R 15
ROSSLAND FOREST
A. E. COLLINS
1926
- KEY MAP -

SHOWING

ROSSLAND

PROVINCIAL FOREST.

1926.

Scale: 31.56 miles = 1 inch.
Proposed Rossland Forest.

This report by Mr. A.E. Collins indicates that a large percentage of the area recommended for reserve is not capable of producing timber for commercial use. A further large percentage has been heavily burned and is unsatisfactorily restocked.

The area may be divided into three main drainage basins:

A. Sheep Creek, 125 square miles.
B. Moberly, Blueberry and Murphy Creeks, etc. 157 square miles.
C. Dog Creek, 134 square miles.

Area A. - Only 14% productive and satisfactorily stocked mature or immature timber; 38% unproductive sites; 48% unsatisfactorily stocked with young growth, site quality not known.

Area B. - 27% productive and satisfactorily stocked; 27% unproductive; 46% site quality unknown and under-stocked.

Area C. - 20% productive and satisfactorily stocked; 45% unproductive; 35% site quality unknown and under-stocked.
Memorandum for
Chief Forester.

- 2 -

The area reported as having possible productive value, but understocked with reproduction after fires, is very large, 43% of the whole Forest. The actual value of this area could be decided after making a stocktaking survey.

Taking the proposed Forest as a whole, it would seem from this preliminary report that the fire hazard is too great and the productivity too low to justify the extra expense of protection and development that would be demanded by the administration of this area as a Provincial Forest, at the present time.

Area "B" is apparently the most productive part and also the most accessible. It covers the watershed from which the City of Rossland gets its water. It is recommended that this reduced area "B" be reserved as the ROSSLAND PROVINCIAL FOREST, and that a stock-taking survey be made of it during the coming summer. The proposed lookout on Old Glory Mountain would be on the west boundary of this Forest.

[Signature]
Assistant Forester.

FDM:KR
The compilation of the attached map and following report, was made from forest cover data, furnished by the field officer directly administering the area investigated, -- from a report by Hope - 1923, - of the Blueberry Creek area, Ref. file No. 036434, -- and from an extensive examination carried out between dates Nov 1st - Nov 9th, with a view to ascertaining the relationship in land suitable for growing merchantable and accessible timber, as against areas not suitable for forest production.

The volumes as shown in the following estimates are approximate and are given more to illustrate the occurrence and distribution of the mature timber in the Rossland forest.
Preliminary Reconnaissance
Rossland Provincial Forest
- Southern Interior -

LOCATION.
The Rossland forest lies in the Nelson land recording district, twenty miles South West of Nelson, and directly to the North West of Rossland and Trail.
The forest is bounded on the North by the Lower Arrow Lake. On the South by the international boundary. On the East by the Columbia River, and to the West by the Monashee Mountains and the Robson Penticton branch of the Canadian Pacific Railway.

AREA IN SQUARE MILES.

\[
\text{Rossland Forest}
\]
Total area equivalent to 416 sq. miles.
Mature timber, Reproduction and other areas suitable for reforestation..............279 sq. miles..67%
Barren and Scrub areas suitable only for watershed protection........137 " ..33%
GENERAL TOPOGRAPHY AND DRAINAGE.

The area proposed for reserve is inclosed within the Monashee Mountain Range of the Columbia System.

Topographic features vary from the comparatively moderately high mountains of the main range — approx average elevation --6000 feet— to high steep unevenly surfaced slopes of isolated mountains and ridges, with a natural trend North and West to the Columbia River and lower Arrow Lakes, which form the Selkirk trench.

Blueberry, Sheep and Dog Creeks — the three main streams of the Rossland forest, Tributary to the Selkirk Trench, rising directly South of Shields Mountain, are comparatively alike in length, width and depth, the two latter feeders, flowing North and South respectively through deep, narrow, well-defined valleys with excessively steep sidehill slopes — ref map attached — with Blueberry Creek flowing West from Sheep Lake — Elevation 4260 — between more evenly surfaced and less excessively steep slopes, enters the Columbia River at a point six miles South of Castlegar.
The main outstanding topographic features separating the three chief streams of the Rossland forest Tributary to the Lower Arrow Lake and Columbia River watershed are:

Old Glory Mt. - elev. 7230'. Division between Sheep Creek and Columbia River.

Mackie Mt. - elev. 7200'. Division between Blueberry and Sheep Creek.

