

A HISTORY OF SETTLEMENT IN THE LAC DU BOIS BASIN, 1840-1971:
A STUDY IN SEQUENT OCCUPANCE

Settlement in British Columbia has passed through several stages of development, both in growth and in decline. A study using generalized stages was introduced by Whittlesey in 1929 and was termed sequent occupance.¹ Many areas of human occupation within the province, but particularly those of an agricultural origin, may be successfully studied using this theory of sequent occupance. Certainly, no exception is found in the Lac du Bois basin, nine miles northwest of Kamloops, where a farming and later ranching economy has passed through four distinct stages. These may be formulated as:

- 1) Open grazing
- 2) Division of the land into quarter sections for homesteads
- 3) Acquisition by large land owners
- 4) Control by two persons

The Lac du Bois basin, as a concentrated horticultural community, was a failure for much the same reasons as was Walhachin.² From the start, it was impossible to maintain a reasonable standard of living given the quality of land and the small area of land available to each settler. The expectations of the individual homesteader were too high, so that only a few survived for ten years, and all eventually joined the urban migration. However, unlike Walhachin or other settlements incorrectly classified as ghost towns, little trace presently remains of the second stage of occupance in the Lac du Bois basin. Besides a few ruined log cabins, the relics of the homestead period have been effectively erased by succeeding occupance of the land. Fortunately, however, enough written evidence exists to conduct a

¹D. Whittlesey, "Sequent Occupance," Annals of the Association of American Geographers, XIX (1929), pp. 162-165.

²Walhachin was a community on the Thompson River, 30 miles west of Kamloops, which was promoted by British interests from 1908 to 1914. It failed as a settlement for several reasons, but primarily because the land was not suitable for such occupance. See Nelson A. Riis, "Settlement Abandonment: A Case Study of Walhachin - Myth and Reality," Unpublished M.A. Thesis, University of British Columbia, 1970.

fairly detailed study of the stages through which the economy of the Lac du Bois basin has developed. This evidence, together with interviews with several of the original homesteaders and landowners, made this study of sequent occupance possible.³

The Natural Setting

In the vicinity of Kamloops, the Interior Plateau is divided by ranges of low hills into several extensive upland areas. One of these is the Lac du Bois basin (see Map 1). It is best considered as an irregular southward sloping landscape with retaining low ranges of hills to the west, east and south. The basin is an undulating region, mostly of grassland, but with forestation to the north and on the tops of hills over 3,500 feet in elevation. Its approximate area of thirty-five square miles extends from the Mara Range, immediately north of Brocklehurst, to the valley of Dairy Creek which flows eastward across the north end of the Batchelor Range and enters the North Thompson River opposite Rayleigh.

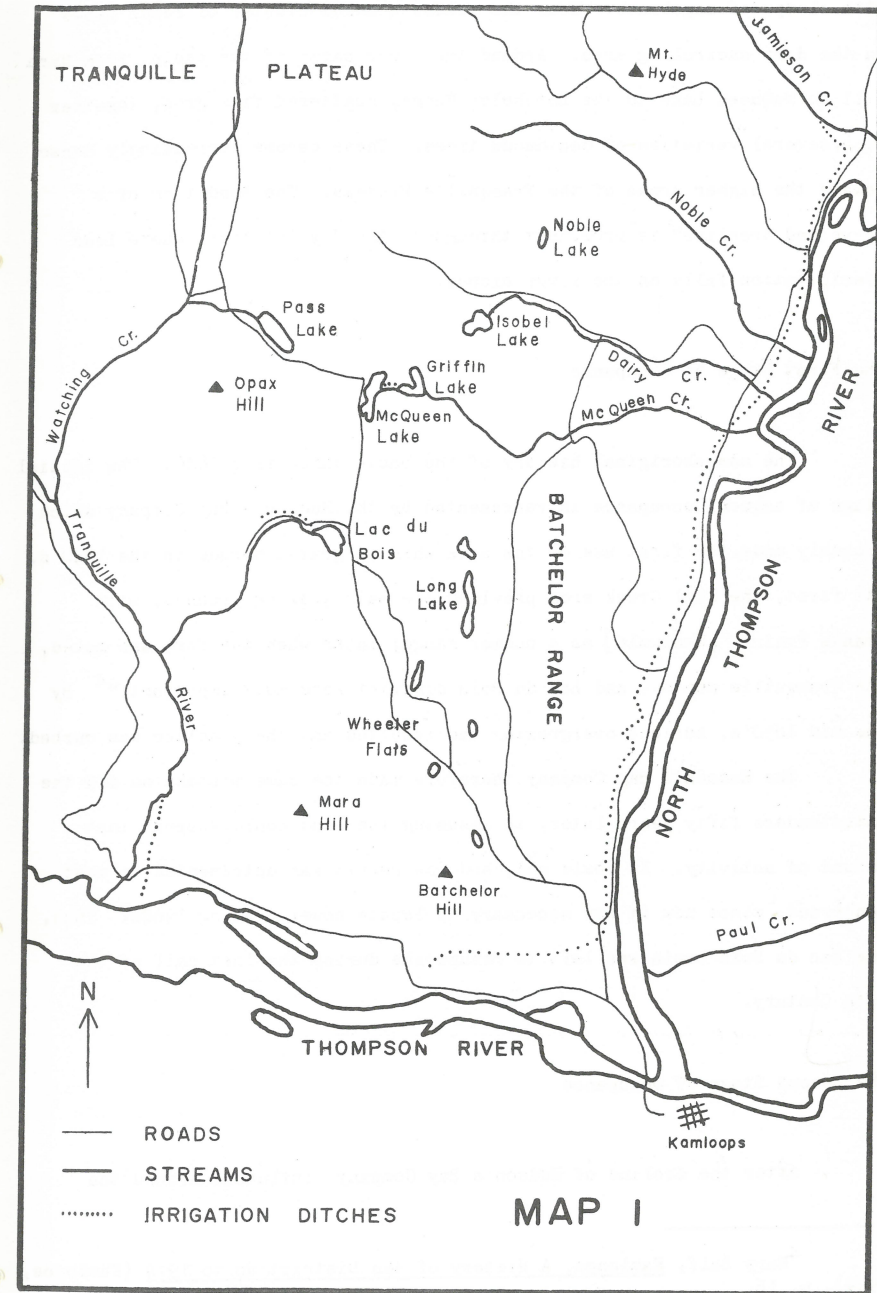
A substantial number of lakes lie in the basin and these range in size from ponds which become dry during the summer, to waterbodies a mile in length. Most lakes are alkaline and merely occupy depressions in the ground, seldom with an outlet. Long Lake is the only sizeable one in the basin which has centripetal drainage; the others, Lac du Bois, McQueen, Griffin and Pass Lake have discharge streams.

