

**Appraisal Summary Report**

Average Line Method  
 BCTS  
 Licence Number: TA0276 CP: XXX  
 Project: XXX  
 Location : Begbie Creek

Grades: MOF Computerized  
 Computerized Decay  
 Computerized Waste  
 Computerized Breakage  
 No Of Blocks : 2

FIZ: G  
 PSYU: Arrowhead  
 Region: 4 - Kootenay-Boundary  
 District: 04 - Selkirk

23-Nov-2018 10:42:09AM  
 Filename: ta0276 begbie creek.ccp  
 Compiled by: BCTS  
 Cruised by: JEREMY WEDDELL  
 Version: 2018.00 IFS build 6202

| Utilization Levels:      | Minimum DBH | Top Diameter | Stump Height |
|--------------------------|-------------|--------------|--------------|
| Mature Blocks: (cm)      | 17.5        | 10.0         | 30           |
| Immature Blocks: (cm)    | 12.0        | 10.0         | 30           |
| Exception[CE]: (cm)      | 17.5        | 15.0         | 30           |
| Exception[PL]: (cm)      | 12.5        | 10.0         | 30           |
| Standard Log Length: (m) | 5.00        |              |              |

Net Area: [All Treatment Units : 19.8 ]

**All Method Summary**

| Species          | Net Volume (m3) |      |     | Net Volume / ha |         |       | Decay% | Stud Log% | LRF | All Burn% |
|------------------|-----------------|------|-----|-----------------|---------|-------|--------|-----------|-----|-----------|
| Code Description | All             | Live | DP  | All             | Live    | DP    |        |           |     |           |
| CE Cedar         | 2715            | 2621 | 94  | 137.129         | 132.378 | 4.751 | 24     | 0         | 188 | 0         |
| HE Hemlock       | 4673            | 4629 | 44  | 236.024         | 233.788 | 2.236 | 23     | 0         | 157 | 0         |
| Conifer          | 7388            | 7250 | 138 | 373.153         | 366.167 | 6.986 | 24     | 0         |     | 0         |
| Total            | 7388            | 7250 | 138 | 373.153         | 366.167 | 6.986 | 24     | 0         |     | 0         |

**Harvesting Method Summaries**

| Species     | Harvest Method | Net Volume | Average Slope% | Net Vol /Tree | Net Vol/ha | Defect% (DWB) | Partial Cut% | All Fire% | Heavy Fire% | Down Tree% | Dead Useless% |
|-------------|----------------|------------|----------------|---------------|------------|---------------|--------------|-----------|-------------|------------|---------------|
| All Species | SC             | 7388       | 18             | 1.43          | 373.153    | 39            |              | 0         | 0           | 3          | 10            |
|             | All Methods    | 7388       | 18             | 1.43          | 373.153    | 39            |              | 0         | 0           | 3          | 10            |
| Conifer     | SC             | 7388       | 18             | 1.43          | 373.153    | 39            |              | 0         | 0           | 3          | 10            |
|             | All Methods    | 7388       | 18             | 1.43          | 373.153    | 39            |              | 0         | 0           | 3          | 10            |

**Insect Damage Net Volume (m3)**

| L.P. Pine    | All Other Conifer |
|--------------|-------------------|
| Green Attack | Red Attack        |
| 0            | 0                 |

**L.P. Pine Red/Grey Attack % of Conifer by Block**

1Y3: 0.0% 6MT: 0.0%

**Cutting Authority**

95% Confidence Interval 14.3  
 Plots/Ha 1.2  
 Cruised Trees/Plot 4.6  
 Cruise Date (yy-mm): 18-05  
 # Plots: 23 # <= 5yrs: 23 # > 5yrs: 0 # > 10yrs: 0 # no date: 0

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

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Average Line Method  
 BCTS  
 Licence Number: TA0276 CP: XXX  
 Project: XXX

Grades: MOF Computerized  
 Computerized Decay  
 Computerized Waste  
 Computerized Breakage

**Cutting Permit Summary**

FIZ: G  
 PSYU: Arrowhead  
 Region: 4 - Kootenay-Boundary  
 District: 04 - Selkirk

