RAFT RIVER RECONNAISSANCE

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1924

Contents of File

2. 14 negatives of area
   Spare Prints
1 Map 1 inch = 2 miles.
TIMBER RECONNAISSANCE - RAFT RIVER

Composed of a three man party, the reconnaissance of the Raft River Watershed was commenced on Oct. 23rd, and discontinued November 5th. Area was reconnoitered to head of river. Snow storms and low clouds made visibility poor. Apart from large areas devastated by fire, merchantable quantity of timber is small.

Cruise Methods Employed

Timbered areas were located from high vantage points and from open burns where good observation was obtained over the surrounding country. Areas of timbered tracts were determined by strips run from stations on the river traverse (made by O.B.N. Wilkie - Surveyor of Kamloops, in June 1922.)

Sample acre plots were taken at random throughout timbered stands, and on strips travelled from point to point, notes on topography made that might hamper or facilitate logging of watershed. Height classes of timbered stands were noted, and the different tree species cut into to determine their general age and soundness.

C.P.R. tables were used in computing of estimates.

Description of Area

Location

The Raft River situated 80 miles north of Kamloops is bounded to the north by Blue River and Myrtle Lake,
to the west by Clearwater River watershed, and to the south and east by the North Thompson Valley.

Area in Acres

Area of Raft River is made up as follows:

Raft River Watershed = Approximately 135 sq. miles

Timbered Area

\[
\begin{align*}
\text{Mill timber} &= 9380 \text{ acres} \\
\text{Pulp stands above 5000' elevation} &= 5100 \text{ acres}
\end{align*}
\]

Fire devastated reproducing plentifully = 33,000

Clean burned areas having no ground cover = 11,000 Acres

Scrub Fir and Pine 2" to 6" = 20,000 "

Barren land, on mountain slopes = 7,920 "

Total = 86,400 Acres

General Topography and Drainage

The Raft River, a moderate to fast flowing stream with an approximate length of 40 miles, an even drop of 20 feet to the mile, an average width of 60 feet and a depth of 30" (at low water) rises in the low table land and Blue River, to the north and empties into the North Thompson River at a point three miles east of Clearwater Station on the Canadian Northern Railway.

Flowing from its source in a southerly direction for twenty miles thence west sixteen miles, thence again south four miles to its outlet, the parent stream receives most
of its tributaries from the north and westerly slopes, where glacier fed from a high snow capped range elevation 6500' that form the divide from the Clearwater to the west. A large volume of water is precipitated to swell the main waterway on its course to the Thompson.

On the north and west slope are to be found, Eagle, the North Fork Maxwell and Richie Creeks. Other Creeks on this slope are small, merely side hill streams. The south and east slopes are well watered by Stratton, Silver, and Blowhole Creeks. Stratton Creek 1 x 16' being the largest.

The north fork is the largest of the main streams tributaries, receiving its waters from snow fields and glaciers of a high mountain range and flowing in a south easterly direction through a narrow and steep ravine and empties into the main river south of Skunk Lake and at a point twenty miles upstream from the main river's outlet.

Mean elevation of valley floor 2200 ft. Average width of valley floor one half mile. Average height of mountain Range capping south eastern slope 5000. Capping north western slope 6500. Height of divide to Myrtle Lake approximately 4000 feet. Sidehill slopes rising to high plateau land elevation 5000 feet, are rough and broken by bench land, bluffs and creek beds.

From the river's source the land is rolling, the main stream has a well defined bed between steep slopes to where
directly below the forks and north of "the hole in the wall" pass to the Thompson - (eight miles distant) - the valley floor widened to level agricultural land. The river finally terminating before it enters into the Thompson into a fast flowing stream through a 6 mile box canyon bounded by steep mountain slopes.

**Climate**

Climate and precipitation on the Raft River varies considerably from the Thompson Valley to the south. Following a course south and west, and with the prevailing winds from the west the valley received more moisture. Annual precipitation - 40 inches. Fall and winter season - November 1st to March 31st. Spring and Summer season - April to October. Usual depth of snow Dec. 15 to February. On valley floor 2 feet. Above 5000' elevation 6 feet.