The southern portion of the basin is extensive grassland and is suitable for the grazing of cattle. Vegetation here is mostly grass, interspersed

³The author is indebted to a number of people who provided valuable data on the history of the Lac du Bois settlement. These include: Mr. C. Wawn, who lived at McQueen Lake between the years 1918 and 1923; Mr. A. Bulman and a lecture delivered by him to Cariboo College students on April 6, 1971, concerning "The History of Cattle Ranching in the Interior"; and Mr. Lloyd Hayward who, with his father, owned the Hayward Ranch from 1939 to 1963.

Map 1: The Lac Du Bois Area

Scale 1:126,720



with clumps of sagebrush. Near the ponds, a dense cluster of reeds grows on the damp encircling area. Around the lower parts of the basin, from Mara Hill to McQueen Lake to the Batchelor Range, scattered firs grow, together with several varieties of deciduous trees. These become increasingly dense toward the higher areas of the Tranquille Plateau. The condition of a "reversed treeline" is prominent throughout the dry Interior, where less precipitation falls on the lower slopes.

The First Stage of Occupance

The non-aboriginal history of the basin dates from 1840. The initial stage of sequent occupance is represented by the Hudson's Bay Company which probably made the first use of the area when it grazed horses in the 1840's. "At first, the Paul Creek area provided the main grazing grounds, with Grande Prairie [Westwold] as a summer range; later when the fort was moved, the Tranquille meadows and Lac du Bois district were most important."⁴ By the mid 1850's, serious overgrazing had resulted and the practice was curbed.

The Hudson's Bay Company therefore made the same mistake as did the homesteaders fifty years later, in assuming the land could support that amount of activity. It could not, and the result was detrimental to most concerned, since now it was necessary to locate newer grazing lands. Thus, the Lac du Bois basin was left to recuperate during the last half of the 19th Century.

The Second Stage of Occupance

After the decline of Hudson's Bay Company influence around the

⁴Mary Balf, Kamloops, A History of the District up to 1914 (Kamloops, 1969), p. 16.

1880's, Kamloops was growing in population. Cattle ranching, as an economic pursuit, gained importance, owing to the ideal climatic conditions, coupled with suitable vegetation and water supply. About 1896, the Clapperton Ranch was established to the northwest of Lac du Bois, on what is presently designated as the SE $\frac{1}{4}$ of Section 30, Township 21, Range 18.⁵ Clapperton was initially concerned with the raising of cattle, mostly for his own use it appears, but later became involved in forestry near his ranch. In the next fifteen years, thirty-five families drifted into the area and settled on quarter-sections of land throughout the basin. Concentrations of homesteads were on Wheeler Flats, three miles south of Lac du Bois, to the south of McQueen Lake, and encircling Lac du Bois itself (see Map 2).

Most of these ranchers were unfamiliar with seasonal conditions around Kamloops, and had little knowledge of farming techniques. The settlement was doomed to failure practically from the beginning, for these reasons, coupled with the unsuitability of the land for such concentrated activity, as the Hudson's Bay Company had found, fifty years previously. However, growth continued and the population peak was reached in 1920; after that date, the thirty-five homesteads gradually disbanded as living conditions became too rigorous.

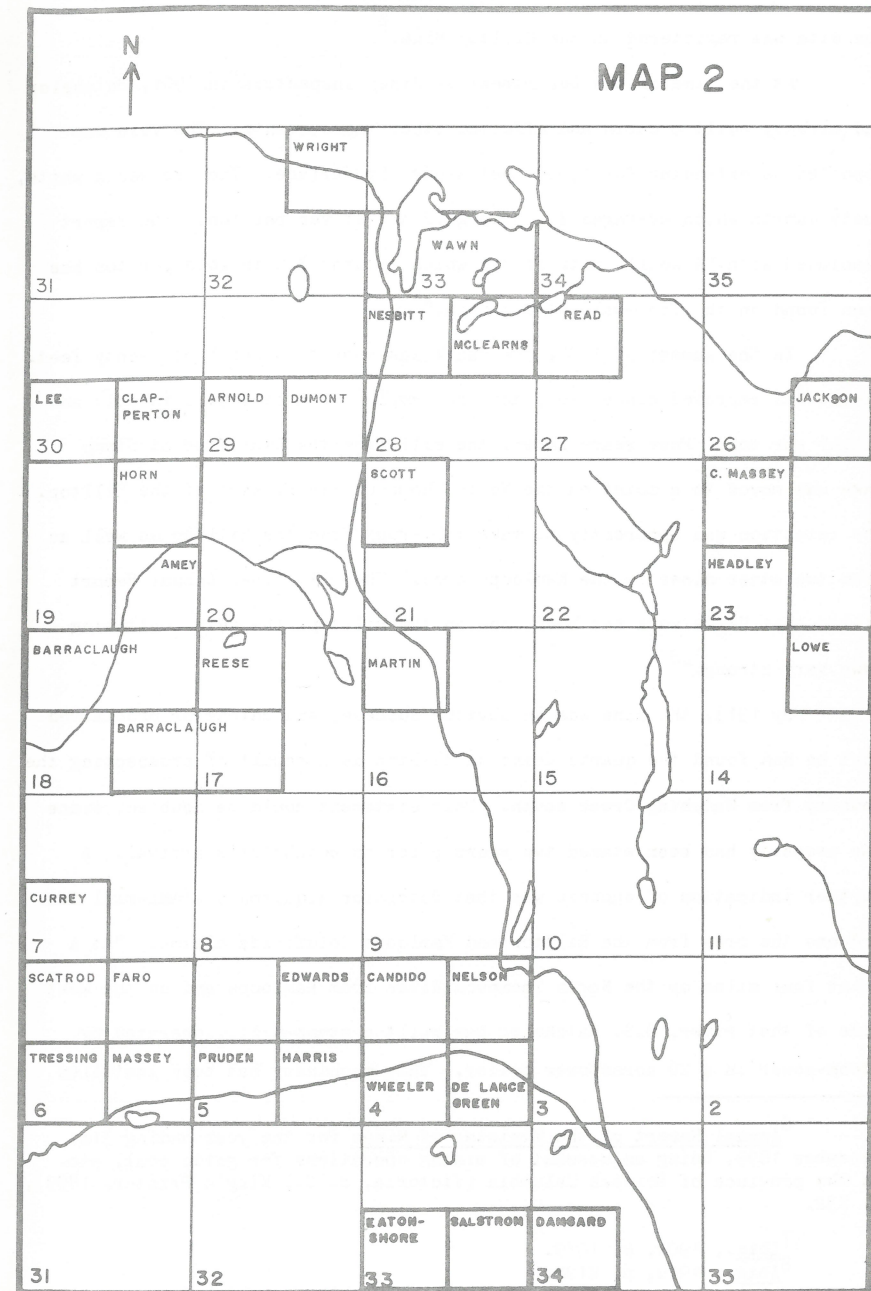
The only exception to the ranching economy was Owen Batchelor, who, in addition to farming, staked and developed a small mine on his property in the NE $\frac{1}{4}$ of Section 32, T 20, R 18. He may have been the second settler in the area, since his arrival was only four years after Clapperton's. Batchelor acquired the site in 1901 from the Boillet brothers of Paris who had controlled it for the previous two years. Two men had been working on the claim for the three months prior to Batchelor's receipt of the land.