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Net Area: [ A : 19.8 ]  
 Gross Area: [ WTRA : 5.3 ] [ Non Merch : 0.1 ] [ Grand Total : 25.2 ]

|                             |         | Total | Conifer | Decid | C     | H     |
|-----------------------------|---------|-------|---------|-------|-------|-------|
| <b>Utilization Limits</b>   |         |       |         |       |       |       |
| Min DBH                     | cm (M)  |       |         |       | 17.5  | 17.5  |
| Stump Ht                    | cm (M)  |       |         |       | 30.0  | 30.0  |
| Top Dia                     | cm (M)  |       |         |       | 15.0  | 10.0  |
| Log Len                     | m       |       |         |       | 5.0   | 5.0   |
| <b>Volume and Size Data</b> |         |       |         |       |       |       |
| Gross Merchantable          | m3      | 12055 | 12055   |       | 4551  | 7503  |
| Net Merchantable            | m3      | 7388  | 7388    |       | 2715  | 4673  |
| Net Merch - All             | m3/ha   | 373   | 373     |       | 137   | 236   |
| Distribution                | %       | 100   | 100     |       | 37    | 63    |
| Decay                       | %       | 24    | 24      |       | 24    | 23    |
| Waste                       | %       | 10    | 10      |       | 9     | 11    |
| Waste(billing)              | %       | 17    | 17      |       | 15    | 18    |
| Breakage                    | %       | 5     | 5       |       | 7     | 3     |
| Total Cull (DWB)            | %       | 39    | 39      |       | 40    | 38    |
| Basal Area / Ha             | m2/ha   | 58.3  | 58.3    |       | 25.8  | 32.5  |
| Net VBAR                    | m3/m2   | 6.397 | 6.397   |       | 5.326 | 7.218 |
| Stems/Ha (Live & DP)        |         | 261.8 | 261.8   |       | 78.8  | 182.9 |
| Avg DBH (Live & DP)         | cm      | 53.3  | 53.3    |       | 64.5  | 47.6  |
| Snags/Ha                    |         | 30.2  | 30.2    |       | 28.8  | 1.4   |
| Avg Snag DBH                | cm      | 27.3  | 27.3    |       | 17.8  | 97.5  |
| Gross Merch Vol/Tree        | m3      | 2.33  | 2.33    |       | 2.92  | 2.07  |
| Net Merch Vol/Tree          | m3      | 1.43  | 1.43    |       | 1.74  | 1.29  |
| Avg Weight Total Ht         | m       | 33.9  | 33.9    |       | 34.6  | 33.5  |
| Avg Weight Merch Ht         | m       | 28.5  | 28.5    |       | 28.0  | 28.7  |
| Avg 5.0 m Log Net           | m3      | 0.36  | 0.36    |       | 0.50  | 0.31  |
| Avg 5.0 m Log Gross         | m3      | 0.54  | 0.54    |       | 0.75  | 0.47  |
| Avg # of 5.0 m Logs/Tree    |         | 4.27  | 4.27    |       | 3.88  | 4.44  |
| Net Immature                | %       | 14.0  | 14.0    |       | 20.0  | 10.6  |
| Average Slope               | %       | 18    |         |       |       |       |
| <b>LRF and Log Summary</b>  |         |       |         |       |       |       |
| Net Merch - Stud            | %       |       |         |       |       |       |
| Net Merch - Small Log       | %       | 29.5  | 29.5    |       | 22.0  | 33.8  |
| Net Merch - Large Log       | %       | 70.5  | 70.5    |       | 78.0  | 66.2  |
| Avg LRF All                 | bdft/m3 | 168.4 | 168.4   |       | 188.3 | 156.9 |
| <b>Statistical Summary</b>  |         |       |         |       |       |       |
| Coeff. of Variation         | %       | 33.0  | 33.0    |       | 87.4  | 58.3  |
| Two Standard Error          | %       | 14.3  | 14.3    |       | 37.9  | 25.3  |
| Number and Type of Plots    | MP = 23 |       |         |       |       |       |
| Number of Potential Trees   |         | 104   |         |       |       |       |
| Plots/Ha                    |         | 1.2   |         |       |       |       |
| Cruised Trees/Plot          |         | 4.6   |         |       |       |       |

\*\*\* 1 tree(s) changed to tree class 6:because only log was less then 3.00 m \*\*\*

