| | Red alder | 10.3 | 32 | 6 |
| 2 | Douglas-fir | 16.8 | 58 | 5 |
| | Red alder | 13.7 | 40 | 6 |
| 3 | Douglas-fir | 15.1 | 51 | 5 |
| | Red alder | 13.8 | 46 | 6 |

8. Cruiser Names/Dates

Cruised by District personnel in 2013 and 2014.

9. Revenue Distribution

FDF 100%

Tax Code: 9-2

Deed Number: 161

10. Attachments

Volume summaries

Stand Table

Log Stock Tables

Logging Plan Map

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

NF – Noble fir leave

SS – Sitka spruce leave

WH – Western hemlock leave

RC – Western red cedar reserved

OC – Class 1 or 2 snag

Log Stock Table - MBF
Project: TRESHEMB

T01S R07W S20 TSALE

T01S R07W S20 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
01S 07W 20 414_AREA1 SALE 114.00 18 113 Date 2/1/2016
Time 11:18:35AM

| Spp | T | S | So | Gr | Log | Len | Gross MBF | % Def | Net MBF | % Spc | Net Volume by Scaling Diameter in Inches | | | | | | | | | | | |
|-----|--------|---|----|----|-----|-----|--------------|----------|------------|----------|--|-----|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|
| | | | | | | | | | | | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 | 20-23 | 24-29 | 30-39 | 40+ |
| DF | CO | 2 | 20 | | | | 31 | | 31 | 1.6 | | | | | | | 14 | | | 17 | | |
| DF | CO | 2 | 22 | | | | 16 | | 16 | .8 | | | | | | | | | | 16 | | |
| DF | CO | 2 | 24 | | | | 25 | | 25 | 1.3 | | | | 11 | | | | | | 15 | | |
| DF | CO | 2 | 28 | | | | 27 | | 27 | 1.4 | | | | | | | | | | | 27 | |
| DF | CO | 2 | 30 | | | | 13 | | 13 | .7 | | | | | | | | | | 13 | | |
| DF | CO | 2 | 40 | | | | 517 | .7 | 513 | 26.8 | | | | 168 | | 201 | 76 | | 43 | | 25 | |
| DF | CO | 3 | 21 | | | | 5 | | 5 | .2 | | | | 1 | 3 | | | | | | | |
| DF | CO | 3 | 22 | | | | 1 | | 1 | .0 | | | 1 | | | | | | | | | |
| DF | CO | 3 | 30 | | | | 19 | | 19 | 1.0 | | | | | 19 | | | | | | | |
| DF | CO | 3 | 32 | | | | 72 | | 72 | 3.8 | | | | 8 | 54 | | | | | 10 | | |
| DF | CO | 3 | 40 | | | | 961 | 1.0 | 951 | 49.6 | | | | 146 | 215 | 287 | 172 | 32 | 81 | | 19 | |
| DF | CO | 3 | 41 | | | | 5 | | 5 | .3 | | | | | | | | | | | | |
| DF | CO | 4 | 13 | | | | 5 | | 5 | .3 | | | 4 | | | | | | | | | |
| DF | CO | 4 | 15 | | | | 4 | | 4 | .2 | | | 4 | | | | | | | | | |
| DF | CO | 4 | 16 | | | | 10 | | 10 | .5 | | | 10 | | | | | | | | | |
| DF | CO | 4 | 17 | | | | 3 | | 3 | .1 | | | | 1 | | | | | | | | |
| DF | CO | 4 | 18 | | | | 9 | | 9 | .4 | | | 9 | | | | | | | | | |
| DF | CO | 4 | 19 | | | | 1 | | 1 | .1 | | | 1 | | | | | | | | | |
| DF | CO | 4 | 20 | | | | 13 | | 13 | .7 | | | 3 | 3 | 7 | | | | | | | |
| DF | CO | 4 | 21 | | | | 17 | | 17 | .9 | | | 17 | | | | | | | | | |
| DF | CO | 4 | 23 | | | | 4 | | 4 | .2 | | | 4 | | | | | | | | | |
| DF | CO | 4 | 25 | | | | 10 | | 10 | .5 | | | 10 | | | | | | | | | |
| DF | CO | 4 | 26 | | | | 12 | | 12 | .6 | | | 12 | | | | | | | | | |
| DF | CO | 4 | 28 | | | | 5 | | 5 | .3 | | | 5 | | | | | | | | | |
| DF | CO | 4 | 29 | | | | 5 | | 5 | .3 | | | 5 | | | | | | | | | |
| DF | CO | 4 | 30 | | | | 1 | | 1 | .1 | | | 1 | | | | | | | | | |
| DF | CO | 4 | 31 | | | | 1 | | 1 | .0 | | | 1 | | | | | | | | | |
| DF | CO | 4 | 32 | | | | 3 | | 3 | .2 | | | 3 | | | | | | | | | |
| DF | CO | 4 | 33 | | | | 1 | | 1 | .0 | | | 1 | | | | | | | | | |
| DF | CO | 4 | 34 | | | | 16 | | 16 | .8 | | | 16 | | | | | | | | | |
| DF | CO | 4 | 36 | | | | 5 | | 5 | .3 | | | 5 | | | | | | | | | |
| DF | CO | 4 | 38 | | | | 10 | | 10 | .5 | | | 10 | | | | | | | | | |
| DF | CO | 4 | 39 | | | | 7 | | 7 | .4 | | | 7 | | | | | | | | | |
| DF | CO | 4 | 40 | | | | 98 | | 98 | 5.1 | | | 77 | | | | | | | 21 | | |
| DF | Totals | | | | | | 1,931 | | 1,918 | 86.9 | | 208 | 156 | 285 | 319 | 350 | 233 | 184 | | 113 | 69 | |
| RA | H | 2 | 16 | | | | 10 | | 10 | 5.9 | | | | 10 | | | | | | | | |
| RA | H | 3 | 16 | | | | 12 | | 12 | 6.6 | | | | 12 | | | | | | | | |
| RA | H | 4 | 13 | | | | 9 | | 9 | 5.2 | | | 9 | | | | | | | | | |
| RA | H | 4 | 15 | | | | 10 | | 10 | 5.7 | | | | 10 | | | | | | | | |
| RA | H | 4 | 18 | | | | 15 | | 15 | 8.7 | | | 15 | | | | | | | | | |
| RA | H | 4 | 19 | | | | 5 | | 5 | 2.9 | | | 5 | | | | | | | | | |
| RA | H | 4 | 20 | | | | 8 | | 8 | 4.5 | | | | 8 | | | | | | | | |
| RA | H | 4 | 21 | | | | 5 | | 5 | 2.9 | | | 5 | | | | | | | | | |
| RA | H | 4 | 22 | | | | 10 | | 10 | 5.7 | | | 10 | | | | | | | | | |
| RA | H | 4 | 24 | | | | 16 | | 16 | 9.0 | | | 3 | | | 12 | | | | | | |
| RA | H | 4 | 25 | | | | 12 | 26.7 | 9 | 5.3 | | | 9 | | | | | | | | | |
| RA | H | 4 | 26 | | | | 2 | | 2 | 1.0 | | | 2 | | | | | | | | | |
| RA | H | 4 | 27 | | | | 3 | | 3 | 1.6 | | | 3 | | | | | | | | | |
| RA | H | 4 | 28 | | | | 7 | | 7 | 4.0 | | | 7 | | | | | | | | | |
| RA | H | 4 | 29 | | | | 16 | 12.4 | 14 | 8.0 | | | 6 | 8 | | | | | | | | |