⁵Referred to in future in its normal abbreviation as T 21, R 18.

Map 2: Land Ownership, 1920

Scale 1:52,800

Source: Reproduced from a sketch map
by Mr. A. Harris, Kamloops.



The site was registered as the Hilltop Mine.⁶

At the time of the Department of Mines inspection in 1901, Batchelor had already built a cabin and effected other improvements. The vein was reported as extending for 1,000 feet along the surface. The ore was a white, rusty quartz which averaged \$3.08 in gold and silver per ton. The report concluded with "A small chute of ore which returns \$30 in gold per ton has been found on the foot-wall of one vein."⁷

In the summer of 1905, the shaft was sunk to a depth of twenty feet. Yields had improved since 1901, and one sample revealed \$15.28 in gold and silver per ton. Four years later, the mill from the Star Mine at Stump Lake was moved to a point on the North Thompson River, east of the Hilltop. The intention was apparently to make mill-runs from the Hilltop as well as from two other mines in the Kamloops area. The 1910 Mines Annual Report stated that "some work has been done on the Hilltop, the vein continuing down very strong."⁸

By 1913, the mine was an obvious success, and Batchelor proclaimed that he had found the quartz veins on Hilltop as a result of prospecting the country from Watching Creek south. This statement could be doubted, since the property had been staked two years prior to Batchelor's arrival. A further indication of success was that Batchelor acquired a stamp-mill to process the ores from the Hilltop and Kamloops Goldfields claims. "At a point four miles up the North Thompson River from Kamloops and on the west side of that river, O.S. Batchelor has built a stamp-mill...operated by steam-power in a 20 horsepower boiler. This machinery had been installed

⁶Annual Report of the Minister of Mines for the year ending 31st December 1899, being an account of mining operations for gold, coal, etc. in the province of British Columbia (Victoria, B. C., King's Printer, 1899), p. 732.

⁷Ibid., 1901, p. 1079.

⁸Ibid., 1910, p. K128.

some years ago on the British Empire mineral claim at Vernon and, after lying idle for a long time, was purchased by Mr. Batchelor and hauled over to its present location..."⁹ The 1913 Mines Report on the Hilltop defines the ore as being well-oxidized quartz, averaging about three feet in width. In addition to the shaft, there were four open cuts to the west from the shaft and one to the east.¹⁰

Batchelor seemed to remain on his own most of the time, since his name never appears in records relating to the agricultural community of the basin. This livelihood was socially segregated from that of Batchelor, who relied, mainly, on his claim instead of on cultivation as did the other settlers.

At the turn of the century, B. C. Fruitlands was developing the north shore of the Thompson River for agriculture, and was interested in the Lac du Bois basin as a source of water. Ultimately, the storage and diversion of water was of some significance in the development of the area. In 1898, the company built a wooden flume which extended fifteen miles from Jamieson Creek down the west side of the North Thompson Valley to their farmlands. This construction had been planned for several years. Early in 1896, the Kamloops Inland Sentinel carried a lengthy article on the feasibility of irrigation in the valley.

To the northwest of the tract is Jamieson Creek, which is quite a large stream during May and June, but late in summer dwindles to very small dimension. It is worth the consideration of interested parties whether the waters of the stream could not be held in a

⁹Ibid., 1913, p. K194.

¹⁰The report continues: "In three of these [cuts] apparently the same vein is exposed, but in two others, one 18 feet long by 8 feet high at the face, and the other 25 feet long and 10 feet deep, lower down the hillside, no vein is yet exposed, these having, so far, only been made as cross-cuts through the surface soil and broken rock...Each of the upper cuts are 10 feet deep and in each of these a vein of oxidized quartz shows strongly; in the cut to the east, 75 feet from the shaft and 12 feet deep, the vein is also exposed, showing the same width and conditions as in the shaft." Ibid., 1913, p. K194.

reservoir during the spring freshets and conveyed through a large ditch to the confluence of the rivers.... The erection of a vegetable and fruit cannery, or some other means of affording a market to the product of this greater area brought under cultivation, would be inseparably connected with the scheme and the two going together would add very materially to the growth and prosperity of Kamloops.¹¹

On September 13, 1900, B. C. Fruitlands received authorization from the provincial government¹² to build dams and to store up to 5,000 acre feet of water in fourteen lakes on Tranquille Plateau, immediately to the north of the Lac du Bois basin. They were also permitted to divert up to 14,000 acre feet of water per annum into the irrigation ditches. Only nine dams were ever completed, but they provided a consistent flow of water to the farmlands. Wentworth Lake was the site of the largest dam: its height was 33 feet and the crest length was 392 feet.

