R 1121

PEACE RIVER BLOCK AND ADJACENT AREAS

Extensive Reconnaissance

1946
Extensive Reconnaissance
634,928 Peace River Block and
59 Adjacent Areas (1946)
C712D
Collins, A. E.

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PARLIAMENT BUILDINGS
VICTORIA, B.C.
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## EXTENSIVE Reconnaissance
### Peace river Block and adjacent areas

#### 1946

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#### Appendix

**Description of watersheds tributary to "Block"**

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Attention Mr. F.S. McKinnon  
Forest Economics Division.

With reference to our letter of July 20th and to your reply of July 23rd written with regard to a proposed aerial reconnaissance of the Peace River Block to determine (a) The remaining stands of merchantable timber left within the block since the P.C.E. Resources Survey in 1930, and (b) Forest protection. This is to report that this reconnaissance was started on August 12th and completed on August 25th. To supplement the map record submitted herewith a brief report for forest inventory follows.

RECONNAISSANCE METHODS EMPLOYED. Before any field work was carried out Dr. Lillard, Director of Soil Survey than being carried out from his headquarters at Peace Coupe, kindly put at our disposal a complete library of 1945 aerial views of the block. These views proved very useful in that before any flying was done they allowed us to examine the extent of known remaining areas of mature timber. Field checks were then made of a few representative stands. A flight map was then laid out to follow, where possible, the well established base lines and township surveys which offered good control for mapping types. Mapping independently, both local rangers Johnson and French accompanied me on each flight after which notes were compared and types finally plotted.

DESCRIPTION OF AREA. Comprising a land and water area of approximately 5470 square miles at an average elevation of 2700' the Peace River Block is situated east of the Rocky mountains and for general purposes may be considered a part of a wide tongue of the Alberta prairies penetrating the eastern boundary of the province along the 56° parallel north latitude and west of the 120° west longitude.

The entire land area is level or gently rolling. The main drainage system is that section of the Peace river, which, flowing east, through the centre of the block crosses the inter provincial boundary below Clayhurst. Water levels of the Peace river with its six main tributaries within the block have cut through
the sedimentary formation of the surrounding land forming narrow valleys and deep canyons. The block has numerous lakes and extensive areas of "muskeg" swamp. Due evidently to the porosity of the soil, and to the level nature of the land, minor tributaries generally run dry during the summer season.

**DESCRIPTION OF WATERSHEDS.** The following are the main watersheds tributary to the Peace river within the block.

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Number</th>
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<tr>
<td>Peace River North</td>
<td>1.</td>
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<tr>
<td>Peace River South</td>
<td>2.</td>
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<tr>
<td></td>
<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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The general structure of all watersheds is physically similar. Deep cut narrow valleys approximately 200' below the surrounding level of the land surface are usual. Valley slopes range in steepness from steep cut banks to gently rising terraces. Stream flow is moderate and the course of all streams tend to be crooked. Both the Beatton and the Kiskatinaw rise and drain lowland areas and widen out near their source. The Halfway, Pine, and Moberly are mountain streams and find their source in steep narrow valleys of the "Rookies".

**DESCRIPTION OF FOREST COVER.** Except for extensive areas of open and black spruce, muskeg swamp, the entire area within the block appears at one time to have been forested with coniferous cover, mainly white spruce and lodgepole pine. Extensive settlement and land clearing with its resulting fire hazard have now eliminated most of the merchantable stands.

Aspen poplar is the predominating forest cover, its occurrence in all age classes being general on all watersheds. Except for minor areas of true forest land bearing all age classes of immature poplar and pine and pine and spruce in the vicinity of Moberly Lake, Cache creek, and Cameron river, poplar will likely continue as a final forest crop until settlement extends to the large areas of land more suited for agriculture and grazing.
In 1930 the Pacific Great Eastern Resources Survey report indicated large isolated areas of merchantable timber still remaining within the block. Unfortunately these stands bordered upon old burns which with dry windfall created a serious fire hazard. Since this survey and more recently during the construction of the Alaska Highway, minor logging operations and mills have resulted further to the elimination of this timber to the extent that only a few minor areas now remain.

