# Timber Sale Appraisal
# Kilchis Saddle
## Sale TL-341-2020-W00651-01

**District: Tillamook**

**Date: February 12, 2020**

## Cost Summary

| | Conifer | Hardwood | Total |
|---|---|---|---|
| **Gross Timber Sale Value** | $707,573.73 | $71,033.04 | $778,606.77 |
| | | **Project Work:** | ($338,130.00) |
| | | **Advertised Value:** | $440,476.77 |

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**District: Tillamook**

**Date: February 12, 2020**

## Timber Description

**Location:** Sections 17, 18, 19, 20 and 30 of T1N R8W, W.M., Tillamook County, Oregon.

**Stand Stocking:** 20%

| Specie Name | AvgDBH | Amortization (%) | Recovery (%) |
|---|---|---|---|
| Douglas - Fir | 20 | 0 | 95 |
| Western Hemlock / Fir | 19 | 0 | 95 |
| Sitka Spruce | 26 | 0 | 95 |
| Alder (Red) | 14 | 0 | 90 |

| Volume by Grade | 2S | 3S & 4S 6"-11" | Camprun | Total |
|---|---|---|---|---|
| **Douglas - Fir** | 1,321 | 497 | 0 | 1,818 |
| **Western Hemlock / Fir** | 1,236 | 603 | 0 | 1,839 |
| **Sitka Spruce** | 127 | 41 | 0 | 168 |
| **Alder (Red)** | 0 | 0 | 936 | 936 |
| **Total** | 2,684 | 1,141 | 936 | 4,761 |

**Comments:** Pond Values Used: December 2019
Region: Astoria, Forest Grove, and Tillamook

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
$1,156/MBF - $450/MBF = $706/ MBF

Pulp (Conifer and Hardwood) Price = $ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = $2.00/ MBF
FUEL COST ALLOWANCE = $3.00/ Gallon
HAULING COST ALLOWANCE
Hauling cost equivalent to $950 daily truck cost
($95.00/hr x 10 hr. = $950)

Other Costs with Profit and Risk to be added:

TOTAL Other Costs with profit and Risk to be added = $0

Other Costs with No Profit and Risk Added:

Optional Project Road (G to H):
Construction: $12,327.44
Pipe Pulling/Road Abandoning: $2,300

Non-Project Rd. 1: 17+29 sta. $347/sta. = $6000
Non-Project Rd. 2: 3+40 sta. $250/sta. = $850
Non-Project Rd. 3: 3+20 sta. $250/sta. = $800

Move-in Guyline Cats (Area1): $1000 /machine x 3 machines x 1 seasons = $3,000
Move-in Machine Cleaning: $1,000/machine x 3 machines x 1 seasons = $3,000
Slash piling and sorting (Cable Settings): $5/ac x 135ac. = $675
Heliport Construction: $500/area x 2 areas = $1000

Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/ tilt bed & small excavator: $900 x 2 = $1,800
Small excavator (Cat 312 or equivalent): 40 hours @ $135/ hour = $5,400
Dump truck: 40 hours @ $90/ hour = $3,600

TOTAL Other Costs no Profit and Risk added = $40,752.44

ROAD MAINTENANCE:
Spot Rocking: 20cy/MMBF/mile x 4.761 MMBF x $30/cy x 12.6 miles / 4,761 MBF= $7.56/MBF
Interim Grading: $1,150/ mile x 12.6 miles x 2 times/ 4,761 MBF = $6.09/MBF
Final Maintenance Grading: $1,500 x 12.6 miles/ 4,761 MBF = $3.97/MBF
Final Maintenance Compaction: $950/mile x 5.8 miles/ 4,761 MBF = $1.16/MBF

Total Road Maintenance: $18.78MBF
$18.78 x 4,761 MBF = $89,412

**District: Tillamook** **Date: February 12, 2020**

## Logging Conditions

**Combination#: 1**

| | |
|---|---|
| Douglas - Fir | 73.55% |
| Western Hemlock / Fir | 82.69% |
| Sitka Spruce | 40.95% |
| Alder (Red) | 61.62% |

**Logging System:** Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
**yarding distance:** Long (1,500 ft) **downhill yarding:** No
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
**loads / day:** 6.5 **bd. ft / load:** 4600
**cost / mbf:** $260.21
**machines:** Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

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**Combination#: 2**

| | |
|---|---|
| Douglas - Fir | 4.96% |
| Western Hemlock / Fir | 3.25% |
| Sitka Spruce | 11.07% |
| Alder (Red) | 7.20% |

**Logging System:** Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
**yarding distance:** Medium (800 ft) **downhill yarding:** No
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
**loads / day:** 14 **bd. ft / load:** 4600
**cost / mbf:** $120.81
**machines:** Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

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**Combination#: 3**

| | |
|---|---|
| Douglas - Fir | 3.31% |
| Western Hemlock / Fir | 2.16% |
| Sitka Spruce | 7.38% |
| Alder (Red) | 4.80% |

**Logging System:** Cable: Small Tower <=40 **Process:** Harvester Head Delimbing
**yarding distance:** Short (400 ft) **downhill yarding:** No
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
**loads / day:** 16 **bd. ft / load:** 4600
**cost / mbf:** $100.28
**machines:** Log Loader (A)
Forwarder
Harvester
Tower Yarder (Small)

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**Combination#: 4**

| | |
|---|---|
| Douglas - Fir | 18.18% |
| Western Hemlock / Fir | 11.90% |
| Sitka Spruce | 40.60% |
| Alder (Red) | 26.38% |

| | | | |
|---|---|---|---|
| **Logging System:** | Shovel | **Process:** | Harvester Head Delimbing |
| **yarding distance:** | Short (400 ft) | **downhill yarding:** | No |
| **tree size:** | Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF | | |
| **loads / day:** | 15 | **bd. ft / load:** | 4800 |
| **cost / mbf:** | $74.22 | | |
| **machines:** | Forwarder<br>Harvester | | |

# Timber Sale Appraisal
# Kilchis Saddle
## Sale TL-341-2020-W00651-01

**District: Tillamook** **Date: February 12, 2020**

## Logging Costs

| | | | |
|---|---|---|---|
| **Operating Seasons:** | 2.00 | **Profit Risk:** | 10% |
| **Project Costs:** | $338,130.00 | **Other Costs (P/R):** | $0.00 |
| **Slash Disposal:** | $0.00 | **Other Costs:** | $40,752.44 |

**Miles of Road** **Road Maintenance:** $18.78

| 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 | 2.0 | 4.2 |
| Western Hemlock / Fir | $0.00 | 2.0 | 4.2 |
| Sitka Spruce | $0.00 | 1.0 | 5.0 |
| Alder (Red) | $162.00 | 1.0 | 3.8 |

# Timber Sale Appraisal
# Kilchis Saddle
## Sale TL-341-2020-W00651-01

"STEWARDSHIP IN FORESTRY"

**District: Tillamook** **Date: February 12, 2020**

## Logging Costs Breakdown

| Logging | Road Maint | Fire Protect | Hauling | Other P/R appl | Profit & Risk | Slash Disposal | Brand & Paint | Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Douglas - Fir** | | | | | | | | | |
| $214.19 | $19.72 | $1.84 | $118.76 | $0.00 | $35.45 | $0.00 | $2.00 | $8.56 | $400.52 |
| **Western Hemlock / Fir** | | | | | | | | | |
| $230.08 | $19.72 | $1.84 | $118.76 | $0.00 | $37.04 | $0.00 | $2.00 | $8.56 | $418.00 |
| **Sitka Spruce** | | | | | | | | | |
| $157.47 | $19.72 | $1.84 | $199.50 | $0.00 | $37.85 | $0.00 | $2.00 | $8.56 | $426.94 |
| **Alder (Red)** | | | | | | | | | |
| $193.44 | $20.66 | $1.84 | $178.20 | $0.00 | $39.41 | $0.00 | $2.00 | $8.56 | $444.11 |

| Specie | Amortization | Pond Value | Stumpage | Amortized |
|---|---|---|---|---|
| Douglas - Fir | $0.00 | $669.45 | $268.93 | $0.00 |
| Western Hemlock / Fir | $0.00 | $536.13 | $118.13 | $0.00 |
| Sitka Spruce | $0.00 | $435.38 | $8.44 | $0.00 |
| Alder (Red) | $0.00 | $520.00 | $75.89 | $0.00 |

# Timber Sale Appraisal
# Kilchis Saddle
## Sale TL-341-2020-W00651-01

**District: Tillamook** **Date: February 12, 2020**

## Summary

**Amortized**

| Specie | MBF | Value | Total |
|---|---|---|---|
| Douglas - Fir | 0 | $0.00 | $0.00 |
| Western Hemlock / Fir | 0 | $0.00 | $0.00 |
| Sitka Spruce | 0 | $0.00 | $0.00 |
| Alder (Red) | 0 | $0.00 | $0.00 |

**Unamortized**

| Specie | MBF | Value | Total |
|---|---|---|---|
| Douglas - Fir | 1,818 | $268.93 | $488,914.74 |
| Western Hemlock / Fir | 1,839 | $118.13 | $217,241.07 |
| Sitka Spruce | 168 | $8.44 | $1,417.92 |
| Alder (Red) | 936 | $75.89 | $71,033.04 |

**Gross Timber Sale Value**

**Recovery:** $778,606.77

**Prepared By:** Haakon Smith Smith **Phone:** 503-815-7045

"STEWARDSHIP IN FORESTRY"

**PROJECT SUMMARY SHEET**

Sale: Kilchis Saddle

**CONSTRUCTION**

| | | | | |
|---|---|---|---|---|
| Point | E to F | 14+70 | stations = | $32,703.61 |
| Point | I to J | 5+00 | stations = | $7,978.50 |
| Point | K to L | 6+20 | stations = | $9,755.10 |
| Point | O to P | 2+60 | stations = | $7,797.69 |
| Point | Q to R | 10+30 | stations = | $33,659.55 |
| | | | **SUBTOTAL CONSTRUCTION** | **$91,894.45** |

**IMPROVEMENT**

| | | | | |
|---|---|---|---|---|
| Point | A to B | 329+50 | stations = | $83,332.54 |
| Point | C to D | 95+40 | stations = | $18,926.95 |
| Point | M to N | 261+20 | stations = | $92,484.65 |
| Point | S to T | 6+00 | stations = | $3,194.40 |
| | | | **SUBTOTAL IMPROVEMENT** | **$197,938.54** |

**RECONSTRUCTION**

| | | | | |
|---|---|---|---|---|
| Point | O to P | 4+60 | stations = | $7,802.03 |
| | | | **SUBTOTAL RECONSTRUCTION** | **$7,802.03** |

**SPECIAL PROJECTS**

| | | | |
|---|---|---|---|
| Point U Stockpile | 500 | CY Purchased 1 1/2" Crushed | $14,385.00 |
| Roadside Brushing | 18.0 | Miles of Road | $18,900.00 |
| | | **SUBTOTAL SPECIAL PROJECTS** | **$33,285.00** |

**MOVE IN** **$7,209.98**

**GRAND TOTAL** **$338,130.00**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **A to B**

| Construction - | 0+00 | stations | Improvement - | 329+50 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.00 | miles | | 6.24 | miles | | 0.00 | miles |

**IMPROVEMENT:** CLEARING AND GRUBBING -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Side cast | 0.084 | acres @ | $1,500.00 | per acre = | $126.00 | | |
| Widening | 0.121 | acres @ | $1,500.00 | per acre = | $181.50 | | |
| | | | | **TOTAL CLEARING AND GRUBBING** | | | **$307.50** |

**IMPROVEMENT**: EXCAVATION -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pullback | 370 | cy. @ | $2.00 | per c.y.= | $740.00 | | |
| Widening | 464 | cy. @ | $2.00 | per c.y.= | $928.00 | | |
| | | | | **TOTAL EXCAVATION** | | | **$1,668.00** |

**IMPROVEMENT**: ENDHAUL -

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pullback | 64+70 | to | 65+30 | 87 | cy. @ | $3.35 | per c.y.= | $291.45 | |
| Pullback | 71+20 | to | 72+60 | 82 | cy. @ | $3.07 | per c.y.= | $251.74 | |
| Pullback | 146+00 | to | 146+80 | 139 | cy. @ | $3.00 | per c.y.= | $417.00 | |
| Pullback | 213+70 | to | 214+00 | 52 | cy. @ | $3.88 | per c.y.= | $201.76 | |
| Pullback | 220+10 | to | 220+20 | 10 | cy. @ | $4.06 | per c.y.= | $40.60 | |
| Widening | 170+80 | to | 171+60 | 31 | cy. @ | $3.19 | per c.y.= | $98.89 | |
| Widening | 201+00 | to | 201+80 | 39 | cy. @ | $3.52 | per c.y.= | $137.28 | |
| Widening | 231+00 | to | 232+00 | 73 | cy. @ | $4.12 | per c.y.= | $300.76 | |
| Existing Waste | 243+80 | to | 244+20 | 196 | cy. @ | $4.46 | per c.y.= | $874.16 | |
| Widening | 273+20 | to | 277+50 | 125 | cy. @ | $4.71 | per c.y.= | $588.75 | |
| Spread & compact | | | | 834 | cy. @ | $0.50 | per c.y.= | $417.00 | |
| | | | | | | | **TOTAL ENDHAUL** | | **$3,619.39** |

**CULVERTS - MATERIALS & INSTALLATION**

Culverts

| | | | | | | |
|---|---|---|---|---|---|---|
| 30 | LF of 18" | $600.00 | 0 | LF of 24" | $0.00 | |
| 60 | LF of 42" | $5,100.00 | 0 | LF of 48" | $0.00 | |

Culvert Stakes & Markers

| | | | |
|---|---|---|---|
| 41 | markers | $328.00 | |
| | | **TOTAL CULVERTS** | **$6,028.00** |