Log Stock Table - MBF
Project: TRESHEMB

T01S R07W S20 TSALE

T01S R07W S20 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
01S 07W 20 414_AREA1 SALE 114.00 18 113 Date 2/1/2016
Time 11:18:35AM

| 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 |
| RA | H | 4 | 30 | | | 5 | 25.0 | 3 | 2.0 | | | 3 | | | | | | | |
| RA | H | 4 | 31 | | | 3 | | 3 | 1.9 | | | 3 | | | | | | | |
| RA | H | 4 | 34 | | | 6 | | 6 | 3.5 | | | 6 | | | | | | | |
| RA | H | 4 | 36 | | | 6 | | 6 | 3.2 | | | 6 | | | | | | | |
| RA | H | 4 | 40 | | | 23 | 6.4 | 22 | 12.4 | | | 22 | | | | | | | |
| RA | Totals | | | | | 182 | 4.4 | 174 | 7.9 | | | 114 | 16 | 10 | 22 | 12 | | | |
| OC | * | * | 32 | | | 50 | | 50 | 100.0 | | | 50 | | | | | | | |
| OC | Totals | | | | | 50 | | 50 | 2.3 | | | 50 | | | | | | | |
| SS | * | * | 32 | | | 38 | | 38 | 100.0 | | | 38 | | | | | | | |
| SS | Totals | | | | | 38 | | 38 | 1.7 | | | 38 | | | | | | | |
| NF | CO | 2 | 40 | | | 16 | | 16 | 90.9 | | | | | | 16 | | | | |
| NF | CO | 4 | 36 | | | 2 | | 2 | 9.1 | | 2 | | | | | | | | |
| NF | Totals | | | | | 18 | | 18 | .8 | | 2 | | | | 16 | | | | |
| WH | CO | 3 | 40 | | | 9 | | 9 | 100.0 | | | 9 | | | | | | | |
| WH | Totals | | | | | 9 | | 9 | .4 | | | 9 | | | | | | | |
| Total All Species | | | | | | 2,228 | | 2,207 | 100.0 | | 210 | 368 | 301 | 329 | 372 | 245 | 200 | 113 | 69 |