Robson Ridge - elev. 5200'. Division between Blueberry Creek and Lower Arrow Lake.

Shields Mt. - elev. 6040'. Between Moberly and Dog Creeks.

Maximum elev. Old Glory Mt. - elev. 7792'.

Minimum elev. Castlegar - elev. 1418'.

CLIMATE.

Mean annual precipitation - approximately 30" (from precipitation map).

Summer Season - May 15th to August 30th is exceptionally dry, with a very small rainfall. Winters are severe with an average snowfall of 40".

Spring and Summer Seasons - April 1st...Sept 15th.

Fall " - Sept. 15th...Oct 30th.

Winter " - Oct 30th...March 30th.
AGRICULTURE.

The only areas of land contained within the Rossland forest suitable for agriculture are on Sheep Creek and at the headwaters of Blueberry Creek. A report of the Blueberry Creek watershed was made by Mr. Hope of the Nelson district in 1923 - reference file - 036434 -. A further examination of this area was not made during my preliminary reconnaissance, as it was apparent that the area in question was too small, and too far distant from transportation, to warrant settlement.

The area on Sheep Creek suitable for tillage comprises approximately 1000 acres of river bottom land under statutory timber.

Adjoining the forest to the East along the Columbia River and principally adjacent to Brilliant, agriculture is intensively practised, chiefly by Doukabours, fruit being the chief commodity.

SOIL.

Valley bottom to sidehill slopes, a moderate to shallow light sandy loam, giving way to shallow sandy loam on rock, with very heavy
rock outcropping in the higher elevations.

FOREST DESCRIPTION.

Forest Type -
Composed of an uneven aged mixed forest, the remaining mature stands of timber within the borders of the Rossland forest are located over the headwaters of small streams, tributary to the Columbia River, the lower parts of which, immediately adjacent to the Columbia River have been logged or burned.

Timber Types May be Divided as Follows:

Valley floor - lower slopes and benches.

Above 5000' elevation.
Fir, Yellow Pine, Spruce Balsam.
DISTRIBUTION.

Cedar is the dominant species with White Pine, Fir, Spruce, Larch and Hemlock next in importance. Of the lesser species, Yellow Pine is found growing on rocky highland southern exposures in mixture with Fir.

REPRODUCTION.

Periodic fires and later the restocking of the forest by coppices of seed trees left unburned has created a composite type stand of reproduction.

In small areas where fire has clean burned the mature stand, pure stands of Lodge Pole Pine have come in. Reproducing areas may be divided into two classes -

Areas fully stocked.

Areas understocked.

Of the 153,000 acres of reproduction in the Rossland
forest.

Fully stocked areas...39,000 acres 25%
Understocked areas...114,000 " 75%

The fully stocked stands, located principally on Blueberry Creek - Area B - and Brooklyn and Dog Creeks - Area C - vary in age between 10-40 years, are thrifty, the chief species being Lodge Pole Pine, Larch, Cedar, Fir and White Pine.

Understocked stands are chiefly located in Area C, East of Dog Creek, and across Shields Mountain to Moberly Creek - Area B, and South to the West of Sheep Creek - Area A.

In Area C, reproduction in mixture of Lodge Pole Pine, Cedar, Larch, Fir, White Pine, Spruce and Balsam, is scattered over very rough and heavily burned ground, and will ultimately reseed in to a mixed forest from the many isolated groups of seed trees left unburned.

The large area of clean burned true forest land west of Sheep Creek - Area A, must rely for restocking from the large area of scrub land directly between Sheep and Lamb Creeks, and from isolated seed trees left in patches from previous periodic fires.
Reproduction under timber is mixed and healthy, and suitable for restocking out over lands.

**QUALITY AND UTILIZATION.**

**Cedar.** - Found growing to best advantage during Pole stage - 12-24 inches D.B.H. when the tree is sound, straight, and generally free from defect.

Above 24 inches D.B.H. Cedar is very defective in conical heartrot.

**Utilisation - Cedar poles.**

**White Pine** - Average D.B.H. 18" is straight of a medium height to a high crown, no defect noticed.

**Utilisation - Finishing material, and matches.**

**Fir.** - Average D.B.H. 16", of medium height, free from defect.

**Utilisation - For building material, ties and piling.**
Larch. - Average 16" D.B.H., is tall and straight to a high crown. Small defect in heartrot.

Utilisation. - Ties and Common Stock.

Spruce. - Average 18" D.B.H., of medium height and straight.