**ROCK**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 119+00 to | 165+70 | 810 | cy. of | Crushed | @ | $31.27 | per c.y.= | $25,328.70 |
| Culvert Bedding/Backfill | 173+00,247+30 | 30 | cy. of | Crushed | @ | $31.50 | per c.y.= | $945.00 |
| Bridge Approach Repair | 214+00 | 30 | cy. of | Pit-Run | @ | $13.23 | per c.y.= | $396.90 |
| Fill Armor | 173+00 | 40 | cy. of | Pit-Run | @ | $14.03 | per c.y.= | $561.20 |
| Spot Rock | 0+00-119+00 | 300 | cy. of | Crushed | @ | $30.28 | per c.y.= | $9,084.00 |
| Spot Rock | 165+70-329+50 | 300 | cy. of | Crushed | @ | $32.97 | per c.y.= | $9,891.00 |
| Energy Dissipator | 173+00,220+20,247+30 | 20 | cy. of | Riprap | @ | $14.72 | per c.y.= | $294.40 |
| Bridge Approach Repair | 214+00 | 80 | cy. of | Riprap | @ | $38.00 | per c.y.= | $3,040.00 |
| Base Rock | 72+00 | 10 | cy. of | Pit-Run | @ | $15.12 | per c.y.= | $151.20 |
| Fill Repair | 72+00 | 40 | cy. of | Riprap | @ | $15.92 | per c.y.= | $636.80 |
| Rock Ditch Filters | 18 LOCS | 90 | cy. of | Drain Rock | @ | $34.63 | per c.y.= | $3,116.70 |
| Fill Ditch to Outslope | 71+20-72+60 | 20 | cy. of | Drain Rock | @ | $34.06 | per c.y.= | $681.20 |
| | | | | | | | **TOTAL ROCK** | **$54,127.10** |

**SPECIAL PROJECTS**

| | | | | | |
|---|---|---|---|---|---|
| Scarify, waterbar & block road & trails at 1+80 & 120+00 - | 3.00 | hours @ | $165.00 | per hour | $495.00 |
| Bench below road to repair fill at 72+00 - | 2.00 | hours @ | $165.00 | per hour | $330.00 |
| Clean ditchout at 2+40 - | 1.00 | @ | $40.00 | | $40.00 |
| Clean ditch free drain at 46+50 - | 1.00 | @ | $165.00 | | $165.00 |
| Repair failing half round at 234+30 - | 2.00 | hours @ | $40.00 | per hour | $80.00 |
| Grade and shape road (includes grader ditching) - | 329.50 | stations @ | $30.00 | per station | $9,885.00 |
| Clean out rubber water diverter at 215+30 - | 1.00 | @ | $40.00 | | $40.00 |
| Roll subgrade w/ vibratory roller prior to rocking - | 329.50 | stations @ | $17.50 | per station | $5,766.25 |
| Remove old culverts and half rounds from state lands - | 2.00 | @ | $509.50 | total | $509.50 |
| Grass seed and fertilize - | 0.33 | acres @ | $280.00 | per acre | $92.40 |
| Mulching - | 0.230 | acres @ | $780.00 | per acre | $179.40 |
| | | | | **TOTAL SPECIAL PROJECTS** | **$17,582.55** |

**GRAND TOTAL** **$83,332.54**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **C to D**

| Construction - | 0+00 | stations | Improvement - | 95+40 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.00 | miles | | 1.81 | miles | | 0.00 | miles |

**CULVERTS - MATERIALS & INSTALLATION**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Culverts | | | | | | | | | |
| | | 30 | LF of 18" | $600.00 | | 30 | LF of 24" | $930.00 | |
| Culvert Stakes & Markers | | | | | | | | | |
| | | 12 | markers | $96.00 | | | | | |
| | | | | | | | | **TOTAL CULVERTS** | **$1,626.00** |

**ROCK**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10+00 to | 16+00 | 110 | cy. of | Crushed | @ | $33.09 | per c.y.= | $3,639.90 | |
| Culvert Bedding/Backfill | 18+00,46+40 | 20 | cy. of | Crushed | @ | $33.06 | per c.y.= | $661.20 | |
| Spot Rock | 0+00-95+40 | 100 | cy. of | Crushed | @ | $33.89 | per c.y.= | $3,389.00 | |
| Energy Dissipator | 12+00,18+00,46+40 | 30 | cy. of | Riprap | @ | $13.07 | per c.y.= | $392.10 | |
| Fill Ditch to Outslope | 43+00-44+70 | 20 | cy. of | Drain Rock | @ | $37.59 | per c.y.= | $751.80 | |
| Loaded Turn Around | 68+00 | 60 | cy. of | Pit-Run | @ | $12.13 | per c.y.= | $727.80 | |
| Rock Ditch Filters | 3 LOCS | 20 | cy. of | Drain Rock | @ | $37.47 | per c.y.= | $749.40 | |
| | | | | | | | | **TOTAL ROCK** | **$10,311.20** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Construct loaded log truck turnaround at 68+00 - | 0.50 | hours @ | $160.00 | per hour | $80.00 | |
| Grade and shape road - | 95.40 | stations @ | $22.00 | per station | $2,098.80 | |
| Pull ditch and endhaul - | 26.00 | stations @ | $105.00 | per station | $2,730.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 95.40 | stations @ | $17.50 | per station | $1,669.50 | |
| Remove culverts from state lands - | 1.00 | @ | $411.45 | total | $411.45 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$6,989.75** |

**GRAND TOTAL** **$18,926.95**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **E to F**

| Construction - | 14+70 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.28 | 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+80 | 60% | 0.5 | Ditch | $3,198 | = | $5,756.40 | |
| 1+80 | | 9+00 | 20% | | Ditch | $228 | = | $1,641.60 | |
| 9+00 | | 10+50 | 30% | | Ditch | $320 | = | $480.00 | |
| 10+50 | | 11+70 | 40% | | Ditch | $413 | = | $495.60 | |
| 11+70 | | 14+70 | 30% | | Ditch | $320 | = | $960.00 | |
| | | | | | | | | **TOTAL** | **$9,333.60** |

**CULVERTS - MATERIALS & INSTALLATION**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Culverts | | | | | | | | |
| 60 | LF of 18" | $1,200.00 | | 0 | LF of 24" | $0.00 | | |
| Culvert Stakes & Markers | | | | | | | | |
| 2 | markers | $16.00 | | | | | | |
| | | | | | | | **TOTAL CULVERTS** | **$1,216.00** |

**ROCK**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0+00 | to | 14+70 | 1,110 | cy. of | Pit-Run | @ | $12.23 | per c.y.= | $13,575.30 | |
| 5+60 | to | 14+70 | 170 | cy. of | Crushed | @ | $33.09 | per c.y.= | $5,625.30 | |
| Landing Rock | | Point F | 80 | cy. of | Pit-Run | @ | $12.39 | per c.y.= | $991.20 | |
| Junction Rock | | 0+00 | 20 | cy. of | Pit-Run | @ | $12.07 | per c.y.= | $241.40 | |
| Energy Dissipator | | 2 Pipes | 10 | cy. of | Riprap | @ | $13.03 | per c.y.= | $130.30 | |
| | | | | | | | | | **TOTAL ROCK** | **$20,563.50** |

**SPECIAL PROJECTS**

| | | | | | |
|---|---|---|---|---|---|
| Construct landing at Point F - | 1.00 | @ | $370.00 | | $370.00 |
| Construct turnaround before landing - | 1.00 | @ | $100.00 | | $100.00 |
| Construct waste area at 2+20 - | 1.00 | hour @ | $180.00 | per hour | $180.00 |
| Construct ditchout at 5+60 and 8+80 - | 2.00 | @ | $60.00 | each | $120.00 |
| Grade and shape road - | 14.70 | stations @ | $22.00 | per station | $323.40 |
| Roll subgrade w/ vibratory roller prior to rocking - | 14.70 | stations @ | $17.50 | per station | $257.25 |
| Grass seed and fertilize - | 0.67 | acres @ | $280.00 | per acre | $187.60 |
| Mulching - | 0.067 | acres @ | $780.00 | per acre | $52.26 |
| | | | | **TOTAL SPECIAL PROJECTS** | **$1,590.51** |

**GRAND TOTAL** **$32,703.61**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **G to H** **--OPTIONAL--**

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

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

| Station | to | Station | Avg. Sideslope | Avg. Dist. To W.A. (mi.) | Outslope/Ditch | Cost per Station | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0+00 | | 5+30 | 20% | | Outslope | $174 | = | $922.20 | |
| 5+30 | | 6+00 | 50% | | Outslope | $573 | = | $401.10 | |
| 6+00 | | 8+10 | 20% | | Outslope | $174 | = | $365.40 | |
| 8+10 | | 10+30 | 30% | | Outslope | $239 | = | $525.80 | |
| 10+30 | | 11+30 | 50% | | Outslope | $573 | = | $573.00 | |
| 11+30 | | 12+80 | 30% | | Outslope | $239 | = | $358.50 | |
| 12+80 | | 13+80 | 40% | | Outslope | $303 | = | $303.00 | |
| 13+80 | | 15+10 | 30% | | Outlsope | $239 | = | $310.70 | |
| 15+10 | | 16+00 | 20% | | Outslope | $174 | = | $156.60 | |
| | | | | | | | | **TOTAL** | **$3,916.30** |

**CULVERTS - MATERIALS & INSTALLATION**

Culverts

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | LF of 18" | $0.00 | 80 | LF of 24" | $2,480.00 | |
| 40 | LF of 30" | $1,640.00 | 0 | LF of 36" | $0.00 | |

Culvert Stakes & Markers

| | | | |
|---|---|---|---|
| 3 | markers | $24.00 | |
| | | **TOTAL CULVERTS** | **$4,144.00** |

**ROCK**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4+30 | to | 6+00 | 130 | cy. of | Pit-Run | @ | $12.50 | per c.y.= | $1,625.00 |
| 11+00 | to | 12+00 | 80 | cy. of | Pit-Run | @ | $12.63 | per c.y.= | $1,010.40 |
| Energy Dissipator | | 3 Pipes | 15 | cy. of | Riprap | @ | $13.36 | per c.y.= | $200.40 |
| | | | | | | | | **TOTAL ROCK** | **$2,835.80** |

**SPECIAL PROJECTS**

| | | | | | |
|---|---|---|---|---|---|
| Construct landing at Point H - | 1.00 | @ | $370.00 | | $370.00 |
| Construct turnaround before landing - | 1.00 | @ | $100.00 | | $100.00 |
| Grade and shape road - | 16.00 | stations @ | $20.00 | per station | $320.00 |
| Roll subgrade w/ vibratory roller prior to rocking - | 16.00 | stations @ | $17.50 | per station | $280.00 |
| Remove large stumps - | 1.00 | lump sum @ | $100.00 | | $100.00 |
| Grass seed and fertilize - | 0.73 | acres @ | $280.00 | per acre | $204.40 |
| Mulching - | 0.073 | acres @ | $780.00 | per acre | $56.94 |
| | | | | **TOTAL SPECIAL PROJECTS** | **$1,431.34** |

**GRAND TOTAL** **$12,327.44**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **I to J**

| Construction - | 5+00 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.09 | 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+00 | 40% | | Outslope | $303 | = | $303.00 | |
| 1+00 | | 5+00 | 20% | | Outslope | $174 | = | $696.00 | |
| | | | | | | | | **TOTAL** | **$999.00** |

**ROCK**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0+00 | to | 5+00 | 380 | cy. of | Pit-Run | @ | $12.49 | per c.y.= | $4,746.20 | |
| Landing Rock | | Point J | 80 | cy. of | Pit-Run | @ | $12.76 | per c.y.= | $1,020.80 | |
| Junction Rock | | 0+00 | 20 | cy. of | Pit-Run | @ | $12.23 | per c.y.= | $244.60 | |
| | | | | | | | | | **TOTAL ROCK** | **$6,011.60** |

**SPECIAL PROJECTS**

| | | | | | |
|---|---|---|---|---|---|
| Construct landing at Point J - | 1.00 | @ | $370.00 | | $370.00 |
| Grade and shape road - | 5.00 | stations @ | $20.00 | per station | $100.00 |
| Roll subgrade w/ vibratory roller prior to rocking - | 5.00 | stations @ | $17.50 | per station | $87.50 |
| Remove large stumps - | 1.00 | lump sum @ | $360.00 | | $360.00 |
| Grass seed and fertilize - | 0.18 | acres @ | $280.00 | per acre | $50.40 |
| | | | | **TOTAL SPECIAL PROJECTS** | **$967.90** |

**GRAND TOTAL** **$7,978.50**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **K to L**

| Construction - | 6+20 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.12 | 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 | | 2+00 | 40% | | Outslope | $303 | = | | $606.00 | |
| 2+00 | | 6+20 | 30% | | Outslope | $239 | = | | $1,003.80 | |
| | | | | | | | | | **TOTAL** | **$1,609.80** |

**ROCK**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0+00 | to | 6+20 | 500 | cy. of | Pit-Run | @ | $12.29 | per c.y.= | $6,145.00 | |
| Landing Rock | | Point L | 80 | cy. of | Pit-Run | @ | $12.21 | per c.y.= | $976.80 | |
| Junction Rock | | 0+00 | 20 | cy. of | Pit-Run | @ | $12.13 | per c.y.= | $242.60 | |
| | | | | | | | | | **TOTAL ROCK** | **$7,364.40** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Construct landing at Point L - | 1.00 | @ | $370.00 | | $370.00 | |
| Construct turnaround before landing - | 1.00 | @ | $100.00 | | $100.00 | |
| Grade and shape road - | 6.20 | stations @ | $20.00 | per station | $124.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 6.20 | stations @ | $17.50 | per station | $108.50 | |
| Grass seed and fertilize - | 0.28 | acres @ | $280.00 | per acre | $78.40 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$780.90** |

**GRAND TOTAL** **$9,755.10**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **M to N**

| Construction - | 0+00 | stations | Improvement - | 261+20 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.00 | miles | | 4.95 | miles | | 0.00 | miles |