| FI | | TSTNDSUM | | Stand Table Summary | | | | | | | | | | | | |
|---------------------|-----|----------|-----------|---------------------|-----------|----------------|--------------|--------------|---------------|---------------------|----------------------|-----------------------|-----------------------|--------|--------|-------|
| Project | | | | | | | | | | TRESHEMB | | | | | | |
| T01S R07W S20 TSALE | | | | | | | | | | T01S R07W S20 TSALE | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | | Page: | 1 | | | | | |
| 01S | 07W | 20 | 414_AREA1 | SALE | 114.00 | 18 | 113 | | | Date: | 02/01/2010 | | | | | |
| | | | | | | | | | | Time: | 11:15:40AM | | | | | |
| S Spc | T | Sample | | Av | | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
| | | DBH | Trees | FF 16' | Ht Tot | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| DF | | 9 | | 84 | 33 | 3.506 | 1.59 | 3.55 | 5.2 | 20.7 | .53 | 19 | 74 | 60 | 21 | 8 |
| DF | | 10 | | 89 | 88 | 8.519 | 4.76 | 14.39 | 8.6 | 39.3 | 3.52 | 123 | 566 | 401 | 141 | 65 |
| DF | | 12 | | 88 | 85 | 3.944 | 3.17 | 7.99 | 11.1 | 46.6 | 2.52 | 89 | 372 | 288 | 101 | 42 |
| DF | | 13 | | 89 | 94 | 3.360 | 3.17 | 6.81 | 14.6 | 59.5 | 2.84 | 100 | 405 | 324 | 114 | 46 |
| DF | | 14 | | 86 | 102 | 7.244 | 7.94 | 16.15 | 16.4 | 67.8 | 7.54 | 264 | 1,094 | 859 | 302 | 125 |
| DF | | 15 | | 83 | 104 | 8.834 | 11.11 | 17.90 | 21.9 | 82.8 | 11.20 | 393 | 1,483 | 1,277 | 448 | 169 |
| DF | | 16 | | 86 | 96 | 7.764 | 11.11 | 15.74 | 23.0 | 89.5 | 10.31 | 361 | 1,408 | 1,176 | 412 | 161 |
| DF | | 17 | | 88 | 105 | 3.930 | 6.35 | 7.97 | 30.3 | 119.1 | 6.87 | 241 | 948 | 784 | 275 | 108 |
| DF | | 18 | | 85 | 106 | 4.382 | 7.94 | 8.88 | 33.6 | 123.2 | 8.49 | 298 | 1,094 | 968 | 340 | 125 |
| DF | | 19 | | 83 | 106 | 4.719 | 9.52 | 10.36 | 34.7 | 121.9 | 10.25 | 360 | 1,263 | 1,169 | 410 | 144 |
| DF | | 20 | | 82 | 108 | 2.840 | 6.35 | 6.47 | 36.9 | 125.4 | 6.80 | 239 | 812 | 776 | 272 | 93 |
| DF | | 21 | | 82 | 110 | 2.576 | 6.35 | 6.52 | 37.5 | 140.8 | 6.98 | 245 | 919 | 796 | 279 | 105 |
| DF | | 22 | | 81 | 105 | 2.347 | 6.35 | 6.54 | 35.1 | 133.7 | 6.53 | 229 | 874 | 745 | 261 | 100 |
| DF | | 23 | | 86 | 106 | .537 | 1.59 | 1.09 | 54.9 | 222.6 | 1.70 | 60 | 242 | 194 | 68 | 28 |
| DF | | 24 | | 82 | 105 | .986 | 3.17 | 2.00 | 58.1 | 201.9 | 3.31 | 116 | 403 | 377 | 132 | 46 |
| DF | | 25 | | 77 | 104 | 1.363 | 4.76 | 3.22 | 54.1 | 173.1 | 4.97 | 174 | 558 | 566 | 199 | 64 |
| DF | | 26 | | 81 | 117 | .840 | 3.17 | 2.13 | 59.7 | 217.4 | 3.62 | 127 | 463 | 413 | 145 | 53 |
| DF | | 27 | | 72 | 98 | 1.169 | 4.76 | 3.16 | 44.3 | 141.1 | 3.99 | 140 | 445 | 454 | 159 | 51 |
| DF | | 29 | | 74 | 99 | 1.013 | 4.76 | 2.05 | 69.4 | 203.6 | 4.06 | 142 | 418 | 463 | 162 | 48 |
| DF | | 30 | | 75 | 120 | .631 | 3.17 | 1.60 | 71.7 | 279.6 | 3.27 | 115 | 447 | 372 | 131 | 51 |
| DF | | 33 | | 72 | 98 | .782 | 4.76 | 1.59 | 108.7 | 291.6 | 4.91 | 172 | 462 | 560 | 196 | 53 |
| DF | | 34 | | 74 | 109 | .737 | 4.76 | 2.24 | 78.7 | 299.1 | 5.03 | 176 | 670 | 573 | 201 | 76 |
| DF | | 35 | | 71 | 96 | .464 | 3.17 | .94 | 119.5 | 339.1 | 3.20 | 112 | 319 | 365 | 128 | 36 |
| DF | | 36 | | 80 | 122 | .657 | 4.76 | 2.00 | 88.9 | 438.3 | 5.06 | 178 | 876 | 577 | 203 | 100 |
| DF | | 39 | | 64 | 85 | .187 | 1.59 | .38 | 143.6 | 258.9 | 1.55 | 54 | 98 | 176 | 62 | 11 |
| DF | | 40 | | 64 | 85 | .177 | 1.59 | .36 | 152.7 | 295.1 | 1.57 | 55 | 106 | 178 | 63 | 12 |
| DF | | Totals | | 84 | 97 | 73.507 | 131.74 | 152.02 | 30.1 | 110.6 | 130.61 | 4,583 | 16,821 | 14,889 | 5,224 | 1,918 |
| RA | | 9 | | 76 | 36 | 3.434 | 1.56 | 3.46 | 5.9 | 20.9 | .56 | 20 | 72 | 64 | 23 | 8 |
| RA | | 10 | | 83 | 44 | 8.344 | 4.69 | 8.40 | 6.6 | 24.3 | 1.53 | 56 | 205 | 174 | 63 | 23 |
| RA | | 12 | | 87 | 39 | 3.863 | 3.12 | 3.89 | 9.6 | 31.3 | 1.03 | 37 | 122 | 117 | 43 | 14 |
| RA | | 13 | | 75 | 42 | 4.937 | 4.69 | 4.97 | 12.8 | 41.7 | 1.76 | 63 | 207 | 201 | 72 | 24 |
| RA | | 14 | | 65 | 55 | 2.838 | 3.12 | 2.86 | 11.1 | 31.3 | .87 | 32 | 89 | 99 | 36 | 10 |
| RA | | 15 | | 78 | 74 | 1.236 | 1.56 | 1.24 | 20.2 | 52.2 | .69 | 25 | 65 | 79 | 29 | 7 |
| RA | | 17 | | 78 | 58 | 4.812 | 7.81 | 5.81 | 19.3 | 53.9 | 3.08 | 112 | 313 | 352 | 128 | 36 |
| RA | | 18 | | 76 | 52 | 2.575 | 4.69 | 2.59 | 33.8 | 80.0 | 2.41 | 88 | 207 | 275 | 100 | 24 |
| RA | | 19 | | 73 | 59 | 1.541 | 3.12 | 1.55 | 21.4 | 47.0 | .91 | 33 | 73 | 104 | 38 | 8 |
| RA | | 20 | | 79 | 44 | 1.391 | 3.12 | 1.40 | 25.3 | 36.5 | .97 | 35 | 51 | 111 | 40 | 6 |
| RA | | 24 | | 72 | 68 | .483 | 1.56 | .97 | 40.5 | 125.2 | 1.08 | 39 | 122 | 123 | 45 | 14 |
| RA | | Totals | | 78 | 48 | 35.454 | 39.05 | 37.14 | 14.6 | 41.1 | 14.89 | 542 | 1,527 | 1,698 | 617 | 174 |
| OC | | 11 | | 80 | 89 | 2.288 | 1.57 | 2.29 | 26.9 | 96.0 | 1.54 | 62 | 220 | 175 | 70 | 25 |
| OC | | 23 | | 72 | 40 | .523 | 1.57 | .52 | 117.6 | 419.9 | 1.54 | 62 | 220 | 175 | 70 | 25 |
| OC | | Totals | | 79 | 80 | 2.812 | 3.14 | 2.81 | 43.8 | 156.3 | 3.08 | 123 | 440 | 351 | 140 | 50 |
| SS | | 15 | | 62 | 33 | 1.228 | 1.57 | 1.23 | 61.9 | 273.7 | 1.98 | 76 | 336 | 225 | 87 | 38 |
| SS | | Totals | | 62 | 33 | 1.228 | 1.57 | 1.23 | 61.9 | 273.7 | 1.98 | 76 | 336 | 225 | 87 | 38 |
| NF | | 29 | | 76 | 90 | .334 | 1.57 | .68 | 82.0 | 227.8 | 1.33 | 55 | 154 | 152 | 63 | 18 |
| NF | | Totals | | 76 | 90 | .334 | 1.57 | .68 | 82.0 | 227.8 | 1.33 | 55 | 154 | 152 | 63 | 18 |
| WH | | 16 | | 80 | 70 | 1.079 | 1.57 | 1.09 | 27.8 | 73.8 | .97 | 30 | 81 | 111 | 35 | 9 |
| WH | | Totals | | 80 | 70 | 1.079 | 1.57 | 1.09 | 27.8 | 73.8 | 0.97 | 30 | 81 | 111 | 35 | 9 |

Stand Table Summary

Project TRESHEMB

T01S R07W S20 TSALE

T01S R07W S20 TSALE

| | | | | | | | | | |
|------------|------------|------------|------------------|-------------|--------------|--------------|---------------------|--------------|-------------------|
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | Page: | 2 |
| 01S | 07W | 20 | 414_AREA1 | SALE | 114.00 | 18 | 113 | Date: | 02/01/2010 |
| | | | | | | | | Time: | 11:15:40AM |

| S Spc | T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | |
|----------|---|-----|-----------------|-----------|-----------------|----------------|-------------|--------------|---------------|---------------|---------------|-----------------------|-----------------------|--------|--------|-------|
| | | | | | | | | | Net Cu.Ft. | Net Bd.Ft. | | | | Tons | Cunits | MBF |
| Totals | | | | 82 | 80 | 114.413 | 178.63 | 194.97 | 27.7 | 99.3 | 152.86 | 5409 | 19,358 | 17,426 | 6,166 | 2,207 |