**Merchable Timber.** Remaining stands of merchantable timber are now confined to four small stands on the Fine, Beatton, Blueberry and Aloes rivers. These areas, together with numerous scattered islands of mature timber throughout the block will altogether approximate an area of 11,000 acres and a total volume of 152 million board feet, mostly spruce.

Although deciduous growth, in the form of aspen poplar has generally been considered non-commercial cover for inventory purposes, this species, of which there is a large volume, will continue to supply present local needs for fuelwood.

After present merchantable stands of milling timber have been exhausted local industry will have to depend upon the large reserve of available timber on watersheds of the Peace River Aid Block to the west. Much of the volume in this reservoir is tributary to the Peace river in valleys east of the mountains, which if protected will supply local demands for a long time.

**Forest Protection.** The entire area within the block can be considered to have a high fire hazard. While local variations in rain, snowfall and temperature will vary they are not extreme and will average as follows at Fort St. John.

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<tr>
<td>2210</td>
<td>15.7</td>
<td>8.4</td>
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The extreme hazard is the result of a variety of causes, the main one being the high inflammability of debris after logging, and windfall after fire, which if ignited during the summer season period, when hot dry winds prevail across the level terrain will quickly spread fire beyond the control of human agency.
While protection may be maintained within the block, prevention along educational lines, rather than suppression will likely be the rule. To save rapid spread this should particularly apply to lands adjoining open burning areas to the north of Peace river and adjacent to farmed areas east of Ground-birch.

A "tight" system of protection should now be considered along the Peace-Pine river highway and could be extended north in the form of trails and patrols via Callazon creek and the Clearwater river as well as on Carbon river. These watersheds form part of the reserve of merchantable timber, previously referred to, which will supply future needs of farming communities in the Peace block.

Agriculture & Grazing. The high fertility of the soils of the Peace River Block have already been recognized and proven. Already approximately 490 square miles are being cultivated and fresh areas of equally good arable land are being rapidly settled. Wheat is the chief product of farms but other field crops do well. Clearing the light poplar cover is done at little cost and appears a minor problem. Areas that were virgin bushlands last year are cleared, fall fallowed, and are now growing crops—mostly wheat—which will be truck hauled to storage elevators on railhead at Dawson Creek and at Peace Coupe.

Although as yet an unknown quantity, and dependent upon soil surveys now being projected within and to the south of the block on Tupper creek and the Kiskatinaw river, indication points to there being equally as large an area of arable land topographically suitable for tillage as that already under cultivation.

Extensive areas of level, partially dry, muskeg swamp, particularly those along the lower Moberly, Halfway and Aloes rivers may be considered as possible future areas suitable for grazing. They are to a lesser extent being used for this purpose at present.

Small natural prairies on I.R. 17 at Fort St. John, and open benchlands on the Halfway and most minor tributaries flowing into the Peace from the
north offer good summer and fall range. Although winter feeding is considered too long for stock raising on any large scale, the area is well suited for mixed farming.

CONCLUSION. Apart from minor areas which may be classified as true forest land located in the vicinity of Moberly Lake and the Pine and Doig rivers, and extensive areas of non-productive muskeg swamp, the entire block should be considered in the light of potential agricultural land rather than as forest reserve. A complete and more refined report with an album of illustrations were compiled for the Pacific Great Eastern Railway Resources Survey in 1930 which should be referred to when reading this supplementary record.

A.B. Collins,
Assistant Forester,
Forest Economics Division.

Enclosure 1 cover map
Scale 4 miles = 1 inch

Appendix - Areas adjacent to Peace River Block.

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APPENDIX.

Drainage areas immediately tributary to the Peace River Block.