**IMPROVEMENT:** CLEARING AND GRUBBING -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Widening | 0.053 | acres @ | $860.00 | per acre = | $45.58 | | |
| | | | | **TOTAL CLEARING AND GRUBBING** | | | **$45.58** |

**IMPROVEMENT**: EXCAVATION -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Widening | 391 | cy. @ | $2.00 | per c.y.= | $782.00 | | |
| | | | | **TOTAL EXCAVATION** | | | **$782.00** |

**IMPROVEMENT**: ENDHAUL -

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Widening | 14+00 | to | 14+20 | 35 | cy. @ | $4.36 | per c.y.= | $152.60 | |
| Existing Waste | 125+70 | to | 125+80 | 20 | cy. @ | $3.09 | per c.y.= | $61.80 | |
| Widening | 158+60 | to | 159+40 | 35 | cy. @ | $3.26 | per c.y.= | $114.10 | |
| Existing Waste | 159+90 | to | 160+00 | 20 | cy. @ | $3.30 | per c.y.= | $66.00 | |
| Existing Waste | 160+50 | to | 161+10 | 217 | cy. @ | $3.33 | per c.y.= | $722.61 | |
| Widening | 163+50 | to | 163+90 | 44 | cy. @ | $3.44 | per c.y.= | $151.36 | |
| Existing Waste | 169+00 | to | 169+40 | 20 | cy. @ | $3.62 | per c.y.= | $72.40 | |
| Spread & compact | | | | 391 | cy. @ | $0.50 | per c.y.= | $195.50 | |
| | | | | | | | **TOTAL ENDHAUL** | | **$1,536.37** |

**CULVERTS - MATERIALS & INSTALLATION**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Culverts | | | | | | | |
| 30 | LF of 18" | $600.00 | | 0 | LF of 24" | $0.00 | |
| Culvert Stakes & Markers | | | | | | | |
| 17 | markers | $136.00 | | | | | |
| | | | | | **TOTAL CULVERTS** | | **$736.00** |

**ROCK**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0+00 to | 175+00 | 2,050 | cy. of | Crushed | @ | $33.50 | per c.y.= | $68,675.00 | |
| 245+50 to | 247+50 | 110 | cy. of | Pit-Run | @ | $13.93 | per c.y.= | $1,532.30 | |
| 245+50 to | 247+50 | 40 | cy. of | Crushed | @ | $35.43 | per c.y.= | $1,417.20 | |
| Culvert Bedding/Backfill | 171+60 | 10 | cy. of | Crushed | @ | $34.08 | per c.y.= | $340.80 | |
| Fill Armor | 59+70 | 20 | cy. of | Pit-Run | @ | $14.60 | per c.y.= | $292.00 | |
| Energy Dissipator | 171+60 | 5 | cy. of | Riprap | @ | $14.44 | per c.y.= | $72.20 | |
| | | | | | | | **TOTAL ROCK** | | **$72,329.50** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Reconstruct waterbars (232+50-260+00) - | 12.00 | @ | $40.00 | each | $480.00 | |
| Construct waste areas - | 0.50 | hours @ | $180.00 | per hour | $90.00 | |
| Construct culvert outlet ditch at 171+60 - | 1.00 | @ | $60.00 | | $60.00 | |
| Pull ditch and endhaul - | 54.00 | stations @ | $105.00 | per station | $5,670.00 | |
| Grade and shape road - | 261.20 | stations @ | $22.00 | per station | $5,746.40 | |
| Grade and shape first pitch of spur at 79+00 - | 18.50 | stations @ | $22.00 | per station | $407.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 261.20 | stations @ | $17.50 | per station | $4,571.00 | |
| Grass seed and fertilize - | 0.11 | acres @ | $280.00 | per acre | $30.80 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$17,055.20** |

**GRAND TOTAL** **$92,484.65**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **O to P**

| Construction - | 2+60 | stations | Improvement - | 0+00 | stations | Reconstruction - | 4+60 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.05 | miles | | 0.00 | miles | | 0.09 | 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 | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4+60 | | 5+00 | 30% | | Outslope | $239 | = | $95.60 | |
| 5+00 | | 5+40 | 50% | | Outslope | $573 | = | $229.20 | |
| 5+40 | | 5+80 | 70% | 0.8 | Outslope | $3,636 | = | $1,454.40 | |
| 5+80 | | 6+20 | 40% | | Outslope | $303 | = | $121.20 | |
| 6+20 | | 6+60 | 60% | 0.8 | Outslope | $2,374 | = | $949.60 | |
| 6+60 | | 6+90 | 75% | 0.8 | Outslope | $4,262 | = | $1,278.60 | |
| 6+90 | | 7+20 | 30% | | Outslope | $239 | = | $71.70 | |
| | | | | | | | | **TOTAL** | **$4,200.30** |

**RECONSTRUCTION:** CLEARING AND GRUBBING -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Widening | 0.036 | acres @ | $860.00 | per acre = | $30.96 | | |
| Scattering | 0.230 | acres @ | $1,275.00 | per acre = | $293.25 | | |
| | | | | **TOTAL CLEARING AND GRUBBING** | | | **$324.21** |

**RECONSTRUCTION**: EXCAVATION -

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Widening | 189 | cy. @ | $2.00 | per c.y.= | $378.00 | | |
| | | | | **TOTAL EXCAVATION** | | | **$378.00** |

**RECONSTRUCTION**: ENDHAUL -

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Widening | 1+20 | to | 2+50 | 189 | cy. @ | $3.39 | per c.y.= | $640.71 | |
| Spread & compact | | | | 189 | cy. @ | $0.50 | per c.y.= | $94.50 | |
| | | | | | | | **TOTAL ENDHAUL** | | **$735.21** |

**ROCK**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0+00 to | 7+20 | 540 | cy. of | Pit-Run | @ | $13.90 | per c.y.= | $7,506.00 | |
| Landing Rock | Point P | 80 | cy. of | Pit-Run | @ | $14.22 | per c.y.= | $1,137.60 | |
| Junction Rock | 0+00 | 20 | cy. of | Pit-Run | @ | $13.58 | per c.y.= | $271.60 | |
| | | | | | | | | **TOTAL ROCK** | **$8,915.20** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Construct waste areas - | 0.50 | hours @ | $180.00 | per hour | $90.00 | |
| Construct landing at Point P - | 1.00 | @ | $500.00 | | $500.00 | |
| Reconstruct Turnaround at 4+00 - | 1.00 | @ | $100.00 | | $100.00 | |
| Grade and shape road - | 7.20 | stations @ | $20.00 | per station | $144.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 7.20 | stations @ | $17.50 | per station | $126.00 | |
| Grass seed and fertilize - | 0.31 | acres @ | $280.00 | per acre | $86.80 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$1,046.80** |

**GRAND TOTAL** **$15,599.72**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **Q to R**

| Construction - | 10+30 | stations | Improvement - | 0+00 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.20 | 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+20 | 20% | | Outslope | $174 | = | | $208.80 | |
| 1+20 | | 3+60 | 30% | | Outslope | $239 | = | | $573.60 | |
| 3+60 | | 4+60 | 60% | 0.1 | Outslope | $1,901 | = | | $1,901.00 | |
| 4+60 | | 5+40 | 70% | 0.1 | Outslope | $4,624 | = | (Increased for Rock) | $3,699.20 | |
| 5+40 | | 5+80 | 60% | 0.1 | Outslope | $1,901 | = | | $760.40 | |
| 5+80 | | 6+40 | 70% | 0.1 | Outslope | $4,624 | = | (Increased for Rock) | $2,774.40 | |
| 6+40 | | 7+00 | 90% | 0.1 | Outslope | $9,140 | = | (Increased for Rock) | $5,484.00 | |
| 7+00 | | 7+50 | 70% | 0.2 | Outslope | $4,624 | = | (Increased for Rock) | $2,312.00 | |
| 7+50 | | 7+80 | 50% | | Outslope | $573 | = | | $171.90 | |
| 7+80 | | 10+30 | 30% | | Outslope | $239 | = | | $597.50 | |
| | | | | | | | | | **TOTAL** | **$18,482.80** |

**CULVERTS - MATERIALS & INSTALLATION**

| Culverts | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | LF of 18" | $800.00 | | 0 | LF of 24" | $0.00 | |
| Culvert Stakes & Markers | | | | | | | |
| 1 | markers | $8.00 | | | | | |
| | | | | | | **TOTAL CULVERTS** | **$808.00** |

**ROCK**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0+00 | to | 10+30 | 810 | cy. of | Pit-Run | @ | $14.31 | per c.y.= | $11,591.10 | |
| Landing Rock | | Point R | 80 | cy. of | Pit-Run | @ | $14.63 | per c.y.= | $1,170.40 | |
| Junction Rock | | 0+00 | 20 | cy. of | Pit-Run | @ | $13.99 | per c.y.= | $279.80 | |
| | | | | | | | | | **TOTAL ROCK** | **$13,041.30** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Construct waste areas - | 1.00 | hours @ | $180.00 | per hour | $180.00 | |
| Construct landing at Point R - | 1.00 | @ | $370.00 | | $370.00 | |
| Construct turnaround before landing - | 1.00 | @ | $100.00 | | $100.00 | |
| Grade and shape road - | 10.30 | stations @ | $20.00 | per station | $206.00 | |
| Roll subgrade w/ vibratory roller prior to rocking - | 10.30 | stations @ | $17.50 | per station | $180.25 | |
| Grass seed and fertilize - | 1.04 | acres @ | $280.00 | per acre | $291.20 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$1,327.45** |

**GRAND TOTAL** **$33,659.55**

# SUMMARY OF CONSTRUCTION COST

Sale: **Kilchis Saddle** Road: **S to T**

| Construction - | 0+00 | stations | Improvement - | 6+00 | stations | Reconstruction - | 0+00 | stations |
|---|---|---|---|---|---|---|---|---|
| | 0.00 | miles | | 0.11 | miles | | 0.00 | miles |

**ROCK**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0+80 | to | 2+30 | 30 | cy. of | Crushed | @ | $30.73 | per c.y.= | $921.90 | |
| 3+60 | to | 6+00 | 70 | cy. of | Crushed | @ | $30.75 | per c.y.= | $2,152.50 | |
| | | | | | | | | | **TOTAL ROCK** | **$3,074.40** |

**SPECIAL PROJECTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Grade and shape road - | 6.00 | stations @ | $20.00 | per station | $120.00 | |
| | | | | **TOTAL SPECIAL PROJECTS** | | **$120.00** |

**GRAND TOTAL** **$3,194.40**

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | |
|---|---|---|---|
| Pit: | Purchased_Crushed | Location: | Commercial Source |
| Sale: | **Kilchis Saddle** | Road: | 4690 c.y. |
| Swell: | N/A | Stockpile: | c.y. |
| Shirinkage | N/A | Total Truck Loads: | 4690 c.y. |
| Drill Pct.: | 0% | In Place Total: | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| Plant Price 1 1/2" Crushed Rock | $14.60 | /cu.yd. | x | 4540 cu.yds. | = | $66,284.00 |
| Plant Price 3" Drain Rock | $19.50 | /cu.yd. | x | 150 cu.yds. | = | $2,925.00 |
| | | | | Subtotal | | $69,209.00 |

| | | | | | |
|---|---|---|---|---|---|
| Move in Roller and Compactor | 1 | @ | $653.10 | = | $653.10 |
| Move in Grader | 1 | @ | $996.25 | = | $996.25 |
| Move in Trucks | 2 | @ | $243.10 | = | $486.20 |
| | | | Subtotal | | $2,135.55 |
| | | | TOTAL PRODUCTION COSTS | | $71,344.55 |

| | | |
|---|---|---|
| Base Cost 1 1/2" | $15.07 | Per Cu. Yd. |
| Base Cost 3" | $19.50 | 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 11900 16570 (Crushed) | 13.00 | 3.20 | 15.07 | 31.27 | 810 | | $25,328.70 |
| A to B Culvert Bedding/Backfill (Crushed) | 13.93 | 2.50 | 15.07 | 31.50 | 30 | | $945.00 |
| A to B Spot Rock (Crushed) | 12.01 | 3.20 | 15.07 | 30.28 | 300 | | $9,084.00 |
| A to B Spot Rock (Crushed) | 14.70 | 3.20 | 15.07 | 32.97 | 300 | | $9,891.00 |
| A to B Rock Ditch Filters (Drain Rock) | 12.63 | 2.50 | 19.50 | 34.63 | 90 | | $3,116.70 |
| A to B Fill Ditch to Outslope (Drain Rock) | 12.06 | 2.50 | 19.50 | 34.06 | 20 | | $681.20 |
| C to D 1000 1600 (Crushed) | 14.82 | 3.20 | 15.07 | 33.09 | 110 | | $3,639.90 |
| C to D Culvert Bedding/Backfill (Crushed) | 15.49 | 2.50 | 15.07 | 33.06 | 20 | | $661.20 |
| C to D Spot Rock (Crushed) | 15.62 | 3.20 | 15.07 | 33.89 | 100 | | $3,389.00 |
| C to D Fill Ditch to Outslope (Drain Rock) | 15.59 | 2.50 | 19.50 | 37.59 | 20 | | $751.80 |
| C to D Rock Ditch Filters (Drain Rock) | 15.47 | 2.50 | 19.50 | 37.47 | 20 | | $749.40 |
| E to F 560 1470 (Crushed) | 14.82 | 3.20 | 15.07 | 33.09 | 170 | | $5,625.30 |
| M to N 0 17500 (Crushed) | 15.23 | 3.20 | 15.07 | 33.50 | 2050 | | $68,675.00 |
| M to N 24550 24750 (Crushed) | 17.16 | 3.20 | 15.07 | 35.43 | 40 | | $1,417.20 |
| M to N Culvert Bedding/Backfill (Crushed | 16.51 | 2.50 | 15.07 | 34.08 | 10 | | $340.80 |
| S to T 80 230 (Crushed) | 13.66 | 2.00 | 15.07 | 30.73 | 30 | | $921.90 |
| S to T 360 600 (Crushed) | 13.68 | 2.00 | 15.07 | 30.75 | 70 | | $2,152.50 |
| Point U Stockpile (Crushed) | 12.00 | 1.70 | 15.07 | 28.77 | 500 | | $14,385.00 |
| | | | | Total C.Y. | 4690 | Sub Total | $151,755.60 |
| | | | | | TOTAL ROCKING COSTS | | $151,755.60 |