Log Stock Table - MBF

Project: TRESHEMB

T01S R07W S17 TSALE

T01S R07W S17 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees
01S 07W 17 11_AREA2 SALE 102.00 16 101

Page 2
Date 2/1/2016
Time 11:21:14AM

| 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 | 20-23 |
| RA | H | 4 | 32 | | | 16 | 6.0 | 15 | 3.5 | | | 4 | 12 | | | | | | | |
| RA | H | 4 | 33 | | | 4 | | 4 | 1.0 | | | 4 | | | | | | | | |
| RA | H | 4 | 34 | | | 19 | | 19 | 4.3 | | | 19 | | | | | | | | |
| RA | H | 4 | 35 | | | 10 | | 10 | 2.3 | | | 10 | | | | | | | | |
| RA | H | 4 | 36 | | | 54 | 5.9 | 50 | 11.3 | | | 50 | | | | | | | | |
| RA | H | 4 | 37 | | | 9 | | 9 | 2.0 | | | 9 | | | | | | | | |
| RA | H | 4 | 39 | | | 7 | | 7 | 1.5 | | | 7 | | | | | | | | |
| RA | H | 4 | 40 | | | 86 | 1.3 | 85 | 19.1 | | | 68 | 17 | | | | | | | |
| RA | Totals | | | | | 455 | 2.2 | 445 | 33.0 | | | 243 | 36 | 118 | 48 | | | | | |
| WH | CO | 3 | 40 | | | 14 | | 14 | 81.8 | | | 14 | | | | | | | | |
| WH | CO | 4 | 34 | | | 3 | | 3 | 18.2 | | 3 | | | | | | | | | |
| WH | Totals | | | | | 18 | | 18 | 1.3 | | 3 | | 14 | | | | | | | |
| OC | * | * | 32 | | | 7 | | 7 | 100.0 | | | 7 | | | | | | | | |
| OC | Totals | | | | | 7 | | 7 | .5 | | | 7 | | | | | | | | |
| RC | CO | 4 | 23 | | | 3 | | 3 | 100.0 | | 3 | | | | | | | | | |
| RC | Totals | | | | | 3 | | 3 | .2 | | 3 | | | | | | | | | |
| Total All Species | | | | | | 1,365 | 1.3 | 1,348 | 100.0 | | 111 | 290 | 157 | 294 | 143 | 132 | 184 | 38 | | |

