SETTLEMENT ABANDONMENT

A CASE STUDY OF WALHACHIN - MYTH AND REALITY

by

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ABSTRACT

It has commonly been assumed that the community of Walhachin, settled by British aristocracy during the immigration boom at the turn of the century, was eventually abandoned consequent to most of its manpower being lost as casualties during World War I. With investigation it was found that this explanation did not sufficiently account for Walhachin's failure. It was, however, the one accepted and offered by the settlers since it absolved them of all responsibility.

The thesis is concerned with the identification and examination of the less obvious and yet more critical variables associated with the settlement's abandonment, and views these variables and their interrelationships within the unifying theme of settlement process. The variables examined range from "micro-climatic conditions" that worked against the settler's efforts as horticulturists to "levels of expectation" which determined the agricultural productivity demanded of the settlement.

The results of the inquiry would suggest that Walhachin had never existed as a viable agricultural community. Since the settlement may be regarded virtually as a microcosm of variables inherent in agricultural frontier abandonment, its failure variables may be considered applicable not only to similar colonization

schemes but to agricultural frontier regions generally.

Two broad implications are derived from the findings. First, the generally accepted single-factor explanation of Walhachin's fate must be replaced by a multi-factor explanation. Second, the individual's inability to act effectively in a new environment plays a more important function than usually accorded it in frontier studies. The essence of the research was that even in retrospect, most of the settlers interviewed were either unwilling or unable to determine the most fundamental cause for Walhachin's failure - the settlers themselves.

ACKNOWLEDGEMENTS

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Photograph from the Honorable Carol Fellows family archives

* Photograph from B.C.D.A. promotional brochure

+ Photograph taken from the Report on the Anglesey Estate, Walhachin, B.C., by W.H. Moodie

Chapter I

Introduction

Introduction To The Problem

In Sir Clifford Sifton's[1] efforts to entice immigrants into the Canadian West, he described the ideal settler as a "...stalwart peasant in a sheep-skin coat, born on the soil, whose forefathers had been farmers for generations, with a stout wife and half-a-dozen children...."[2] If one could visualize another settler standing with Sifton's "ideal", namely the 6th Marquis of Anglesey from one of England's wealthiest aristocratic families, educated at Eton, married by the Archbishop of Canterbury, Captain of the Royal Horse Guards and close friend of King George V and Queen Mary, the theme of this study would begin to unfold. The study is about Walhachin[3], an agricultural (primarily horticultural) settlement, which may also be

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[1] Sir Clifford Sifton, Minister of the Interior in Laurier's Liberal Government, was in part responsible for the massive immigration into Canada between the turn of the century and World War I. His vigorous immigration policies are exemplified in British Columbia where in 1921, only 50% of the population was native-born.

[2] J. W. Dafoe, Clifford Sifton In Relation To His Time, Toronto, The Macmillan Company of Canada Ltd., 1931, p. 319.

[3] Walhachin (pronounced "Wallasheen") was the name given to the C.P.R. station in 1909. In this study the name refers not only to the station and the townsite but also to all the lands purchased for horticulture connected with the settlement.

regarded as an ethnic settlement in that its population was comprised totally of English immigrants. Its decline and abandonment has, in the popular myth, been attributed solely to casualties suffered by Walhachin volunteers during World War I. However, as this investigation reveals, the casualties were light and Walhachin's viability[4] as a settlement was, at best, doubtful with the advent of war only hastening its inevitable end.

The single factor explanation of the settlement's abandonment presented by Ormsby, Hutchison, Borthwick, and Balf[5] is not only inaccurate but also inadequate in that it ignores the most important factors. A more complete explanation is offered by an examination and assessment of multiple factors which may be defined generally as cultural and environmental. These would include such variables as level of expectation, quality of background and education, relative location, availability of capital, quality and

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[4] The terms viability, failure and success are used frequently throughout this study and therefore require clarification. They are discussed and defined at the end of this chapter.

[5] See M. Balf et al, A History of the District to 1914, Kamloops, Kamloops Museum Association, 1969, Chapter 34; D. Borthwick, "Settlement in British Columbia", Transactions of the 8th British Columbia Natural Resources Conference, Victoria, 1955, pp. 97-108; B. Hutchison, The Fraser, Toronto, Clarke, Irwin and Co. Ltd., 1950, Chapter 18; M. Ormsby, British Columbia, Toronto, The Macmillan Company of Canada, Ltd., 1958, Chapter 13.

quantity of land, and product demand. The purpose of this study is to identify a number of these variables and explain their contributions to the process of settlement failure at Walhachin. The settlement serves as a useful study area in which to examine such a process since it may be viewed as a composite of settlement failure factors. In most "ghost town" studies, abandonment is generally attributed to one major variable such as resource depletion or drought, but Walhachin's abandonment resulted from a number of variables. En toto they created an environment in which settlement could no longer continue, and although all were contributory, a number were significantly more important and will be identified and discussed accordingly.

Since the fundamental theme of this study is failure, it may be useful to explain how the term is to be used in the context of this inquiry. Settlement can be considered successful only if an adequate income is generated by activity within the settlement -- adequate in providing a standard of living acceptable to the individual[6]. If such a condition is not fulfilled, the settlement fails and is followed by deterioration and eventual abandonment. The viability of a settlement, then, refers to its inhabitants'

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[6]By this definition, a settlement of remittance men would not be considered successful since their livelihood would not necessarily be dependent upon their activities in the settlement.

potential and ability to avoid this state of failure. However, one must recognize that this is subjective failure, since both failure and viability relate to the settler's level of expectation. If there is a lowering of this level, the viability and failure assessment may be altered. Another aspect of subjective failure may be illustrated by the individual who settles in a viable location but dislikes his neighbors and abandons his land. However, in regard to Walhachin, though livestock enterprises are possible, one may hypothesize that the settlement was never essentially viable. At that particular site, an agricultural community likely could never have endured[7] regardless of the level of expectation held by the settlers. As well as site shortcomings, the settlers themselves were representative of a behaviorial pattern typical of settlers who eventually become failures.

Walhachin's viability as an agricultural settlement will be examined within these general categories of cultural and environmental variables. More explicitly, its viability will be investigated through an explanation of the processes of Walhachin's settlement discussed in response to the following questions:

1) What possibilities (myths) did those responsible for settlement policy see in the physical environment?

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[7] Although agriculture still exists at Walhachin, it is at such a scale as to render an income sufficient for only one or two families.

2) How did the settlement evolve and can one recognize distinct stages of sequent occupance?

3) What were the land and promotional policies designed to bring land and people together as well as the experiments and adjustments[8] attempted once this union occurred?

4) What economic achievements, if any, did the settlers experience -- individually and as a whole?

5) What form did the settlement eventually take in terms of physical and social structure?

These general questions outline, in essence, the research parameters of this study. The answers to these questions, combined within a unifying theme of Walhachin's viability, will aim to substantiate the statement issued by a Departmental Committee appointed by the British Parliament in 1906 to inquire into English agricultural settlements in the British colonies, which concluded, "... whether we turn to Canada, South America or Australia, we do not find an instance of a thoroughly successful effort at colonization".[9]

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[8] The terms 'adjustment' and 'adaptation' will be used interchangeably throughout this study to refer to any change in personality, society, or culture which aids in the maintenance, continuance, or functioning of a settlement system.

[9] W. A. Carrothers, Emigration From the British Isles. London, P. S. King and Sons, Ltd., 1929, p. 239.

The Problem in Context

There is a definite need for studies such as this to fully explain that critical period of British Columbia settlement around the turn of the century which, in some respects, was as important to British Columbia's development as the gold rushes of the mid-19th century. Although the mining frontier initiated much of the settlement which occurred in the province, it was the agricultural frontier that established a sense of permanence to the settlement patterns created by the search for minerals. Mining provided the impetus, and agriculture provided the stability.

This study's concern is with British Columbia settlement and it is hoped that some contribution has been made toward a better understanding of settlement process generally and to that in British Columbia in particular.

Although no comprehensive study of British Columbia has yet been made, there are a limited number of general treatments such as those done by D. Borthwick[10] and M. Ormsby[11]. Regions such as the Shuswap, Okanagan and Lower Fraser Valley have been studied in depth and consequently the settlement process which occurred in these particular regions is well documented. Settlement has also been studied in connection with various limited themes as Gunn's examination of the gold rush's effect on British Columbia settlement

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[10] Borthwick, loc. cit.

[11] Ormsby, op. cit.

settlement patterns.[12] Along with a collection of local histories, many of which are poorly researched and written, these constitute the existing British Columbia settlement studies. It is hoped that this study of Walhachin will eventually facilitate a comprehensive study of the province's settlement process.[13]

British Columbia settlement may be dealt with by using various themes such as its relationship to the mining frontier (partially attempted by Gunn), but for many parts of the province a more appropriate association would be that with the agricultural frontier. In British Columbia, the role of the agriculture frontier has not received its due consideration.[14] Walhachin may be viewed as a case-study of an agricultural frontier area. It was characterized by marginal soil quality, climatic uncertainty, and unavailability of accurate information about the area, all of which are implicit in the

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[12] A. M. Gunn, "Gold and the Early Settlement of British Columbia, 1858-1885" (unpublished Master's dissertation, Department of Geography, University of British Columbia, 1965.)

[13] No research has been attempted on the Walhachin area other than for superficial accounts in newspaper articles and is generally known only through isolated references in books and articles dealing with British Columbia.

[14] F. Fairfield, writing about British Columbia prior to World War I, goes to great lengths describing only the horticultural areas in the province such as the Okanagan, Upper Fraser (Thompson and Nicola Valleys), Shuswap and Adams Lake, Boundary Country (Kettle Valley), Vancouver Island and adjacent islands and the settlement which occurred in each of these.

See F. Fairfield, British Columbia, London, Sir Isaac Pitman & Sons Ltd., 1914.

term frontier. Although British Columbia appears to lack the frontier line emphasized by Turner and Meinig, the frontier phenomena discussed by these two and by Bowman, Webb, Billington, Innis and Lower are extremely relevant to any discussion of British Columbia settlement.[15]

One can recognize the agriculture frontier continually advancing and retreating on the outer fringes of land occupation. One kind of crop and then another may be grown to see which will best withstand the hazards of uncertain climate. Range land is broken into farmland and then reverts to range again. Whether to raise livestock or grow crops, or how best to combine them, are questions that are never completely resolved by settlers on the frontier because the climate is generally uncertain and the relative market prices of what they might have to sell can rarely be determined in advance. Walhachin can be considered as a frontier location and can be seen as a case study of frontier adjustment and/or maladjustment.

Walhachin may also be viewed as one of a number of ethnic group settlements which were established during the period around the turn of the last century. Although many of these were eventually abandoned, they did play a role in the province's development, both directly and

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[15] Each of the following have written extensively on the frontier with the latter two emphasizing Canada: Isaiah Bowman, Frederick Jackson Turner, Walter P. Webb, D. W. Meinig, R. A. Billington, A. R. M. Lower and G. F. G. Stanley.

indirectly, and as yet, have received little attention.[16]

These were groups in which language, sectarianism, nationalism and collectivism in various combinations distinguished them from their neighbors. Investigation of a population map indicating country-of-origin and depicting settlement at intervals after 1895 would indicate that homogeneous groups had taken possession of specific areas. Their members would constitute a significant proportion of the population and would have experienced a sense of solidarity from the outset. Some of these groups, as the French and Dutch, exhibited more individualism in community building while in other groups this individualism was held in check by a common desire to maintain their cultural distinctiveness. An example of the latter groups are the Doukhobors and Mennonites which have been the only major ethnic groups studied in detail.[17] Hence a number of gaps require filling and within this context the community of Walhachin deserves examination as an ethnic group settlement.

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[16] Some of these ethnic group settlements are: Seymour Arm (British), Malcolm Island (Finnish), Bella Coola (Norwegian), Cape Scott (Danish), Telkwa (Swiss), Housten (Dutch), Tupper Creek (Sudeten-German), and Windermere (British. The best contemporary example would be the Quaker settlement at Argenta on Kootenay Lake.

[17] Examples of these studies would be H. W. Bockemuehl's M. A. thesis, Doukhobor Impact on the British Columbia Landscape: An Historical Geographical Study and A. H. Siemens' M. A. thesis, Mennonite Settlement in the Lower Fraser Valley.

A portion of this study is devoted to the cultural variable in the settlement process at Walhachin. Isaiah Bowman remarked that "a study of pioneering that takes no account of the spirit of the pioneers is a study in vacua".[18] More recently, J. Wreford Watson furthered this argument by stating that "... illusions about the environment have powerful effect upon how the environment is used, and thus the subject we call geography should pay at least as much attention to the climate of the mind as to the climate, to the morphology of thought as to geomorphology, that is, to mental processes and patterns"[19]. While collecting data that focused on human failure within the Walhachin schema of failure, a topic began to emerge that has received little attention in the explanation of the province's sequent occupance: a search for Utopia. Many settlers, both individually and in groups, arrived in British Columbia searching for the 'good life' in varying forms, such as health, wealth and adventure. Although seeking Utopia, most ended similarly to the Walhachin settlers by finding quite the contrary. However it is a factor that must be reckoned with, and upon examination, may explain a good deal of the province's settlement

18 I. Bowman, "Planning In Pioneer Settlement", Annals of the Association of American Geographers, XXII (June, 1932), No. 2, p. 97. Of the nine volumes in the Canadian Frontiers of Settlement series, one volume, Pioneering in the Prairie Provinces: The Social Side of the Settlement Process, deals with the cultural variable in settlement. B. Benvenute, in Farming in Cultural Change, stresses the human aspect of efficient farming.

19 J. W. Watson, "The Role of Illusion in North American Geography: A Note on the Geography of North American Settlement, "The Canadian Geographer, XIII, (Spring 1969), p. 26.

process and pattern.

Walhachin may be regarded as exemplifying a number of general themes relating to British Columbia settlement; sequent occupance, agriculture and the frontier, and the search for Utopia and, as a result, was an obvious topic for one interested primarily in settlement and in Western Canada. As a research topic, Walhachin was also chosen because of its distinctiveness and its ready accessibility. Its obvious distinctiveness (remnant orchards in sagebrush and elitist social structure) would pique the interest of any geographer. Also, time was becoming critical. Although the site and historical records are readily accessible, a substantial part of the data for this inquiry was available only from informants, of whom the most useful were the original settlers.[20]

The Methodology

This is a study in settlement geography using an historical approach. It may be classed as a study of past geography and geographic change through time, employing a method introduced by Whittlesey -- that of

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[20] Of the original settlers still living, most were in their eighties and of those born at Walhachin, most were retired. The importance of the time factor is illustrated by the fact that two of the people interviewed during the 1969 field work have since died.

sequent occupance.[21] It is a useful method to apply to an area where stages may be recognized during which human occupation and development remained relatively constant and were altered only when extraneous forces interfered, changing the area's direction or rate of development or both. Although these forces may be natural, such as an earthquake or flood, the forces acting on Walhachin's stages may be regarded as interruptions of a cultural nature. It is upon these forces that emphasis will be placed in order to explain the processes responsible for the merging of one stage into the next. These stages of sequent occupance not only place the current stage in its proper relation to antecedents and to successors, but place any stage into its true perspective.[22] Therefore, a geographer using such an approach is able to select and elaborate upon those past geographies whose reconstruction is especially significant for his purposes.[23]

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[21] See D. Whittlesey, "Sequent Occupance,"Annals of the Association of American Geographer, XIX (1929), pp. 162-165.
The study of Walhachin lends itself to this type of approach as it may be recognized as evolving through four distinct stages:
1) Prior to 1908
2) Organization and Promotion
3) Boom period prior to 1914
4) Decline and abandonment.

[22] Ibid., 164.

[23] A. H. Clark, "Historical Geography", American Geography Inventory and Prospect, ed. P. E. James, and C. F. Jones, (Syracuse:Syracuse University Press, 1954), Chapter 3.

Consequently, the third stage of occupance at Walhachin, the one which witnessed the most significant changes, will receive the greatest emphasis.

The phases of sequent occupance may be visualized as impressions upon the landscape, the landscape being a natural palimpsest[24], This method of explaining the current landscape is especially applicable to Walhachin. Each of the former phases of human occupance are faintly visible upon the landscape today, indicating a part of a varied past; each being a stage of human occupance. Such a landscape could not long remain unexamined by cultural geographers and it is in such a spirit that this research was undertaken.

The various research techniques utilized in this study are described in detail in Appendix I.

Having defined the problem as well as the parameters of explanation, and shown the position of this study in the literature and current British Columbia settlement research, attention will now be turned to an inquiry into the physical setting of Walhachin.

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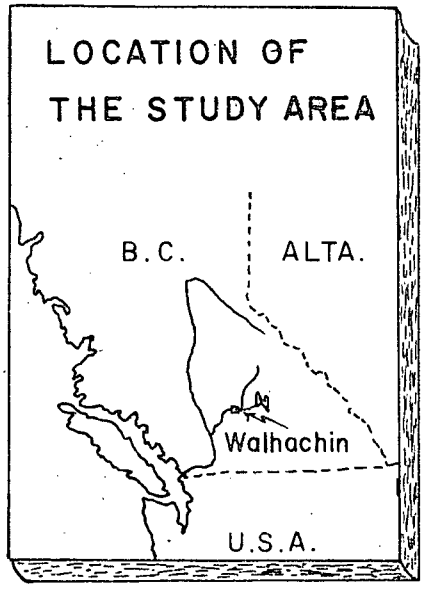
[24] Webster's New World Dictionary (College Edition) defines palimpsest as "a parchment, tablet, etc. that has been written upon or inscribed two or three times, the previous text or texts having been imperfectly erased and remaining, therefore, still visible."