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Pit: | 250_Saddle_Pit_Run_RR | Location: | SE 1/4, NW 1/4, Sec 30, T1N, R8W, WM | | |
| Sale: | **Kilchis Saddle** | | Road: | 2530 c.y. | |
| Swell: | 1.40 | | Stockpile: | c.y. | |
| Shirinkage | 1.16 | | Total Truck Loads: | 2530 c.y. | |
| Drill Pct.: | 50% | | In Place Total: | 1807 c.y. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area, place overburden in Waste Area, spread and compact. | | | | | | | $5,028.45 |
| Drill & Shoot: | $3.25 | /cu.yd. | x | 904 | cu.yds. | = | $2,938.00 |
| Rip Rock: | $3.00 | /cu.yd. | x | 903 | cu.yds. | = | $2,709.00 |
| Load Dump Truck: | $1.00 | /cu.yd. | x | 2530 | cu.yds. | = | $2,530.00 |
| | | | | | Subtotal | | $13,205.45 |

| | | | | | |
|---|---|---|---|---|---|
| Move In and set up Drill and Compressor | 1 | @ | $1,025.15 | = | $1,025.15 |
| Move in Roller and Compactor | 1 | @ | $653.10 | = | $653.10 |
| Move in Grader | 1 | @ | $996.25 | = | $996.25 |
| Move in D-8 | 1 | @ | $1,149.85 | = | $1,149.85 |
| Move in Excavator | 1 | @ | $1,116.25 | = | $1,116.25 |
| Move in Trucks | 2 | @ | $243.10 | = | $486.20 |
| | | | | Subtotal | $5,426.80 |
| | | | TOTAL PRODUCTION COSTS | | $18,632.25 |

Base Cost= $7.36 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 Bridge Approach Repair (Pit-Run) | 3.37 | 2.50 | 7.36 | 13.23 | 30 | | $396.90 |
| A to B Fill Armor (Pit-Run) | 4.17 | 2.50 | 7.36 | 14.03 | 40 | | $561.20 |
| A to B Energy Dissipator (Riprap) | 4.86 | 2.50 | 7.36 | 14.72 | 20 | | $294.40 |
| A to B Base Rock (Pit-Run) | 6.06 | 1.70 | 7.36 | 15.12 | 10 | | $151.20 |
| A to B Fill Repair (Riprap) | 6.06 | 2.50 | 7.36 | 15.92 | 40 | | $636.80 |
| C to D Energy Dissipator (Riprap) | 3.21 | 2.50 | 7.36 | 13.07 | 30 | | $392.10 |
| C to D Loaded Turn Around (Pit-Run) | 3.07 | 1.70 | 7.36 | 12.13 | 60 | | $727.80 |
| E to F 0 1470 (Pit-Run) | 3.17 | 1.70 | 7.36 | 12.23 | 1110 | | $13,575.30 |
| E to F Landing Rock (Pit-Run) | 3.33 | 1.70 | 7.36 | 12.39 | 80 | | $991.20 |
| E to F Junction Rock (Pit-Run) | 3.01 | 1.70 | 7.36 | 12.07 | 20 | | $241.40 |
| E to F Energy Dissipator (Riprap) | 3.17 | 2.50 | 7.36 | 13.03 | 10 | | $130.30 |
| G to H 430 600 (Pit-Run) | 3.44 | 1.70 | 7.36 | 12.50 | 130 | | $1,625.00 |
| G to H 1100 1200 (Pit-Run) | 3.57 | 1.70 | 7.36 | 12.63 | 80 | | $1,010.40 |
| G to H Energy Dissipator (Riprap) | 3.50 | 2.50 | 7.36 | 13.36 | 15 | | $200.40 |
| I to J 0 500 (Pit-Run) | 3.43 | 1.70 | 7.36 | 12.49 | 380 | | $4,746.20 |
| I to J Landing Rock (Pit-Run) | 3.70 | 1.70 | 7.36 | 12.76 | 80 | | $1,020.80 |
| I to J Junction Rock (Pit-Run) | 3.17 | 1.70 | 7.36 | 12.23 | 20 | | $244.60 |
| K to L 0 620 (Pit-Run) | 3.23 | 1.70 | 7.36 | 12.29 | 500 | | $6,145.00 |
| K to L Landing Rock (Pit-Run) | 3.15 | 1.70 | 7.36 | 12.21 | 80 | | $976.80 |
| K to L Junction Rock (Pit-Run) | 3.07 | 1.70 | 7.36 | 12.13 | 20 | | $242.60 |
| | | | Including G to H | Total C.Y. | 2755 | Sub Total | $34,310.40 |
| | | | Not Including G to H | Total C.Y. | 2530 | Sub Total | $31,474.60 |
| | | | | | TOTAL ROCKING COSTS | | $31,474.60 |

## ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Pit: | KLO_Pit_Run_RR | Location: | NW 1/4, NE 1/4, Sec 19, T1N, R8W, WM | | |
| Sale: | **Kilchis Saddle** | | Road: | | 1685 c.y. |
| Swell: | 1.40 | | Stockpile: | | c.y. |
| Shirinkage | 1.16 | | Total Truck Loads: | | 1685 c.y. |
| Drill Pct.: | 50% | | In Place Total: | | 1204 c.y. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area, place overburden in Waste Area, spread and compact. | | | | | | | $4,336.67 |
| Drill & Shoot: | $3.25 | /cu.yd. | x | 602 | cu.yds. | = | $1,956.50 |
| Rip Rock: | $3.00 | /cu.yd. | x | 602 | cu.yds. | = | $1,806.00 |
| Load Dump Truck: | $1.00 | /cu.yd. | x | 1685 | cu.yds. | = | $1,685.00 |
| | | | | | Subtotal | | $9,784.17 |

| | | | | | |
|---|---|---|---|---|---|
| Move In and set up Drill and Compressor | 1 | @ | $1,025.15 | = | $1,025.15 |
| Move in Roller and Compactor | 1 | @ | $653.10 | = | $653.10 |
| Move in Grader | 1 | @ | $996.25 | = | $996.25 |
| Move in D-8 | 1 | @ | $1,149.85 | = | $1,149.85 |
| Move in Excavator | 1 | @ | $1,116.25 | = | $1,116.25 |
| Move in Trucks | 2 | @ | $243.10 | = | $486.20 |
| | | | | Subtotal | $5,426.80 |
| | | | TOTAL PRODUCTION COSTS | | $15,210.97 |

Base Cost= $9.03 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 |
|---|---|---|---|---|---|---|---|
| M to N 24550 24750 (Pit-Run) | 3.20 | 1.70 | 9.03 | 13.93 | 110 | | $1,532.30 |
| M to N Fill Armor (Pit-Run) | 3.07 | 2.50 | 9.03 | 14.60 | 20 | | $292.00 |
| M to N Energy Dissipator (Riprap) | 2.91 | 2.50 | 9.03 | 14.44 | 5 | | $72.20 |
| O to P 0 720 (Pit-Run) | 3.17 | 1.70 | 9.03 | 13.90 | 540 | | $7,506.00 |
| O to P Landing Rock (Pit-Run) | 3.49 | 1.70 | 9.03 | 14.22 | 80 | | $1,137.60 |
| O to P Junction Rock (Pit-Run) | 2.85 | 1.70 | 9.03 | 13.58 | 20 | | $271.60 |
| Q to R 0 1030 (Pit-Run) | 3.58 | 1.70 | 9.03 | 14.31 | 810 | | $11,591.10 |
| Q to R Landing Rock (Pit-Run) | 3.90 | 1.70 | 9.03 | 14.63 | 80 | | $1,170.40 |
| Q to R Junction Rock (Pit-Run) | 3.26 | 1.70 | 9.03 | 13.99 | 20 | | $279.80 |
| | | | | Total C.Y. | 1685 | Sub Total | $23,853.00 |
| | | | | | TOTAL ROCKING COSTS | | $23,853.00 |

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

Sale: **Kilchis Saddle**

| LOWBOY HAUL (Round Trip) | | |
|---|---|---|
| DIST. (mi) | ROADWAY | AVE SPEED (mph) |
| 16.8 | Pavement | 30 |
| 9.8 | Main Lines | 7 |
| 6.3 | Steep Grades | 2 |

| No. | EQUIPMENT DESCRIPTION | Move in Cost | Pilot Cars | Within Area Move ($/mile) | Begin Mileage | End Mileage | Total Miles | Within Area Cost | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Drill & Compressor | $1,025.15 | | $46.00 | 0.00 | 0.00 | 0 | $0.00 | $1,025.15 |
| 1 | Brush Cutter | $836.85 | | $4.00 | 0.00 | 0.00 | 0 | $0.00 | $836.85 |
| 1 | Excavators (Med.) | $1,053.90 | | $35.50 | 0.00 | 4.50 | 4.5 | $159.75 | $1,213.65 |
| 1 | Excavators (Large) | $1,116.25 | 1 | $44.80 | 0.00 | 4.50 | 4.5 | $201.60 | $1,317.85 |
| 1 | Tractor (D8) | $1,149.85 | 2 | $15.10 | 0.00 | 4.50 | 4.5 | $67.95 | $1,217.80 |
| 2 | Dump Truck (10 cy +) | $489.80 | | $2.85 | 0.00 | 0.00 | 0 | $0.00 | $489.80 |
| 1 | Dump Truck (Off Hiway) | $1,087.50 | 1 | $4.75 | 0.00 | 4.50 | 4.5 | $21.38 | $1,108.88 |
| | | | | | | TOTAL MOVE-IN COSTS: | | | $7,209.98 |

# OREGON DEPARTMENT OF FORESTRY
# CRUISE REPORT
*Kilchis Saddle*

## 1. Type of Sale
Regeneration harvest, Recovery

## 2. Legal Description
Sections 17, 18, 19, 20 and 30 of T1N R8W, W.M., Tillamook County, Oregon.

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

| | ACRES | |
|---|---|---|
| | Gross | Net |
| **Unit 1 (Modified Clearcut)** | 141 | 100 |
| **Unit 2 (Modified Clearcut)** | 118 | 82 |
| **Total Acres** | 259 | 182 |

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
All units were cruised using a 700’ x 175’ grid. The timber sale areas were cruised with a variable plot sampling method. All conifers 8” DBH and greater and all hardwoods 10” DBH and greater were recorded on all plots. Every plot recorded species, diameter, height, form factor and grade. Merchantable heights were recorded to 6” and 7” outside bark for conifers and hardwoods, respectively.

### B. Plot size
Point of observation was 4.0’. Form factor was measured at 16.0’.

| Unit | BAF |
|---|---|
| 1 | 27.78 |
| 2 | 27.78 |

### C. Grading System
All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40’ lengths.

## 5. Computation Procedure

Cruise data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type. Plots landing in riparian management areas or areas excluded from the timber sale harvest areas were removed from computation procedures.

Net sale acreage was used for volume calculation.

| Cruise Statistics (Board Foot Volumes) | | | |
|---|---|---|---|
| Units | Number of Plots | SE (%) | CV (%) |
| 1 | 34 | 8.9 | 51.7 |
| 2 | 31 | 8.9 | 49.8 |

## 6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 2% reduction to hardwood volumes for hidden defect and breakage.

## 7. Timber Description

Unit 1 and is comprised mostly of Douglas-fir and western hemlock with some red alder, mostly in the buffers. The stand is approximately 54 years old. Unit 2 is comprised of a mix of Douglas-fir, western hemlock, and red alder, with smaller amount of Sitka spruce. Approximate age of Unit 2 is 60 years old. No previous management is indicated in either area.

The stand is comprised of multiple merchantable species, please see the table below:

| Sale Unit | Species | DBH | Merchantable Bole Height (feet) | Merchantable top (inches inside bark) |
|---|---|---|---|---|
| 1 | Douglas-fir | 20.1 | 106 | 5 |
| 1 | Western hemlock | 15.4 | 72 | 5 |
| 1 | Red alder | 13.8 | 52 | 6 |
| 1 | Sitka spruce | 26.2 | 61 | 5 |
| 2 | Douglas-fir | 19.5 | 73 | 5 |
| 2 | Western hemlock | 23.2 | 83 | 5 |
| 2 | Red alder | 15.1 | 51 | 6 |
| 2 | Sitka spruce | 17.1 | 39 | 5 |

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

## 8. Cruiser /Dates

The timber sale area was cruised by the Tillamook Marketing Unit in 2019/20.