Also in 1900, B. C. Fruitlands turned to the basin and dug a ditch between McQueen Lake and Griffin Lake, less than one-quarter mile downstream. The company obtained a licence which would allow them to divert 100 acre feet of McQueen Creek per annum; however, the necessary dam on Griffin Lake was never built.

During the hot summers, many ponds which were required as a water supply dried up, and the lakes became seriously depleted. For this reason, the ranchers themselves were concerned with water storage. In 1900, the Clappertons built a dam at the outlet of Lac du Bois; it lasted about twenty years before it rotted and was replaced. The present dam is the third one on the site and was constructed in 1950.

Bill Arnald¹³ appears to have been a leading figure among the

¹¹ Kamloops Inland Sentinel, 28 February 1896, p. 2.

¹² In 1909, an act was established by the Legislature to uniformly license water rights claims; this was the beginning of the Water Rights Branch. Before 1909, claims were looked after by the Gold Commissioner.

¹³ He is also referred to as Bill Arnold in some reports.

ranchers. He came to British Columbia in 1878 and settled in the Lac du Bois basin in 1902. His ranch was located to the immediate east of Clapperton's on the SW $\frac{1}{4}$ of Section 29, T 21, R 18. He maintained a close contact with Kamloops and the newspaper. Early in 1905, Arnald travelled to Victoria to arrange for the manufacture and sale of a new type of stove which he had invented. It was to be called "Arnald's improved stove."¹⁴

Arnald seems to have been somewhat of a prankster, or at the least, he enjoyed publicity. W. M. Brewer wrote in the 1913 Mines Annual Report that Arnald had been doing quite a lot of work on "a wide outcrop of iron-stained igneous rock that resembled diorite, but with the hornblende in very well-defined and distinct crystals."¹⁵ Arnald claimed to have obtained values in silver, but a sample when tested assayed only a trace in gold and silver. The report concluded that "Mr. Arnald has staked a large number of claims and is most industrious in doing assessment work, so that it is to be regretted he has had no better results for his hard work."¹⁶

Nine years later, in 1922, Arnald announced to the newspaper that his ranch contained a deposit of radium. The water in his well appeared to have extraordinary healing powers: a metal water pail had a break which he sealed with beef fat and sugar. About two years later, it was completely closed with a metal coating which he attributed to radium. Also, neuralgia which he had suffered in his neck disappeared due to drinking water from his remarkable well. However, his discovery could not have been substantiated, or even reported to the proper authorities, since no record of his find appeared in the Mines Annual Report. Almost certainly, his claim was merely sensationalism for the front page of the Sentinel.¹⁷

Along with the cattle industry, there was some forestry in the basin.

¹⁴ Kamloops Inland Sentinel, 10 March 1905, p. 1.

¹⁵ Annual Report of the Minister of Mines, 1913, p. K196.

¹⁶ Ibid., p. K196.

¹⁷ Kamloops Standard-Sentinel, 5 September 1922, p. 1.

Two portable sawmills were eventually established, one on the north shore of Lac du Bois and the other adjacent to the Clapperton Ranch. The former was owned jointly by McNicholson, Mill and Clapperton and the other by Henry Anderson, Fred Distero, Harry Tuplin and Van Bisker. Forestry was a profitable pursuit for some ranchers; the Wawns, for instance, over several years felled a total of \$6,000 of timber from a quarter-section and hauled the trees two miles to Clapperton's mill.¹⁸

Unlike many settlements in the Central Interior, the First World War did not adversely affect the ranching community. Indeed, the year 1917 was one of the best and most productive that the ranchers experienced. Although it was an unusually dry summer, the Kamloops Inland Sentinel reported that "crops were ample this year."¹⁹ Many farmers cultivated only twenty to thirty acres which consisted partly of vegetables for their personal use and partly of hay to feed their horses and cattle during the winter. Fruit trees, however, were apparently never attempted, although many ranchers did successfully grow raspberries and strawberries. Dairy cows were owned by two settlers, Lane and Colliers, and the milk was sold to a firm in North Kamloops.

During the war years, the greatest expansion of the settlement occurred. An indication of the increasing amount of property was seen in 1916 when the first school opened in the basin and was attended by eight students. It was located one-half mile north of Lac du Bois on the road to McQueen Lake. The first teacher, Miss Stevenson, taught for the initial year, but resigned at the end of the summer term of 1917. She was replaced by Miss Robinson who had come from Vancouver. In that year, the school board consisted of two trustees and a secretary, all ranchers themselves.²⁰ A second schoolhouse on Wheeler Flats, three miles south of Lac du Bois, had a short life. Early in the 1920's, the building, for unknown reasons, was

¹⁸ Interview with Mr. C. Wawn, February 1971.

¹⁹ 14 September 1917, p. 7.

²⁰ Ibid.

stolen and moved to North Kamloops. The man responsible received six months imprisonment.²¹ As ranchers began to leave the area, the remaining school became obsolete and was generally used for the storage of hay. Its end came just a few years ago when it was destroyed by fire.

The decade of the 1910's marked the end of the settlement's success. In 1922, there was a serious drought and a grasshopper plague. During that year, it was necessary to purchase hay from Kamloops at a cost of \$30.00 per ton and transport it to the ranches in the basin as cattle feed. The unsuitability of the area for concentrated agriculture was now becoming critically apparent. As a direct result of inadequate feeding, many cattle died from consumption of the larkspur weed, thus crippling the settlement even further.