| FI | | TSTNDSUM | | Stand Table Summary | | | | | | | | | | | | |
|---------------------|--------|----------|----------|---------------------|----------------|-------------|--------------|-------------|---------------|----------------------|-----------------------|-----------------------|---------------|----------|--------|-------|
| Project | | | | | | | | | | | | | | TRESHEMB | | |
| T01S R07W S17 TSALE | | | | | | | | | | T01S R07W S17 TSALE | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | Page: | 1 | | | | | | | |
| 01S | 07W | 17 | 11_AREA2 | SALE | 102.00 | 16 | 101 | Date: | 02/01/2010 | | | | | | | |
| | | | | | | | | Time: | 11:19:57AM | | | | | | | |
| S Spc | T | Sample | | Av | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals | | | |
| | | DBH | Trees | FF 16' | | | | Ht Tot | Net Cu.Ft. | | | | Net Bd.Ft. | Tons | Cunits | MBF |
| DF | | 8 | | 80 | 22 | 3.540 | 1.30 | 3.65 | 3.4 | 10.8 | .35 | 12 | 39 | 36 | 13 | 4 |
| DF | | 9 | | 83 | 49 | 5.594 | 2.60 | 5.77 | 6.6 | 32.3 | 1.08 | 38 | 186 | 111 | 39 | 19 |
| DF | | 10 | | 86 | 95 | 2.266 | 1.30 | 4.67 | 6.9 | 37.7 | .92 | 32 | 176 | 94 | 33 | 18 |
| DF | | 11 | | 86 | 69 | 1.872 | 1.30 | 1.93 | 14.2 | 43.1 | .78 | 28 | 83 | 80 | 28 | 8 |
| DF | | 12 | | 86 | 86 | 4.720 | 3.89 | 9.73 | 11.3 | 48.5 | 3.14 | 110 | 472 | 320 | 112 | 48 |
| DF | | 14 | | 86 | 80 | 2.312 | 2.60 | 4.77 | 15.1 | 59.3 | 2.05 | 72 | 282 | 209 | 73 | 29 |
| DF | | 15 | | 86 | 89 | 1.007 | 1.30 | 2.08 | 19.3 | 75.4 | 1.14 | 40 | 157 | 116 | 41 | 16 |
| DF | | 16 | | 85 | 86 | 4.425 | 6.49 | 9.12 | 21.7 | 85.1 | 5.65 | 198 | 777 | 577 | 202 | 79 |
| DF | | 17 | | 87 | 100 | 2.352 | 3.89 | 4.85 | 28.1 | 111.3 | 3.89 | 136 | 540 | 397 | 139 | 55 |
| DF | | 18 | | 85 | 81 | 1.399 | 2.60 | 2.88 | 27.1 | 102.4 | 2.23 | 78 | 295 | 227 | 80 | 30 |
| DF | | 19 | | 86 | 85 | 1.883 | 3.89 | 3.88 | 28.9 | 107.8 | 3.20 | 112 | 418 | 327 | 115 | 43 |
| DF | | 20 | | 84 | 93 | 1.699 | 3.89 | 3.50 | 37.6 | 129.3 | 3.75 | 132 | 453 | 383 | 134 | 46 |
| DF | | 22 | | 84 | 88 | 1.541 | 3.89 | 3.18 | 40.2 | 132.9 | 3.64 | 128 | 422 | 371 | 130 | 43 |
| DF | | 23 | | 84 | 80 | 1.404 | 3.89 | 2.90 | 41.7 | 136.5 | 3.44 | 121 | 395 | 351 | 123 | 40 |
| DF | | 24 | | 84 | 101 | 1.285 | 3.89 | 3.09 | 46.8 | 173.9 | 4.12 | 145 | 538 | 420 | 147 | 55 |
| DF | | 25 | | 85 | 103 | 1.967 | 6.49 | 4.46 | 54.4 | 212.6 | 6.91 | 243 | 948 | 705 | 247 | 97 |
| DF | | 26 | | 84 | 96 | .725 | 2.60 | 1.49 | 61.9 | 215.5 | 2.64 | 93 | 322 | 269 | 94 | 33 |
| DF | | 28 | | 86 | 107 | 1.243 | 5.19 | 3.20 | 62.8 | 265.1 | 5.74 | 201 | 849 | 585 | 205 | 87 |
| DF | | 30 | | 84 | 102 | .269 | 1.30 | .56 | 88.0 | 334.0 | 1.39 | 49 | 186 | 142 | 50 | 19 |
| DF | | 31 | | 83 | 108 | .503 | 2.60 | 1.04 | 95.0 | 369.1 | 2.81 | 99 | 383 | 287 | 101 | 39 |
| DF | | 32 | | 86 | 114 | .236 | 1.30 | .73 | 70.5 | 330.4 | 1.46 | 51 | 241 | 149 | 52 | 25 |
| DF | | 33 | | 83 | 109 | .443 | 2.60 | 1.14 | 88.3 | 368.5 | 2.87 | 101 | 420 | 293 | 103 | 43 |
| DF | Totals | | | 85 | 79 | 42.686 | 68.80 | 78.62 | 28.2 | 109.2 | 63.22 | 2,218 | 8,584 | 6,448 | 2,262 | 876 |
| RA | 10 | | | 83 | 47 | 6.697 | 3.91 | 4.53 | 8.9 | 27.2 | 1.11 | 40 | 123 | 113 | 41 | 13 |
| RA | 11 | | | 85 | 50 | 9.224 | 6.52 | 9.36 | 13.2 | 43.5 | 3.40 | 124 | 407 | 346 | 126 | 42 |
| RA | 12 | | | 85 | 57 | 9.301 | 7.82 | 9.44 | 17.6 | 58.0 | 4.56 | 166 | 547 | 465 | 169 | 56 |
| RA | 13 | | | 82 | 59 | 6.604 | 6.52 | 6.70 | 21.5 | 60.9 | 3.96 | 144 | 408 | 404 | 147 | 42 |
| RA | 14 | | | 83 | 60 | 5.695 | 6.52 | 6.93 | 20.2 | 58.0 | 3.84 | 140 | 402 | 392 | 143 | 41 |
| RA | 16 | | | 85 | 63 | 4.961 | 6.52 | 6.04 | 26.3 | 74.3 | 4.37 | 159 | 449 | 446 | 162 | 46 |
| RA | 17 | | | 83 | 71 | 4.360 | 6.52 | 7.08 | 24.5 | 84.2 | 4.76 | 173 | 596 | 486 | 177 | 61 |
| RA | 18 | | | 86 | 90 | 1.545 | 2.61 | 3.14 | 28.1 | 108.7 | 2.42 | 88 | 341 | 247 | 90 | 35 |
| RA | 19 | | | 85 | 80 | 3.445 | 6.52 | 5.59 | 32.1 | 123.6 | 4.94 | 180 | 691 | 504 | 183 | 71 |
| RA | 20 | | | 83 | 67 | .618 | 1.30 | 1.26 | 27.8 | 97.8 | .96 | 35 | 123 | 98 | 36 | 13 |
| RA | 21 | | | 86 | 60 | .558 | 1.30 | .57 | 56.8 | 152.1 | .88 | 32 | 86 | 90 | 33 | 9 |
| RA | 22 | | | 85 | 57 | .506 | 1.30 | .51 | 59.3 | 130.4 | .84 | 30 | 67 | 85 | 31 | 7 |
| RA | 27 | | | 75 | 43 | .330 | 1.30 | .33 | 106.1 | 363.1 | .98 | 35 | 120 | 100 | 36 | 12 |
| RA | Totals | | | 84 | 59 | 53.845 | 58.66 | 61.48 | 21.9 | 70.9 | 37.02 | 1,346 | 4,360 | 3,776 | 1,373 | 445 |
| WH | 19 | | | 85 | 97 | .673 | 1.30 | 1.39 | 33.7 | 124.4 | 1.50 | 47 | 172 | 153 | 48 | 18 |
| WH | Totals | | | 85 | 97 | .673 | 1.30 | 1.39 | 33.7 | 124.4 | 1.50 | 47 | 172 | 153 | 48 | 18 |
| OC | 23 | | | 85 | 116 | .462 | 1.32 | .46 | 66.3 | 154.6 | .77 | 31 | 71 | 78 | 31 | 7 |
| OC | Totals | | | 85 | 116 | .462 | 1.32 | .46 | 66.3 | 154.6 | 0.77 | 31 | 71 | 78 | 31 | 7 |
| RC | 15 | | | 70 | 31 | 1.113 | 1.30 | 1.15 | 15.1 | 22.6 | .41 | 17 | 26 | 41 | 18 | 3 |
| RC | Totals | | | 70 | 31 | 1.113 | 1.30 | 1.15 | 15.1 | 22.6 | 0.41 | 17 | 26 | 41 | 18 | 3 |
| Totals | | | | 84 | 68 | 98.780 | 131.37 | 143.10 | 25.6 | 92.3 | 102.90 | 3659 | 13,213 | 10,496 | 3,732 | 1,348 |

Log Stock Table - MBF
Project: TRESHEMB

T01S R07W S16 TSALE

T01S R07W S16 TSALE

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
01S 07W 16 331_AREA3 SALE 115.00 16 102 Date 2/1/2016
Time 11:23:37AM