## 9. Revenue Distribution

FDF 100%
Tax Code: 5600 – 100%
Deed Numbers: 161

## 10. Attachments

Volume Summary
Stand Table
Log Stock Tables
Logging Plan

## 11. Stand and Log Stock Tables Species Key

BM – Big leaf maple
DF – Douglas-fir take
OC – Other conifer
RA – Red alder take
SS – Sitka spruce
WH – Western hemlock
RC – Western red cedar

TC TSTNDSUM

# Stand Table Summary

**Project** **SADDLEUP**

**T01N R08W S18 TSALE**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 18 | 7321 | SALE | 100.00 | 34 | 113 |



| Spc | S T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log Net Cu.Ft. | Average Log Net Bd.Ft. | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals Tons | Totals Cunits | Totals MBF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WH | | 9 | 1 | 91 | 80 | 4.139 | 1.83 | 4.14 | 10.9 | 60.0 | 1.44 | 45 | 248 | 144 | 45 | 25 |
| WH | | 10 | 4 | 89 | 63 | 13.411 | 7.31 | 16.76 | 8.9 | 36.0 | 4.80 | 150 | 603 | 480 | 150 | 60 |
| WH | | 11 | 1 | 92 | 103 | 2.771 | 1.83 | 5.54 | 12.8 | 60.0 | 2.27 | 71 | 333 | 227 | 71 | 33 |
| WH | | 12 | 3 | 91 | 81 | 6.985 | 5.49 | 11.64 | 13.5 | 56.0 | 5.02 | 157 | 652 | 502 | 157 | 65 |
| WH | | 13 | 1 | 92 | 85 | 1.984 | 1.83 | 3.97 | 10.9 | 50.0 | 1.38 | 43 | 198 | 138 | 43 | 20 |
| WH | | 14 | 1 | 93 | 107 | 1.711 | 1.83 | 3.42 | 20.0 | 90.0 | 2.18 | 68 | 308 | 218 | 68 | 31 |
| WH | | 15 | 3 | 92 | 99 | 4.470 | 5.49 | 10.43 | 18.7 | 85.7 | 6.24 | 195 | 894 | 624 | 195 | 89 |
| WH | | 16 | 5 | 93 | 116 | 6.548 | 9.14 | 15.72 | 26.7 | 123.3 | 13.43 | 420 | 1,938 | 1,343 | 420 | 194 |
| WH | | 17 | 2 | 93 | 123 | 2.320 | 3.66 | 6.96 | 24.5 | 111.7 | 5.46 | 170 | 777 | 546 | 170 | 78 |
| WH | | 18 | 2 | 92 | 105 | 2.070 | 3.66 | 4.14 | 27.4 | 137.5 | 3.64 | 114 | 569 | 364 | 114 | 57 |
| WH | | 19 | 2 | 93 | 126 | 1.857 | 3.66 | 4.64 | 34.8 | 154.0 | 5.17 | 162 | 715 | 517 | 162 | 72 |
| WH | | 20 | 4 | 93 | 125 | 3.353 | 7.31 | 8.38 | 39.1 | 189.0 | 10.49 | 328 | 1,584 | 1,049 | 328 | 158 |
| WH | | 21 | 2 | 93 | 126 | 1.521 | 3.66 | 3.80 | 44.3 | 208.0 | 5.39 | 168 | 791 | 539 | 168 | 79 |
| WH | | 22 | 4 | 93 | 134 | 2.771 | 7.31 | 7.62 | 46.8 | 219.1 | 11.41 | 356 | 1,669 | 1,141 | 356 | 167 |
| WH | | 23 | 3 | 93 | 137 | 1.901 | 5.49 | 5.70 | 50.4 | 247.8 | 9.19 | 287 | 1,413 | 919 | 287 | 141 |
| WH | | 28 | 1 | 93 | 126 | .428 | 1.83 | 1.28 | 71.3 | 363.3 | 2.93 | 91 | 466 | 293 | 91 | 47 |
| WH | | 32 | 1 | 94 | 144 | .327 | 1.83 | .98 | 78.9 | 443.3 | 2.48 | 78 | 435 | 248 | 78 | 44 |
| WH | | 33 | 1 | 94 | 148 | .308 | 1.83 | .92 | 108.4 | 626.7 | 3.20 | 100 | 579 | 320 | 100 | 58 |
| WH | | 38 | 1 | 94 | 148 | .232 | 1.83 | .70 | 91.1 | 546.7 | 2.03 | 63 | 381 | 203 | 63 | 38 |
| WH | | Totals | 42 | 92 | 97 | 59.108 | 76.80 | 116.76 | 26.3 | 124.7 | 98.16 | 3,067 | 14,555 | 9,816 | 3,067 | 1,456 |
| DF | | 11 | 1 | 89 | 101 | 2.775 | 1.83 | 5.55 | 10.6 | 50.0 | 1.68 | 59 | 277 | 168 | 59 | 28 |
| DF | | 14 | 1 | 89 | 127 | 1.713 | 1.83 | 3.43 | 19.1 | 80.0 | 1.87 | 66 | 274 | 187 | 66 | 27 |
| DF | | 15 | 1 | 89 | 131 | 1.492 | 1.83 | 4.48 | 20.2 | 100.0 | 2.58 | 90 | 448 | 258 | 90 | 45 |
| DF | | 16 | 1 | 90 | 139 | 1.312 | 1.83 | 3.93 | 21.8 | 100.0 | 2.45 | 86 | 393 | 245 | 86 | 39 |
| DF | | 17 | 2 | 89 | 135 | 2.324 | 3.66 | 6.97 | 25.6 | 118.3 | 5.09 | 179 | 825 | 509 | 179 | 82 |
| DF | | 18 | 1 | 88 | 106 | 1.036 | 1.83 | 1.04 | 44.7 | 180.0 | 1.32 | 46 | 187 | 132 | 46 | 19 |
| DF | | 19 | 1 | 89 | 147 | .930 | 1.83 | 3.72 | 26.2 | 127.5 | 2.77 | 97 | 474 | 277 | 97 | 47 |
| DF | | 21 | 3 | 90 | 139 | 2.284 | 5.49 | 6.09 | 42.7 | 211.3 | 7.41 | 260 | 1,287 | 741 | 260 | 129 |
| DF | | 22 | 4 | 91 | 146 | 2.775 | 7.33 | 9.02 | 42.7 | 203.8 | 10.97 | 385 | 1,838 | 1,097 | 385 | 184 |
| DF | | 23 | 4 | 90 | 128 | 2.539 | 7.33 | 6.35 | 47.5 | 218.0 | 8.58 | 301 | 1,384 | 858 | 301 | 138 |
| DF | | 24 | 2 | 89 | 144 | 1.166 | 3.66 | 2.91 | 59.4 | 282.0 | 4.93 | 173 | 822 | 493 | 173 | 82 |
| DF | | 25 | 1 | 90 | 146 | .537 | 1.83 | 1.61 | 60.5 | 296.7 | 2.78 | 98 | 478 | 278 | 98 | 48 |
| DF | | 26 | 3 | 89 | 152 | 1.490 | 5.49 | 4.97 | 60.1 | 310.0 | 8.51 | 299 | 1,540 | 851 | 299 | 154 |
| DF | | 27 | 2 | 90 | 139 | .921 | 3.66 | 2.76 | 71.9 | 381.7 | 5.67 | 199 | 1,055 | 567 | 199 | 105 |
| DF | | 28 | 1 | 89 | 134 | .428 | 1.83 | 1.28 | 69.6 | 346.7 | 2.55 | 89 | 445 | 255 | 89 | 45 |
| DF | | 30 | 1 | 89 | 160 | .373 | 1.83 | 1.49 | 69.4 | 375.0 | 2.95 | 103 | 560 | 295 | 103 | 56 |
| DF | | Totals | 29 | 90 | 133 | 24.096 | 53.11 | 65.61 | 38.6 | 187.3 | 72.12 | 2,531 | 12,287 | 7,212 | 2,531 | 1,229 |
| RA | | 11 | 4 | 87 | 62 | 6.907 | 4.56 | 6.91 | 12.6 | 42.5 | 2.38 | 87 | 294 | 238 | 87 | 29 |
| RA | | 12 | 8 | 90 | 79 | 11.608 | 9.12 | 17.41 | 13.8 | 59.2 | 6.59 | 239 | 1,030 | 659 | 239 | 103 |
| RA | | 13 | 7 | 91 | 82 | 8.654 | 7.98 | 12.36 | 17.4 | 65.0 | 5.93 | 216 | 804 | 593 | 216 | 80 |
| RA | | 14 | 4 | 92 | 94 | 4.264 | 4.56 | 7.46 | 20.6 | 90.0 | 4.23 | 154 | 672 | 423 | 154 | 67 |
| RA | | 15 | 5 | 90 | 81 | 4.643 | 5.70 | 7.43 | 23.5 | 97.5 | 4.80 | 174 | 724 | 480 | 174 | 72 |
| RA | | 16 | 1 | 89 | 69 | .816 | 1.14 | 1.63 | 18.7 | 75.0 | .84 | 31 | 122 | 84 | 31 | 12 |
| RA | | 17 | 1 | 93 | 94 | .723 | 1.14 | 1.45 | 28.2 | 115.0 | 1.12 | 41 | 166 | 112 | 41 | 17 |
| RA | | 18 | 3 | 91 | 86 | 1.935 | 3.42 | 3.22 | 31.3 | 116.0 | 2.77 | 101 | 374 | 277 | 101 | 37 |
| RA | | 19 | 1 | 94 | 103 | .579 | 1.14 | 1.16 | 36.3 | 155.0 | 1.15 | 42 | 179 | 115 | 42 | 18 |
| RA | | 20 | 2 | 92 | 90 | 1.045 | 2.28 | 2.09 | 35.5 | 132.5 | 2.04 | 74 | 277 | 204 | 74 | 28 |
| RA | | 22 | 1 | 93 | 111 | .432 | 1.14 | .86 | 54.7 | 235.0 | 1.30 | 47 | 203 | 130 | 47 | 20 |
| RA | | 26 | 1 | 90 | 77 | .309 | 1.14 | .62 | 46.7 | 210.0 | .79 | 29 | 130 | 79 | 29 | 13 |
| RA | | Totals | 38 | 90 | 80 | 41.914 | 43.30 | 62.60 | 19.7 | 79.5 | 33.95 | 1,234 | 4,975 | 3,395 | 1,234 | 497 |

TC TSTNDSUM

# Stand Table Summary

**Project** **SADDLEUP**

**T01N R08W S18 TSALE**

**T01N R08W S18 TSALE**



| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 18 | 7321 | SALE | 100.00 | 34 | 113 |

**Date:** 02/20/202(

**Time:** 7:12:40AM

| Spc | ST | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log Net Cu.Ft. | Average Log Net Bd.Ft. | Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals Tons | Totals Cunits | Totals MBF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS | | 21 | 1 | 87 | 79 | .566 | 1.36 | 1.13 | 34.0 | 140.0 | 1.00 | 38 | 159 | 100 | 38 | 16 |
| SS | | 29 | 1 | 85 | 71 | .297 | 1.36 | .30 | 116.3 | 360.0 | .90 | 35 | 107 | 90 | 35 | 11 |
| SS | | 33 | 1 | 86 | 84 | .229 | 1.36 | .46 | 96.4 | 410.0 | 1.15 | 44 | 188 | 115 | 44 | 19 |
| SS | | Totals | 3 | 86 | 78 | 1.092 | 4.09 | 1.89 | 62.1 | 240.2 | 3.05 | 117 | 453 | 305 | 117 | 45 |
| WL | | 46 | 1 | 93 | 158 | .071 | .82 | .21 | 191.8 | 1106.7 | 1.30 | 41 | 235 | 130 | 41 | 24 |
| WL | | Totals | 1 | 93 | 158 | .071 | .82 | .21 | 191.8 | 1106.7 | 1.30 | 41 | 235 | 130 | 41 | 24 |
| Totals | | | 113 | 91 | 98 | 126.281 | 178.12 | 247.07 | 28.3 | 131.6 | 208.58 | 6990 | 32,506 | 20,858 | 6,990 | 3,251 |

TC TLOGSTVB

# Log Stock Table - MBF

**Project:** SADDLEUP

**T01N R08W S18 TSALE** **T01N R08W S18 TSAL**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 18 | 7321 | SALE | 100.00 | 34 | 113 |