Utilisation. - For Box Shook and Building material.

Lodge Pole Pine.

Average 10" D.B.H., tall and straight, to a high crown.

Utilised for - Box shook.

Yellow Pine. - Average D.B.H 18", of medium height and free from defect.

Utilised for - Shop, Interior finishing.

Hemlock. - Average D.B.H. 16", of medium height and straight, defective in heartrot.

Utilised for - Rough boarding in building material.

Utilised for - Rough building material.

Cedar Pole Stand
Headwaters of Murphy Creek - Area - B.
Main Type Description in Acres  Total in Square Miles.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Mature Timber Accessible</th>
<th>Invasive Timber Accessible</th>
<th>Fully Stocked</th>
<th>Under Stocked</th>
<th>Barren &amp; Barren</th>
<th>Total Acres</th>
<th>Total Sq. Miles</th>
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<tbody>
<tr>
<td>A</td>
<td>5120</td>
<td>-</td>
<td>6080</td>
<td>38266</td>
<td>30464</td>
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<tr>
<td>B</td>
<td>7888</td>
<td>-</td>
<td>18856</td>
<td>46300</td>
<td>27436</td>
<td>100,480</td>
<td>157</td>
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<tr>
<td>C</td>
<td>3500</td>
<td>9000</td>
<td>13912</td>
<td>29500</td>
<td>29848</td>
<td>85,760</td>
<td>134</td>
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</table>

| Total | 16978                    | 9000                       | 38848         | 114066        | 87748           | 266,240     | 416            |

Fully stocked:

A 16%
B 27%
C 20%
ESTIMATES OF TIMBER AS FOLLOWS:
SAWLOG AND TIE TIMBER IN THOUSAND BOARD FEET.
CEDAR POLE TIMBER IN LIN. FT.

<table>
<thead>
<tr>
<th>Area</th>
<th>Acres</th>
<th>Cedar</th>
<th>Larch</th>
<th>Fir</th>
<th>White</th>
<th>Lodgepole</th>
<th>Yellow</th>
<th>Spruce</th>
<th>Balsam</th>
<th>Hemlock</th>
<th>Total Sawlog &amp; Tie Timber M. Bd. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5190</td>
<td>8200</td>
<td>6100</td>
<td>4500</td>
<td>9500</td>
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<td>600</td>
<td>12400</td>
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<td>16100</td>
<td>105,900</td>
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<tr>
<td>C</td>
<td>2500</td>
<td>2200</td>
<td>1500</td>
<td>4900</td>
<td>3900</td>
<td>2000</td>
<td>100</td>
<td>3700</td>
<td>4300</td>
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<td>23,900</td>
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<tr>
<td>Inaccessible</td>
<td>9000</td>
<td>2000</td>
<td>12000</td>
<td>-</td>
<td>-</td>
<td>4000</td>
<td>-</td>
<td>-</td>
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<td>22100</td>
<td>13,5100</td>
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</table>

Total Cedar Poles in Lineal Feet -- 2,970 M.

\[
\begin{align*}
\text{Accessible Sawlog and Tie Timber} & = 173,200 \text{ M. Bd. Ft. Average per acre exclusive of timber} \\
\text{Inaccessible} & = 18,000 \text{ M. Bd. Ft. All species per acre.} \\
\text{Cedar Pole Timber} & = 2,970 \text{ Lin. Ft.}
\end{align*}
\]

Above estimates have been subject to following call: -Cedar 40% -- Hemlock 20%.
UTILISATION AND LOGGING OF TIMBER PRODUCTS.

Timber products utilised are Cedar poles, and all interior tree species, logged and milled for the States and Prairie markets. The Sullivan Creek Lumber Co., are the only operators at present logging in the Rossland forest with their operation and mill - capacity approximately 30 M. per day - across the headwaters of Sullivan Creek where timber is cut and milled in the rough and flumed via a "V" flume, for a distance of two miles to the planing mill at Birchbank on the Columbia River and C.P. Railway.

The two other mills operating immediately adjacent to the Rossland forest - follow -

The Edgewood Lumber Co. - North of Castlegar,

50 M. per day capacity.

Renata Box Factory - Renata, 5 M. per day capacity.

PROTECTION.

The area covered by the Rossland forest is evidently one of bad fire hazard. During the last three years, seventy-one fires have occurred within the reserve - thirty-three having been caused by lightning - ten by railways, and twenty-eight by unknown causes.
Approximately 150 miles of automobile highway and railroad traverse the four boundaries of the forest, offering ready access to, and having under observation the steep slope immediately adjacent.