| Spp | T | S | So | Gr | Log | Len | Gross MBF | % Def | Net MBF | % Spc | Net Volume by Scaling Diameter in Inches | | | | | | | | | | | |
|-------------------|---|--------|----|----|-----|-----|--------------|----------|------------|----------|--|-----|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|
| | | | | | | | | | | | 2-3 | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 | 16-19 | 20-23 | 24-29 | 30-39 | 40+ |
| DF | | CO | 2 | | 32 | | 13 | | 13 | 1.2 | | | | 13 | | | | | | | | |
| DF | | CO | 2 | | 40 | | 290 | .2 | 289 | 26.4 | | | | 114 | 29 | 79 | 67 | | | | | |
| DF | | CO | 3 | | 32 | | 217 | | 217 | 19.8 | | 48 | 115 | 53 | | | | | | | | |
| DF | | CO | 3 | | 39 | | 3 | | 3 | .3 | | 3 | | | | | | | | | | |
| DF | | CO | 3 | | 40 | | 352 | .5 | 350 | 31.9 | | | 103 | 247 | | | | | | | | |
| DF | | CO | 4 | | 16 | | 5 | | 5 | .5 | | 5 | | | | | | | | | | |
| DF | | CO | 4 | | 17 | | 3 | | 3 | .2 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | | 18 | | 16 | | 16 | 1.5 | | 16 | | | | | | | | | | |
| DF | | CO | 4 | | 19 | | 6 | | 6 | .6 | | 6 | | | | | | | | | | |
| DF | | CO | 4 | | 20 | | 27 | | 27 | 2.5 | | 26 | 1 | | | | | | | | | |
| DF | | CO | 4 | | 21 | | 25 | | 25 | 2.3 | | 25 | | | | | | | | | | |
| DF | | CO | 4 | | 22 | | 5 | | 5 | .4 | | 5 | | | | | | | | | | |
| DF | | CO | 4 | | 23 | | 9 | | 9 | .8 | | 9 | | | | | | | | | | |
| DF | | CO | 4 | | 24 | | 17 | | 17 | 1.5 | | 17 | | | | | | | | | | |
| DF | | CO | 4 | | 25 | | 25 | | 25 | 2.3 | | 25 | | | | | | | | | | |
| DF | | CO | 4 | | 26 | | 2 | | 2 | .2 | | 2 | | | | | | | | | | |
| DF | | CO | 4 | | 28 | | 4 | | 4 | .4 | | 2 | 2 | | | | | | | | | |
| DF | | CO | 4 | | 29 | | 10 | | 10 | .9 | | 10 | | | | | | | | | | |
| DF | | CO | 4 | | 30 | | 14 | | 14 | 1.3 | | 14 | | | | | | | | | | |
| DF | | CO | 4 | | 32 | | 10 | | 10 | .9 | | 10 | | | | | | | | | | |
| DF | | CO | 4 | | 34 | | 12 | | 12 | 1.1 | | 12 | | | | | | | | | | |
| DF | | CO | 4 | | 35 | | 3 | | 3 | .3 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | | 36 | | 6 | | 6 | .5 | | 6 | | | | | | | | | | |
| DF | | CO | 4 | | 38 | | 3 | | 3 | .3 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | | 40 | | 22 | | 22 | 2.0 | | 15 | 7 | | | | | | | | | |
| DF | | Totals | | | | | 1,098 | | 1,096 | 66.6 | | 214 | 61 | 218 | 300 | 127 | 29 | 79 | 67 | | | |
| RA | | H | 2 | | 16 | | 10 | | 10 | 1.8 | | | | 10 | | | | | | | | |
| RA | | H | 2 | | 40 | | 34 | 4.6 | 33 | 5.9 | | | | 33 | | | | | | | | |
| RA | | H | 3 | | 32 | | 114 | 9.1 | 103 | 18.8 | | | | 103 | | | | | | | | |
| RA | | H | 3 | | 40 | | 71 | 4.3 | 68 | 12.3 | | | | 68 | | | | | | | | |
| RA | | H | 4 | | 16 | | 15 | | 15 | 2.8 | | 15 | | | | | | | | | | |
| RA | | H | 4 | | 17 | | 8 | | 8 | 1.5 | | 8 | | | | | | | | | | |
| RA | | H | 4 | | 19 | | 2 | | 2 | .4 | | 2 | | | | | | | | | | |
| RA | | H | 4 | | 20 | | 5 | | 5 | .9 | | 5 | | | | | | | | | | |
| RA | | H | 4 | | 22 | | 5 | | 5 | .9 | | 5 | | | | | | | | | | |
| RA | | H | 4 | | 23 | | 10 | | 10 | 1.8 | | 10 | | | | | | | | | | |
| RA | | H | 4 | | 24 | | 10 | 8.8 | 9 | 1.7 | | 9 | | | | | | | | | | |
| RA | | H | 4 | | 26 | | 6 | | 6 | 1.0 | | 6 | | | | | | | | | | |
| RA | | H | 4 | | 32 | | 49 | 10.0 | 44 | 8.0 | | 11 | 33 | | | | | | | | | |
| RA | | H | 4 | | 33 | | 16 | | 16 | 2.9 | | 16 | | | | | | | | | | |
| RA | | H | 4 | | 35 | | 16 | | 16 | 2.9 | | 16 | | | | | | | | | | |
| RA | | H | 4 | | 36 | | 7 | 16.7 | 6 | 1.1 | | 6 | | | | | | | | | | |
| RA | | H | 4 | | 37 | | 10 | 16.7 | 8 | 1.5 | | 8 | | | | | | | | | | |
| RA | | H | 4 | | 38 | | 16 | | 16 | 2.9 | | 16 | | | | | | | | | | |
| RA | | H | 4 | | 40 | | 175 | 3.4 | 169 | 30.8 | | 105 | 65 | | | | | | | | | |
| RA | | Totals | | | | | 579 | 5.1 | 549 | 33.4 | | 238 | 98 | 171 | 43 | | | | | | | |
| Total All Species | | | | | | | 1,677 | 1.9 | 1,645 | 100.0 | | 214 | 299 | 316 | 471 | 169 | 29 | 79 | 67 | | | |