MAP I

RELATIVE LOCATION

LAND AND WATER



Snohoosh Lake

Criss Creek

N

Diversion Dam

Water Distribution Limits

WALHACHIN LAND BLOCK

Deadman Creek

A

B

C

D

Bonaparte River

Thompson River

Kamloops Lake

Savona

Twin Lakes

Ashcroft

Brassey Creek

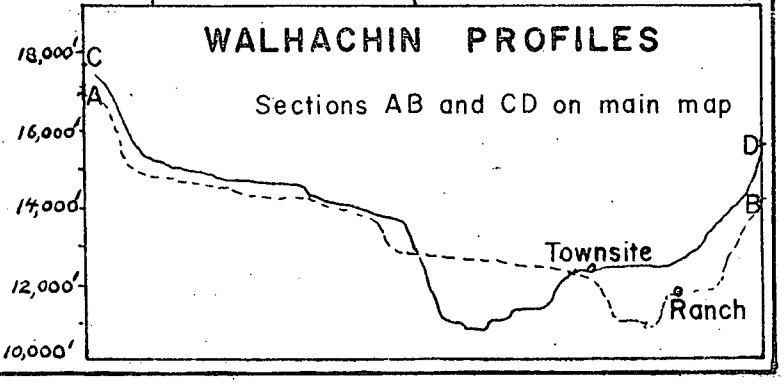
Jimmie Creek

Upper Ranch Creek

SCALE OF MAIN MAP

Miles

0 3 6



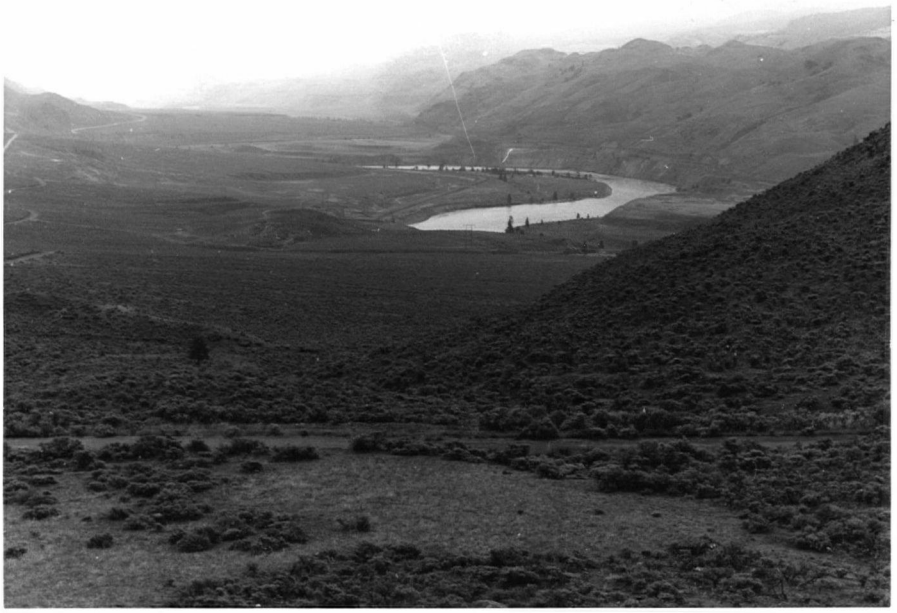


Photo 1. A view of the Walhachin area in the Thompson River Valley, indicating the arid nature of the region.

Photo 2. An eastward view of the townsite and the C.N.R. station, showing the terrace formations common to the entire Walhachin area.

Chapter 2

The Natural Setting

Introduction

Considering the vision of an ideal rural landscape likely held by most of the English settlers, the sight of the Walhachin landscape must have caused considerable disappointment. Most had lived at some period or other in a country seat and undoubtedly expected some idyllic setting (partly as a result of promotional brochures) but found virtually the opposite.

Walhachin is one of the driest parts of Canada, receiving an average of only 7.55 inches of precipitation annually[1] and is comparable to the southern Okanagan Valley in maximum summer temperatures (a July and August average of 70.5° F.)[2]. Xerophytic vegetation covers the area (see Photo 1 and Photo 2).

Location and Limits

Walhachin lies in the Thompson River Valley, situated in the southern part of the Interior Plateau of British Columbia (see Map 1). The areal extent of Walhachin

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[1] J. K. Mohr, Acting Officer in charge of the Ashcroft Meteorological Station stated in an interview that the temperatures and precipitation at Walhachin are equivalent to those at the Ashcroft Village Weather Station. The exact figure was obtained from:
British Columbia, Department of Agriculture, Climate of British Columbia, Report for 1965, Victoria, 1966, p. 38.

[2] Ibid., pp. 8-9.

approximates five thousand acres, stretching in a seven mile belt along the river, about one-and-one-half miles wide. This particular shape is largely dictated by physiographic boundaries. The north-south limit is related to climatic and landform boundaries which essentially separate the valley from the surrounding uplands. The valley rim may be considered the natural boundary between the valley and plateau. Although the climatic boundary is less definite and must be recognized as a zone where the valley and plateau climates merge, this zone corresponds remarkably well with the valley rim increasing the relevance of the physiographic boundary in delimiting the study area.

The longitudinal limits of Walhachin are property lines and were arbitrarily established in that the amount of land available for purchase was limited. An Indian Reserve lay to the east and private property to the west. Although the settlement was essentially abandoned more than fifty years ago, its extent may still be recognized by the relics left upon the landscape such as irrigation works, fence lines, and fruit tree skeletons.[3]

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[3] These demarcation criteria, physiographic and cultural elements, excludes two areas which are indirect components of Walhachin but critical in the analysis of the settlement: water sources and grazing lands. Map No. 1 shows the basic irrigation pattern and the sources beyond Walhachin lands, and also the Twin Lakes area which served as summer grazing pastures for Walhachin cattle.

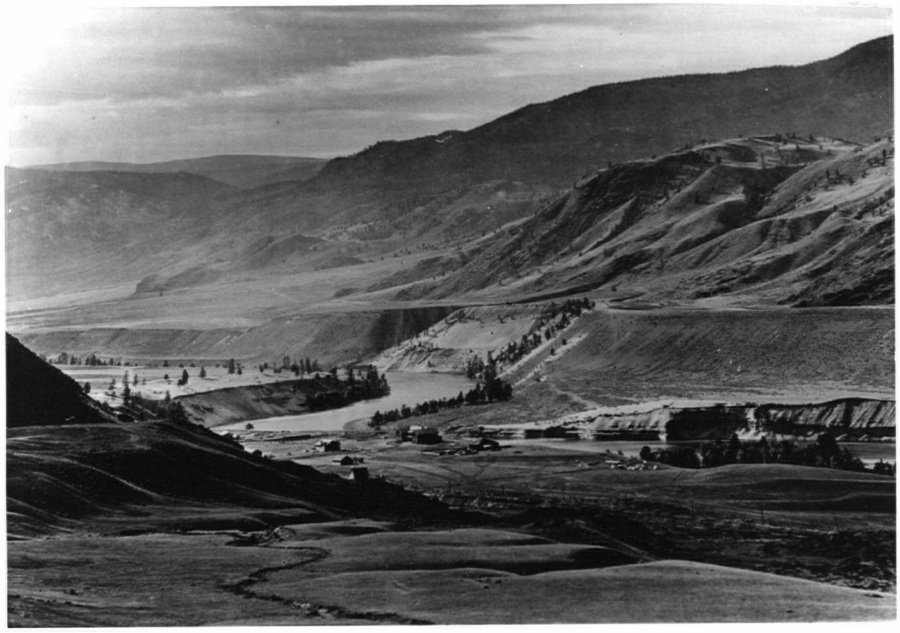

Photo 3. Westward view of the Thompson Valley showing uplands and terraces. The 1910 townsite is partly visible.

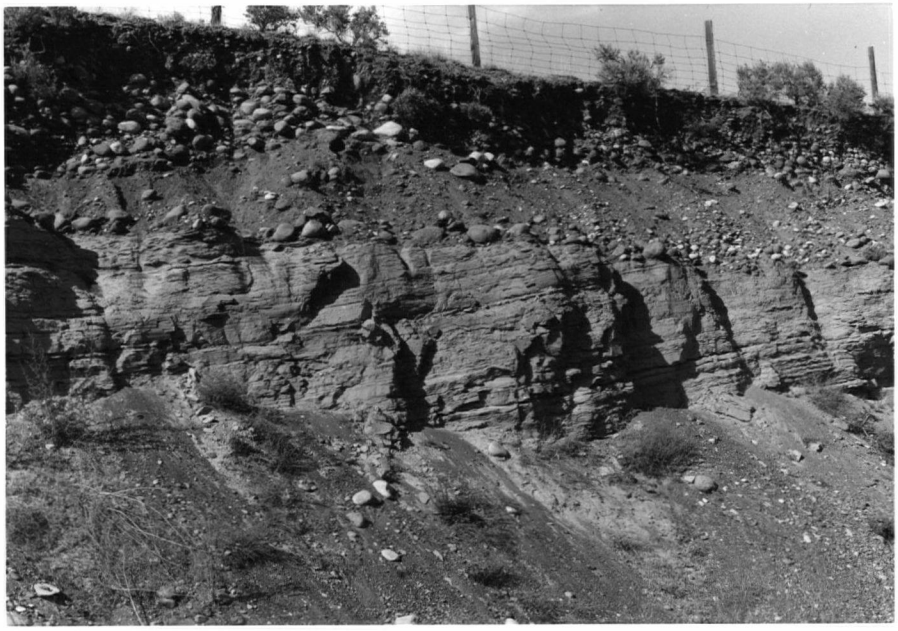

Photo 4. A soil profile portraying the layer of cobble gravel which was spread over the lacustrine silts.

Physiography

Walhachin lies within the Thompson River Valley which is believed to have developed upon an old erosion surface, remnants of which now lie at an elevation of about 5,000 feet above sea level and about 4,000 feet above the valley floor. The region is characterized by flat-topped to rolling uplands separated from one another by deeply entrenched valleys. Walhachin is located in such a valley.

During deglaciation, a large part of the Thompson River Valley was occupied by a glacial lake which had successive shorelines at about 1800, 1600, and 1400 feet elevation above sea level. The valley between Savona and Ashcroft, in which Walhachin is located, was part of the lake[4]. During this lake stage, large deltas were formed at the mouths of Deadman and Brassey Creeks, composed mainly of sand and gravelly materials. Between these two deltas, the valley bottom was lined with silt, deposited chiefly by the Bonaparte River since at that time the drainage was eastward.

The glacial lake probably lowered its shoreline considerably below the 1400 foot level before drainage opened westward towards the Fraser River. During this period the Thompson River carved a channel through the area, reducing the deltas and terracing the lacustrine

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[4] See Map No. 1 for place name orientation and for profiles of the valley. (Map information source was the British Columbia Department of Lands, Brief 198, by E. H. Tredcroft.)

silts (see Photo 3). The eroded sands and gravels from the deltas were spread as a thin veneer over the terraced silts (see Photo 4). During some later period, substantial erosion occurred in the watersheds of the temporary and permanent streams which resulted in a series of fan formations such as those at the mouth of Brassey and Upper Ranch Creeks which overlaid parts of the sandy and gravelly terraces, thus improving the land for irrigation. The resulting mosaic of soils varying in quality did not receive any consideration in the planning of the settlement[5]. The wide range of soil quality was certainly influential in determining Walhachin's success agriculturally and consequently the topic of soils will receive more elaboration when attention is focused upon problems experienced by the settlers.

Climate cannot be emphasized too strongly since the success of an agricultural economy "... pivots primarily on effective adjustment to climatic conditions".[6] The Walhachin settlers essentially failed to complete this adjustment.

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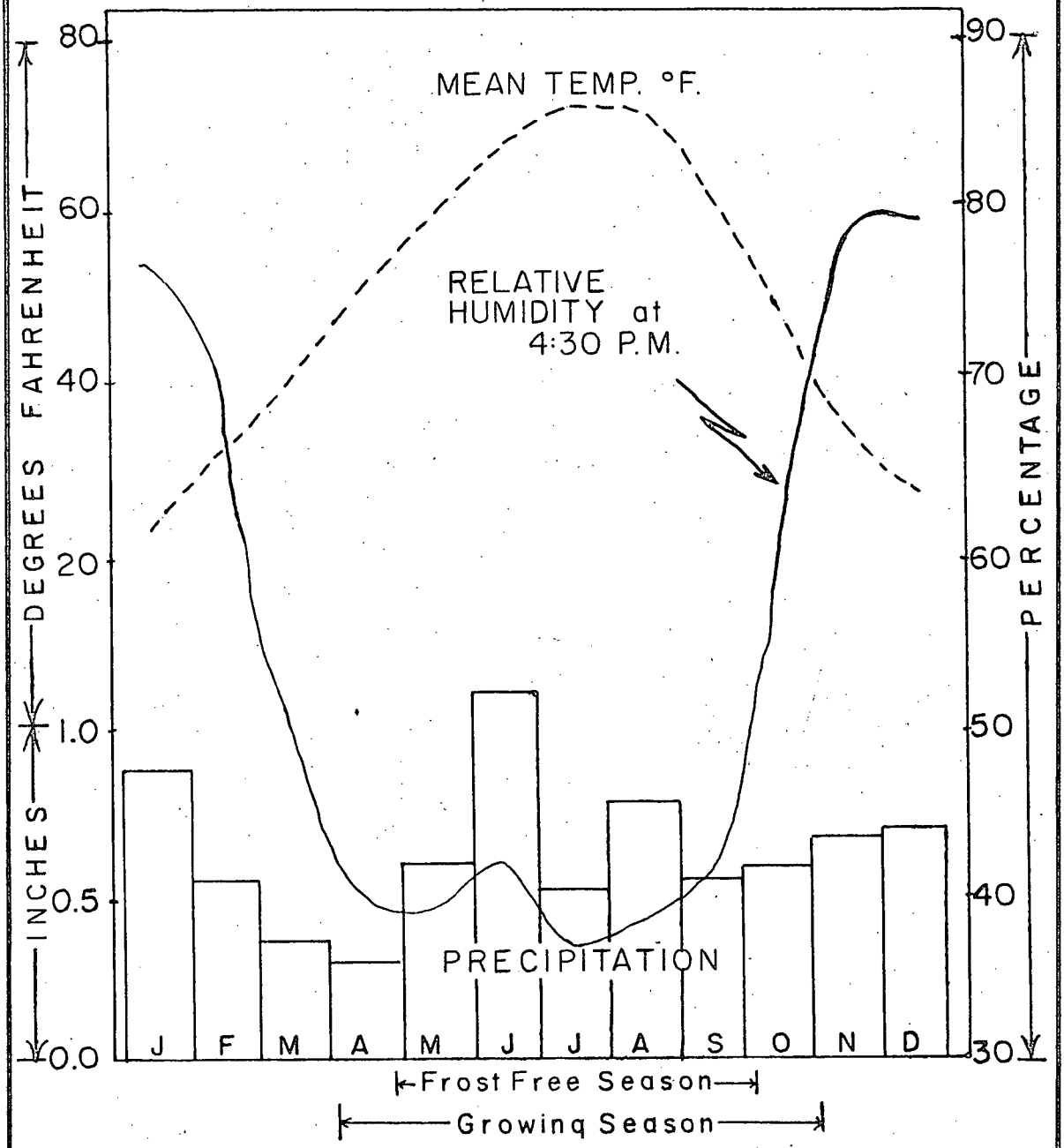
[5] It is significant that the original evaluation of the property was made by observing and testing the soil on the fan at the mouth of Brassey Creek -- the most fertile location in the area.

Appendix No. 2 presents more specific information regarding the nature and location of soils at Walhachin, with Appendix No. 3 indicating the classes of soils according to their suitability for irrigation.

[6] T. F. Saarinen, Perception of the Drought Hazard of the Great Plains, The University of Chicago, Department of Geography Research Paper No. 106, 1966, p. 18.

FIGURE 1

CLIMATIC SUMMARY



Frost Free Season (Mean) – April 30 – Oct. 7

Growing Season Mean Temperature >43°

Sources: CLIMATE OF BRITISH COLUMBIA, REPORT for 1966.
FROST FREE SEASON IN B.C. by A.T. CONNER, 1949.
CLIMATE OF B.C. AND THE YUKON TERRITORY by W. KENDREW & D. KERR

Figure 1 summarizes graphically the climate of Walhachin showing the averages of three climatic elements (along with two derivatives of temperature), their distribution throughout the year, and their interrelationships. Because the settlement lies in a rain shadow, it experiences comparatively little precipitation. Rainfall and snowfall in the valley are light compared to that on the plateau, with annual snowfall seldom exceeding forty inches and thus posing no problems for those living in the valley. The adjacent upland areas receive noticeably more precipitation than the valley and it was upon these areas that Walhachin relied for a source of irrigation water. The lowest parts of the valley experience the least precipitation, since even when rain does fall over the valley it often evaporates during the long drop to the valley floor.