Several families came close to starvation in 1922 and the years immediately following. Herman Nesbitt, whose ranch was south of McQueen Lake, left the area for this specific reason and went to Kamloops.²²

Some land improvement was required each year for the homestead lease to be honoured by the government. During this period of plague and drought, the settlers barely survived with their current holdings, without contemplating any upgrading of the land. Thus, ranches were neglected and their leases were cancelled by the government. Illustration is found in a letter from the District Forest Ranger in 1931 regarding Owen Batchelor's holdings: "On the 30th of July, 1919, he abandoned the area and on the 19th of June, 1922, he relocated and obtained a new entry over the same area. Apparently the necessary improvements have not been made and for that reason, cancellation proceedings are pending."²³ Other farmers were unable to pay the taxes on their homesteads and the lands were seized for payment.

Due to lack of food, animal sickness and death, lease cancellation

²¹ Interview with Mr. C. Wawn, February 1971.

²² Statement of Mr. Neil McGregor, Kamloops Public Works Department.

²³ Kamloops District Forest Ranger Report, 31 October 1931, in files of District Forest Ranger, Kamloops.

or land seizure, most of the original settlers had left the Lac du Bois country by the late 1920's, presumably joining the urban migration. A report by the District Forest Ranger reviewed this period as follows: "None of the land is even suitable for dry farming. Many years ago, a number of the quarters now covered by the [Hayward] lease were homesteaded, but the land proved to be totally unsuited to agriculture and the settlers were forced to abandon their holdings."²⁴

The Third Stage of Occupance

In the years after 1925, the individual land holder was outmoded by more modern methods of farming and the era of the 'giant ranch' was beginning. Joseph Bulman gradually acquired this land as it was abandoned or sold. He had come to British Columbia from England in 1886 and worked first for William Roper who started the Cherry Creek Ranch, west of Kamloops. When he began to ranch himself, he leased land south of Lac du Bois, at Westwold, thirty miles southeast of Kamloops, and near the Willow Ranch on the Merritt road. In 1935, Bulman controlled 10,530 acres in the Lac du Bois basin; this consisted of 10,250 acres which were suitable for grazing with the remaining 280 acres being timbered (see Map 3).

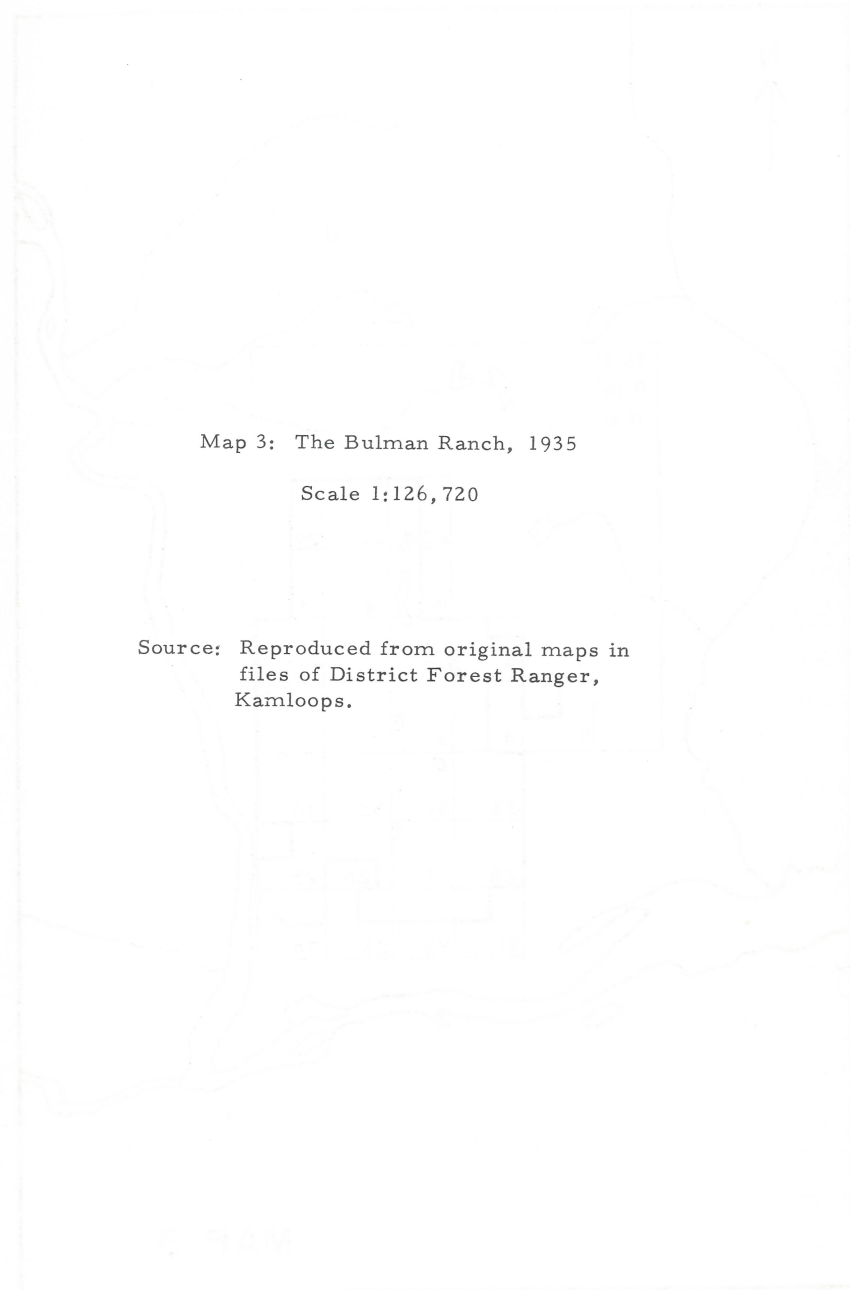
In the second stage of occupance, the maximum property size had been 320 acres per family, but only three such pre-emptions were registered in the whole basin; most homesteaders had only 160 acres. Fifteen years after the start of the second stage decline, the holdings per person were almost seventy times larger. But with these expanded holdings, land condition was evidently not maintained at such a satisfactory level. On May 12, 1935, a report on the Bulman Ranch was prepared by the District Forest Ranger. It