An opportunity was afforded to cover the following watersheds outside and adjacent to the block which are briefly reported upon as follows.

1. **Halfway-Cameron rivers - Block Bdy. to Cypress creek.**
   
   This section of the Halfway river and its four main tributaries, the Graham, Chowade, Cypress and Cameron rivers, flowing through wide shallow valleys all appear to be heavily burned. This particularly applies to Chowade river and Cypress creek where large fires in poplar, immature pine, and old burn were still burning. The balance of the area of these two tributaries as far as could be seen, are clean burned and have extensive areas of black spruce and muskeg swamp. While most of the above described drainage area is forest land indications found to the sites being generally poor. Except for a few small islands of merchantable spruce and cottonwood on river bends, merchantable timber appears to be non-existent in all drainages.

   A large level land area growing poplar and immature pine situated between the Halfway and Cameron rivers would appear to have potential agricultural values. Similar minor areas, mostly burned over and now being farmed occur along the Halfway river.

2. **Blueberry River adjoining Block Bdy.**

   Comprises mostly a large area of immature pine and poplar growing on average sites adjacent to the Alaska Highway. One small stand of merchantable spruce occurs along the highway at mile 104.

   No. areas suitable for agriculture are indicated along this section of the Blueberry river.

3. **Peace-Pine River Highway - Block Bdy. to Solitude Mtn.**

   Occurs in a well defined V-shaped mountain valley. Valley slopes rising from narrow bottom lands tend to be steep with much rock outcropping. Areas periodically burned, and now reforesting to poplar and immature poplar, pine and spruce are general over average growing sites, much of which may be classified as non-productive. This section of the Pine river has some small stands of merchantable timber along the valley floor most of which is now under timber sale for construction uses along the highway.

   Some good areas of agricultural land, sections of which are being mixed farmed on surveyed areas adjacent to the block will comprise the main area of agricultural land along this section of the Pine river.

A flight was made of the above to observe if the timbered areas indicated on the present map record of the P.C. & E. resources survey of the Peace River Aid Block was still intact. No new fires on the above described areas were noted.

While small stands of merchantable spruce and balsam, intermixed with immature pine and spruce occur on Callazon and Carbon creeks the main body of timber is on Clearwater creek, where a large stand is tributary to the Peace river. This valley varies in width, and is inclined to be narrow with even, moderately steep slopes. From all appearances the crown cover of the stand generally appears over mature or heavily infested. No great physical difficulties appear apparent to the logging of any of the above noted watersheds.

No land suitable for agriculture was evident in any of these mountain valleys.


At the conclusion of the reconnaissance a flight was made to determine the extent of available merchantable stands of timber near existing sale areas adjacent to the Red Willow river, and, at the same time to ascertain the general nature and distribution of forest cover. In doing this a course was flown south between the Kiskatinaw and the B.C. Alberta interprovincial boundary, over a level terrain forming an extension of land physically similar to the Peace river block to the north; extending south to the Red Willow and continuing in a series of lightly timbered ridges to the Wapiti river. The course was then continued up the Red Willow river thence via a low pass down Flatbed creek to the Murry river.

Forest cover on the Kiskatinaw and Red Willow drainage is very similar to that found on the Peace block, poplar being the predominating growth with stands of immature pine. Large areas of this watershed have been clean burned, although not as extensive as those to the north and east of the block, muskog and swamp are numerous. The only mature timber stands noted were small isolated islands adjoining present sale areas on the Red Willow.

The reconnaissance was concluded up the Red Willow river thence via Flatbed creek to Murry river and continuing north and west via Gwillim lake and the Sukunka to Moberly lake. Heavy smoke haze blowing in from the southwest prevented good observation on these drainages. What could be observed of the Murry and Sukunka valleys indicated both to be heavily burned. Some areas of mature timber were evident on the mountain slopes at the east end of Gwillim lake.