Just as with precipitation, temperature is greatly affected by the valley and its east-west orientation. The settlers recognized the effect of altitude on temperature and concentrated their horticultural efforts only in the valley bottom. Here the frost-free period is two to three times greater than on the upland surface.[7] Because of the east-west trend of the valley, the north

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[7] T. R. Weir, Ranching In The Southern Interior Plateau of British Columbia, Ottawa, Geographical Branch, Mines and Technical Surveys, Memoir 4, 1964, p. 31.

wall receives more solar energy, reaches its maximum temperature sooner and retains its heat longer than the south wall after the sun has set.[8] This difference causes cross-valley winds which, combined with site factors, make the northern side less prone to frosts but more susceptible to drought.

Walhachin is a good example of an area where agriculture is affected by micro-climatic controls. As well as the valley and its directional orientation, the interposition of such landforms as terraces, small hills, ridges and basins create conditions favorable to the development of a complex pattern of micro-climates. One landform may experience more shade or more sunlight than another, be better protected from winds, have maximum temperatures in the morning or be associated with a particular soil type, creating an environment more suited to one crop than another. The modification may be considerable or infinitesimal, depending more or less on the size and shape of the landform acting as the major control. The importance of micro-climatic variations must not be underestimated when analyzing a marginal agricultural area such as Walhachin.

The climate of Walhachin is largely the result of a

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[8] This temperature range is also indicated by the rattlesnake distribution. Large numbers of snakes are found on the north side of Walhachin, few on the south. Also, relative humidity is related to temperature and has important relationships with soil moisture.

local control, namely the valley, which transforms the overall climate of the Central Interior into a sub-regional climate which in turn is altered by the many micro-climatic controls. The upland and lowland nature of the Central Interior's climate has essentially placed Walhachin altitudinally below the tree-line. Located wholly in a grassland region, the vegetation being the type normally associated with semi-arid conditions in Western North America: a dominance of sagebrush, rabbit bush and cacti on the terraces with blue-bunch wheat-grass growing mainly on the valleywalls.

Each element in the physical environment is, to some extent, the result of all the others and cannot be changed without affecting the region as a whole. Partly as a result of the number of variable features, changes do occur, especially over long periods of time, but one of the most common agents of change is man, whose influence has been comparatively recent. Man himself may be recognized as a potential geographic element for he becomes as integral a part of the region as landforms, climate, vegetation and soils -- perhaps even more so because he is capable of introducing physical changes at will. It is up to him whether or not he will use the natural region wisely and to his advantage. The following chapters deal with man's activities upon the landscape at Walhachin and how the settlers, in fact, failed to use the region always to advantage.

Chapter 3

Sequent Occupance On A Cultural Landscape

Introduction

The sequent occupance of Walhachin may be divided into four main phases of development. The first phase entails a long period of human occupance prior to 1908, the year when property was purchased for the Walhachin colonization scheme. Phase two deals with the organization and the preliminary development of the settlement as it was prepared for speculation. This phase lasted only two years and essentially serves to introduce the third phase, being the boom years. These boom years preceding the outbreak of World War I are in some ways the most crucial in that they were Walhachin's 'best' years and will receive considerable elaboration because they provide much of the framework upon which the following analysis depends. The fourth phase includes the years of social and economic decline until 1922 when the last English settlers abandoned their lands. Included in this section will be a short discussion of the post-Walhachin developments to round out the period of human occupance.

Walhachin Prior to 1908

In the spring of 1808, Simon Fraser, with twenty-three men, left Fort George in four canoes. Their purpose was to explore unknown waters to the south, then regarded as

main tributaries of the Columbia River. In June they reached a large river flowing from the east and named it Thompson River after David Thompson, explorer for the Northwest Company. The year 1811 witnessed the arrival of the first white men into the Thompson River Valley when two fur traders of the Pacific Fur Company wandered into the valley from the Okanagan and spent the winter trading with the Shuswap Indians. One of these traders returned the following year and constructed a permanent trading post at the site of present-day Kamloops, some thirty-four miles east of Walhachin. In 1921, the Thompson Valley came under the auspices of the Hudson's Bay Company which possessed sole trading rights throughout the valley and acted as the local government.

Considering the Company's fur trade monopoly, it is not surprising that although the traders were aware of the existence of gold in the area as early as 1852, they were reluctant to publicize the fact. Their reluctance was well founded, for in 1858 news of the discovery drew miners from all over the world, many of whom passed through the Thompson Valley or worked its river bars for placer gold. Although their presence would eventually have profound effects upon the landscape, their immediate influence was negligible. However, the miners did transform the river's edge and in so doing, initiated a process which eventually removed the aboriginal inhabitants from their ancestral lands around Walhachin.

These Indians, a subgroup of the large Interior Salish nation, built their winter quarters in and around Walhachin. Basically a nomadic people, they lived at a number of camping grounds with more or less permanent winter homes. These kekulies[1], still visible along the dry river terraces, were located at or near the river since an important item in the Indian's diet was fish, primarily salmon, steelhead and trout. Fishing conditions were particularly good at Walhachin with the large exbow and expanses of backwater creating not only good fishing but a suitable environment for water fowl and excellent autumn hunting.

This choice setting was shortlived once the miners appeared, since the Indian's winter homesites were located on the major routeway for cattle drives to Barkerville, an important centre of placer-mining activity to the north. Chief Ceciasket's tribe, inhabiting the territory around Walhachin, consisted of sixty-two families with a total population of only 122 in 1868[2] (perhaps indicating the consequence of the 1862 smallpox epidemic). Although the tribe owned twenty-eight horses and ten head of cattle, the cattlemen who began moving permanently into the valley apparently had no intention of sharing good winter pasture

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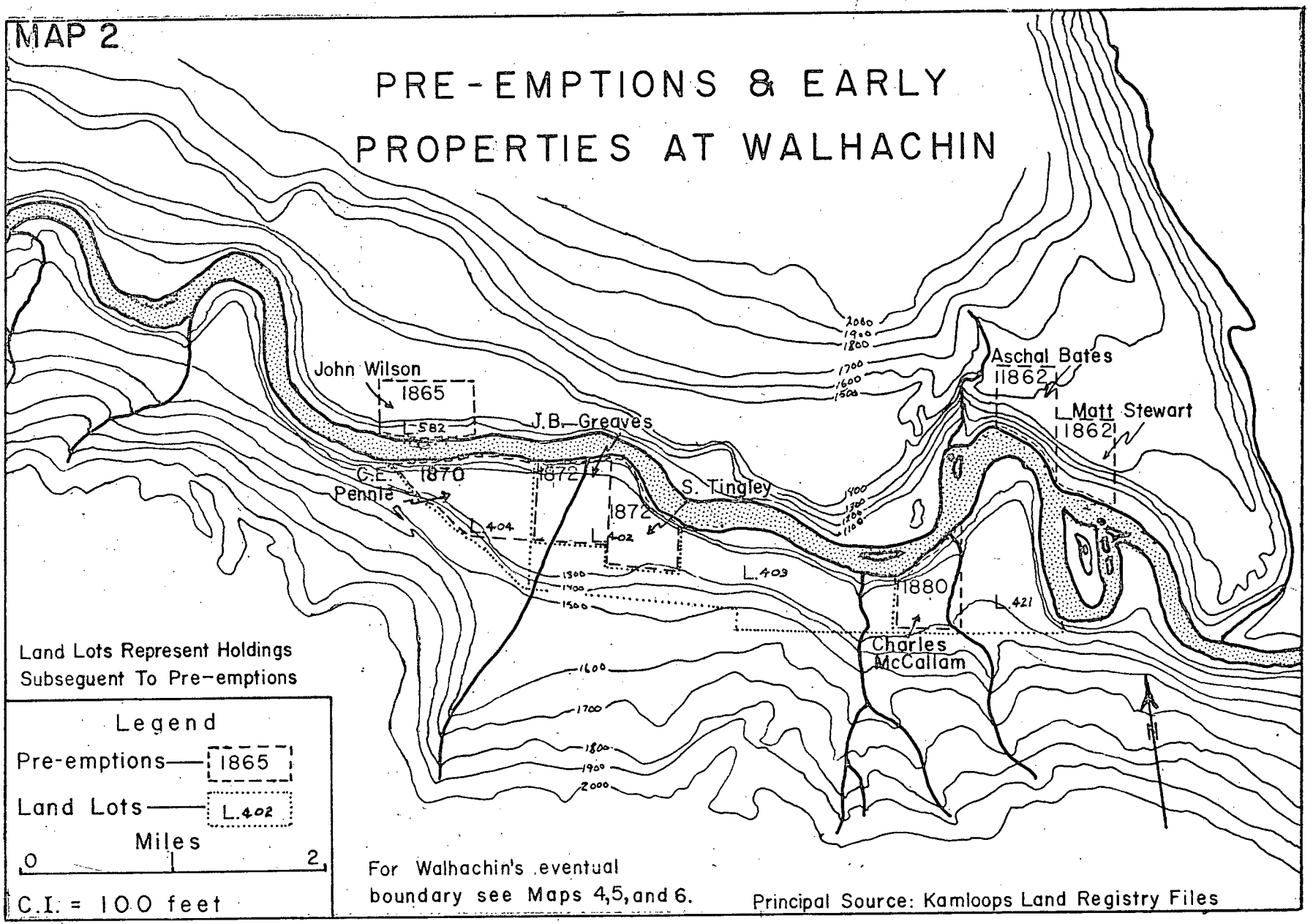
[1] A circular pit two to three feet deep with an average diameter of thirty feet under a framework of poles covered with bark, dry grass, and sods.

[2] P. O'Reilly, "Report to the Chief Commissioner of Lands and Works", Simpson's Papers, Kamloops Museum, August 29, 1868.


MAP 2
PRE-EMPTIONS & EARLY
PROPERTIES AT WALHACHIN
John Wilson
1865
L.582
J.B. Greaves
C.E. Pennie
1870
1872
L.404
1872
L.402
S. Tingley
L.403
1880
L.421
Charles McCallam
Aschal Bates
1862
Matt Stewart
1862
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
Land Lots Represent Holdings
Subseguent To Pre-emptions
Legend
Pre-emptions — 1865
Land Lots — L.402
Miles
0
2
C.I. = 100 feet
For Walhachin's eventual
boundary see Maps 4,5, and 6.
Principal Source: Kamloops Land Registry Files

with the Indians. Consequently, the Deadman's Creek Reserve was surveyed in 1868 to provide a new home because the tribe's ancestral lands and winter homes had been transformed and had taken on a new role, as rangeland.

The first major cattleman in the Walhachin area was John Wilson. He had prospered during the California Gold Rush and had used his money to purchase cattle in Oregon which he drove to the Cariboo. He continued to bring in cattle and in 1865 pre-empted land at Walhachin for winter grazing.[3] He expanded his holdings and eventually grazed thousands of cattle to become known as the cattle-king of the Central Interior. Aschal Sumner Bates and Matt Stewart pre-empted land west of Deadman's Creek. Although they preceded Wilson, their cattle holdings were never extended beyond their original pre-emption lots. J. B. Greaves, the founder of the Douglas Lake Cattle Company, abandoned a large herd at the present townsite of Walhachin in 1867 after failing to sell them in the Cariboo. Upon his return the following spring, he found the herd to be thriving so he continued to graze cattle at the site, alongside the pre-emption of Stephen Tingley. When Tingley failed to complete his title, Greaves claimed his as well as

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[3] Land records show a number of 160-acre pre-emptions taken out by various men and transferred to Wilson -- a technique used to obtain large acreages of good bottomland.

General view of an old timer's Cattle Ranch at Pennys in the Thompson River district—now being irrigated and developed as a Fruit farming estate.
Canadian Pacific Railway to Vancouver in the foreground.

Photo 5. General view of the Pennie Ranch property and the lands which were first irrigated at Walhachin. C.P.R. line appears in the foreground.

Photo 6. An opposite view of the Pennie Ranch (looking westward) to that in the preceding photo.

pre-empting the neighboring 160 acres in 1872.[4] In 1879 he purchased more land to own both land lots 402 and 403 (see Map 2).

In 1870, Charles Pennie pre-empted 160 acres across the river from John Wilson's winter pasture after witnessing the excellent winter grazing conditions. Two years later he purchased 487 acres from Charles McCallum (Lot 421) which later became known as the Upper Ranch. In 1878, he added to his first pre-emption and expanded that lot (Lot 404) to 320 acres as well as obtaining a lease for 20,000 acres of summer pasture (see Photo 5 and Photo 6).

With the gradual passing of activity in the Cariboo goldfields, there was a tendency for pre-emptors to abandon their holdings and move on. By 1876 only Charles Pennie had settled on the aforementioned lands permanently. Although he continued his trade as a part-time packer on the Cariboo Road, he eventually became an admired and prosperous rancher, exemplified by his election to the first Presidency of the Inland Agricultural Association in 1887.

During these years, when ranching was introduced to Walhachin, the landscape underwent some remarkable changes.

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[4] Under the terms of the Land Act of 1860, only 160 acres of land could be pre-empted. It was not until 1870 that a new Land Act made it possible to pre-empt as much as 320 acres. This new act was initiated after it became evident that the 160-acre quantity was generally insufficient acreage for most agricultural endeavors.

Photo 7. An example of "natural grasslands" in the Walhachin area.

Photo 8. The small apple orchard at the Pennie Ranch which initiated the idea from which the Walhachin scheme began.

The pre-emptors had been attracted by the "bunchgrass moving in the wind...and stretching for mile upon mile".[5] By the 1880's this had been altered. G. M. Dawson reported that "...bunchgrass and sage were the characteristic plants, but as in many other localities, the bunchgrass was already almost entirely destroyed...by overgrazing"[6]. The grass was slowly being replaced by sagebrush and cactus (see Photo 7). Charles Pennie was certainly a contributor to this process of landscape transformation and it was he who, in part, was responsible for further change because Walhachin began to take form at the Pennie Ranch.

Pennie had complete water control on Brassey Creek and storage rights on Twin Lakes (see Map 1) for domestic water as well as water to irrigate two acres of apples near the ranchstead (see Photo 8).[7] He had chosen the orchard site well as the soil was the most fertile in the area, virtually stone free, suitable for furrow

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[5] T. R. Weir, Ranching In The Southern Interior Plateau of British Columbia, Ottawa, Geographical Branch, Mines and Technical Surveys, Memoir 4, 1964, p. 92.

[6] G. M. Dawson, Preliminary Report on the Physical and Geological Features of the Southern Portion of the Interior of British Columbia, Report of Progress, Geological Survey of Canada, 1878, quoted in C. C. Kelly and P. N. Sprout, Soil Survey of the Ashcroft-Savona Area, Kelowna, B. C. Department of Agriculture, Interim Report, 1963, p. 3.

[7] Having an orchard as an adjunct to a ranch was not uncommon. One of the first activities usually undertaken by settlers was to plant a few apple trees to provide much needed fresh fruit for the winter months.

irrigation and protected by a windbreak. This productive orchard was misinterpreted by C. E. Barnes, an American land surveyor working out of Ashcroft, as being representative of the agricultural potential of the whole valley. Considering that fruit farming was just beginning in the Okanagan Valley and British Columbia was caught up in an immigration boom, it is not surprising that Barnes saw an opportunity for a speculative venture.

Mrs. Pennie had been managing the ranch since her husband's death in 1900 and was likely very respondent when C. E. Barnes, representing the British Columbia Development Association[8], offered to purchase the old Pennie Ranch in 1907. He had persuaded the B.C.D.A. to invest in a land colonization scheme with himself as manager, to be built around the Pennie Ranch. With the change in Ranch ownership which eventually followed (from Mrs. Pennie to the B.C.D.A.), the first phase of human occupance ended. It had endured for hundreds of years, during which time the landscape experienced only moderate changes by the aboriginal inhabitants. However, with the advent of the mining frontier, followed by the cattle frontier, the process of change was greatly accelerated. Not only was there a change in human occupance but the natural vegetative cover was altered -- an alteration which would have far-reaching implications.

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[8] Hereafter to be referred to as the B.C.D.A.

With the beginning of the next phase, both vegetation and other cultural features were about to be, again, radically changed.

Speculative Development 1908 - 1910

The B.C.D.A. Ltd. was a company formed in 1895 in London, England. Its aims may be stated briefly by quoting from the Company's objectives, stated in its Memorandum of Association. They read as follows:

1) To develop the resources of British Columbia, and therein to promote commercial and financial enterprise.

2) To promote, organize and conduct the colonization of British Columbia by the introduction of suitable emigrants (italics mine) from Great Britain.

3) Generally to develop property and estates for the time being of the Company by promoting immigration, selling, leasing, establishing villages and settlements.

4) To carry on among other things the business of farmers, graziers, meat and fruit preservers, brewers, ... and any other businesses which may seem calculated to develop the Company's property, or benefit its interests."[9]

The company was founded by the Duke of Teak, Mr. J. S. K. deKnevett, Agent General for British Columbia in Northern Europe, and Mr. H. C. Beeton, the Agent-General in England for British Columbia. It included shareholders

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[9] Great Britain, Public Records Office, Memorandum of Association of the British Columbia Development Association Ltd., London, December 14, 1895, pp. 1 and 2.

from many European centers such as Paris, Munich, Milan and Brussels.[10] Its considerable interests in British Columbia prior to 1908 consisted of the 2,000 acre 111 Mile House Ranch and Hotel on the Cariboo Road and the Nicola Land Co. Ltd. (Beaver Ranch), as well as large quantities of shares in the Alaska and N. W. Trading Co., White Pass and Yukon Railway Co. Ltd., and the North Pacific Wharves and Trading Co.