| FI | | TSTNDSUM | | Stand Table Summary | | | | | | | | | | | | | |
|---------------------|--------|----------|-----------|---------------------|-----------|----------------|--------------|--------------|---------------|---------------------|---------------|----------------|----------------|--------|--------|-------|--|
| Project | | | | | | | | | | TRESHEMB | | | | | | | |
| T01S R07W S16 TSALE | | | | | | | | | | T01S R07W S16 TSALE | | | | | | | |
| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees | | | Page: | 1 | | | | | | |
| 01S | 07W | 16 | 331_AREA3 | SALE | 115.00 | 16 | 102 | | | Date: | 02/01/2010 | | | | | | |
| | | | | | | | | | | Time: | 11:22:30AM | | | | | | |
| Spc | S T | Sample | | Av | | Trees/ Acre | BA/ Acre | Logs Acre | Average Log | | Net | | Net | | Totals | | |
| | | DBH | Trees | FF 16' | Ht Tot | | | | Net Cu.Ft. | Net Bd.Ft. | Tons/ Acre | Cu.Ft. Acre | Bd.Ft. Acre | Tons | Cunits | MBF | |
| DF | | 8 | | 88 | 40 | 3.968 | 1.46 | 4.10 | 4.4 | 21.6 | .52 | 18 | 89 | 60 | 21 | 10 | |
| DF | | 9 | | 83 | 47 | 9.405 | 4.38 | 9.71 | 6.8 | 28.8 | 1.89 | 66 | 280 | 218 | 76 | 32 | |
| DF | | 10 | | 82 | 45 | 5.078 | 2.92 | 5.24 | 8.2 | 32.4 | 1.22 | 43 | 170 | 141 | 49 | 20 | |
| DF | | 11 | | 86 | 92 | 6.296 | 4.38 | 13.00 | 9.4 | 43.2 | 3.48 | 122 | 562 | 400 | 140 | 65 | |
| DF | | 12 | | 82 | 47 | 1.763 | 1.46 | 1.82 | 13.4 | 32.4 | .69 | 24 | 59 | 80 | 28 | 7 | |
| DF | | 13 | | 85 | 74 | 9.015 | 8.76 | 15.51 | 14.3 | 49.7 | 6.31 | 221 | 771 | 726 | 255 | 89 | |
| DF | | 14 | | 86 | 75 | 7.773 | 8.76 | 16.05 | 14.6 | 60.3 | 6.66 | 234 | 968 | 766 | 269 | 111 | |
| DF | | 15 | | 88 | 106 | 1.129 | 1.46 | 2.33 | 23.4 | 102.7 | 1.55 | 54 | 239 | 178 | 63 | 28 | |
| DF | | 16 | | 85 | 82 | 3.968 | 5.84 | 7.17 | 23.3 | 86.5 | 4.76 | 167 | 620 | 548 | 192 | 71 | |
| DF | | 17 | | 84 | 80 | 7.029 | 11.68 | 13.60 | 23.5 | 85.7 | 9.13 | 320 | 1,166 | 1,050 | 368 | 134 | |
| DF | | 18 | | 84 | 78 | 2.351 | 4.38 | 4.85 | 25.9 | 86.5 | 3.59 | 126 | 420 | 412 | 145 | 48 | |
| DF | | 20 | | 83 | 82 | 2.814 | 5.84 | 5.81 | 27.9 | 100.0 | 4.62 | 162 | 581 | 531 | 186 | 67 | |
| DF | | 21 | | 85 | 88 | 3.809 | 8.76 | 7.86 | 36.3 | 121.6 | 8.14 | 286 | 956 | 936 | 328 | 110 | |
| DF | | 22 | | 84 | 87 | 2.303 | 5.84 | 4.75 | 36.2 | 118.9 | 4.90 | 172 | 565 | 564 | 198 | 65 | |
| DF | | 23 | | 86 | 77 | 1.049 | 2.92 | 2.17 | 38.5 | 129.7 | 2.38 | 83 | 281 | 273 | 96 | 32 | |
| DF | | 25 | | 85 | 86 | .441 | 1.46 | .91 | 50.7 | 172.9 | 1.32 | 46 | 157 | 151 | 53 | 18 | |
| DF | | 28 | | 83 | 101 | .348 | 1.46 | .72 | 73.3 | 254.0 | 1.50 | 53 | 183 | 173 | 61 | 21 | |
| DF | | 30 | | 84 | 108 | .906 | 4.38 | 1.87 | 89.5 | 345.9 | 4.77 | 167 | 647 | 548 | 192 | 74 | |
| DF | | 31 | | 86 | 113 | .282 | 1.46 | .58 | 99.6 | 459.3 | 1.65 | 58 | 268 | 190 | 67 | 31 | |
| DF | | 32 | | 82 | 68 | .264 | 1.46 | .27 | 135.6 | 389.1 | 1.05 | 37 | 106 | 121 | 43 | 12 | |
| DF | | 34 | | 84 | 113 | .233 | 1.46 | .48 | 119.6 | 508.0 | 1.64 | 58 | 245 | 189 | 66 | 28 | |
| DF | | 35 | | 80 | 106 | .220 | 1.46 | .45 | 120.4 | 432.3 | 1.56 | 55 | 196 | 179 | 63 | 23 | |
| DF | Totals | | | 85 | 72 | 70.443 | 91.96 | 119.25 | 21.6 | 79.9 | 73.34 | 2,573 | 9,527 | 8,434 | 2,959 | 1,096 | |
| RA | | 10 | | 86 | 66 | 10.011 | 5.80 | 7.63 | 14.1 | 58.3 | 2.96 | 107 | 444 | 340 | 124 | 51 | |
| RA | | 11 | | 86 | 62 | 4.137 | 2.90 | 4.20 | 14.8 | 54.6 | 1.72 | 62 | 229 | 197 | 72 | 26 | |
| RA | | 12 | | 87 | 80 | 8.690 | 7.25 | 12.36 | 17.0 | 64.0 | 5.77 | 210 | 791 | 664 | 241 | 91 | |
| RA | | 13 | | 87 | 67 | 4.443 | 4.35 | 6.02 | 16.5 | 51.9 | 2.73 | 99 | 312 | 314 | 114 | 36 | |
| RA | | 14 | | 87 | 69 | 3.831 | 4.35 | 5.19 | 23.1 | 71.0 | 3.29 | 120 | 368 | 378 | 138 | 42 | |
| RA | | 15 | | 86 | 68 | 6.674 | 8.70 | 11.30 | 21.1 | 74.3 | 6.56 | 239 | 839 | 755 | 274 | 97 | |
| RA | | 16 | | 85 | 66 | 4.888 | 7.25 | 5.96 | 24.8 | 81.9 | 4.06 | 148 | 488 | 467 | 170 | 56 | |
| RA | | 18 | | 86 | 75 | 4.330 | 7.25 | 7.92 | 27.6 | 92.2 | 6.01 | 218 | 730 | 691 | 251 | 84 | |
| RA | | 19 | | 87 | 80 | 1.545 | 2.90 | 3.14 | 31.3 | 109.2 | 2.70 | 98 | 343 | 311 | 113 | 39 | |
| RA | | 20 | | 84 | 55 | 2.080 | 4.35 | 2.11 | 22.7 | 43.7 | 1.32 | 48 | 92 | 152 | 55 | 11 | |
| RA | | 24 | | 87 | 86 | .473 | 1.45 | .96 | 42.2 | 142.0 | 1.12 | 41 | 136 | 128 | 47 | 16 | |
| RA | Totals | | | 86 | 69 | 51.099 | 56.52 | 66.77 | 20.8 | 71.5 | 38.22 | 1,390 | 4,774 | 4,396 | 1,598 | 549 | |
| Totals | | | | 85 | 71 | 121.542 | 148.48 | 186.03 | 21.3 | 76.9 | 111.56 | 3963 | 14,301 | 12,829 | 4,558 | 1,645 | |



"STEWARDSHIP IN FORESTRY"