**Agricultural Possibilities**

Directly north of Irvine on the Canadian Northern Railway over a good trail through "the hole in the wall" pass (elevation 4000 ft.) to the Raft River, 1400 Acres of level surveyed bottom land and 500 acres of bench land and side hill are to be found.

Bottom land composed of sandy silt loam over gravel is moderate to shallow in depth, will grow usual farm crops, can be readily cleared of burnt timber from burn, and irrigated from the waters of Eagle Creek immediately adjoining.
Surface of bench and sidehill land is broken but when tilled will make good pastureland.

Skunk Lake. Looking North West to timbered stand of North Fork.

Raft River below the canyon 2 miles from the Thompson.
Cleaned burned, broken land, between North Fork and Main River.

Spruce Cedar bottom land - Raft River below Stratton Creek.
Forest Type

Sixteen years ago a large fire devastated 80% of the timbered area of the Raft River. Clean burning what was once a fine stand of Hemlock, Cedar, Fir, Spruce and Balsam. Timber stands left are scattered in small areas throughout the valley.

Timber may be divided into the following types:

- Valley Floor
  - Cedar
  - Spruce
  - Hemlock
  - Balsam

- Mountain Slopes
  - Hemlock
  - Cedar
  - Spruce
  - W. Pine

- Elevations above 5000
  - Spruce
  - Balsam

Down timber - North of the "Forks".
Hemlock

The dominant species, average dia. 16", is of poor quality, moderate height, carries many limbs to high dense crowns, is decadent dead defective with conk and unmerchantable.

Cedar

Of moderate height, is straight, clean boled, carries height well to high crown. Contains slight conical butt rot to a height of 8 feet in small trees (10" to 18"), and heart rot in larger diameters, rot running through entire length of tree.

Spruce

Mill type - is tall, straight, carries few limbs on its merchantable length, is mature but free from defect. Pulp type is of moderate height, carries limbs to the ground, is sound and free of defect.

Balsam

Scattered over areas of moderate height, is free of limbs to a high crown, straight and sound. Pulp type is short, heavy with limbs, but free of defect.

Fir

Scattered throughout area, average dia. 14", is tall, straight, clean, high crowned and free from defect.

Soil

A shallow to moderate loam on gravel sub-soil with much rock out cropping is found on the side hill slopes.
Within the bottom lands moderate to deep sandy loam on gravel and rock. Depth of humus covering, except throughout fire ravaged areas, 4 inches.

Reproductions

Reproduction in timbered territory is much suppressed under heavy crown cover, attains an average height of 14 ft. is in Hemlock 60%, Cedar 30%, other species 10%. Under-Growth moderate in Red Willow, Alder, Yew, and Devil Clubs.

Burned areas are reproducing plentifully to an average height of 6 feet in Hemlock, Spruce, Cedar and Fir.

A large area has been cleaned burned and is devoid of all vegetation other than scattered Red Willow and Aspens.

Quality of timber

(a) Hemlock can be culled throughout area.

(b) 80% Cedar 20" D.B.H. and over. Heart rot running through to top can be culled.

(c) Cedar smaller diameters 12" to 19" rot running 8 ft. up trunk. These trees if long butted will make good pole timber, average length of poles 35" to 45".

(d) Spruce, Balsam, Fir and Pine in valley best utilisation, saw timber.

(e) Spruce, Balsam stands above 5000 ft. elevation, pulp wood.

Age of stand approximately 250 years.
10.

Logging Conditions

Entire watershed represents a poor logging proposition, surface of ground too rough for tractor or horse logging. Quality of timber poor. Quantity in comparison with cost of output - installation of chutes, tote roads, deck landings, negligible. A location for road to outlet of river would be impossible. Location for a road via "Hole in the Wall" Pass possible but expensive, and would constitute an adverse haul of 5 miles over a 10% grade to summit.

Only outlet for logs is via river, which if cleared of its many log jams can be driven to a point immediately above a 6 mile box canyon - (10 miles from river's outlet to Thompson) The canyon with its rapids and falls would comprise a big hazard and important factor for river driving. Erection of a sluice around canyon above its precipitous walls would be practicable but expensive.

Surface of ground above canyon rough and would offer many difficulties in road ing logs to river.

Length of driving season

Three months - May till July.