In 1907, C. E. Barnes persuaded William Bass, a baronet of "ale fame" in England and a director for the B.C.D.A., to view the property at Walhachin. Accompanied by Messers Palmer and Ashcroft, an agriculturist and engineer respectively, from Lord Aberdeen's Estates,[11] Bass was convinced of the area's speculative value and upon his recommendation, the B.C.D.A. began to borrow capital in order to purchase and begin development of the site.

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[10] An examination of the lists of shareholders disclosed that 70% listed their occupation as either Gentleman or Knight and 28% as Barrister and Solicitor or some military rank. The directors were all listed as "Gentlemen". As these men were to provide the capital as well as indirect guidance for the development of Walhachin, their backgrounds must be regarded as important to the settlement process. Later in the thesis, their folly is viewed as a major factor relating to the settlement's abandonment.

[11] John Campbell Gordon, the 7th Earl of Aberdeen, acquired extensive properties near Vernon in 1891 and was one of the first to attempt commercial orchards. He was later to become Governor General of Canada.

On January 21, 1908, C. H. Wilkinson, the managing director of the B.C.D.A. in London, accompanied by E. E. Billinghurst, the provincial manager in Victoria, bought the Pennie Ranch (which included the "Upper Ranch") as well as the 930 acres formerly owned by J. B. Greaves. Although the exact purchase price was not verified, a newspaper reporter quoted a sum of $200/acre or $229,400 including buildings, livestock and leased land.[12]

The cattle manager from the Company's 111 Mile Ranch, Sir Talbot Chetwynd, was transferred immediately to the Pennie Ranch to dispose of the large herd of Shorthorn cattle. This phasing out of the cattle herd was necessary since the benchlands were to be used for orchards, allowing little or no land for the wintering of cattle.[13] Chetwynd was the first representative of the B.C.D.A. to begin work on the site and may be regarded as the most qualified agriculturist that ever settled at Walhachin.

How qualified was he? He was descended from the "ennobled House of Chetwynd"[14] and after doing very poorly

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[12] Ashcroft Journal, January 18, 1908, p. 1.

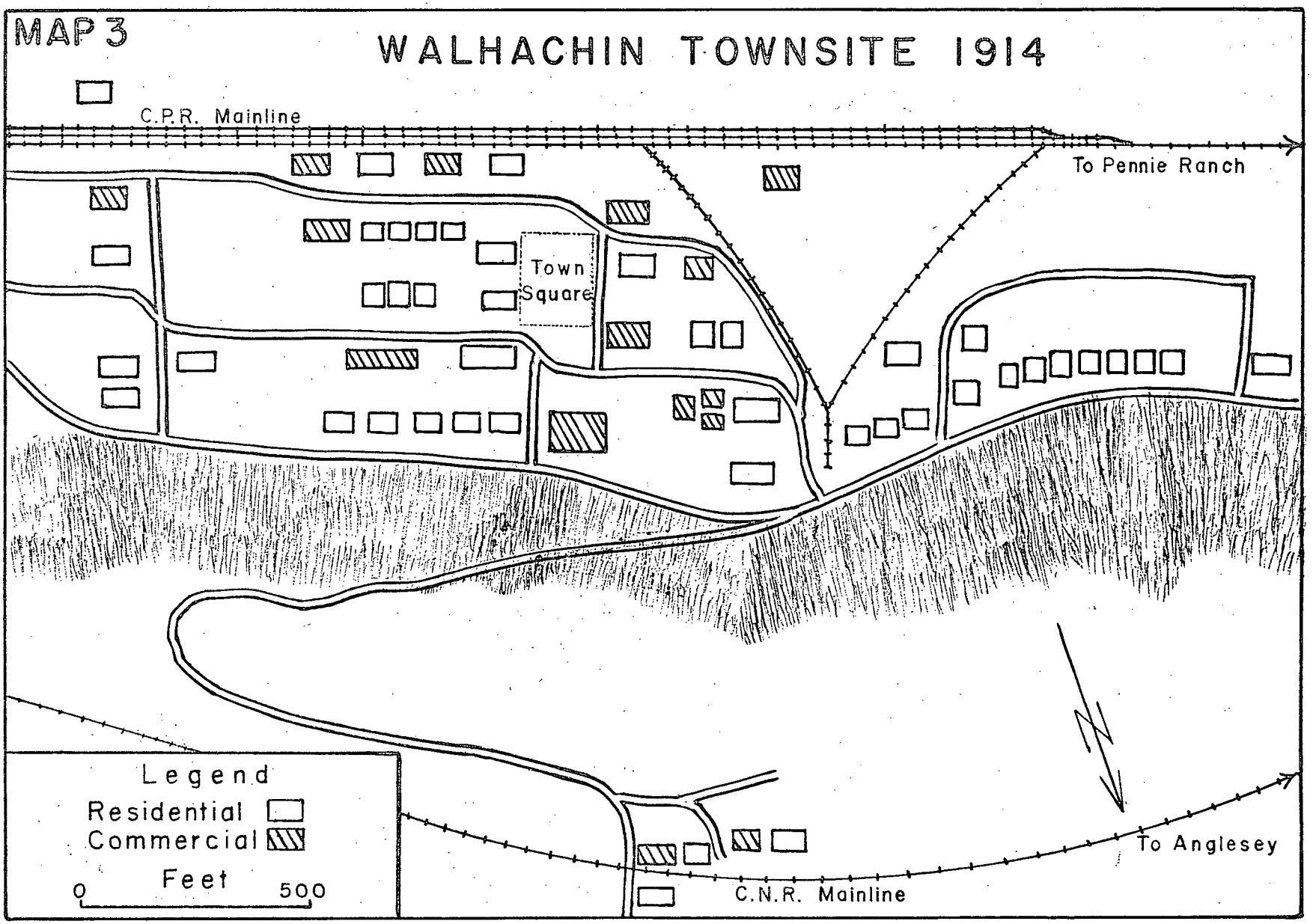
[13] This rapid change from grazing land to commercial orchards was, with the exception of the Okanagan Valley, unique in all of Canada. Most orchard regions evolved from farmstead orchards, expanded to provide a cash crop for the farmer. See R. R. Kruger "The Geography of the Orchard Industry of Canada", Geographical Bulletin, VII, 1965, p. 218.

[14] B. Burke, Burke's Peerage, Baronetage, and Knightage, London, Harrison and Sons, 1959 edition.

in his schooling at Wellington, was sent to Australia to learn the ranching business. After working three years at various cattle and sheep ranches, his father arranged for him to manage the B.C.D.A.'s 300 cattle at their newly purchased ranch from whence he was transferred to Walhachin. It is significant that the most skilled settler to live in the orchard settlement had four years of varied experience with livestock.

As well as altering the ranch structure, the B.C.D.A. immediately formed two companies: the British Columbia Horticultural Estates Ltd., to deal with all the agricultural development and the Dry Belt Settlement Utilities Ltd., to oversee the development of the townsite. Both companies began work immediately.

The townsite, comprising 150 town lots, was surveyed during the summer of 1908 and approximately 25 acres were planted with grass to create a lush appearance in contrast with the sand and sagebrush. It was irrigated by two newly installed irrigation systems from Brassey and Jimmie Creeks. A small storage dam was constructed at Twin Lakes fed by a ditch and flume from Barnes Creek, to provide a constant and dependable water source for the ranch. A series of short canals were built to divert the water from Jimmie Creek and a spring was developed to supply the new domestic water system installed throughout the townsite. Building construction began immediately on


MAP 3
WALHACHIN TOWNSITE 1914
C.P.R. Mainline
To Pennie Ranch
Town Square
Legend
Residential
Commercial
0 Feet 500
C.N.R. Mainline
To Anglesey

a large house for Barnes and a hotel to accommodate prospective clients and settlers awaiting houses.

The settlement was significantly different from the common frontier pattern of isolated holdings as well as from the segregated town-farm type, both of which were the norm throughout the province. At Walhachin, the settlers lived together in a 'central' village and owned properties located some distance from their homes. The buildings were geometrically ordered about the town square which served as the focal point of the village (see Map 3). Included with the homes were individual's vegetable and flower gardens with the cultivated orchard lands extending in various directions from the village. Because the small orchard lots varied in quality, several residents possessed segmented holdings and some owned grazing meadows located beyond the orchards. With such a form, the settlement had many similarities with traditional agricultural settlements in northern Europe (see Map 4).

Prior to 1909, the C.P.R. had a whistle-stop at the ranch which was called the Pennie Station. When the B.C.D.A. learned of the Railroad's plans to build a railroad Y[15] in the general vicinity, they offered some of the company's land, anticipating the C.P.R. would give

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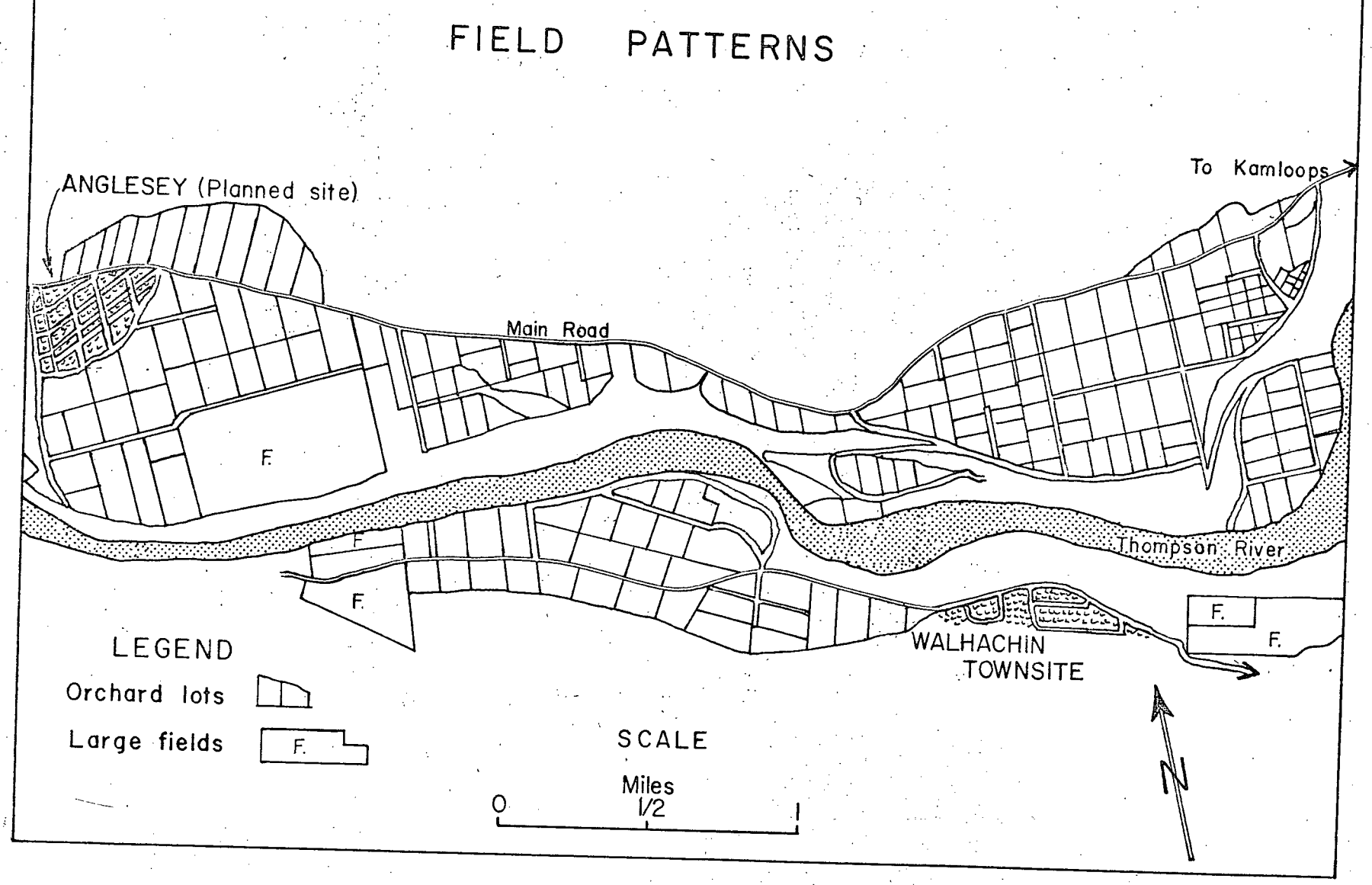
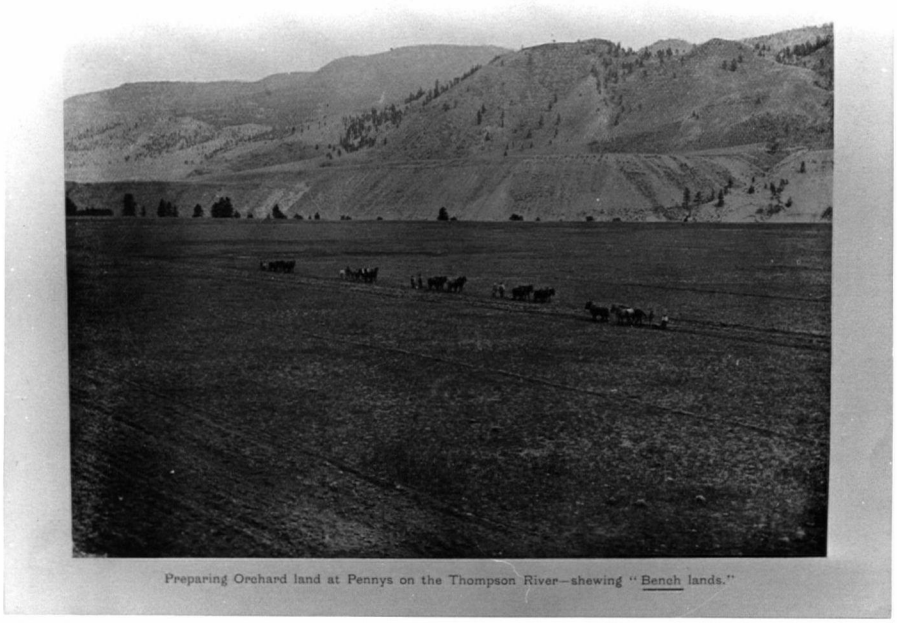
[15] From North Bend C.P.R. yards 89 miles S.W. of Walhachin) to Pennie the railroad grade was such that only thirty cars could be hauled at a time. With a Y at Pennies, the highest point on the C.P.R. until Craigellachie, 133 miles further east, a steam engine could bring one train up, return for another thirty-car train and then continue east from Pennies with a full 60 car train.

MAP 4

FIELD PATTERNS





Preparing Orchard land at Pennys on the Thompson River—shewing "Bench lands."

Photo 9. Preparing the orchard land (breaking the soil) at Walhachin prior to the selling of individual orchards.

Photo 10. Work crew camp at Walhachin during preparatory work on the orchard lands.

them the immediate facilities of a station and sidings. The C.P.R. accepted and provided the facilities.

Until this time the B.C.D.A. had given the name Sunnymede to the townsite but decided to change the name when the C.P.R. built a new station at the townsite. For promotional purposes they decided to adopt the Indian name for the area which was Walhassen which was later changed to Walhachin. Although the direct translation means "land of round rocks", likely in reference to the large concentrations of cobble gravel terrace capping[16], the Company gave and published the translation as "abundance of the earth" or "bountiful valley" to facilitate their promotional descriptions of the valley.

By the autumn of 1909, much of the preparatory work (see Photo 9 and Photo 10) on the land had been completed, permitting an extensive advertising campaign to be initiated in England. The Company's office was first located on High Holborn Street in London but was moved, in 1916, adjacent to British Columbia House when it opened at Waterloo Place. From these bases, an extremely selective promotional campaign was launched, fulfilling one of the objects of the Company as stated in its Memorandum: "To promote, organize and conduct the colonization of

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[16] The terraces have a top layer of cobble gravel, varying from 18 inches to many feet thick, which was deposited while the river was down cutting and swinging laterally to form the terraces.

British Columbia by the introduction of suitable emigrants (italics mine) from Great Britain ...".[17] Those considered to be potential settlers were either sons of wealthy British families who were finishing their public schooling, or military and government personnel about to retire on pensions. Consequently, a good deal of the promotion occurred at social functions and through business and government contacts of the directors and shareholders. Indicative of the Company's recruitment selectiveness is the fact that they made virtually no use of the newspaper media to advertise their colonization scheme.

Elaborate brochures[18] and pictures (of the Wenatchee orchard area, U.S.A., and the Coldstream Ranch in the Okanagan) were displayed in the company's office to supplement the very capable salesmanship of company representatives. Sales went remarkably well with many carried out by cablegram with Army Officers on overseas assignments such as in India and the Sudan. Most purchased the land sight unseen and upon arrival recognized that the valley was not as "bountiful" as the promoters had indicated.

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[17] Great Britain, Public Record Office, Memorandum of Association (British Columbia Development Association Ltd.), London, 1895, p. 2.

[18] The brochures indicate the nature of the land promotion in that they were valued at nearly five pounds sterling and included alleged pictures of Walhachin which were actually pictures of the Okanagan Valley.