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

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Average Line Method

BCTS

Licence Number: TA0276 CP: XXX

Project: XXX

Grades: MOF Computerized

Computerized Decay

Computerized Waste

Computerized Breakage

Volume Statistical Analysis

FIZ: G

PSYU: Arrowhead

Region: 4 - Kootenay-Boundary

District: 04 - Selkirk

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|                          |             |              |              |
|--------------------------|-------------|--------------|--------------|
| Utilization Levels:      | Minimum DBH | Top Diameter | Stump Height |
| Mature Blocks: (cm)      | 17.5        | 10.0         | 30           |
| Immature Blocks: (cm)    | 12.0        | 10.0         | 30           |
| Exception[CE]: (cm)      | 17.5        | 15.0         | 30           |
| Exception[PL]: (cm)      | 12.5        | 10.0         | 30           |
| Standard Log Length: (m) | 5.00        |              |              |

| Forest Type | Plots |     |     | Area ha | Net Volume m3/ha | Proportional Volume | Trees |     |     | Standard Deviation | Coeff. of Variation | Sampling Error |       |
|-------------|-------|-----|-----|---------|------------------|---------------------|-------|-----|-----|--------------------|---------------------|----------------|-------|
|             | Cnt   | Mea | Tot |         |                  |                     | Cnt   | Mea | Tot |                    |                     | 1 SE%          | 2 SE% |
| 1 :HC       | 0     | 9   | 9   | 7.4     | 402.3            | 0.40                | 0     | 43  | 43  | 106.5909           | 26.5                | 8.8            | 20.4  |
| 2 :HCS      | 0     | 14  | 14  | 12.4    | 355.7            | 0.60                | 0     | 61  | 61  | 131.1982           | 36.9                | 9.9            | 21.3  |
| TOTAL       | 0     | 23  | 23  | 19.8    | 373.2            |                     | 0     | 104 | 104 |                    | 33.0                | 6.9            | 14.3  |

Number of live & dead potential trees sampled is 104  
Number of dead useless trees sampled is 2  
Number of live useless trees sampled is 1

The weighted sampling error is 14.3% at the 95% confidence level

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir  
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PSYU: Arrowhead  
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District: 04 - Selkirk

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Net Area: Block : (M) - 1Y3:K1Y3, Plots in Block: 9, TUs: [ A : 7.4 ]  
Gross Area: [ WTRA : 3.0 ] [ Non Merch : 0.1 ] [ Grand Total : 10.5 ]

|                             |         | Total | Conifer | Decid | C     | H     |
|-----------------------------|---------|-------|---------|-------|-------|-------|
| <b>Utilization Limits</b>   |         |       |         |       |       |       |
| Min DBH                     | cm (M)  |       |         |       | 17.5  | 17.5  |
| Stump Ht                    | cm (M)  |       |         |       | 30.0  | 30.0  |
| Top Dia                     | cm (M)  |       |         |       | 15.0  | 10.0  |
| Log Len                     | m       |       |         |       | 5.0   | 5.0   |
| <b>Volume and Size Data</b> |         |       |         |       |       |       |
| Gross Merchantable          | m3      | 4911  | 4911    |       | 1487  | 3424  |
| Net Merchantable            | m3      | 2977  | 2977    |       | 876   | 2101  |
| Net Merch - All             | m3/ha   | 402   | 402     |       | 118   | 284   |
| Distribution                | %       | 100   | 100     |       | 29    | 71    |
| Decay                       | %       | 24    | 24      |       | 24    | 24    |
| Waste                       | %       | 11    | 11      |       | 9     | 11    |
| Waste(billing)              | %       | 17    | 17      |       | 15    | 19    |
| Breakage                    | %       | 5     | 5       |       | 8     | 3     |
| Total Cull (DWB)            | %       | 39    | 39      |       | 41    | 39    |
| Basal Area / Ha             | m2/ha   | 58.5  | 58.5    |       | 21.8  | 36.7  |
| Net VBAR                    | m3/m2   | 6.874 | 6.874   |       | 5.436 | 7.726 |
| Stems/Ha (Live & DP)        |         | 268.1 | 268.1   |       | 91.6  | 176.5 |
| Avg DBH (Live & DP)         | cm      | 52.7  | 52.7    |       | 55.0  | 51.5  |
| Snags/Ha                    |         | 2.0   | 2.0     |       |       | 2.0   |
| Avg Snag DBH                | cm      | 93.5  | 93.5    |       |       | 93.5  |
| Gross Merch Vol/Tree        | m3      | 2.48  | 2.48    |       | 2.19  | 2.62  |
| Net Merch Vol/Tree          | m3      | 1.50  | 1.50    |       | 1.29  | 1.61  |
| Avg Weight Total Ht         | m       | 36.1  | 36.1    |       | 36.4  | 36.0  |
| Avg Weight Merch Ht         | m       | 31.2  | 31.2    |       | 30.0  | 31.7  |
| Avg 5.0 m Log Net           | m3      | 0.39  | 0.39    |       | 0.48  | 0.35  |
| Avg 5.0 m Log Gross         | m3      | 0.59  | 0.59    |       | 0.71  | 0.55  |
| Avg # of 5.0 m Logs/Tree    |         | 4.19  | 4.19    |       | 3.07  | 4.78  |
| Net Immature                | %       | 1.1   | 1.1     |       | 3.6   |       |
| Average Slope               | %       | 16    |         |       |       |       |
| <b>LRF and Log Summary</b>  |         |       |         |       |       |       |
| Net Merch - Stud            | %       |       |         |       |       |       |
| Net Merch - Small Log       | %       | 23.5  | 23.5    |       | 22.4  | 23.9  |
| Net Merch - Large Log       | %       | 76.5  | 76.5    |       | 77.6  | 76.1  |
| Avg LRF All                 | bdft/m3 | 174.7 | 174.7   |       | 186.7 | 169.6 |
| <b>Statistical Summary</b>  |         |       |         |       |       |       |
| Coeff. of Variation         | %       | 26.5  | 26.5    |       | 93.6  | 41.3  |
| Two Standard Error          | %       | 20.4  | 20.4    |       | 71.9  | 31.7  |
| Number and Type of Plots    | MP =    | 9     |         |       |       |       |
| Number of Potential Trees   |         | 43    |         |       |       |       |
| Plots/Ha                    |         | 1.2   |         |       |       |       |
| Cruised Trees/Plot          |         | 4.8   |         |       |       |       |