Tres Hembres

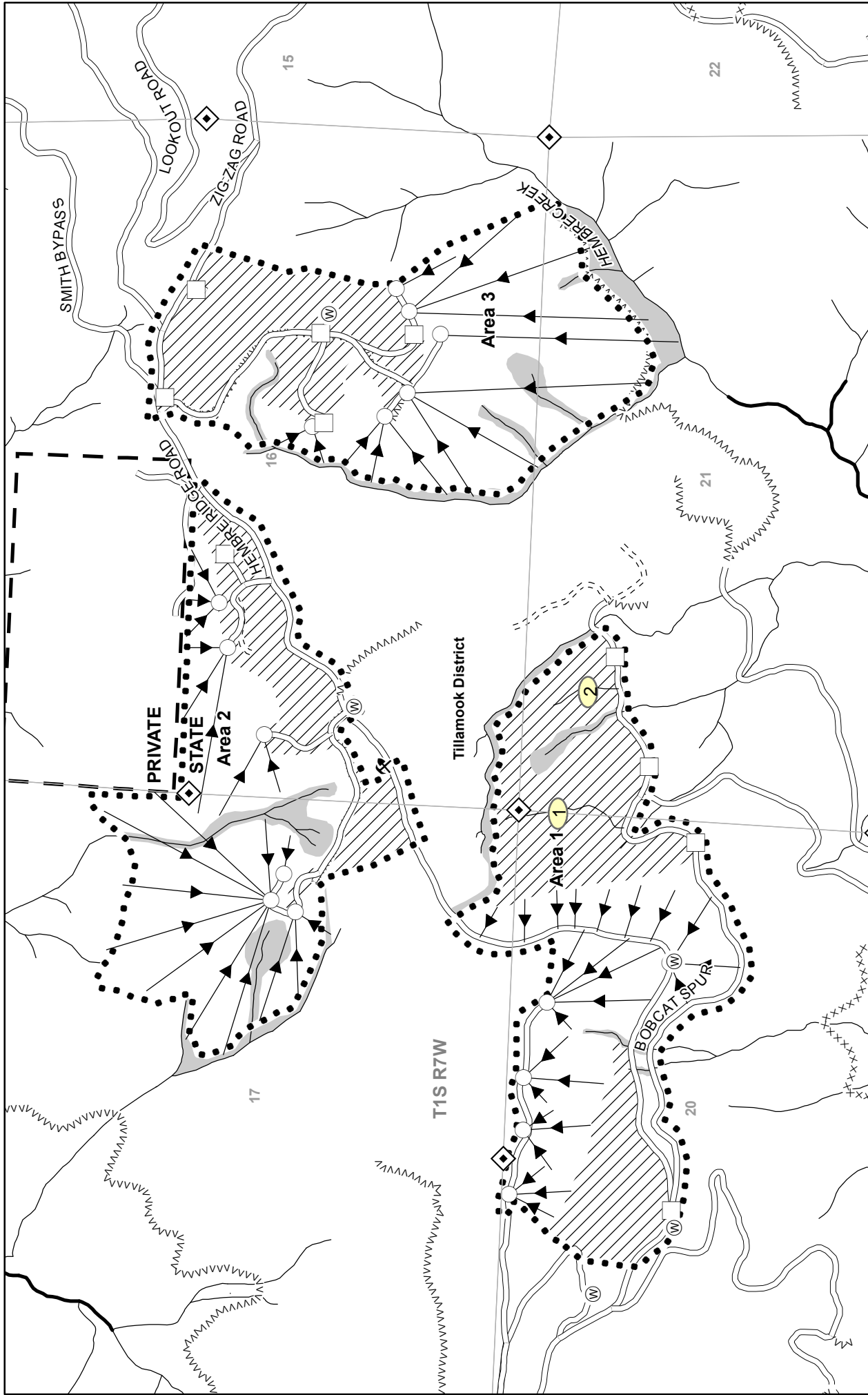
Volume Summary

| Area 1-Modified Clearcut | | | | |
|--------------------------|-------------|-------------|--------|-------------|
| 114 acres | | | | |
| SPECIES | Cruised Net | Cruised Net | Hidden | Net Sale |
| | MBF/ Acre | MBF | D&B | MBF |
| Douglas-fir | 16.8 | 1918 | 1% | 1899 |
| Alder | 1.5 | 174 | 10% | 157 |
| TOTAL | 18.4 | 2092 | | 2056 |

| Areas 2-Modified Clearcut | | | | |
|---------------------------|-------------|-------------|--------|-------------|
| 102 acres | | | | |
| SPECIES | Cruised Net | Cruised Net | Hidden | Net Sale |
| | MBF/ Acre | MBF | D&B | MBF |
| Douglas-fir | 8.6 | 876 | 1% | 867 |
| Alder | 4.4 | 445 | 10% | 401 |
| TOTAL | 13.0 | 1321 | | 1268 |

| Areas 3-Modified Clearcut | | | | |
|---------------------------|-------------|-------------|--------|-------------|
| 115 acres | | | | |
| SPECIES | Cruised Net | Cruised Net | Hidden | Net Sale |
| | MBF/ Acre | MBF | D&B | MBF |
| Douglas-fir | 9.5 | 1096 | 1% | 1085 |
| Alder | 4.8 | 549 | 10% | 493 |
| TOTAL | 14.3 | 1645 | | 1578 |

| TOTAL SALE VOLUME | | | 331 | acres |
|-------------------|-------------------|--|----------------|-------|
| SPECIES | Cruised Net (MBF) | | Net Sale (MBF) | |
| Douglas-fir | 3890 | | 3851 | |
| Red Alder | 1168 | | 1051 | |
| TOTAL | 5058 | | 4902 | |



| | | | |
|--|------------------------------|--|---------------------|
| | Rock source | | Swing road |
| | Stock pile | | Non-project road |
| | Waste area | | Blocked road |
| | Bridge | | OHV trail |
| | Gate | | Non-motorized trail |
| | Survey corner | | Transmission line |
| | Domestic water supply intake | | Railroad |
| | Truck turn-around | | Cable yarding |
| | Helicopter landing zone | | Ground landing |
| | Cultural site | | Yarder landing |
| | Restricted area | | |
| | Area boundary | | |
| | Sale boundary | | |
| | Ownership boundary | | |
| | Fish stream | | |
| | Non-fish stream | | |
| | Unsurfaced road | | |
| | Surfaced road | | |
| | Paved road | | |
| | Abandoned road | | |

LOGGING PLAN

Timber Sale Contract No. 341-16-75
Tres Hembres
Portions of Sections 16, 17, 20, and 21
of T1SR7W, W.M.,
Tillamook County, Oregon

1,000 0 1,000 Feet

| Area | Type of Operation | Gross | Net |
|--------------|-------------------|------------|------------|
| 1 | Modified Clearcut | 126 | 114 |
| 2 | Modified Clearcut | 116 | 102 |
| 3 | Modified Clearcut | 134 | 115 |
| Total | | 376 | 331 |

Tillamook District GIS
03/23/2016
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.