Figure 2 CHRONOLOGY OF WALHACHIN'S FORMATIVE YEARS

	1907	1908	1909	1910	1911	1912	1913	1914	1915
PROPERTY OWNERSHIP	Charles Pennie (817) acres with leased land	British Columbia Development Association (south side of river) - B.C.Horticultural Estates & Dry Belt Settlement Utilities	As in 1908 plus individual settlers	As in 1909 plus the Barnes Estates on the north side of the river	As in 1910	As in 1911 plus the Marquis of Anglesey purchased 817 acres of the old Pennie Ranch with its grazing rights	As in 1912	As in 1913	As in 1914
LANDS IN CROPS	2 acre apple orchard with about 40 acres in irrigated hay		Small (undetermined) acreage planted	194 acres - 104 apples 20 tobacco 35 potatoes 35 hay	500 acres of apples including 74 acres of potatoes as a filler crop	800 acres - apples with potatoes and peaches as filler crops. This acreage included 20 acres of cherries	1083 acres - 1040 apples 10 pumpkins 10 tomatoes 23 pears	1246 acres - 1203 apples 10 pumpkins 20 tomatoes 13 pears	As in 1914
DEVELOPMENT		Storage dam on Twin Lakes Irrigation system on Jimmie and Brassey Creeks Ferry built at Upper Ranch Townsite surveyed	-C.P.R. expansion at the townsite -Construction of Hotel -Domestic water system installed Ditch and flume begun on north side of river -Preparation (cultivation) of land started	-Construction of Snohoosh Lake Dam -Main Square developed -Ferry built at Pennie Ranch -Aqueduct completed -Construction of town	-Walhachin newspaper -Snohoosh Water, Light, and Power Co. -Bridge across river -School opening -Walhachin Town Hall Co. -C.P.R. expands facilities -C.N.R. surveying north side -Steel pipe laid in river	-The Marquis of Anglesey purchased 400 head of cattle for ranch -The 5PX Co. dealing in many facets of the community -Townsite of Anglesey surveyed	-Irrigation pipe slung across river		Flume washes out
POPULATION	6 cattlemen 1 Chinese cook	2 British residents 7 cattlemen 1 Chinese cook	6 British residents 34 Workmen 11 Chinese	79 British residents 85 Workmen 50 Chinese	96 British residents 150 Workmen 40 Chinese	110 British residents 120 Workmen 50 Chinese	142 British residents 80 Workmen 55 Chinese	150 British 110 Workmen 40 Chinese	92 British ? Workmen 20 Chinese
BUILDING STRUCTURES	Ranchstead		Store, bunkhouses, 3 homes, C.P.R.station	13 homes, poultry ranch, tobacco sheds, laundry livery stable, post office, C.P.R. sheds	Chinatown, bakery, restaurant with rooms, laundry, haberdashery, 12 houses, bunkhouses	Restaurant, fabric store, chicken ranch, dairy, fuel centre, school, 3 houses, town hall, butcher shop hay sheds, Company office	Cannery, 2 houses, packing house	C.N.R.Station Packing house	
ORGANIZED SOCIAL ACTIVITIES				Soccer, curling, debating, society, competetive skating	Golf club, tennis club, hockey, hunting club, Conservative club	Polo team, gymkhana club, cricket club, baseball team Walhachin Mounted Troop			
PRODUCE SHIPPED FOR SALE				Turkeys to Vancouver Potatoes to C.P.R.	Potatoes to C.P.R.		Vegetables sold to C.P.R.	255 boxes of vegetables shipped to the Prairies and to Vancouver	282 boxes of veg. to the Prairies and Vancouver 300 eggs/day to the C.P.R.

The Boom Era, 1910 - 1914

These five years constitute the period of Walhachin's most extensive and rapid growth and are outlined in graphic form in Figure 2. The B.C.D.A. made every effort to capitalize on the atmosphere of activity and excitement for promotional purposes, and were abetted in this by the concurrent developments of the C.P.R. and C.N.R. in Western Canada including Walhachin. The Company quoted exorbitant figures to newspaper reporters, in their brochures and reports, regarding the numbers of workmen employed at Walhachin, failing to mention that two-thirds were working on railroad installations.

Settlers began arriving at Walhachin in the spring of 1910 and to make the settlement as attractive as possible, the Company built a splendid hotel, laid out a large town square and planted many acres with grass seed to make the "burnt" terraces more agreeable to people familiar mainly with English countrysides. To establish a sense of permanency about the settlement, the Company began publishing a weekly newspaper (the Walhachin Chronicle) and went so far as to purchase Ginger Ale and lemonade from London in bottles designed only for sale in Walhachin.

Proposals such as a monorail system to link all the orchard lands and a goal of 5,000 cultivated acres (all of which appeared highly possible at the time) were publicized extensively. Many people were prepared to believe

almost anything regarding the future potential of agriculture in the province and to them, these predictions fit their expectations. This was a time of rapid immigration in British Columbia[19] when optimism and expectations were excessively high, a situation which the Company promoters used to their advantage. They went to extremes to publicize the potential of Walhachin, even to having Prime Minister Laurier officially open the Walhachin Hotel in person.[20]

Development occurred on a relatively large scale, both financially and spatially. C. E. Barnes, on behalf of the B.C.D.A., purchased a block of land totalling 3265 acres within the railway belt from the Dominion Government. Located on the north side of the Thompson River, the cost of the land was only one dollar per acre with the stipulation that Barnes provide water for its total development.[21] This policy was used by the Government in order to encourage settlement in the dry-belt where irrigation was costly but absolutely necessary for sedentary agriculture.

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[19] Large numbers of immigrants had come from Great Britain and in 1912 "the high-water mark had been reached in (British) immigration", from W. A. Carrothers, Emigration From the British Isles, London, P. S. King and Sons Ltd., 1929, p. 251.

[20] Another example to indicate the extent to which the B.C.D.A. would go in their promotional efforts was that Walhachin won a bronze medal for her exhibit at the 1910 Colonial Fruit Exhibit in London although the trees had just been planted as saplings.

[21] Kamloops Sentinal, August 11, 1954, p. 1.

Photo 11. A typical settler's home at Walhachin. Although the picture was taken in 1970 it suggests how the residents attempted to provide a contrast with the arid landscape surrounding the townsite.

This block of land, with the exclusion of John Wilson's pre-emption, (Lot 582), was combined with the British Columbia Horticultural Estate's property on the south side of the river to form the total acreage of Walhachin. Five and ten acre estates were sold for prices ranging between $250.00 and $1,500.00 per acre depending upon location and/or whether the property had been planted in fruit trees. Prices also varied depending upon how knowledgeable the prospective buyer was with conditions and land prices in the dry-belt of British Columbia. Immediate settlement was not necessary, because once the orchard was purchased, planting and tending could be done by the Company's horticulturists.[22] This provision was intended to attract the largest category of prospective settlers (other than the public school boys): Army Officers and Government Officials about to retire on pension.

Transport from London to Walhachin was very reasonable: forty dollars for colonist class; while a three-bedroom house could be purchased for as little as $1,200.00 (see Photo 11). By July, 1910, fifty-six English settlers had arrived at Walhachin with as many again having purchased property or engaged in the process of appraising the settlement. The population grew to 150 by 1914 not including Chinese residents and the settlements' labour force. Depending on the season, workmen numbered as

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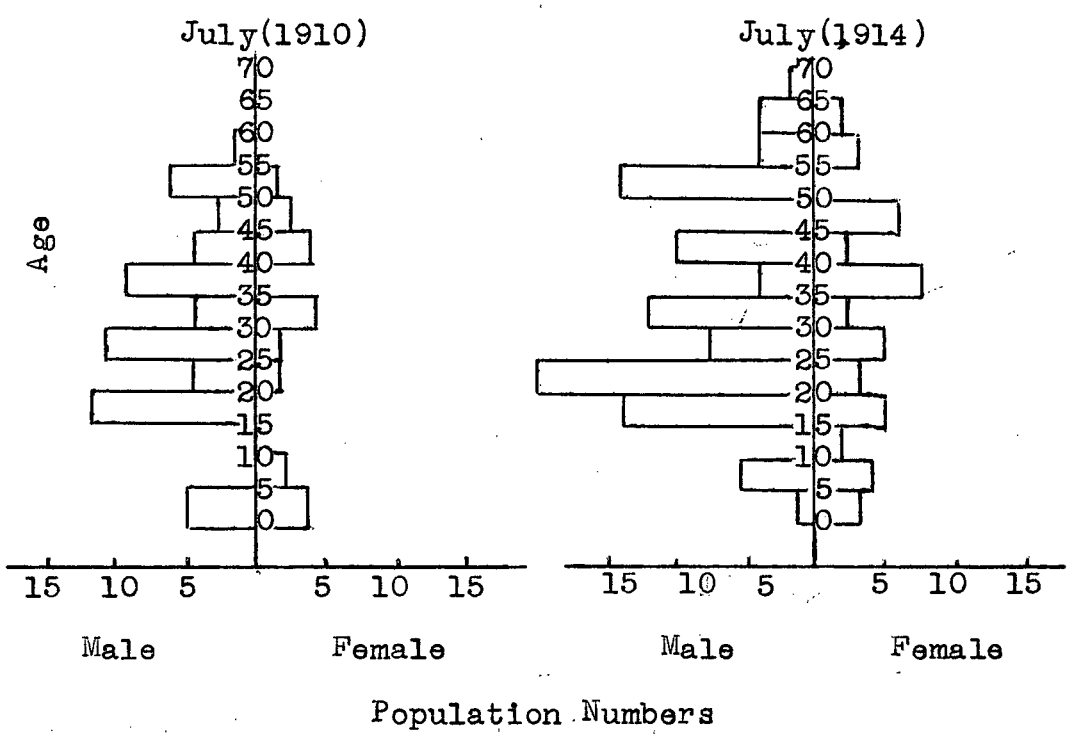
[22] The term horticulturists was that used in the Company's brochures. A more suitable term would have been representatives.

many as 150, again not including the Chinese irrigators and domestic servants who comprised a total of 50 in 1910.

The population pyramids indicate the composition of the permanent British population and do not represent the large number of seasonal male employees. The male-female ratio is skewed throughout the settlement period with a noticeable lack of young families. The female and children

Figure 3

WALHACHIN POPULATION PYRAMID



figures were significantly altered during the spring and summer when large numbers of friends and relatives from England visited at Walhachin, often remaining for many

months. During the fall season, the male population was even further skewed with the influx of sportsmen, from both England and Victoria, to fish for salmon and trout and to participate in wild fowl shooting.

Sports were a lure for sportsmen and settlers alike and consequently were encouraged by the B.C.D.A. promoters and Walhachin entrepreneurs to draw business. As Figure 2 suggests, sports and social functions were almost a way of life and for most, this was the life to which they were accustomed. The one point which practically all the informants recalled was the community spirit and the abundance of leisure activities. Since most of the duties in the orchards and the settlement were carried out by the large number of employees, the settlers had considerable time to engage in social and sporting events.

Parties and dances were held at least twice weekly, and there was a monthly ball to which all local dignitaries were formally invited. To provide for these functions a Town Hall Company was formed which organized the construction of a large town hall in 1912. It was a magnificent building with built-in steam heating and a floor that could be mounted on springs for dance parties (the structure remains at Walhachin and is still the pride of its residents). Concerts were held frequently, with music provided by an Orchestral Grande model piano

Photo 12. The British Columbia Development Association's hotel, built primarily to provide accommodation for prospective settlers as well as for settlers awaiting the completion of their own homes.

Photo 13. Exclusive dining room in the Company's hotel.

that a settler had purchased from Paderewski.[23]

At this point, it is important to recognize that two groups or types of settlers, (quite distinct socially and economically), were represented at Walhachin. One group, by far the largest, was fully financed from England, seldom worked in the orchards, and led a vigorous social life. In the other group, some relied wholly and others at least partly upon their efforts at Walhachin for their livelihood, and consequently worked alongside their employees and had little opportunity for leisure activities.[24] This group difference was manifested in the policy of the Company's Hotel (see Photo 12 and Photo 13): the Hotel was not open to the public and even then there were two beverage rooms to separate the properly dressed from the hoi polloi. (However, a court order in 1911 changed this house rule and after 1912, when the Marquis of Anglesey[25] purchased the hotel, it was opened to the public.)

The group dependent on their own efforts formed the core of the entrepreneurial component of Walhachin which

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[23] The settler's orientation towards leisure activities may also be exemplified by the swimming pool which the Marquis of Anglesey had built on his estate at Walhachin in 1913; one of the first in British Columbia.

[24] An estimate would place about one-sixth the population in this category. Of the informants interviewed in this group, nearly half claimed they had never attended a dance or ball and seldom had visited the Company's Hotel.

[25] Hereafter to be referred to as the Marquis.

grew in numbers as the settlement developed. A number of small estates and companies, each with a number of managerial personnel were formed, such as the Snell Estates, 5PX Estates, Walhachin Town Hall Co. Ltd., and Staffordshire Canning Company. At one point there were practically as many settlers engaged in entrepreneurial activities as in horticulture. Property changed ownership often, with some of the newly formed companies controlling considerable interests for a limited period. The largest of these was the 5PX Estates Ltd., managed by a Captain Peebles who had come to Walhachin via Northern Nigeria where he had served in the Political Department. The Estates at one time owned a chicken ranch, a dairy, a butcher shop, a coal and wood yard, a livery stable, a laundry, 184 head of beef cattle, and did contract work on 100 acres of orchard. (Within three years Peebles was forced to sell all of the Estate's holdings due to debts incurred from poor management, a fate not at all uncommon at Walhachin.)

Development at Walhachin involved work on the lands, on the irrigation systems, and on the townsite. Aspects of the townsite have already been discussed with the structural development presented most clearly in Map No. 3 and the irrigation system will receive special consideration in a section at the beginning of the following chapter. The following discussion of the land development is designed mainly to set this phase of the development

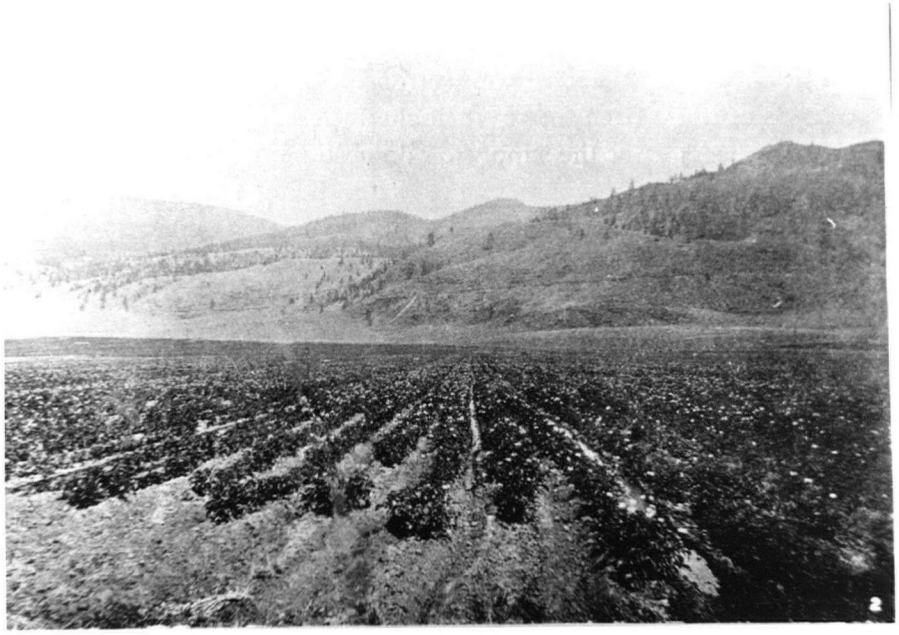


Photo 14. 1910 potato crop showing the technique (furrow) used for irrigating the vegetable crops.

Photo 15. 1912 orchard with a vegetable crop as a filler. The filler crop was intended to reduce evaporation as well as to provide some marketable goods.

into perspective and will receive further elaboration later in the study.

The crops attempted at Walhachin were numerous and varied. Over the years, cherries, pears, apples, peaches, plums, and apricots were planted but apples were found to be the only suitable species of fruit and by 1914, less than 1% of the total acreage was in fruit other than apples. Tobacco was planted but the area proved to be too hot and dry to warrant its continuation. Various vegetables thrived and were grown alone or used as filler crops in the orchards to reduce the amount of evaporation (see Photo 14 and Photo 15).

The first properties were prepared and the first orchards were planted by representatives of the B.C.D.A. for clients who had purchased land but had not yet arrived. In fact, the Company continued to care for much acreage because a number of estates were purchased and remained in control of absentee landowners during the entire period Walhachin was regarded as an English settlement.