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

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Grades: MOF Computerized  
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**Block Summary**

FIZ: G  
PSYU: Arrowhead  
Region: 4 - Kootenay-Boundary  
District: 04 - Selkirk

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Net Area: Block : (M) - 6MT:K6MT, Plots in Block: 14, TUs: [ A : 12.4 ]  
Gross Area: [ WTRA : 2.3 ][ Grand Total : 14.7 ]

|                             |         | Total | Conifer | Decid | C     | H     |
|-----------------------------|---------|-------|---------|-------|-------|-------|
| <b>Utilization Limits</b>   |         |       |         |       |       |       |
| Min DBH                     | cm (M)  |       |         |       | 17.5  | 17.5  |
| Stump Ht                    | cm (M)  |       |         |       | 30.0  | 30.0  |
| Top Dia                     | cm (M)  |       |         |       | 15.0  | 10.0  |
| Log Len                     | m       |       |         |       | 5.0   | 5.0   |
| <b>Volume and Size Data</b> |         |       |         |       |       |       |
| Gross Merchantable          | m3      | 7144  | 7144    |       | 3065  | 4079  |
| Net Merchantable            | m3      | 4411  | 4411    |       | 1839  | 2572  |
| Net Merch - All             | m3/ha   | 356   | 356     |       | 148   | 207   |
| Distribution                | %       | 100   | 100     |       | 42    | 58    |
| Decay                       | %       | 23    | 23      |       | 24    | 23    |
| Waste                       | %       | 10    | 10      |       | 9     | 11    |
| Waste(billing)              | %       | 16    | 16      |       | 14    | 18    |
| Breakage                    | %       | 5     | 5       |       | 7     | 3     |
| Total Cull (DWB)            | %       | 38    | 38      |       | 40    | 37    |
| Basal Area / Ha             | m2/ha   | 58.2  | 58.2    |       | 28.2  | 30.0  |
| Net VBAR                    | m3/m2   | 6.113 | 6.113   |       | 5.260 | 6.914 |
| Stems/Ha (Live & DP)        |         | 258.0 | 258.0   |       | 71.2  | 186.8 |
| Avg DBH (Live & DP)         | cm      | 53.6  | 53.6    |       | 71.0  | 45.2  |
| Snags/Ha                    |         | 47.0  | 47.0    |       | 45.9  | 1.1   |
| Avg Snag DBH                | cm      | 23.4  | 23.4    |       | 17.8  | 101.8 |
| Gross Merch Vol/Tree        | m3      | 2.23  | 2.23    |       | 3.47  | 1.76  |
| Net Merch Vol/Tree          | m3      | 1.38  | 1.38    |       | 2.08  | 1.11  |
| Avg Weight Total Ht         | m       | 32.4  | 32.4    |       | 33.7  | 31.4  |
| Avg Weight Merch Ht         | m       | 26.6  | 26.6    |       | 27.1  | 26.3  |
| Avg 5.0 m Log Net           | m3      | 0.35  | 0.35    |       | 0.52  | 0.28  |
| Avg 5.0 m Log Gross         | m3      | 0.52  | 0.52    |       | 0.77  | 0.41  |
| Avg # of 5.0 m Logs/Tree    |         | 4.32  | 4.32    |       | 4.51  | 4.25  |
| Net Immature                | %       | 22.8  | 22.8    |       | 27.9  | 19.2  |
| Average Slope               | %       | 18    |         |       |       |       |
| <b>LRF and Log Summary</b>  |         |       |         |       |       |       |
| Net Merch - Stud            | %       |       |         |       |       |       |
| Net Merch - Small Log       | %       | 33.5  | 33.5    |       | 21.9  | 41.9  |
| Net Merch - Large Log       | %       | 66.5  | 66.5    |       | 78.1  | 58.1  |
| Avg LRF All                 | bdft/m3 | 164.2 | 164.2   |       | 189.1 | 146.4 |
| <b>Statistical Summary</b>  |         |       |         |       |       |       |
| Coeff. of Variation         | %       | 36.9  | 36.9    |       | 84.0  | 71.2  |
| Two Standard Error          | %       | 21.3  | 21.3    |       | 48.5  | 41.1  |
| Number and Type of Plots    | MP = 14 |       |         |       |       |       |
| Number of Potential Trees   |         | 61    |         |       |       |       |
| Plots/Ha                    |         | 1.1   |         |       |       |       |
| Cruised Trees/Plot          |         | 4.4   |         |       |       |       |