With the large percentage of cut on species throughout the valley, would not advocate selective cutting of pole timber, but would recommend mill and trees for restocking of fire devastated areas until such time as timber is marketable on the basis of a better stumpage value.
Trails

The pack horse trail, leading from the road east of Clearwater Station on the Canadian Northern Railway, thence following the north bank of Raft River and keeping to high ground above the Canyon, is in good condition for 10 miles, and to a point where the burn is reached. From this point north to its termination at the "forks" the trail is poorly defined and in bad condition, but could with little difficulty be cleaned out.

Best route to enter valley via Irvine and the "Hole in the Wall" pass by a good trail which intersects the main river trail on Blownhole Creek.
Timber Estimate is as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Area in Acres</th>
<th>Hemlock</th>
<th>Cedar Saw Timber</th>
<th>Spruce</th>
<th>Balsam</th>
<th>Fir</th>
<th>W.Pine Ft.</th>
<th>No.Poles</th>
<th>M.Ed.Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) North Fork (Main Valley)</td>
<td>1200</td>
<td>4572</td>
<td>4710</td>
<td>3500</td>
<td>2680</td>
<td>400</td>
<td>84</td>
<td>3500</td>
<td>12446</td>
</tr>
<tr>
<td>(2) Maxwell Cr.</td>
<td>1000</td>
<td>2980</td>
<td>620</td>
<td>2000</td>
<td>1236</td>
<td>60</td>
<td>212</td>
<td>10</td>
<td>2000</td>
</tr>
<tr>
<td>(3) Richie Creek</td>
<td>1900</td>
<td>8300</td>
<td>1800</td>
<td>1200</td>
<td>3900</td>
<td>55</td>
<td>120</td>
<td>90</td>
<td>1200</td>
</tr>
<tr>
<td>(4) Head of River</td>
<td>1200</td>
<td>6000</td>
<td>120</td>
<td>1200</td>
<td>6300</td>
<td>190</td>
<td>198</td>
<td>16</td>
<td>1200</td>
</tr>
<tr>
<td>(5) Stratton Cr.</td>
<td>2500</td>
<td>14200</td>
<td>2100</td>
<td>2000</td>
<td>1660</td>
<td>120</td>
<td>25</td>
<td>19</td>
<td>2000</td>
</tr>
<tr>
<td>(6) Eagle Creek</td>
<td>1200</td>
<td>1800</td>
<td>2624</td>
<td>3000</td>
<td>1900</td>
<td>55</td>
<td>150</td>
<td>8</td>
<td>3000</td>
</tr>
<tr>
<td>Other Areas</td>
<td>300</td>
<td>75</td>
<td>600</td>
<td>200</td>
<td>200</td>
<td>30</td>
<td>115</td>
<td>600</td>
<td>420</td>
</tr>
</tbody>
</table>

Pulp Areas above 5000 foot elevation - Spruce, Balsam, 9 ft. per acre 60% Spruce, 40% Balsam 27540 27540 45900

| Totals | 9380 | 38427 | 11974 | 13500 | 45416 | 19365 | 1210 | 227 | 13500 | 116619 |

The above estimates are subject to the following Stall:

(continued)
**Estimate of Timber - continued**

**Call on Species**
- Hemlock 100% Call - Conk and Dead Timber.
- Cedar Saw Timber - 20" D.B.H. and over 80% defect in heart rot.

**Total Volume is as follows:**

<table>
<thead>
<tr>
<th>Raft River Watershed</th>
<th>Area in Acres</th>
<th>Hemlock</th>
<th>Cedar Saw Timber</th>
<th>Spruce</th>
<th>Salish</th>
<th>Fir.</th>
<th>W. Pine</th>
<th>Total in M. Bd. Feet</th>
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</thead>
<tbody>
<tr>
<td>9380</td>
<td>Called</td>
<td>2398</td>
<td>17876</td>
<td>1005</td>
<td>1210</td>
<td>227</td>
<td></td>
<td>22716</td>
</tr>
<tr>
<td>Pulp stand above 5000 feet elevation</td>
<td>27540</td>
<td>18360</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45900</td>
</tr>
</tbody>
</table>

**Total in M. Bd. Feet...**

53616

**Cedar Poles**
- Length 35 to 45
- Average D.B.H. 13"
- Lin. Feet. 540,000.