By the autumn of 1910, a few individuals had begun to develop their own estates by cultivating and planting fruit trees. During the following years the orchard acreage expanded by approximately 250 acres yearly until 1246 acres had been planted by 1914 (see Map 5). At first, horse teams were used to clear and break the land until the Company purchased six large steam tractors in

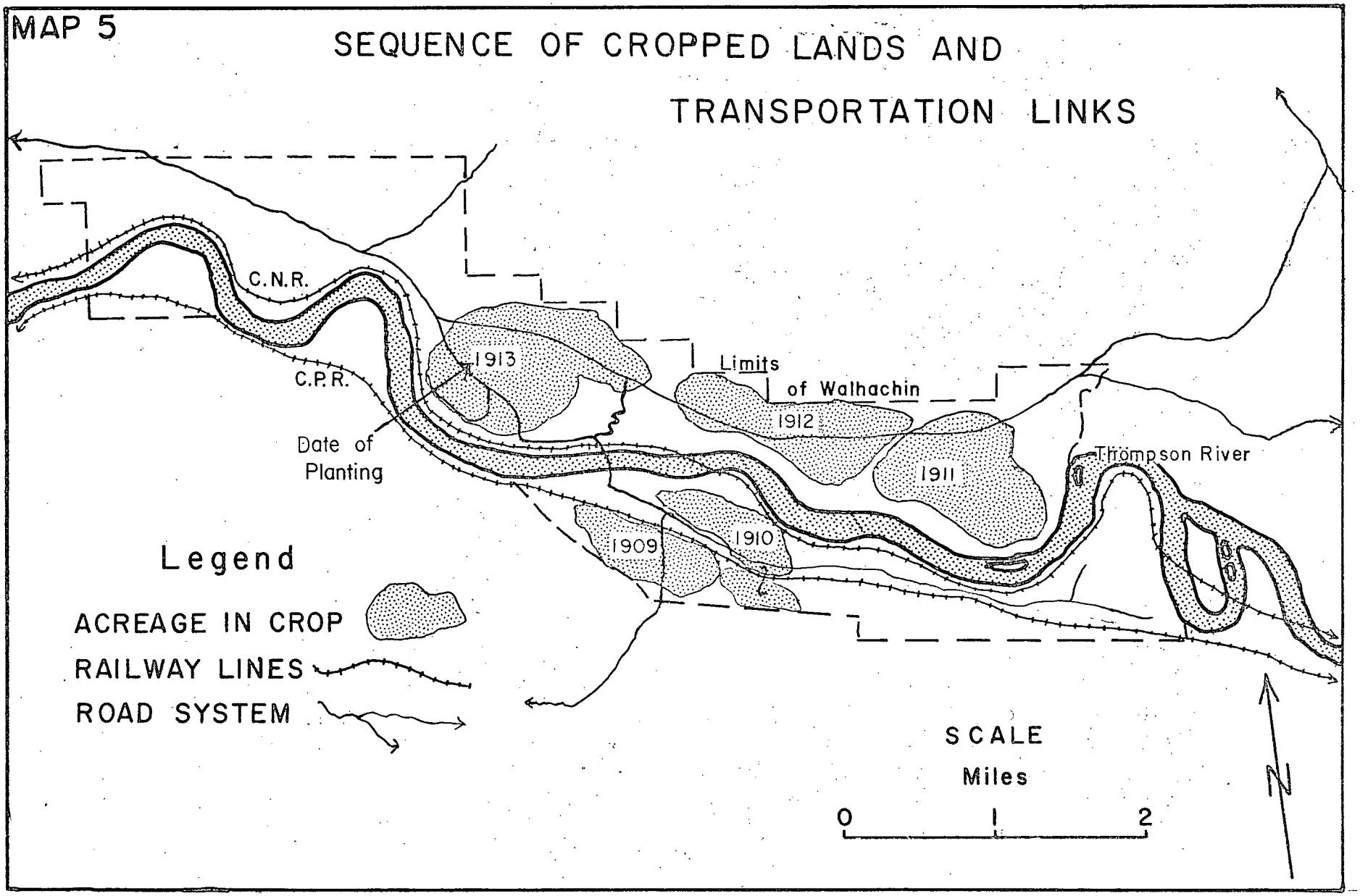

MAP 5
SEQUENCE OF CROPPED LANDS AND
TRANSPORTATION LINKS
C.N.R.
C.P.R.
1913
Limits
of Walhachin
1912
1911
Thompson River
Date of
Planting
1909
1910
Legend
ACREAGE IN CROP
RAILWAY LINES
ROAD SYSTEM
SCALE
Miles
0
1
2
N

Photo 16. 1910 Barnes Estates

Photo 17. B.C.H.E. (West of townsite) 1910

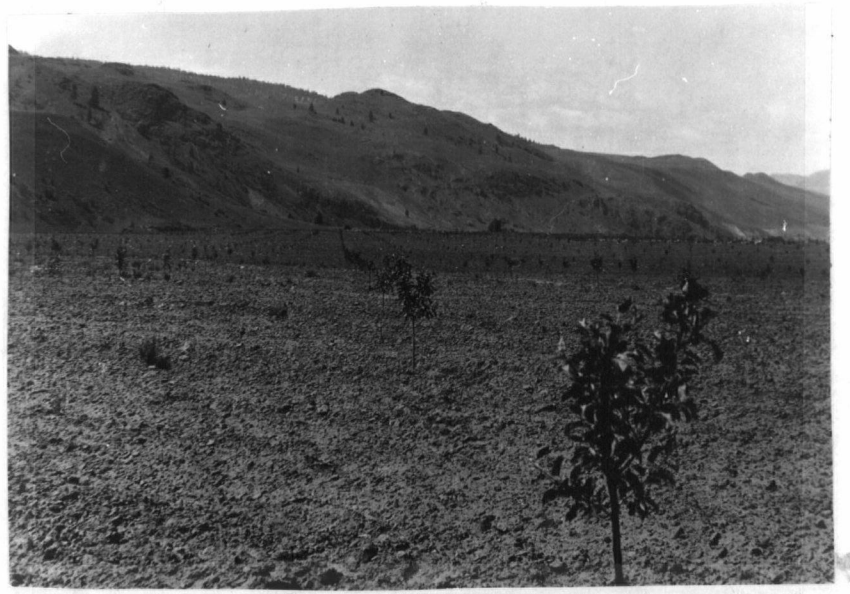


Photo 18. 1911 Upper Ranch orchard

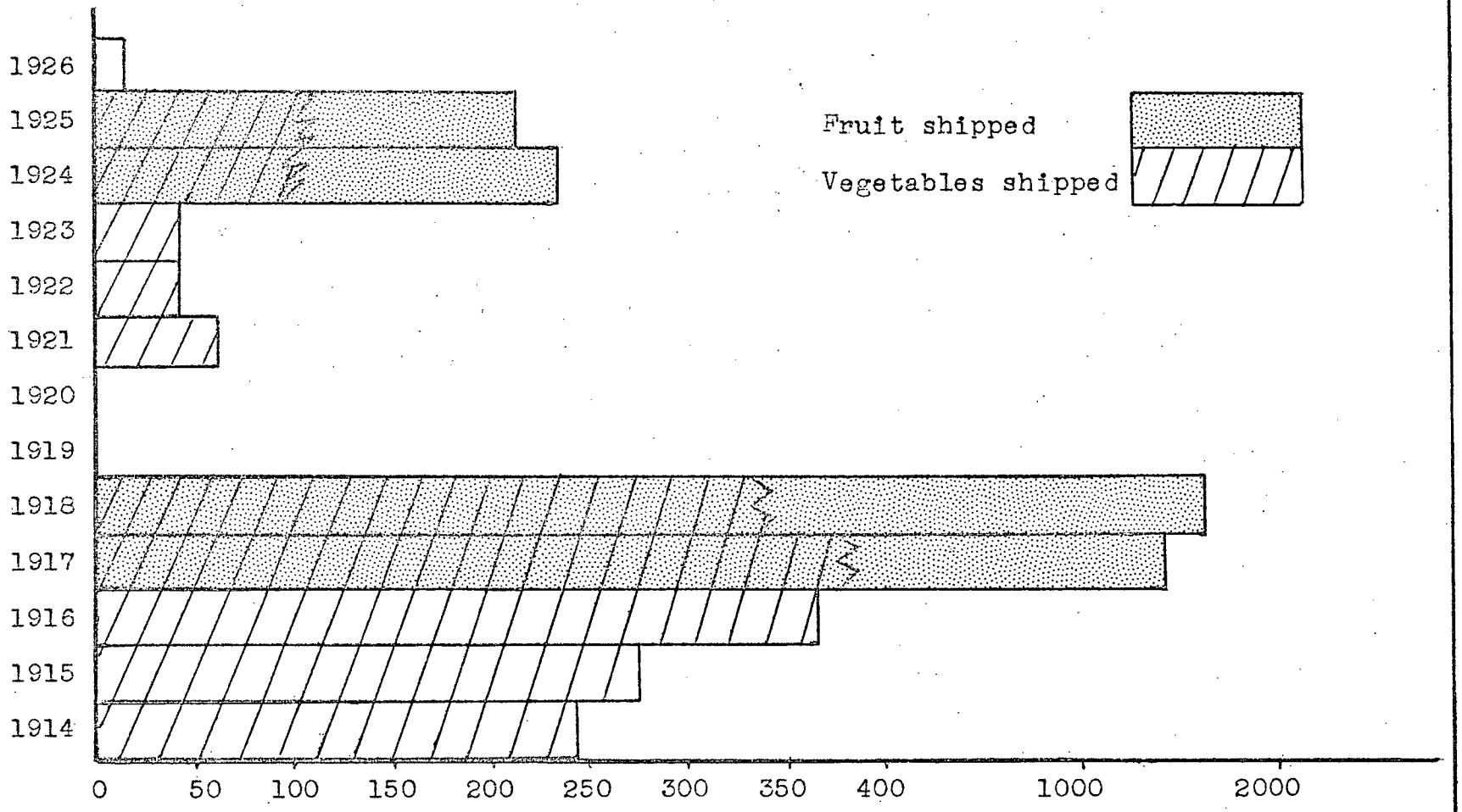
Photo 19. B.C.H.E. 1912 orchard

1912. Using these, hundreds of acres were quickly cleared, broken, and subsequently planted. The process of land development is illustrated by photos 16 - 19.

In 1914, the fruit trees at Walhachin ranged in age from one to six years, although there were only about fifteen acres of six-year-old trees. This range was a result of the expanding orchards and the fact that after considerable losses from winter injury each year, the tender varieties were replaced by those more hardy. Fruit production began in 1917 when the first trees reached a bearing stage. As Figure 4 indicates, only small volumes of vegetables were shipped via the C.P.R. to the prairies prior to 1917, with major fruit shipments lasting only two years. The abrupt termination of shipments by 1919 reflects the destruction caused to parts of the main aqueduct from a 1918 thunderstorm that resulted in the wholesale destruction of many orchards. The slight resurgence in production after 1923 was due totally to the efforts of Chinese gardeners who had leased land after the settlers had left. This period of decline and abandonment represents the next phase of sequent occupance and, combined with some comments of the contemporary landscape, will complete this chapter of Walhachin's evolution.

Figure 4

PRODUCE SHIPPED FROM WALHACHIN



Source: Agricultural Statistics, 1918, 1923, 1927.

Decline and Abandonment - 1915-1923

Although forty of Walhachin's British population left immediately for overseas duty when hostilities broke out in 1914 there remained, at least until 1916, a considerable number of older and married men. A number of references verify this, such as the Annual Report of the Department of Agriculture which describes a meeting at Walhachin under the direction of the B. C. Horticultural Branch at which sixty-four people were in attendance.[26] Most would have been from Walhachin, since meetings containing the same information offered by the same speakers were held for horticulturists in both Ashcroft and Kamloops. In 1917, a one-week course in orchard pruning was offered by the provincial Department of Agriculture at Walhachin which would indicate a substantial number of settlers in residence. Also, a photograph of the 1916 Walhachin Sports Day portrays sixty-five men participating and observing one of the events. This suggests a situation quite unlike the common assumption that virtually no men remained at Walhachin after 1914.

Considering that at the outbreak of war only 1246 acres were in orchards, of which a large portion was recognized as being unproductive, and that there still

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26 British Columbia, Department of Agriculture, 8th Annual Report, Sessional Papers, 1915, R 51.

remained a number of laborers,[27] the orchards left in the care of those remaining need not have presented an unmanageable situation. However, as the war progressed, more men left for overseas and by 1918 the total British population was about fifty. Ironically, these war years were essentially the only years that Walhachin was in a position to export any of its produce.

A disaster in 1918 was the beginning of the end. From the steep sandy bluffs, into which the main ditch of the Barnes Canal was dug, mud and gravel slides occurred during a summer rainstorm, completely filling the ditch for 1½ miles and washing out a number of flume sections. Although the system was repaired the following year, the total crop of vegetables and fruit trees was lost to the drought which followed. That year too, the leadership of the settlement changed. The Marquis acquired the controlling interest in the Barnes Estate and the Snohoosh Water, Light, and Power Company, and since Ralph Chetwynd had been director of the Anglesey Estates he replaced C. E. Barnes as overall director of Walhachin.

Settlers began returning to Walhachin during the spring of 1919, either with or to rejoin their families. Only a few had been killed or wounded and most of the

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[27] The settlers did not always feel obligated to pay their Chinese laborers until the harvest provided them with money. Since such a harvest seldom occurred, many Chinese were never paid in full and were virtually obligated to remain with their employers and await more prosperous times or a change in the employer's attitude.

others returned, at least temporarily. If they had not already made arrangements to pursue some other means of livelihood most did so very soon, after viewing the condition of Walhachin compared to what it had been when they had departed. By 1921, with the irrigation system in a state of disrepair, the orchards deteriorating, fruit prices falling, and a prevailing atmosphere of failure, most had left, including R. Chetwynd. He was replaced by a Mr. Johnston who was unsympathetic to any suggestions for reviving the settlement because he had been directed to dispose of any properties possible. The Marquis had lost interest in the project and was not only unwilling to cooperate with the remaining settlers but unable to invest further capital.

The water system was left untended and in July, 1922, ceased to operate. Fields and orchards on the north side of the river fell immediately into ruin and by the end of 1922, all the original British settlers at Walhachin had abandoned their lands.[28]

The lands remained vacant until 1940, when cattleman Harry Ferguson leased all of the Marquis' property, which totalled nearly 5,000 acres of bottomland. This

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[28] British Columbia, Department of Agriculture, 17th Annual Report, Sessional Papers, 1926, W 47.

A few acres, however, continued to produce. Johnston had leased thirty acres of fertile land to a number of Chinese who had been employed at Walhachin. This land was located near the original Pennie Ranch apple orchard and received adequate water from Twin Lakes. They cultivated vegetables and a twelve-acre orchard of apples and pears, selling their produce in Ashcroft and Kamloops, and to the C.P.R. and C.N.R.

included the total Walhachin acreage excluding twelve acres of townsite and three orchard lots on which families in Britain continued to pay taxes. While President of the University of Bangor, Wales, the Marquis sold the property to Ferguson for $40,000, just prior to his death at his estate of Plas-Newydd on the Isle of Anglesey in 1947.

Ferguson used the property at Walhachin for a winter grazing range, just as Pennie had done earlier, and began a process whereby the vegetative cover was once again altered: this time back to its original grassland state. Orchard and sagebrush were cleared, grass seeded and irrigation water applied (obtained mainly from the renewed Brassey Creek system) which transformed large acreages again to hay and meadow land. The adjustment process appears to have made the full cycle (grassland to sagebrush to orchards to sagebrush to grassland) and to have stabilized, with cattle ranching continuing to be the most optimal type of land use up to the present. This type of land use is able to support relatively small numbers of people, and settlement with an horticultural base appears not to have been viable.

Was Walhachin not a viable settlement? It existed over a period of nearly thirteen years during which time the fundamental agricultural resource base experienced little change. The following chapter presents an interpretation of the major factors which account for Walhachin's failure and abandonment.

Chapter 4

Adjustments and Failure Variables

Introduction

During the years that Walhachin appeared to function as a successful settlement the settlers, either consciously or unconsciously, attempted to adjust to their new environment. These adjustments were many and varied, major and inconsequential, attempted as a group and individually, and were successful or unsuccessful in varying degrees. It is the intent of this chapter to identify those major adjustments which either were, or became, maladjustments and eventual components of a failure process. The failure variables will be examined individually but when considered in composite should explain the failure experienced by the Walhachin settlement. While attention is explicitly focused upon failure variables, some examination of the variables that might have led to success is implicit.