**Page** 1
**Date** 2/20/2020
**Time** 7:12:39AM

| Spp | S T | So rt | Gr de | 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+ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WH | | CO | 2 | 16 | 11 | | 11 | .8 | | | | | | | | 11 | | | | |
| WH | | CO | 2 | 29 | 11 | | 11 | .7 | | | | | | | | | 11 | | | |
| WH | | CO | 2 | 30 | 2 | | 2 | .1 | | | | 2 | | | | | | | | |
| WH | | CO | 2 | 36 | 37 | | 37 | 2.5 | | | | | | | | | 8 | | 29 | |
| WH | | CO | 2 | 40 | 775 | .3 | 772 | 53.1 | | | | | | 230 | | 180 | 261 | 63 | 38 | |
| WH | | CO | 3 | 15 | 1 | | 1 | .1 | | | | | | 1 | | | | | | |
| WH | | CO | 3 | 32 | 18 | | 18 | 1.2 | | | | | 18 | | | | | | | |
| WH | | CO | 3 | 34 | 3 | | 3 | .2 | | | | 3 | | | | | | | | |
| WH | | CO | 3 | 36 | 34 | | 34 | 2.3 | | | | 34 | | | | | | | | |
| WH | | CO | 3 | 37 | 9 | | 9 | .6 | | | 9 | | | | | | | | | |
| WH | | CO | 3 | 40 | 409 | | 409 | 28.1 | | | 81 | 117 | 156 | 26 | | 29 | | | | |
| WH | | CO | 4 | 12 | 2 | | 2 | .2 | 2 | | | | | | | | | | | |
| WH | | CO | 4 | 14 | 1 | | 1 | .1 | 1 | | | | | | | | | | | |
| WH | | CO | 4 | 15 | 4 | | 4 | .3 | 4 | | | | | | | | | | | |
| WH | | CO | 4 | 16 | 5 | | 5 | .3 | 2 | | 3 | | | | | | | | | |
| WH | | CO | 4 | 17 | 3 | | 3 | .2 | 3 | | | | | | | | | | | |
| WH | | CO | 4 | 18 | 5 | | 5 | .3 | 5 | | | | | | | | | | | |
| WH | | CO | 4 | 22 | 17 | | 17 | 1.2 | 4 | | 13 | | | | | | | | | |
| WH | | CO | 4 | 23 | 8 | | 8 | .5 | 8 | | | | | | | | | | | |
| WH | | CO | 4 | 24 | 13 | | 13 | .9 | 13 | | | | | | | | | | | |
| WH | | CO | 4 | 25 | 2 | | 2 | .1 | | | 2 | | | | | | | | | |
| WH | | CO | 4 | 26 | 7 | | 7 | .5 | 7 | | | | | | | | | | | |
| WH | | CO | 4 | 27 | 14 | | 14 | 1.0 | 14 | | | | | | | | | | | |
| WH | | CO | 4 | 31 | 5 | | 5 | .4 | 5 | | | | | | | | | | | |
| WH | | CO | 4 | 32 | 8 | | 8 | .6 | 8 | | | | | | | | | | | |
| WH | | CO | 4 | 33 | 3 | | 3 | .2 | 3 | | | | | | | | | | | |
| WH | | CO | 4 | 36 | 3 | | 3 | .2 | 3 | | | | | | | | | | | |
| WH | | CO | 4 | 37 | 3 | | 3 | .2 | 3 | | | | | | | | | | | |
| WH | | CO | 4 | 38 | 15 | | 15 | 1.0 | | | | | | 15 | | | | | | |
| WH | | CO | 4 | 39 | 3 | | 3 | .2 | 3 | | | | | | | | | | | |
| WH | | CO | 4 | 40 | 30 | | 30 | 2.0 | 30 | | | | | | | | | | | |
| WH | | Totals | | | 1,458 | | 1,456 | 44.8 | 116 | | 108 | 155 | 175 | 270 | 191 | 310 | 63 | 67 | | |
| DF | | CO | 2 | 32 | 20 | | 20 | 1.7 | | | | | | | | 20 | | | | |
| DF | | CO | 2 | 40 | 845 | .5 | 841 | 68.5 | | | | | | 115 | 219 | 382 | 126 | | | |
| DF | | CO | 3 | 24 | 7 | | 7 | .6 | | | 2 | | 5 | | | | | | | |
| DF | | CO | 3 | 31 | 2 | | 2 | .2 | | | 2 | | | | | | | | | |
| DF | | CO | 3 | 32 | 30 | | 30 | 2.5 | | | | 11 | 13 | 6 | | | | | | |
| DF | | CO | 3 | 37 | 3 | | 3 | .3 | | | 3 | | | | | | | | | |
| DF | | CO | 3 | 40 | 264 | | 264 | 21.5 | | | 30 | 78 | 142 | 14 | | | | | | |
| DF | | CO | 3 | 41 | 5 | | 5 | .4 | | | 5 | | | | | | | | | |
| DF | | CO | 4 | 14 | 1 | | 1 | .1 | 1 | | | | | | | | | | | |
| DF | | CO | 4 | 17 | 2 | | 2 | .2 | 2 | | | | | | | | | | | |
| DF | | CO | 4 | 19 | 1 | | 1 | .1 | | | | 1 | | | | | | | | |
| DF | | CO | 4 | 23 | 1 | | 1 | .1 | 1 | | | | | | | | | | | |
| DF | | CO | 4 | 24 | 4 | | 4 | .4 | 4 | | | | | | | | | | | |
| DF | | CO | 4 | 25 | 8 | | 8 | .7 | 8 | | | | | | | | | | | |
| DF | | CO | 4 | 27 | 5 | | 5 | .4 | 5 | | | | | | | | | | | |
| DF | | CO | 4 | 29 | 2 | | 2 | .2 | 2 | | | | | | | | | | | |
| DF | | CO | 4 | 31 | 4 | | 4 | .3 | 4 | | | | | | | | | | | |
| DF | | CO | 4 | 33 | 7 | | 7 | .6 | 7 | | | | | | | | | | | |

TC TLOGSTVB

# Log Stock Table - MBF

**Project:** SADDLEUP

**T01N R08W S18 TSALE** — **T01N R08W S18 TSAL**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 18 | 7321 | SALE | 100.00 | 34 | 113 |

**Page** 2
**Date** 2/20/2020
**Time** 7:12:39AM

| Spp | S T | So rt | Gr de | 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 | 4 | 35 | 3 | | 3 | .2 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | 38 | 7 | | 7 | .6 | | 7 | | | | | | | | | | |
| DF | | CO | 4 | 40 | 8 | | 8 | .7 | | 8 | | | | | | | | | | |
| DF | | Totals | | | 1,233 | | 1,229 | 37.8 | | 54 | 43 | 91 | 160 | 135 | 219 | 402 | 126 | | | |
| RA | | H | 2 | 40 | 57 | .9 | 57 | 11.4 | | | | | | 24 | 15 | 17 | | | | |
| RA | | H | 3 | 18 | 9 | | 9 | 1.7 | | | | | 9 | | | | | | | |
| RA | | H | 3 | 22 | 10 | | 10 | 2.1 | | | | | | | 10 | | | | | |
| RA | | H | 3 | 26 | 12 | | 12 | 2.4 | | | | | | | | 12 | | | | |
| RA | | H | 3 | 32 | 11 | 7.1 | 11 | 2.1 | | | | | 11 | | | | | | | |
| RA | | H | 3 | 36 | 28 | | 28 | 5.6 | | | | | 13 | | 15 | | | | | |
| RA | | H | 3 | 40 | 97 | | 97 | 19.5 | | | | | 81 | 15 | | | | | | |
| RA | | H | 4 | 13 | 3 | | 3 | .6 | | | 3 | | | | | | | | | |
| RA | | H | 4 | 14 | 2 | | 2 | .4 | | | 2 | | | | | | | | | |
| RA | | H | 4 | 17 | 3 | | 3 | .5 | | | 3 | | | | | | | | | |
| RA | | H | 4 | 18 | 8 | | 8 | 1.6 | | | 8 | | | | | | | | | |
| RA | | H | 4 | 24 | 4 | | 4 | .8 | | | 4 | | | | | | | | | |
| RA | | H | 4 | 26 | 6 | | 6 | 1.2 | | | 6 | | | | | | | | | |
| RA | | H | 4 | 27 | 5 | | 5 | 1.0 | | | 5 | | | | | | | | | |
| RA | | H | 4 | 28 | 15 | | 15 | 3.1 | | | 15 | | | | | | | | | |
| RA | | H | 4 | 30 | 10 | | 10 | 2.0 | | | 10 | | | | | | | | | |
| RA | | H | 4 | 32 | 8 | | 8 | 1.6 | | | 8 | | | | | | | | | |
| RA | | H | 4 | 33 | 5 | | 5 | 1.1 | | | 5 | | | | | | | | | |
| RA | | H | 4 | 34 | 3 | | 3 | .6 | | | 3 | | | | | | | | | |
| RA | | H | 4 | 35 | 9 | | 9 | 1.7 | | | 9 | | | | | | | | | |
| RA | | H | 4 | 36 | 15 | | 15 | 3.1 | | | 4 | 12 | | | | | | | | |
| RA | | H | 4 | 37 | 9 | | 9 | 1.7 | | | 9 | | | | | | | | | |
| RA | | H | 4 | 38 | 15 | | 15 | 3.0 | | | 15 | | | | | | | | | |
| RA | | H | 4 | 39 | 7 | | 7 | 1.5 | | | 7 | | | | | | | | | |
| RA | | H | 4 | 40 | 148 | .8 | 147 | 29.5 | | | 64 | 83 | | | | | | | | |
| RA | | Totals | | | 500 | | 497 | 15.3 | | | 180 | 94 | 114 | 40 | 41 | 29 | | | | |
| SS | | CO | 2 | 24 | 14 | 16.7 | 11 | 25.0 | | | | | | | | 11 | | | | |
| SS | | CO | 2 | 32 | 17 | | 17 | 37.9 | | | | | | | | | 17 | | | |
| SS | | CO | 2 | 40 | 11 | | 11 | 23.6 | | | | | | | 11 | | | | | |
| SS | | CO | 3 | 23 | 5 | | 5 | 10.0 | | | | | 5 | | | | | | | |
| SS | | CO | 3 | 31 | 2 | | 2 | 3.5 | | | | 2 | | | | | | | | |
| SS | | Totals | | | 48 | 4.8 | 45 | 1.4 | | | | 2 | 5 | | 11 | 11 | 17 | | | |
| WL | | CO | 2 | 25 | 6 | | 6 | 27.4 | | | | | | | | | | 6 | | |
| WL | | CO | 2 | 36 | 2 | | 2 | 6.6 | | | | | | 2 | | | | | | |
| WL | | CO | 2 | 40 | 16 | | 16 | 66.0 | | | | | | | | | | | 16 | |
| WL | | Totals | | | 24 | | 24 | .7 | | | | | | 2 | | | | 6 | 16 | |
| Total All Species | | | | | 3,262 | | 3,251 | 100.0 | | 169 | 331 | 342 | 453 | 446 | 461 | 752 | 206 | 73 | 16 | |

TC TSTNDSUM

# Stand Table Summary

**Project** **SADDLEUP**

**T01N R08W S30 TSALE**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 30 | 711 | SALE | 82.00 | 31 | 87 |

**T01N R08W S30 TSALE**



**Date:** 02/05/202(

**Time:** 2:04:44PM

| Spc | S T | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log Net Cu.Ft. | Average Log Net Bd.Ft. | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals Tons | Totals Cunits | Totals MBF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DF | | 11 | 1 | 89 | 96 | 2.402 | 1.59 | 4.80 | 8.2 | 40.0 | 1.13 | 39 | 192 | 92 | 32 | 16 |
| DF | | 12 | 1 | 88 | 89 | 2.019 | 1.59 | 4.04 | 11.6 | 45.0 | 1.33 | 47 | 182 | 109 | 38 | 15 |
| DF | | 13 | 2 | 86 | 75 | 3.440 | 3.17 | 6.88 | 12.1 | 52.5 | 2.38 | 83 | 361 | 195 | 68 | 30 |
| DF | | 14 | 1 | 88 | 100 | 1.483 | 1.59 | 2.97 | 19.4 | 80.0 | 1.64 | 58 | 237 | 135 | 47 | 19 |
| DF | | 15 | 2 | 88 | 87 | 2.584 | 3.17 | 5.17 | 19.5 | 80.0 | 2.87 | 101 | 413 | 235 | 83 | 34 |
| DF | | 19 | 1 | 89 | 94 | .805 | 1.59 | 1.61 | 32.7 | 115.0 | 1.50 | 53 | 185 | 123 | 43 | 15 |
| DF | | 21 | 1 | 84 | 83 | .659 | 1.59 | 1.32 | 36.8 | 120.0 | 1.38 | 49 | 158 | 113 | 40 | 13 |
| DF | | 22 | 1 | 87 | 79 | .601 | 1.59 | 1.20 | 32.8 | 125.0 | 1.12 | 39 | 150 | 92 | 32 | 12 |
| DF | | 23 | 2 | 89 | 115 | 1.099 | 3.17 | 3.30 | 38.3 | 161.7 | 3.60 | 126 | 533 | 295 | 104 | 44 |
| DF | | 24 | 3 | 89 | 113 | 1.514 | 4.76 | 4.04 | 46.5 | 198.8 | 5.35 | 188 | 802 | 439 | 154 | 66 |
| DF | | 27 | 1 | 90 | 132 | .399 | 1.59 | 1.20 | 64.6 | 313.3 | 2.20 | 77 | 375 | 181 | 63 | 31 |
| DF | | 28 | 2 | 89 | 117 | .742 | 3.17 | 2.22 | 61.3 | 293.3 | 3.89 | 136 | 653 | 319 | 112 | 54 |
| DF | | 30 | 2 | 90 | 138 | .646 | 3.17 | 1.94 | 83.4 | 428.3 | 4.61 | 162 | 830 | 378 | 133 | 68 |
| DF | | 31 | 1 | 90 | 132 | .302 | 1.59 | .91 | 82.4 | 413.3 | 2.13 | 75 | 375 | 175 | 61 | 31 |
| DF | | 32 | 1 | 86 | 124 | .284 | 1.59 | .85 | 79.7 | 370.0 | 1.93 | 68 | 315 | 159 | 56 | 26 |
| DF | | 33 | 1 | 89 | 142 | .267 | 1.59 | .80 | 99.9 | 513.3 | 2.28 | 80 | 411 | 187 | 66 | 34 |
| DF | | 34 | 1 | 89 | 139 | .251 | 1.59 | .75 | 102.1 | 513.3 | 2.19 | 77 | 387 | 180 | 63 | 32 |
| DF | | 35 | 1 | 90 | 127 | .237 | 1.59 | .95 | 76.1 | 460.0 | 2.06 | 72 | 437 | 169 | 59 | 36 |
| DF | | 36 | 1 | 89 | 128 | .224 | 1.59 | .67 | 108.8 | 593.3 | 2.09 | 73 | 399 | 171 | 60 | 33 |
| DF | | Totals | 26 | 88 | 98 | 19.959 | 41.22 | 45.62 | 35.1 | 162.2 | 45.69 | 1,603 | 7,397 | 3,746 | 1,315 | 607 |
| RA | | 10 | 1 | 91 | 82 | 2.957 | 1.61 | 2.96 | 12.8 | 60.0 | 1.04 | 38 | 177 | 85 | 31 | 15 |
| RA | | 11 | 3 | 93 | 99 | 7.332 | 4.84 | 9.78 | 12.5 | 55.0 | 3.36 | 122 | 538 | 276 | 100 | 44 |
| RA | | 12 | 4 | 92 | 87 | 8.215 | 6.45 | 12.32 | 14.3 | 61.7 | 4.86 | 177 | 760 | 398 | 145 | 62 |
| RA | | 13 | 2 | 92 | 84 | 3.500 | 3.23 | 5.25 | 13.9 | 60.0 | 2.01 | 73 | 315 | 165 | 60 | 26 |
| RA | | 14 | 2 | 88 | 60 | 3.018 | 3.23 | 3.02 | 18.8 | 45.0 | 1.56 | 57 | 136 | 128 | 46 | 11 |
| RA | | 15 | 2 | 93 | 92 | 2.629 | 3.23 | 5.26 | 17.1 | 65.0 | 2.47 | 90 | 342 | 203 | 74 | 28 |
| RA | | 16 | 5 | 92 | 92 | 5.776 | 8.07 | 10.40 | 22.6 | 87.8 | 6.47 | 235 | 913 | 530 | 193 | 75 |
| RA | | 17 | 3 | 93 | 92 | 3.070 | 4.84 | 6.14 | 24.7 | 105.0 | 4.17 | 152 | 645 | 342 | 124 | 53 |
| RA | | 18 | 2 | 91 | 81 | 1.826 | 3.23 | 2.74 | 24.8 | 83.3 | 1.87 | 68 | 228 | 153 | 56 | 19 |
| RA | | 19 | 2 | 92 | 86 | 1.638 | 3.23 | 2.46 | 34.4 | 116.7 | 2.32 | 84 | 287 | 190 | 69 | 24 |
| RA | | 20 | 3 | 90 | 83 | 2.218 | 4.84 | 4.44 | 28.7 | 106.7 | 3.50 | 127 | 473 | 287 | 104 | 39 |
| RA | | 22 | 4 | 90 | 73 | 2.444 | 6.45 | 3.67 | 33.1 | 115.0 | 3.34 | 121 | 422 | 273 | 99 | 35 |
| RA | | 24 | 2 | 93 | 95 | 1.027 | 3.23 | 2.05 | 40.2 | 172.5 | 2.27 | 83 | 354 | 186 | 68 | 29 |
| RA | | Totals | 35 | 92 | 87 | 45.651 | 56.46 | 70.47 | 20.2 | 79.3 | 39.23 | 1,426 | 5,589 | 3,217 | 1,170 | 458 |
| WH | | 16 | 1 | 89 | 64 | 1.095 | 1.53 | 3.28 | 10.9 | 43.3 | 1.15 | 36 | 142 | 94 | 29 | 12 |
| WH | | 19 | 1 | 93 | 105 | .776 | 1.53 | 1.55 | 41.0 | 175.0 | 2.04 | 64 | 272 | 167 | 52 | 22 |
| WH | | 20 | 1 | 92 | 105 | .701 | 1.53 | 1.40 | 42.4 | 165.0 | 1.90 | 59 | 231 | 156 | 49 | 19 |
| WH | | 21 | 1 | 92 | 120 | .636 | 1.53 | 1.91 | 35.3 | 163.3 | 2.15 | 67 | 311 | 177 | 55 | 26 |
| WH | | 22 | 3 | 92 | 103 | 1.737 | 4.59 | 4.05 | 43.6 | 190.0 | 5.66 | 177 | 770 | 464 | 145 | 63 |
| WH | | 23 | 1 | 93 | 113 | .530 | 1.53 | 1.59 | 41.0 | 193.3 | 2.09 | 65 | 307 | 171 | 53 | 25 |
| WH | | 24 | 1 | 92 | 122 | .487 | 1.53 | 1.46 | 49.3 | 243.3 | 2.30 | 72 | 355 | 189 | 59 | 29 |
| WH | | 25 | 2 | 92 | 113 | .897 | 3.06 | 2.69 | 48.9 | 235.0 | 4.21 | 132 | 632 | 345 | 108 | 52 |
| WH | | 26 | 2 | 92 | 111 | .829 | 3.06 | 2.49 | 51.4 | 255.0 | 4.09 | 128 | 634 | 336 | 105 | 52 |
| WH | | 28 | 1 | 93 | 116 | .358 | 1.53 | 1.07 | 60.6 | 303.3 | 2.08 | 65 | 325 | 170 | 53 | 27 |
| WH | | 29 | 1 | 92 | 100 | .333 | 1.53 | .67 | 84.8 | 375.0 | 1.81 | 57 | 250 | 148 | 46 | 20 |
| WH | | 31 | 1 | 93 | 127 | .292 | 1.53 | .87 | 82.6 | 420.0 | 2.31 | 72 | 367 | 190 | 59 | 30 |
| WH | | 39 | 1 | 92 | 107 | .184 | 1.53 | .37 | 161.9 | 810.0 | 1.91 | 60 | 299 | 157 | 49 | 24 |
| WH | | Totals | 17 | 92 | 104 | 8.854 | 25.99 | 23.41 | 45.0 | 209.2 | 33.70 | 1,053 | 4,897 | 2,763 | 864 | 402 |
| SS | | 9 | 1 | 76 | 46 | 5.216 | 2.30 | 5.22 | 6.9 | 30.0 | .94 | 36 | 156 | 77 | 30 | 13 |
| SS | | 20 | 2 | 82 | 59 | 2.112 | 4.61 | 3.17 | 33.0 | 73.3 | 2.72 | 105 | 232 | 223 | 86 | 19 |