\*\*\* 1 tree(s) changed to tree class 6:because only log was less then 3.00 m \*\*\*

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

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 Version: 2018.00 IFS build 6202

Harvest Method : SC - Ground Systems - Clearcut[All Treatment Units : 19.8 ]

|                             |        | Total   | Conifer | Decid | C       | H       |
|-----------------------------|--------|---------|---------|-------|---------|---------|
| <b>Utilization Limits</b>   |        |         |         |       |         |         |
| Min DBH                     | cm (M) |         |         |       | 17.5    | 17.5    |
| Stump Ht                    | cm (M) |         |         |       | 30.0    | 30.0    |
| Top Dia                     | cm (M) |         |         |       | 15.0    | 10.0    |
| Log Len                     | m      |         |         |       | 5.0     | 5.0     |
| <b>Volume and Size Data</b> |        |         |         |       |         |         |
| Gross Merchantable          | m3     | 12055   | 12055   |       | 4551    | 7503    |
| Net Merchantable            | m3     | 7388    | 7388    |       | 2715    | 4673    |
| Net Merch - All             | m3/ha  | 373.153 | 373.153 |       | 137.129 | 236.024 |
| Net Merch - Live            | m3/ha  | 366.167 | 366.167 |       | 132.378 | 233.788 |
| Net Merch - DP              | m3/ha  | 6.986   | 6.986   |       | 4.751   | 2.236   |
| Decay                       | %      | 24      | 24      |       | 24      | 23      |
| Waste(billing)              | %      | 17      | 17      |       | 15      | 18      |
| Total Cull (DWB)            | %      | 39      | 39      |       | 40      | 38      |
| Net Merch Vol/Tree          | m3     | 1.43    | 1.43    |       | 1.74    | 1.29    |
| Avg 5.0 m Log Net           | m3     | 0.36    | 0.36    |       | 0.50    | 0.31    |
| Useless Dead/Living         | %      | 10      | 10      |       | 27      | 1       |

Net Second Growth %

|                   |   |    |   |  |   |   |
|-------------------|---|----|---|--|---|---|
| All Burn Volume   | % |    |   |  |   |   |
| Heavy Fire Volume | % |    |   |  |   |   |
| Blowdown Volume   | % | 3  | 3 |  | 3 | 3 |
| Insect Volume     | % |    |   |  |   |   |
| % Average Slope   |   | 18 |   |  |   |   |

**LRF and Log Summary**

|                       |         |     |     |  |     |     |
|-----------------------|---------|-----|-----|--|-----|-----|
| Net Merch - Stud      | %       |     |     |  |     |     |
| Net Merch - Small Log | %       | 29  | 29  |  | 22  | 34  |
| Net Merch - Large Log | %       | 71  | 71  |  | 78  | 66  |
| Avg LRF All           | bdft/m3 | 168 | 168 |  | 188 | 157 |

\*\*\* 1 tree(s) changed to tree class 6:because only log was less then 3.00 m \*\*\*

FLAGS: Full Volumes, Normal Cruise, All Trees Compiled, Measure Plots Only, Damage, , Wet Belt Fir

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