The Irrigation System

The irrigation system was, and remains, the most obvious adjustment made by the settlers to the Dry Belt conditions. It was one of the major life-lines[1] upon which the settlement depended and with its decline came Walhachin's decline. As a consequence of its importance and status as the most identifiable variable associated

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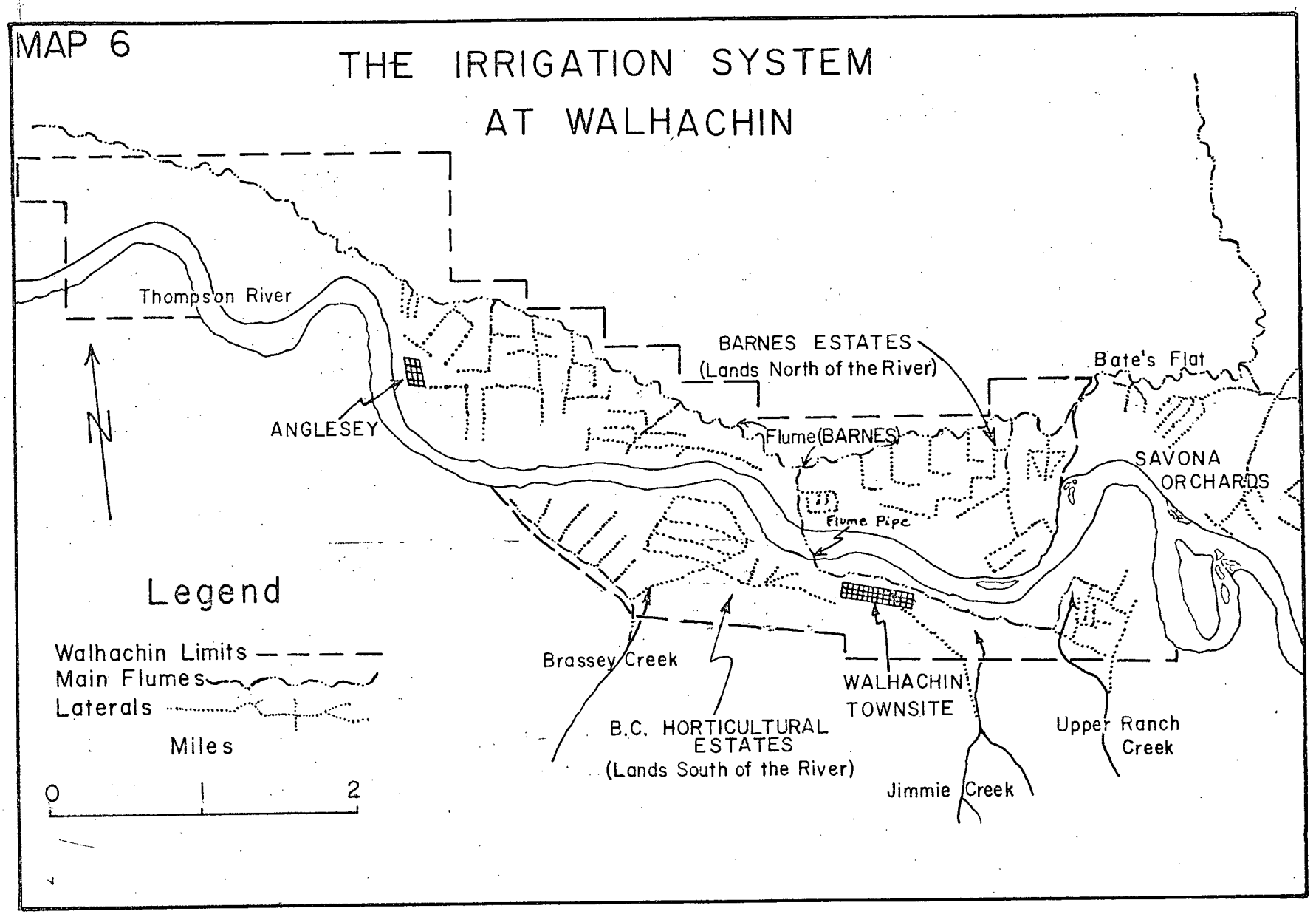
[1] Another major life-line was Walhachin's financial linkage with England (a topic discussed later in Chapter 4.)


MAP 6
THE IRRIGATION SYSTEM
AT WALHACHIN
Thompson River
ANGLESEY
BARNES ESTATES
(Lands North of the River)
Flume(BARNES)
Flume Pipe
Bate's Flat
SAVONA
ORCHARDS
Legend
Walhachin Limits
Main Flumes
Laterals
Miles
0
1
2
Brassey Creek
B.C. HORTICULTURAL
ESTATES
(Lands South of the River)
WALHACHIN
TOWNSITE
Jimmie Creek
Upper Ranch
Creek

with Walhachin's failure, the irrigation system warrants special consideration. It will be described and examined in detail in order to provide an explanation for its failure and will serve as an introduction to a more complete explanation of the settlement's demise.

The location of Walhachin in the Dry Belt of British Columbia necessitated the formation of an agricultural settlement totally dependent upon an irrigation system. Due to the distant water source and the intended expansion of Walhachin, the system was relatively extensive and built on a large scale compared to systems in the Okanagan Valley and elsewhere in the Thompson Valley.

The orchards at Walhachin included acreage on the north as well as the south side of the Thompson River and therefore the water works may be discussed in two corresponding sections, each dealing with one side of the river (see Map 6).

To serve the south side there were three main sources of water covered by licenses. In order of quantitative significance they were: diversion license on Barnes Creek and storage rights for 643 acre-feet in Twin Lakes with water to be transferred down Brassey Gulch to Lot 404, diversion license on Upper Ranch Creek to Lot 421, and all waters from Jimmie Creek.[2]

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[2] British Columbia, Department of Lands, Water Rights Branch Report, No's 42-6-7, 45-6-7, and 43-46-1. These were all originally filed by C. A. Pennie in 1872 and were subsequently transferred to the Barnes Estates.

The storage facilities, consisting of two earthen dams at the outlets of Twin Lakes and Bull Lake, were sufficient to provide water for domestic use at the Ranch and for the irrigation of Lot 404 but the water supply for Lot 421 was not adequate. Jimmie Creek and a natural spring provided water for the townsite's domestic system.

The water was transferred from the natural channels by flume, pipe, and open ditch. The 300 acres of orchard and cropland on the south side required 1¼ miles of wooden flume, 1 mile of ditch, ¾ mile of wooden pipe, and ½ mile of steel pipe.

The north side of the river required a much more elaborate system of water works since it was to service three times as much acreage as well as provide water to the south side to overcome the water deficiencies on Lot 421. In 1910, the Snohoosh Water, Light and Power Company Limited, a subsidiary of the Barnes Estate Limited,[3] was granted 3900 acre-feet of storage rights on Snohoosh Lake, a diversion license for 56 c.f.s. from Deadman Creek and storage rights for 250 acre-feet in Mowich Lake.[4]

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[3] Water companies were established in conjunction with most land companies in the Dry Belt since the law required that anyone applying for water rights describe the specific property to receive water. A company, however, could apply for a license to irrigate a large tract of land and dispose of the water as it deemed necessary. This was the function of the Snohoosh Company.

[4] W. H. Moodie, Report on the Anglesey Estate, Walhachin, B.C., Kamloops Land Office, 1920, p. 3 (Mimeographed).

Photo 20. The original Snohoosh Lake Dam - located approximately thirty miles from Walhachin.

Photo 21. View of Snohoosh Lake from the dam. Construction in foreground shows the flood control gate in disrepair.

With this was the right to "sell, barter, or exchange" water within a prescribed area and to provide water for the 1049 acres belonging to the Savona Orchard Lands which would pay an annual rental of $1500.00[5].

This right was part of an attempt by the government to encourage settlement in the Dry Belt region. They realized the necessity of irrigation works and were extremely willing to grant privileges to those who would invest their own capital in order to construct irrigation projects. At Snohoosh Lake, storage was guaranteed by a substantially constructed dam. A twenty-foot rock-filled crib-dam provided storage in excess of 5,000 acre-feet in a three-mile-long lake with an area of 350 acres see Photo 20 and Photo 21). From the lake, the water flowed in the natural channel of Deadman Creek to a diversion point 13 miles south and 3 miles west, a distance of 18 miles considering the meandering creek bed.

The diversion dam on Deadman Creek was a temporary structure, used only when the creek dropped to a level below the entrance of the diversion channel. The main aqueduct, beginning at this point, was composed of four sections: 1½ miles of earth ditch and 7½ miles of wooden flume (six feet wide) to Bate's Flat, 2 miles of earth

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[5] E. H. Tredcroft, Conditions of Dams on Vidette Lake and Snohoosh Lake: Department of Indian Affairs Report, Kamloops, Dominion Water Power and Reclamation Service, 1929, p. 19.

Photo 22. Main flume indicating flimsy construction

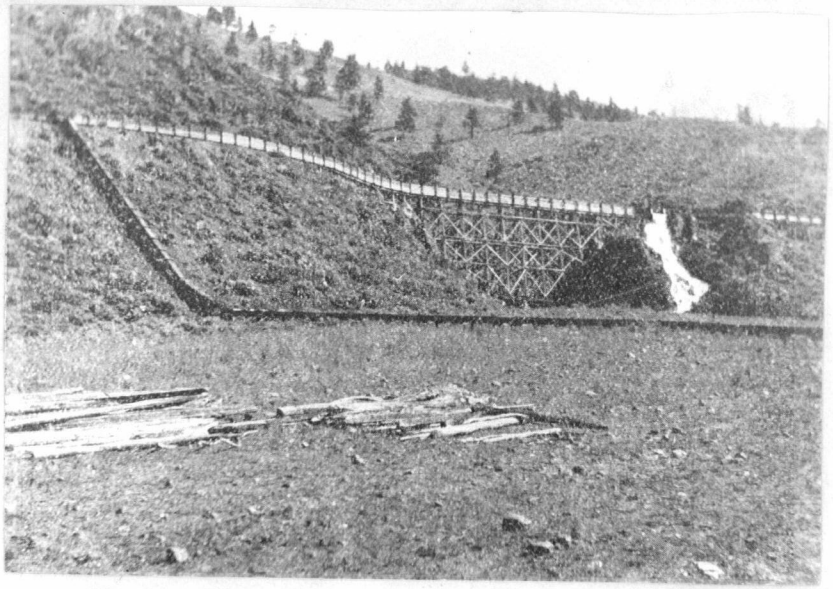

Photo 23. Main flume, lateral flume, and open spillway.

Photo 24. Construction of canal section of the main aqueduct.

Photo 25. Flume along Deadman Creek Valley.

ditch across the flat, 3½ miles of wooden flume (four feet wide) and 1½ miles of earth ditch across the highest portion of the orchard lands, and 2 miles of wooden flume (three feet wide) and 1 mile of earth ditch covering the undeveloped portion of Walhachin (see Photos 22-25). The flume narrowed from six feet to three feet throughout its length and was built to the western edge of the Company's property since their intention was to eventually sell water to a number of adjacent ranches.

Since acreage south of the river had an inadequate water supply, an attempt was made to service the B. C. Horticultural Estates with water from Snohoosh Lake. A first attempt to convey water across the river was made by the Pacific Coast Pipe Company who laid a steel pipe through the river in April, 1911. As a result of the debris and quantity of water occurring during the spring runoff, the pipe was washed out two months after its installation. A suspension bridge was then built across the river on which a six-inch steel pipe was hung (see Photo 23). Unfortunately the pipe was too small to provide an adequate water flow. It was not until three years later, when the Marquis purchased Lot 421 and wished it to be fully developed, that further efforts were taken. He replaced the six-inch steel pipe with a twelve-inch wooden pipe in February, 1914.[6] Although it could provide

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[6] British Columbia, Department of Lands, Water Rights Branch Report, No. 5243, p. 6.

sufficient water it was undependable.[7] The supporting suspension bridge was so low that when the pipe was filled with water, the added weight caused it to sag to such an extent that closure was necessary during high water in the Thompson which usually continues well into the irrigation season. Some years the orchards on the south side, dependent on the siphon, received no water as late as the 4th of August due to the closure and the fact that the buckling of the pipe caused excessive leakage.[8]

In order to distribute the water over the Barnes Estate, laterals from the main aqueduct were constructed and totalled: 6 miles of wooden flume, 2½ miles of wooden stave pipe, and 3/4 mile of steel pipe to feed the siphon system which had to lift water nearly 150 feet to the townsite level. Added to the lateral system were 5½ miles of open ditch. When all of the distributive system is considered (both the Barnes Estates and B. C. Horticultural Estates) it totals 37¼ miles and combined with the 26½ miles of natural channels, 63¾ miles of irrigation works were required to supply water to the individual orchards.

Theoretically the gravity-fed system could have

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[7] At its maximum efficiency the pipe syphoned five second-feet across the river.

[8] Moodie, op. cit., p. 7.

provided an adequate water supply for irrigation and domestic purposes. The amount of water flowing through the canal across Bate's Flat[9] when the flume was first used in 1910 was measured to be thirty cubic feet per second. Considering the amount of arable land, this was ample water.[10] The total acreage of Walhachin, 5,000 acres, could have received one acre-inch per week which is considered suitable for this area but in actuality there were less than 1,000 acres of arable land. If water were applied only nine hours per day, the orchards

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[9] Bate's Flat was a large terrace on the north-east edge of the Walhachin property over which all the water serving Barnes Estates flowed.

[10] The adequacy is evident when the water flow is expressed in acre-inches, the measuring unit for irrigation application. The flow is equal to

$$\frac{30 \text{ ft.}^3}{\text{sec.}} \times \frac{62.4 \text{ lb.}}{3 \text{ ft.}} \times \frac{1 \text{ gal.}}{1 \text{ min.}} \times \frac{60 \text{ min.}}{1 \text{ hr.}} = 673920 \frac{\text{gal.}}{\text{hr.}}$$

Since 1 acre-inch = 22653 gal.

The flow is equal to $673920 \frac{\text{gal.}}{\text{hr.}} \times 1 \frac{\text{acre-inch}}{22653 \text{ gal.}} = 29.75 \frac{\text{acre-ins.}}{\text{hr.}}$

or $29.75 \frac{\text{ac.-ins.}}{\text{hr.}} \times 188 \frac{\text{hr.}}{\text{wk.}} = 4998 \frac{\text{acre-inches}}{\text{week}}$

if water was applied continually. The Snohoosh irrigation system was fed by a 500 mile^2 drainage basin and in 1911, 1912, and 1913 a measurement gauge was set up in Deadman's Creek above the Walhachin diversion and found a 30,000 acre-foot flow during the irrigation period totally sufficient.

could have received two applications per week not considering the water sources south of the river.

What then was the problem with the irrigation? Although the source was sufficient, the system was inadequate and proved to be unreliable.

This introduces one of the most critical factors related not only to the irrigation system but also to the whole settlement -- what may be termed the speculative factor. It reappears throughout this analysis of failure factors in various forms and is here associated with the irrigation system.

Walhachin was the product of a land colonizing company which accounts in part for the poor planning and quality of the water system. Most of the system was built over a period of six months and was designed as only a "temporary structure to be reconstructed when the property got self-supporting -- to a permanent structure."[11] The developers were not interested in the system's long-term capabilities and likely had little concern whether or not Walhachin would one day be self-supporting. Apparently the B.C.D.A. was not an anomaly since W. A. Carrothers, discussing various British settlement schemes attempted during the same period as Walhachin's inception,

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[11] Minutes of the Ashcroft Court House, Case of Steward vs. Indian Department - The Safety of the Snohoosh Lake Dam, April 17, 1929 (in the files of the British Columbia Department of Lands, Water Rights Branch, Victoria).

suggests that, "perhaps it is not uncharitable to say that only a proportion of these were designed in the genuine interest of the emigrants."[12]

Since the system was hastily constructed to serve only as a temporary facility, the design was faulty and the planning was minimal. The main flume varied from three to six feet wide with three and four foot high sides. It was constructed of one inch to one and three-quarters inch single dressed shiplap which was not thick enough (especially the one inch) to be satisfactorily caulked.[13] This resulted in a good deal of leakage and maintenance beyond that usually required.

The leakage was further increased by the use of open earthen ditches. The soils at Walhachin are extremely sandy and gravelly which resulted in a considerable loss of water through seepage. A conservative estimate was that "40% of water was lost in transmission through the ditches."[14] Although the B.C.D.A. originally planned to

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[12] W. A. Carrothers, Emigration From the British Isles, London, P. S. King and Son Ltd., 1929, p. 228.

[13] Proper flumes were constructed using two-inch planking which were caulked by placing oiled rope between the planks. At Walhachin, the flume joints were caulked with oakum only where the flume circumvented bluffs and the flume received tar applications only in some sections which were apparently usually neglected.

[14] British Columbia, Report of the British Columbia Hydrographic Survey, Sessional Paper, No. 25F, 1913, p. 193.

line the ditches with concrete, only 1/22 of the total ditch system received a lining. Further concrete work was abandoned due to insufficient time, since the Company wanted the irrigation system to be in operation for the 1911 planting season.

The open ditches that fed the flumes caused further problems. Erosion occurred on the bottom and walls of the ditches followed by deposition in the flume. This added weight to the already overburdened substructure. Filled with water, a twenty-foot section would weigh in excess of ten tons. This was much too heavy and to avoid extreme buckling throughout the flume system, a depth of six inches was the maximum amount of water possible.[15]

The haste with which the flume was constructed is evident from the neglect to assure solid footings. Settlement of up to eight inches occurred in some sections and, considering the excessive leakage, were it not for the rocky texture of the surface on which the greater portion of the flume was built, it would undoubtedly have failed long before it did.

The lumber for the construction of the flume, obtained from the Monarch Lumber Company at Savona, led to further problems and ultimately, abetted in the final

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[15] This suggests the inadequacy of the design since it was anticipated the flume would deliver nearly six times this quantity.