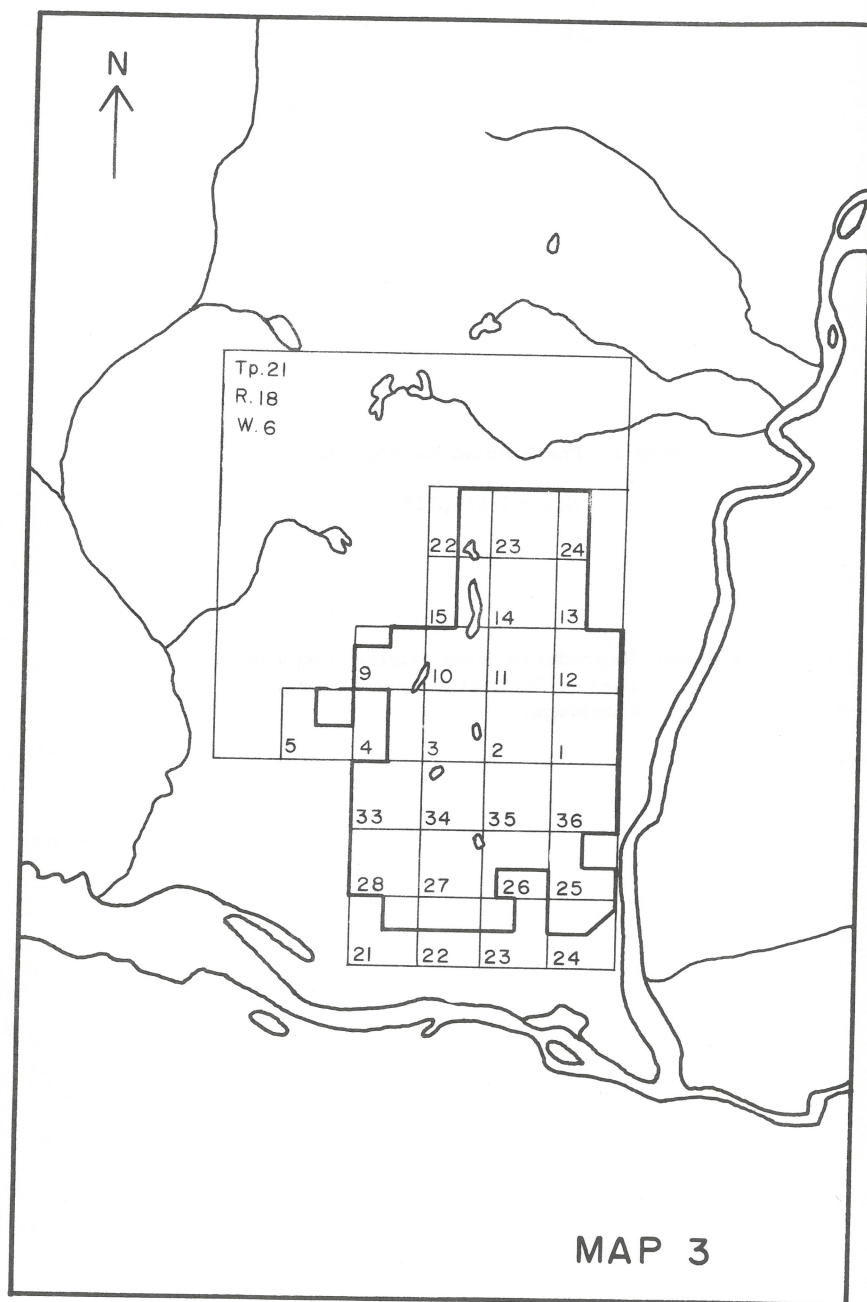
²⁴Ibid., 27 March 1939.

Map 3: The Bulman Ranch, 1935

Scale 1:126,720

Source: Reproduced from original maps in files of District Forest Ranger, Kamloops.





stated that \$567.00 of fence repair was required immediately and that "the area has been badly overgrazed in the past resulting in the eradication of bunch grass which is now only to be found in isolated patches on a few of the steep sidehills."²⁵

Almost four years later, on February 13, 1939, William R. Hayward purchased the entire Bulman Ranch which then covered 11,580 acres. Another Ranger report on February 22 stated that "fences are now in good repair and a cattle guard has been constructed on the Pass Lake road."²⁶

Robert and James Heron controlled some land north of the Hayward tract. Their home ranch was at Cherry Creek and they owned and leased a total of 17,500 acres, of which 2,000 acres were used to grow hay.²⁷ On August 21, 1941, the brothers applied for an additional 320 acres in Sections 27 and 33, T 21, R 18. The report on the land concluded, "The tract is mostly timbered and soil is rather poor and stony. Suitable for grazing only, as no water is available for irrigation. Would carry six head cattle or twenty-five head sheep."²⁸

Meanwhile, William Hayward and his son, Lloyd Hayward, were expanding their holdings. On August 11, 1943, they applied for and obtained 63 acres in the S $\frac{1}{2}$ of Section 20, T 21, R 18. At the beginning of 1947, they leased the W $\frac{1}{2}$ of Section 22 and at that time controlled 16,300 acres and 2,300 sheep. A year later, they obtained an additional 480 acres in Section 21

²⁵Ibid., May 12, 1935.

²⁶Ibid., February 22, 1939.

²⁷On this extensive area, they ran 3,400 sheep and 175 beef cattle.

²⁸Kamloops District Forest Ranger Report, 21 August 1941, in files of District Forest Ranger, Kamloops.

Land applications were registered by several persons during the third stage. Albert McGowan, Francis Lowe, Thomas Mackenzie and John Brown are examples. McGowan held a 21-year grazing lease which dated from June 15, 1933, and which covered the NW $\frac{1}{4}$ of Section 27, T 21, R 18. According to a report in that year, he owned 90 dairy cattle, 40 beef cattle and 70 horses. John Brown controlled 130 acres in the NW $\frac{1}{4}$ of Section 34, but most of this land was classified as agriculturally unsuitable.

(see Map 4).

In 1948, the Haywards owned 3,300 sheep, 33 beef cattle and 30 horses. Land along the North Thompson River was used to grow hay and the sheep were herded down to the valley for this feed. The Lac du Bois basin was used solely as a winter range; during the summer, the sheep grazed on Porcupine Ridge north of Tranquille Lake and in the Fraser Valley west of Clinton.