TC TSTNDSUM

## Stand Table Summary

**Project** **SADDLEUP**

**T01N R08W S30 TSALE**

**T01N R08W S30 TSALE**



| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 30 | 711 | SALE | 82.00 | 31 | 87 |

**Date:** **02/05/202(**

**Time:** **2:04:44PM**

| Spc | ST | DBH | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log Net Cu.Ft. | Average Log Net Bd.Ft. | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals Tons | Totals Cunits | Totals MBF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS | | 22 | 1 | 83 | 60 | .873 | 2.30 | | | | | | | | | |
| SS | | 23 | 1 | 93 | 109 | .799 | 2.30 | 3.19 | 30.2 | 170.0 | 2.51 | 97 | 543 | 206 | 79 | 45 |
| SS | | 27 | 1 | 88 | 91 | .580 | 2.30 | 1.16 | 62.0 | 215.0 | 1.87 | 72 | 249 | 153 | 59 | 20 |
| SS | | 29 | 1 | 88 | 92 | .502 | 2.30 | 1.00 | 66.5 | 340.0 | 1.74 | 67 | 342 | 143 | 55 | 28 |
| SS | | Totals | 7 | 80 | 60 | 10.082 | 16.13 | 13.74 | 27.4 | 110.8 | 9.78 | 376 | 1,523 | 802 | 308 | 125 |
| Totals | | | 85 | 90 | 88 | 84.546 | 139.80 | 153.24 | 29.1 | 126.6 | 128.39 | 4459 | 19,406 | 10,528 | 3,656 | 1,591 |

TC TLOGSTVB

# Log Stock Table - MBF

**Project:** SADDLEUP

**T01N R08W S30 TSALE** — **T01N R08W S30 TSAL**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 30 | 711 | SALE | 82.00 | 31 | 87 |

**Page** 1
**Date** 2/5/2020
**Time** 2:04:43PM

| Spp | ST | Sort | Grade | 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+ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RA | | H | 2 | 12 | 9 | | 9 | 1.9 | | | | | | | | | 9 | | | |
| RA | | H | 2 | 20 | 11 | | 11 | 2.4 | | | | | | | 11 | | | | | |
| RA | | H | 2 | 26 | 15 | | 15 | 3.4 | | | | | | | 15 | | | | | |
| RA | | H | 2 | 40 | 27 | 2.3 | 26 | 5.7 | | | | | | 12 | 15 | | | | | |
| RA | | H | 3 | 16 | 20 | | 20 | 4.3 | | | | | | 9 | 10 | | | | | |
| RA | | H | 3 | 21 | 13 | | 13 | 2.7 | | | | | | | 13 | | | | | |
| RA | | H | 3 | 26 | 16 | | 16 | 3.6 | | | | | | | | 16 | | | | |
| RA | | H | 3 | 32 | 23 | | 23 | 5.1 | | | | | 12 | 12 | | | | | | |
| RA | | H | 3 | 35 | 18 | | 18 | 3.8 | | | | | | 18 | | | | | | |
| RA | | H | 3 | 40 | 57 | | 57 | 12.4 | | | | | 45 | 12 | | | | | | |
| RA | | H | 4 | 12 | 1 | | 1 | .2 | | | 1 | | | | | | | | | |
| RA | | H | 4 | 13 | 2 | | 2 | .5 | | | 2 | | | | | | | | | |
| RA | | H | 4 | 15 | 3 | | 3 | .6 | | | 3 | | | | | | | | | |
| RA | | H | 4 | 16 | 18 | 9.6 | 16 | 3.5 | | | 10 | | 6 | | | | | | | |
| RA | | H | 4 | 18 | 1 | | 1 | .3 | | | 1 | | | | | | | | | |
| RA | | H | 4 | 19 | 6 | | 6 | 1.4 | | | 6 | | | | | | | | | |
| RA | | H | 4 | 21 | 2 | 33.3 | 1 | .2 | | | 1 | | | | | | | | | |
| RA | | H | 4 | 29 | 7 | | 7 | 1.6 | | | 7 | | | | | | | | | |
| RA | | H | 4 | 30 | 6 | 15.2 | 5 | 1.1 | | | 5 | | | | | | | | | |
| RA | | H | 4 | 31 | 13 | | 13 | 2.8 | | | 13 | | | | | | | | | |
| RA | | H | 4 | 32 | 4 | | 4 | .8 | | | 4 | | | | | | | | | |
| RA | | H | 4 | 33 | 12 | | 12 | 2.7 | | | 12 | | | | | | | | | |
| RA | | H | 4 | 34 | 2 | | 2 | .5 | | | 2 | | | | | | | | | |
| RA | | H | 4 | 37 | 5 | | 5 | 1.1 | | | 5 | | | | | | | | | |
| RA | | H | 4 | 40 | 173 | 1.3 | 171 | 37.3 | | | 67 | 104 | | | | | | | | |
| RA | | Totals | | | 464 | 1.3 | 458 | 28.8 | | | 141 | 104 | 62 | 62 | 64 | 16 | 9 | | | |
| DF | | CO | 2 | 20 | 9 | | 9 | 1.5 | | | | | | | | | 9 | | | |
| DF | | CO | 2 | 24 | 5 | | 5 | .9 | | | | | | | | 5 | | | | |
| DF | | CO | 2 | 32 | 36 | | 36 | 5.9 | | | | | | 5 | 11 | | | 19 | | |
| DF | | CO | 2 | 36 | 15 | | 15 | 2.5 | | | | | | | | 15 | | | | |
| DF | | CO | 2 | 40 | 383 | .1 | 383 | 63.1 | | | | | | 37 | 44 | 130 | 106 | 66 | | |
| DF | | CO | 3 | 20 | 1 | | 1 | .2 | | | | | 1 | | | | | | | |
| DF | | CO | 3 | 28 | 2 | | 2 | .3 | | | | 2 | | | | | | | | |
| DF | | CO | 3 | 29 | 1 | | 1 | .2 | | | | 1 | | | | | | | | |
| DF | | CO | 3 | 30 | 1 | | 1 | .2 | | | | 1 | | | | | | | | |
| DF | | CO | 3 | 32 | 44 | 2.1 | 43 | 7.1 | | | 12 | 31 | | | | | | | | |
| DF | | CO | 3 | 35 | 2 | | 2 | .3 | | | | 2 | | | | | | | | |
| DF | | CO | 3 | 40 | 71 | | 71 | 11.6 | | | 14 | 33 | 23 | | | | | | | |
| DF | | CO | 4 | 14 | 2 | | 2 | .3 | | 1 | | 1 | | | | | | | | |
| DF | | CO | 4 | 15 | 2 | | 2 | .3 | | 1 | | 1 | | | | | | | | |
| DF | | CO | 4 | 16 | 2 | | 2 | .4 | | | | 2 | | | | | | | | |
| DF | | CO | 4 | 17 | 6 | | 6 | 1.0 | | 4 | 1 | 1 | | | | | | | | |
| DF | | CO | 4 | 18 | 9 | | 9 | 1.5 | | 5 | 4 | | | | | | | | | |
| DF | | CO | 4 | 20 | 1 | | 1 | .1 | | | 1 | | | | | | | | | |
| DF | | CO | 4 | 23 | 3 | | 3 | .5 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | 24 | 3 | | 3 | .5 | | | | 1 | 2 | | | | | | | |
| DF | | CO | 4 | 30 | 3 | | 3 | .5 | | 3 | | | | | | | | | | |
| DF | | CO | 4 | 31 | 2 | | 2 | .3 | | 2 | | | | | | | | | | |
| DF | | CO | 4 | 40 | 5 | | 5 | .8 | | 5 | | | | | | | | | | |

TC TLOGSTVB

# Log Stock Table - MBF

**Project:** SADDLEUP

**T01N R08W S30 TSALE** — **T01N R08W S30 TSAL**

| Twp | Rge | Sec | Tract | Type | Acres | Plots | Sample Trees |
|---|---|---|---|---|---|---|---|
| 01N | 08W | 30 | 711 | SALE | 82.00 | 31 | 87 |