Approximately 60 miles of trail in from fair to poor condition are located as follows:
Rossland to Shields and lower Arrow Lake - A well graded horses trail across the headwaters of Stoney and Murphy Creeks, to Sheep Lake, thence via Moberly Creek on a poor trail to Shields on the C.P.R.
Paulson on C.P.R. (Robson-Penticton Branch) to Blueberry on Columbia River. Via a trail to Sheep Lake, thence via a trail in poor condition, and nearly obliterated by windfall, down Blueberry Creek to the Columbia River, Tunnel on C.P.R. to Renata, Lower Arrow Lake, Horse Trail in good condition.
Rossland - Grand Forks Road - via Sheep Creek to Lamb Creek, well located trail, but requires clearing of windfall.

The above Trails are well located for travel, but are of little value for patrol purposes, not having under observation the country they traverse.
In order to have directly under observation "dead ground" not visible from roads and trails - would recommend, Old Glory Mt. elev. 7792', ten miles North of Rossland, be made a primary lookout station to tie in with Toad Mt. and Remo lookouts 32 and 36 miles distant to the East respectively ref. attached map showing area directly under observation within an 18 mile radius from lookout mountain.

Ranger headquarters - Rossland forest, H.C. Nichols, Castlegar.

Petrolman " " " Rossland.

MINING.

Mining prospects over the area covered by the Rossland forest are evidently small, this part of the country having been prospected and worked years ago.

The Consolidated Mining and Smelting Co. of Canada, are operating on a small scale the large mine working adjacent to the old mining town of Rossland, Gold, Copper, being the principal ores mined.

The trail Smelter, the largest in the Province, erected in 1895 and located 10 miles East of the City of Rossland, receives most of its ore
from the Slocan and East Kootenay Country. Fumes from this Smelter have not influenced tree growth on the Rossland forest, the fumes keeping more to the well defined valley of the Columbia River.

**SUMMARY.**

I would recommend that the boundaries describing the Rossland Provincial Forest be those outlining area B, as shown on the attached map, and that areas A and C be excluded from the previously proposed boundaries, for following reasons:

**AREA C.** suited for growing a forest crop, is topographically inaccessible to the means of logging as practised in the Southern interior.

**AREA A.** although true forest land, has been so badly fire run as to be of doubtful forest value. The large area to the West of Sheep Creek will have to rely for restocking from the large area of Scrub, between Lamb and Sheep Creeks, and from isolated seed trees left in gulches over the fire killed area.

**AREA B.** Equivalent to 157 sq. miles, carries the chief remaining stand of mature timber, and reproduction in the previously proposed Rossland Forest.
The City of Rossland relies solely upon its water supply upon the conservation of the remaining timber on the Murphy Creek watershed. Ref. file X5509.

The area is made up of true forest land, and with its many small tributaries to the Columbia River is topographically suited for growing a good forest crop.

A.E. Collins, Recon. Officer.
Preliminary Reconnaissance
PROPOSED
ROSSLAND PROVINCIAL
RESERVE.

Scale: 1 inch = 1 mile.
Total area equivalent to 416 square miles.

Legend:
- Merchantable Timber
- Inaccessible Timber
- Reproduction (Fully stocked)
- Reproduction (Scattered)
- Burned Areas
- Barren and Scrub

Note: Contour intervals as shown on this map are placed thereon only of the land surface, and must not be considered as definite.

Geographical and topographical information depends upon triangulation by J. McEvoy, Leach and Russel, of the Geographical Survey. 190
Preliminary Reconnaissance —

PROPOSED

PROVINCIAL FOREST RESERVE.

Scale: 1 Inch = 1 Mile.

Total Area Equivalent to 416 Square Miles.

Merchantable Timber: —
Inaccessible Timber: —
Reproduction (Fully stocked): —
Reproduction (Scattered): —
Burned Areas: —
Barren and Scrub: —

Reserve Boundaries: —
Type Line Boundaries: —
Height of Land: —
Contours: — 1000 ft. intervals.

Intervals as shown on this Map are placed thereon only to show the form of the area, and must not be considered as definite.

Valuable and Topographical information depends upon Triangulation Surveys and Sketches by Ivory, Leach and Russell, of the Geographical Survey. 1900.

Reconnaissance Officer.

Victoria, B.C. 25th January 1927.