On May 30, 1946, Lloyd Hayward applied to the Water Rights Branch to build a dam at the outlet of Lac du Bois and to divert water onto 42 acres in the E $\frac{1}{2}$ of Section 19, T 21, R 18. The application was approved and permitted the storage and diversion of 84 acre feet of water per year. The specifications were that the dam could not exceed six feet in height; construction must be started before March 31, 1947, and completed within three years. An extension was obtained in 1947. Work on the dam by Eric Larsen Ltd. started finally in mid-June, 1950, and was finished at the end of October. That year, three inspections were made by M. L. Zirul of the Water Rights Branch before construction was approved on November 2. The height was reported as seven feet, with a crest of 120 feet, a crest-top width of six feet and a base width of 42 feet.²⁹

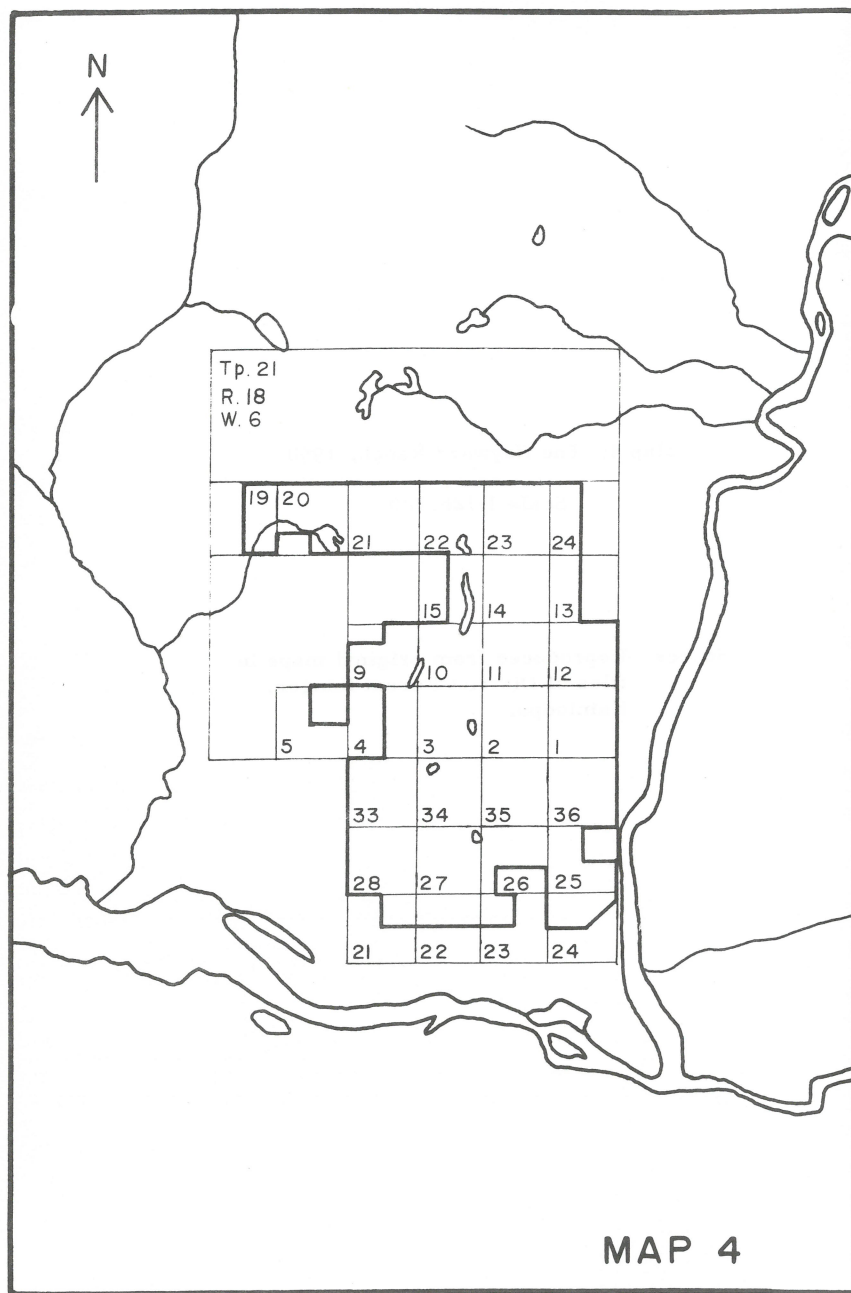
The diversion and irrigation scheme was not started for several years. Two extensions for completion of the works were obtained: one on February 2, 1955, and the other on January 22, 1957. The entire project, including storage facilities, diversion and irrigation ditches, was finished in 1958.

²⁹These dimensions make one expect to find an impressive structure at the outlet of Lac du Bois. During a field study in the summer of 1971, the dam was visited and found to be merely a block of concrete, at most one and one-half feet high, and with retaining earth packed around it. There was no evidence to suggest that the 'dam' had ever been seven feet high. It should also be noted that the licence stipulated a maximum height of six feet, yet the dam was reported as being seven feet high. Some discrepancy is certainly apparent in the records.

Map 4: The Hayward Ranch, 1950

Scale 1:126,720

Source: Reproduced from original maps in files of District Forest Ranger, Kamloops.



The Fourth Stage of Occupance

Five years later, in 1963, Lloyd Hayward sold the entire ranch to Alex Frolek who presently owns the land. The former retained only his hay meadows along the west side of the North Thompson River. On August 24, 1964, B. C. Fruitlands, under the signature of J. F. Whelan, finally abandoned its water rights on McQueen Creek and Griffin Lake which the company had held since 1900. A letter from the Comptroller of Water Rights, dated two days later, advised that Frolek intended to apply for the water made available and to store and divert water from McQueen Lake and Creek.³⁰ It is possible that he did not, since no records in the Water Rights Branch indicate that work has been done on diversions of McQueen Lake.