**Page** 2
**Date** 2/5/2020
**Time** 2:04:43PM

| Spp | ST | Sort | Grade | 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 | | Totals | | | 608 | | 607 | 38.1 | | 24 | 32 | 76 | 26 | 42 | 55 | 150 | 115 | 85 | | |
| WH | | CO | 2 | 28 | 17 | | 17 | 4.1 | | | | | | | | | 17 | | | |
| WH | | CO | 2 | 32 | 17 | | 17 | 4.3 | | | | | | 17 | | | | | | |
| WH | | CO | 2 | 40 | 299 | 1.0 | 296 | 73.6 | | | | | | | 94 | 118 | 62 | 22 | | |
| WH | | CO | 3 | 11 | 2 | | 2 | .4 | | 2 | | | | | | | | | | |
| WH | | CO | 3 | 22 | 10 | | 10 | 2.5 | | | | | | 10 | | | | | | |
| WH | | CO | 3 | 32 | 21 | | 21 | 5.1 | | | | 2 | 11 | | 8 | | | | | |
| WH | | CO | 3 | 36 | 2 | | 2 | .6 | | | | | 2 | | | | | | | |
| WH | | CO | 3 | 40 | 23 | | 23 | 5.8 | | | 4 | 6 | 13 | | | | | | | |
| WH | | CO | 4 | 13 | 1 | | 1 | .2 | | | 1 | | | | | | | | | |
| WH | | CO | 4 | 14 | 1 | | 1 | .3 | | 0 | 1 | | | | | | | | | |
| WH | | CO | 4 | 15 | 3 | | 3 | .8 | | 1 | 2 | | | | | | | | | |
| WH | | CO | 4 | 17 | 1 | | 1 | .2 | | 1 | | | | | | | | | | |
| WH | | CO | 4 | 18 | 1 | | 1 | .3 | | | 1 | | | | | | | | | |
| WH | | CO | 4 | 19 | 1 | | 1 | .2 | | | 1 | | | | | | | | | |
| WH | | CO | 4 | 33 | 2 | | 2 | .5 | | 2 | | | | | | | | | | |
| WH | | CO | 4 | 36 | 2 | | 2 | .5 | | 2 | | | | | | | | | | |
| WH | | CO | 4 | 40 | 2 | | 2 | .6 | | 2 | | | | | | | | | | |
| WH | | Totals | | | 405 | | 402 | 25.2 | | 10 | 9 | 8 | 27 | 27 | 102 | 118 | 78 | 22 | | |
| SS | | CO | 2 | 24 | 21 | | 21 | 16.5 | | | | | | | | | 21 | | | |
| SS | | CO | 2 | 26 | 26 | | 26 | 20.5 | | | | | | | | 26 | | | | |
| SS | | CO | 2 | 40 | 19 | | 19 | 15.2 | | | | | | | | 19 | | | | |
| SS | | CO | 3 | 16 | 10 | | 10 | 8.4 | | | | | | | | 10 | | | | |
| SS | | CO | 3 | 25 | 7 | | 7 | 5.9 | | | | | | | 7 | | | | | |
| SS | | CO | 3 | 32 | 12 | | 12 | 9.7 | | | | | 12 | | | | | | | |
| SS | | CO | 3 | 40 | 5 | | 5 | 4.2 | | | 5 | | | | | | | | | |
| SS | | CO | 4 | 14 | 2 | | 2 | 1.4 | | | 2 | | | | | | | | | |
| SS | | CO | 4 | 20 | 1 | | 1 | 1.1 | | | 1 | | | | | | | | | |
| SS | | CO | 4 | 22 | 9 | | 9 | 6.8 | | 1 | | | | 7 | | | | | | |
| SS | | CO | 4 | 24 | 13 | | 13 | 10.3 | | 13 | | | | | | | | | | |
| SS | | Totals | | | 125 | | 125 | 7.8 | | 14 | 8 | | 12 | 7 | 7 | 55 | 21 | | | |
| Total All Species | | | | | 1,602 | | 1,591 | 100.0 | | 48 | 190 | 188 | 128 | 138 | 229 | 339 | 223 | 107 | | |

"STEWARDSHIP IN FORESTRY"

# Kilchis Saddle

## Volume Summary

| Area 1-Harvest Type | | | | |
|---|---|---|---|---|
| | | 100 acres | | |
| | Cruised Net | Cruised Net | Hidden | Net Sale |
| SPECIES | MBF/ Acre | MBF | D&B | MBF |
| Douglas-fir | 12.29 | 1229 | 1% | 1217 |
| Hemlock | 14.56 | 1456 | 1% | 1441 |
| Spruce | 0.45 | 45 | 1% | 45 |
| Noble Fir | | 0 | 1% | 0 |
| Alder | 4.97 | 497 | 2% | 487 |
| TOTAL | 32.3 | 3227.0 | | 3190 |

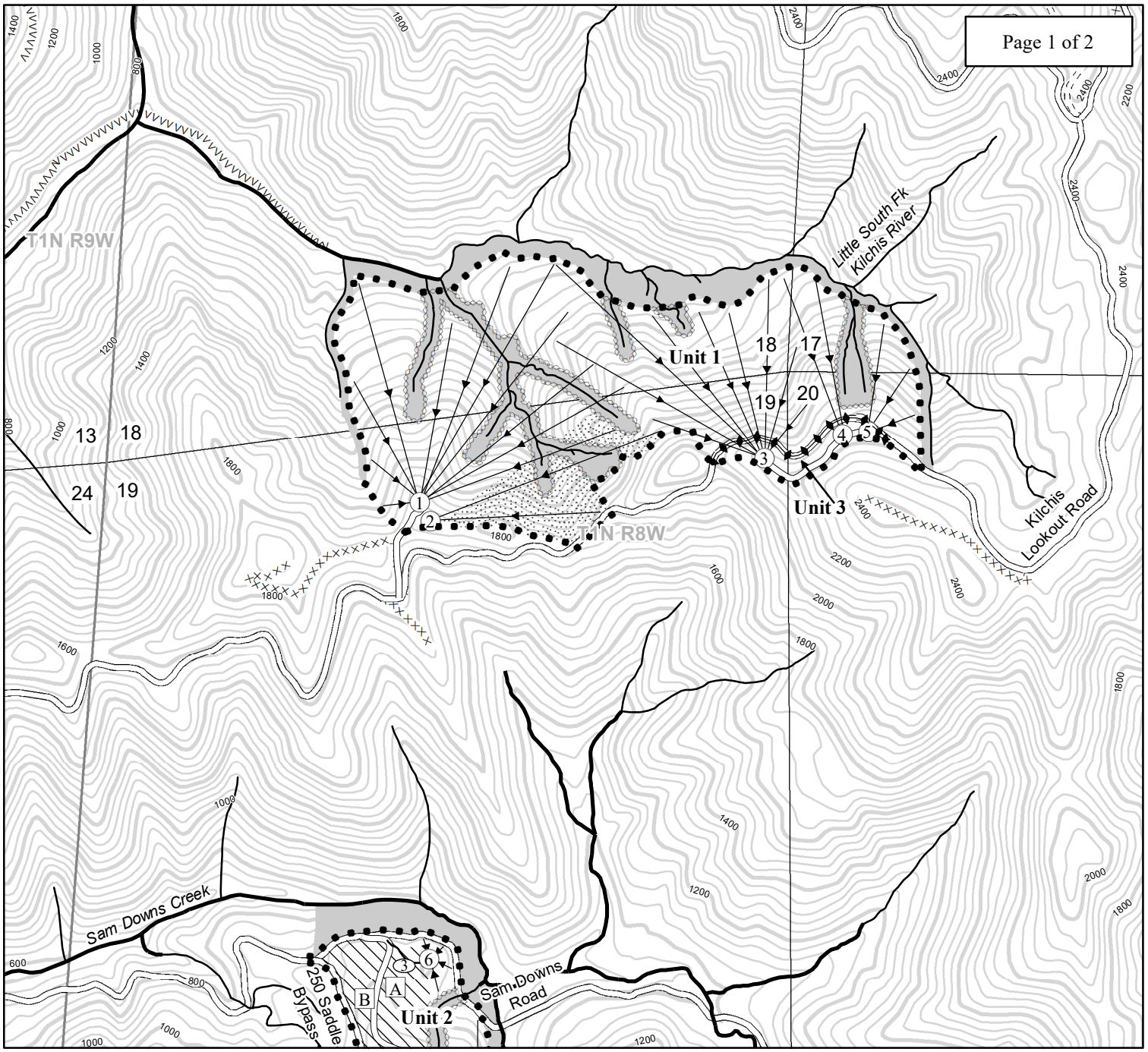
| Areas 2-Harvest Type | | | | |
|---|---|---|---|---|
| | | 82 acres | | |
| | Cruised Net | Cruised Net | Hidden | Net Sale |
| SPECIES | MBF/ Acre | MBF | D&B | MBF |
| Douglas-fir | 7.40 | 607 | 1% | 601 |
| Hemlock | 4.9 | 402 | 1% | 398 |
| Spruce | 1.5 | 125 | 1% | 124 |
| Noble Fir | | 0 | 1% | 0 |
| Alder | 5.59 | 458 | 2% | 449 |
| TOTAL | 19.4 | 1592 | | 1572 |

"STEWARDSHIP IN FORESTRY"

# *Kilchis Saddle*

## Volume Summary

| TOTAL SALE VOLUME | 182 | acres |
|---|---|---|
| SPECIES | Cruised Net (MBF) | Net Sale (MBF) |
| Douglas-fir | 1836 | 1818 |
| Hemlock | 1858 | 1839 |
| Spruce | 170 | 168 |
| Noble Fir | 0 | 0 |
| Red Alder | 955 | 936 |
| **TOTAL** | 4819 | 4761 |




- Timber Sale Boundary
- Area Boundary
- Surfaced Road
- Unsurfaced Road
- Abandoned road
- Blocked road
- (2) Non-project road
- Type-F Stream
- Type-N Stream
- Sections
- Tractor Landing
- Cable Landing
- Cable Corridor
- Stream Buffer
- Posted Buffer
- Downhill Yarding (Cable Yarding with Haulback)
- Ground Yarding
- 40 Foot Contour Band

# LOGGING PLAN

FOR TIMBER SALE CONTRACT TL-341-2020-W00651-01
KILCHIS SADDLE
PORTIONS OF SECTIONS 17,18, 19, 20 & 30, T1N, R8W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
February, 2020
This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.

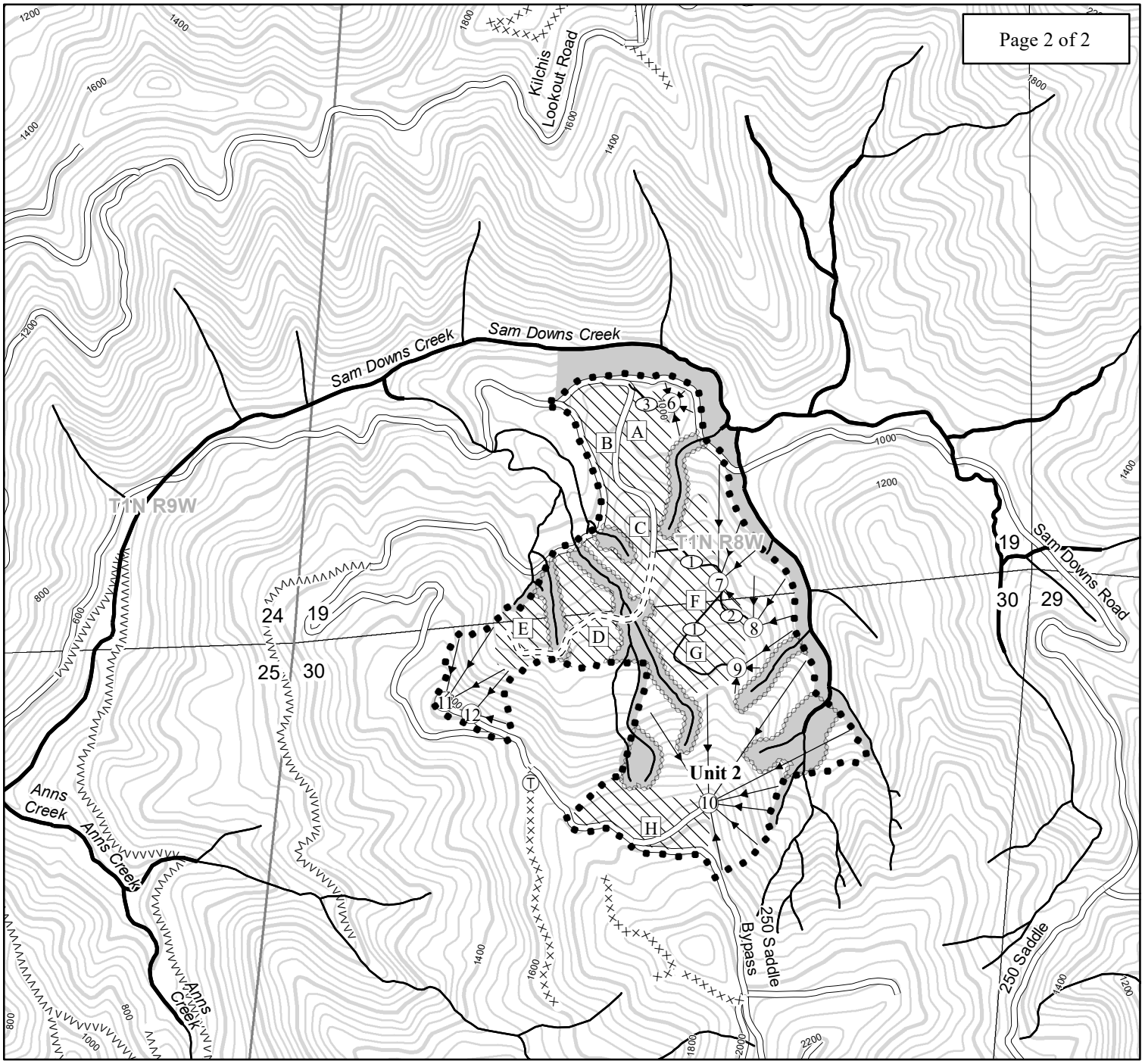
1:12,000
1 inch = 1,000 feet

0 500 1,000 2,000 Feet

N

NET ACRES

| | TRACTOR | CABLE |
|---|---|---|
| UNIT 1 | 0 | 100 |
| UNIT 2 | 44 | 38 |
| TOTAL | 44 | 138 |




- Timber Sale Boundary
- Surfaced Road
- Unsurfaced Road
- Abandoned road
- Blocked road
- (2) Non-project road
- Type-F Stream
- Type-N Stream
- Sections
- Tractor Landing
- Cable Landing
- Cable Corridor
- Ⓣ Truck Turn-around
- Stream Buffer
- Posted Buffer
- Ground Yarding
- 40 Foot Contour Band

# LOGGING PLAN

FOR TIMBER SALE CONTRACT TL-341-2020-W00651-01
KILCHIS SADDLE
PORTIONS OF SECTIONS 17,18, 19, 20 & 30, T1N, R8W, W.M.
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N

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