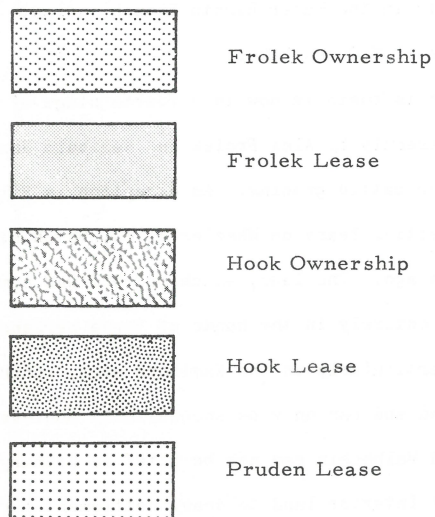
The land of the Lac du Bois basin is now in a fourth stage of sequent occupance. It is controlled presently by Alex Frolek and Reginald Hook, who each hold substantial acreage for cattle grazing. An exception is Bill Pruden who has retained the $\frac{1}{4}$ section lease on Wheeler Flats, which his family acquired over fifty years ago. The land, which in 1920 was homesteaded by thirty-five families, is now entirely in the hands of three persons (see Map 5). It is apparent that, particularly in the Kamloops area, ranching is impossible on small plots of land and can only be successfully achieved with large holdings. Lac du Bois and Walhachin can now be cited as primary examples of the unsuitability of Interior land to heavy settlement for agricultural or horticultural purposes.

There is, perhaps, a fifth stage in sequent occupance for land which is located in close proximity to an urban centre such as Kamloops. With the current rapid population expansion for this city, new housing areas are essential, and already developers may have their sights on the Lac du

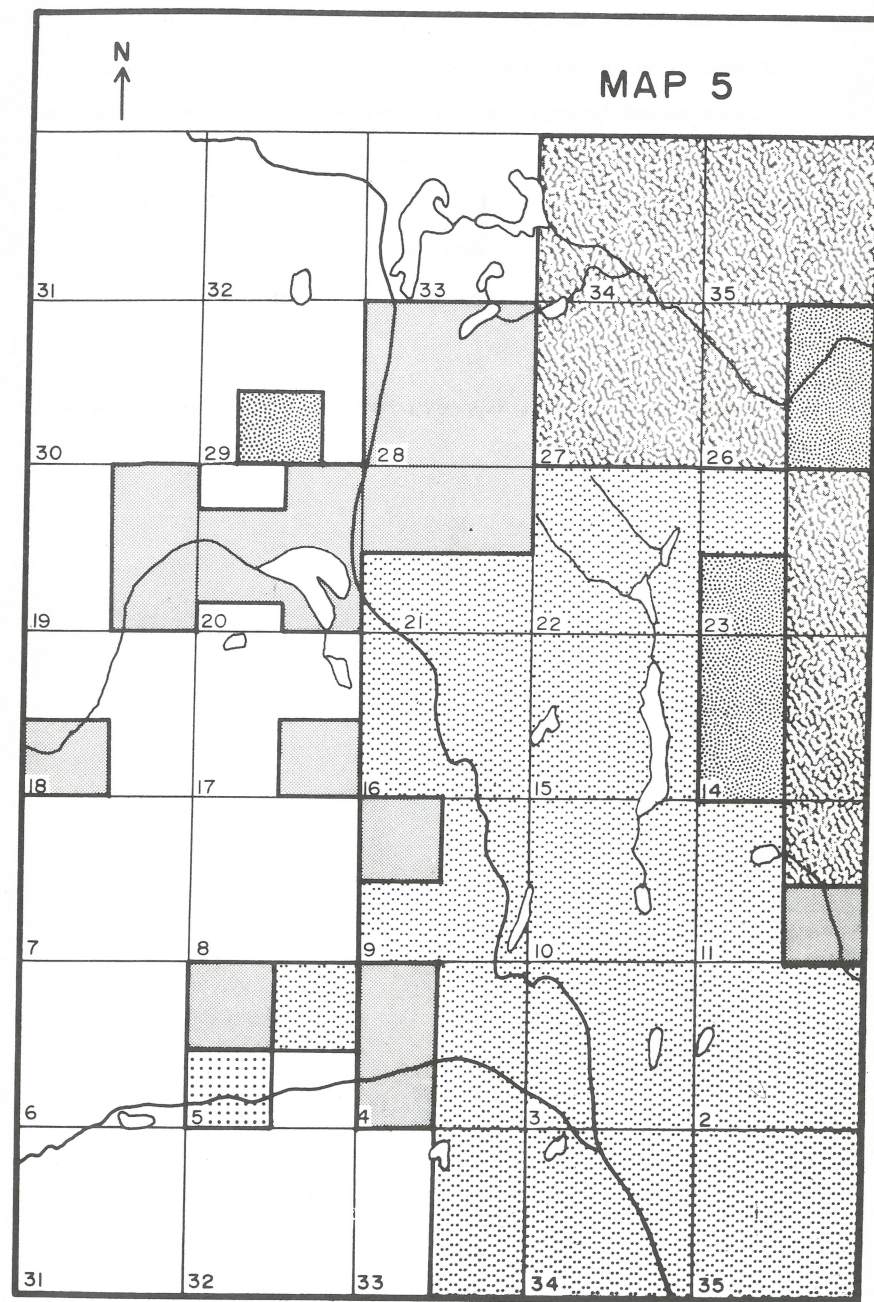
³⁰ Both these letters are in the files of the Kamloops office, Water Rights Branch, Department of Lands, Forests, and Water Resources.

Map 5: Land Ownership, 1971

Scale 1:52,800



Source: Reproduced from original maps in files of District Forest Ranger, Kamloops.



Bois basin as the future home for over 15,000 residents.³¹

If such is to be the case, sequent occupance in the Lac du Bois basin will have passed through several stages notable for control density. The second stage would be a peak with a sudden decline to the present, followed by an abrupt increase. The fifth stage of sequent occupance has already been reached in certain places, such as the Fraser Delta, and represents an undesirable transformation from the useful productivity of the fourth stage.

³¹ Suggested by Mr. Neil McGregor, Kamloops Public Works Department.