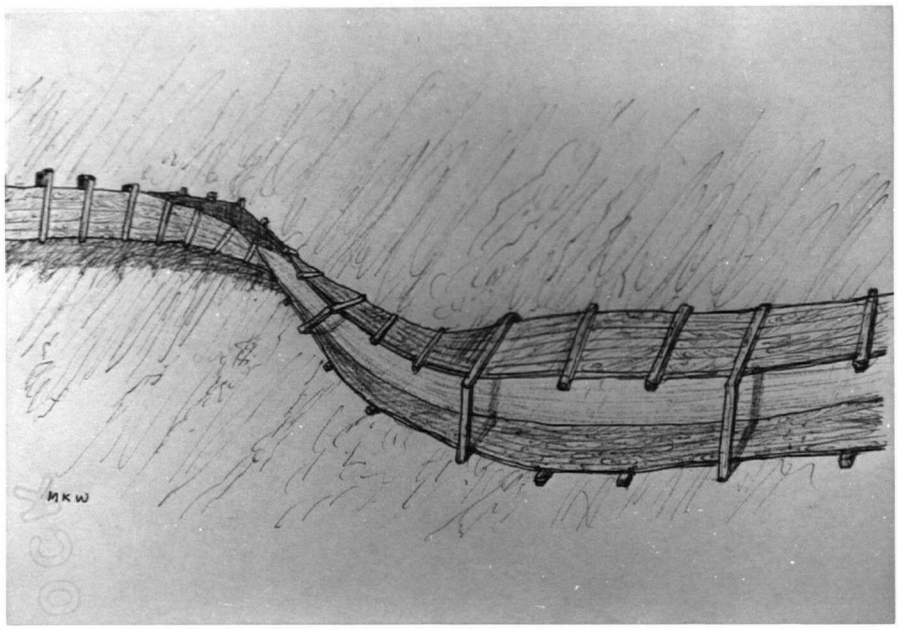

Photo 26. Sketch of the flume twisted down after a small section had b een washed out.

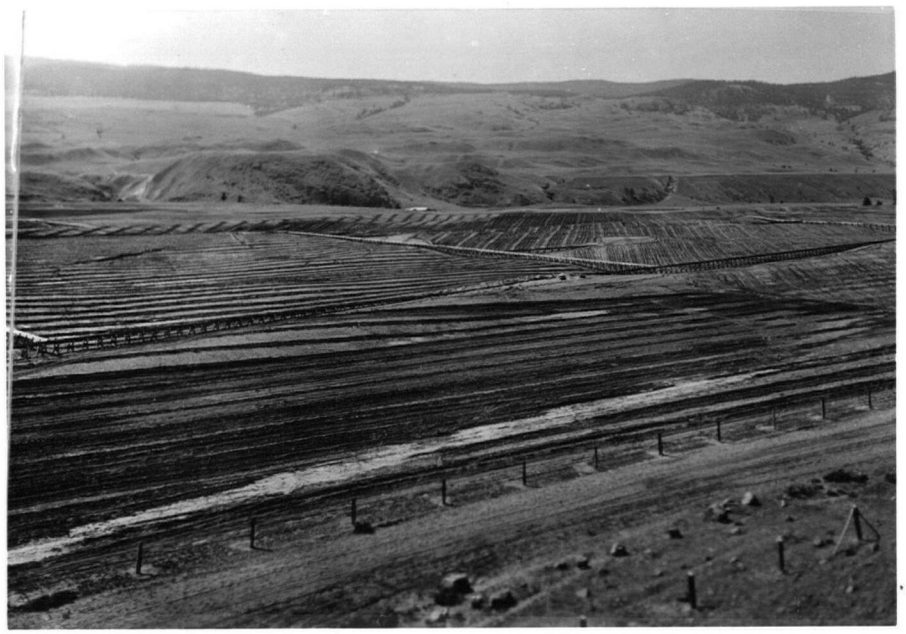

Photo 27. View of Barnes Estates showing lateral system. Note vegetation zonation on the distant slope.

destruction of the flume. Recognizing the inexperience of the settlers managing the construction and wishing to minimize costs by doing as little sawing as possible, the lumber delivered for the flume was abnormally lengthy and in varying lengths. Not recognizing the problem, and to save time, the builders interlinked the flume sections by using the varying board lengths which resulted in the whole flume being essentially one unit. Consequently, if a washout occurred, rather than only one section breaking off from the flume, a whole series of sections would be twisted down. This occurred at least once a season during the life of the system (see Photo 26). The final flume disaster in 1918 occurred when a rainstorm washed out a small section of the flume but due to its interwoven nature, a long section of the flume (nearly $\frac{1}{4}$ of a mile) was wrung down.

Although the extensive lateral system was installed almost totally by the British Columbia Development Association, they failed to use a standard design. Many extravagant designs were used such as cross-sections of $2\frac{1}{2}$' x 10" when a 1' x 18" lateral dimension would have given a comparable carrying capacity with less evaporation and requiring considerably less material in substructure.[16]

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[16] A twenty-foot lateral section $2\frac{1}{2}$' x 10" would have $2\frac{1}{2}$ times more surface area than a 1' x 18" section and would need much more framework to carry the laterals above ground level through the orchards. (For an illustration of the lateral pattern see Photo 27).

Photo 28. An example of the four-furrow system used to irrigate the orchards at Walhachin.

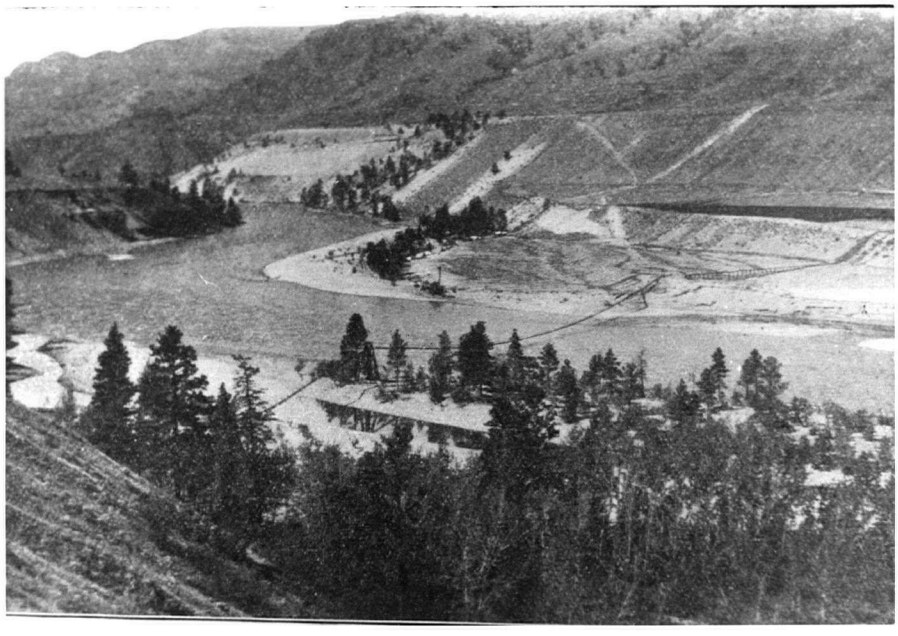

Photo 29. The siphon used to transfer water from the Barnes Estates to the south side of the river.

As well as the structural part of the irrigation system, even the natural channels proved to be problematic. In the natural channels of Deadman and Brassey Creeks, beavers were a continual nuisance. They erected dams to restrict and/or divert the flow of water which necessitated weekly patrols during the spring and summer season along the twenty-six miles of stream bed to keep the channels clear. When the constrictions were permitted to build up, upon their destruction the sudden rush of water occasionally damaged the flow gates on the aqueduct and resulted in the erosion of some sections of the orchards.

The method of water application in the orchards was furrow irrigation (see Photo 28). The water ran into four shallow furrows spaced about three feet apart, set between each row of fruit trees. Orchards could only be located on the gently sloping terraces since with furrow irrigation, too much slope caused saturation and accumulation at the ends of furrows and with too little slope the areas near the water source became over-irrigated, while areas farther from the source received inadequate water.

Since the B.C.D.A. eventually expected to be paid for the irrigation system when the settlement became self-supporting, it is useful to formulate some idea of the capital costs involved. Lumber for the flume totalled

1,350,000 board-feet which was worth about $20,250.00; the Marquis paid $7,275 to construct the final siphon across the river (see Photo 29); and it would have cost $4,800 to make relatively simple repairs to the Snohoosh Dam in 1927.[18] The most significant figure appears in a report prepared for the provincial government in 1920.

In 1919 the Marquis had asked assistance from the government to repair the water-works and had been abruptly turned down. He then offered to give his share of Walhachin to the government to be used as a Soldier Resettlement Area since the provincial government, led by Premier John Oliver, was planning to settle many of the returning soldiers through government-sponsored land settlement schemes. The government then became interested in the costs necessary to revitalize the irrigation system and assessed the cost, "necessary to put the system in satisfactory working order..." to be $240,058.00.[19] Moodie also mentions that the original construction of the flume, including labor costs, averaged between $16,000.00 and $18,000.00 per mile and the lateral system cost a total of $22,000.00.[20] Considering there were fifteen miles of

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[17] British Columbia Lumberman Manufacturer's Association, Price List, 1910, p. 1.

[18] W. C. Warren, Snohoosh Lake Dam and Suggested Alterations, A Report to the British Columbia Department of Lands, Water Rights Branch, Victoria, 1927, p. 18.

[19] Moodie, Op. cit., p. 11.

[20] Ibid., p. 10.

flume, it alone would have required an investment of approximately $255,000.00. When combined with the additional costs, of which only a portion are outlined above, it would indicate an overall capital expenditure in excess of 1/3 of a million dollars only to install the water system. With less than 1,000 acres capable of supporting agriculture, the installation cost of the irrigation system would exceed $350.00 per arable acre. The individual settler eventually would have had to be responsible for this, plus the yearly maintenance costs, which made the cost of water application uneconomical.

Irrigation costs remained excessively high until late in the 1950's when technology had reached a stage sufficient to provide inexpensive water for the croplands. In 1944 an investigation on behalf of the British Columbia Water Rights Branch was carried out to determine the feasibility of providing irrigation for the Walhachin flats in order to grow alfalfa. Even at this time, long after Walhachin's abandonment, the engineer in charge stated, "...it would bring the final cost of operation per acre so high as to render any project uneconomical."[21] The following year a further inquiry was made by agriculturists from various Interior centers as to Walhachin's

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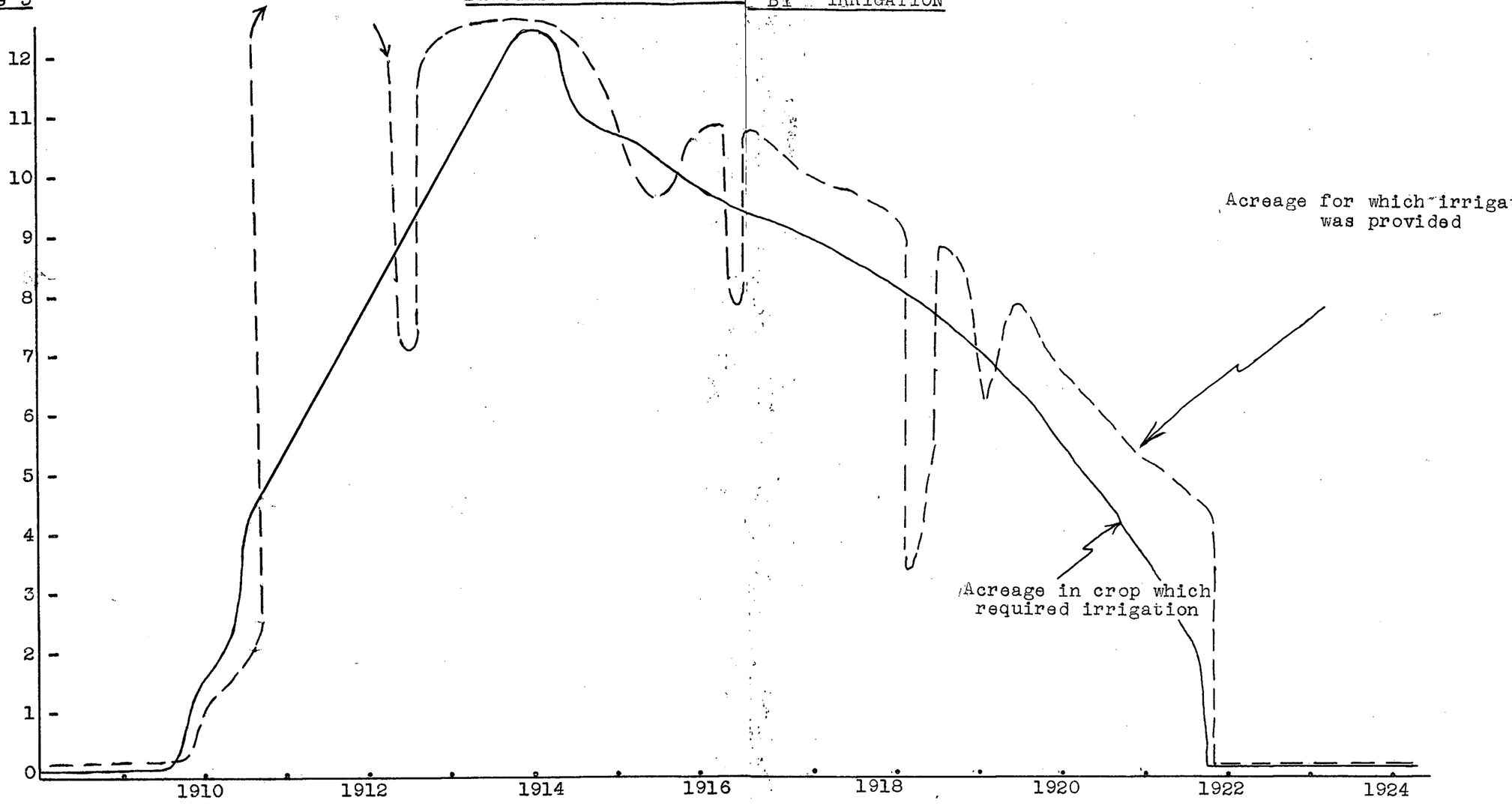
[21] E. H. Tredcroft, Possible Hydro Electric Power Development on Deadman River, Brief No. 198, British Columbia Department of Lands, Water Rights Branch, Victoria, 1944, p. 3.

Figure 5

DROUGHT ADJUSTMENT BY IRRIGATION



Cropland Explanation - Pennie Ranch Orchard; Period of yearly planting of new orchards; Acreage decline after troops leave for the front; Slight revival after W.W.II; Years of rapid decline; Abandonment; Chinese gardeners tend small acreage

Irrigation Explanation - Ranch water system; Construction of Snohoosh Dam and water works; Flume Washout; Decline in maintenance; Decline in flume maintenance and major flume washout; Flume washout; Siphon breaks; Return from War; Declining maintenance; Twin Lakes System

potential, again, as an area for settling returning soldiers. They similarly concluded that "cost would be too high for development under present conditions" and estimated that irrigation would require a capital investment of $209 per acre and an annual rental of $31.40 per acre.[22]

The cost to provide water for the orchards at Walhachin was exhorbitant and a direct cause of its failure. The extent to which this made qgriculture unprofitable will be discussed later in this chapter when market prices are examined.

Figure 5 portrays graphically the adjustment attempted by the settlers to overcome the acute drought conditions at Walhachin. The irrigation system's potential is indicated by the large reserve-margin during the 1911 season with the unreliableness evident in the repeated fluctuations of service. The major fluctuation, caused by the 1918 washout, was followed by decline in service and finally abandonment in 1922. A small acreage had been provided with water from the Twin Lakes Reservoir prior to Walhachin's founding, and continued to be serviced by the same reservoir after 1923 when the land was cultivated by Chinese.

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[22] British Columbia, Department of Agriculture, Proceedings of the Reclamation Committee, Brief No. 2, Kelowna, 1945, p. 11.

The water system had potential in terms of providing a water supply but as will be seen, this proved to be immaterial in that the water could not have been used effectively had it been available. This was due in part to human errors and inadequacies, just as the irrigation system's shortcomings, and will be dealt with in the following section.

Environmental Factors

Walhachin began during a period of great geographical experiment in British Columbia -- a time of empirical testing of the qualities of the land, farm by farm, district by district. Arguments raged over where the limits of agriculture lay, for those limits, as well as the existence of the marginal lands, and the extent of the fertile, reasonably reliable country, had not been defined. The problem for the settlers in British Columbia was made more complex as the agricultural frontier line was not as evident or so easily defined as in Australia or on the Great Plains where one could "cross over lands which many people had judged as marking the limits of agricultural productivity".[23] In British Columbia there was no fixed line or even a strip of marginally potential agricultural land to indicate a frontier; there were a series of valley bottoms of which only some were suited

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[23] D. W. Meinig, On The Margins of the Good Earth, Chicago, Rand McNally and Company, 1962, p. 207.

for agriculture. The first settlers in these areas, almost of necessity, made false starts and it was only after a period of trial and error that the agricultural limits became set.

Any group of immigrants migrating into such an area, intent on beginning an agricultural enterprise is confronted at once with certain environmental conditions to which they must adapt their agricultural practices or shape to their own uses. By innovation, by invention and by borrowing, techniques must be adapted to cope with the new environment. On these techniques and the settler's ability, courage and ingenuity, rests the permanence and viability of their settlement and standard of living which they will be able to achieve.

These environmental factors are difficult to overcome but usually are not difficult to recognize and interpret. They may be variance in soil qualities, climatic probabilities or a topography which lends itself to some agricultural practices and not others. In sum, the success of a settler depends partially upon his ability to interpret the physical environment and wrest from that environment a net income sufficient to enable a standard of living which will permit him to make progress as he conceives progress. This section will deal with the fundamental environmental factors which hindered the progress of Walhachin and will be followed by an analysis of 'human' factors.

Although Walhachin normally experiences summer daytime temperatures exceeding 100° F for periods lasting up to one week, the Company promoters boasted of the long warm season (over 50° F) which extended over a 5½ month period. This apparently added to the area's attractiveness. However, the 3½ months of cold season (less than 32°F proved to be one of Walhachin's shortcomings.

Temperature variability and frost conditions are important to all farmers but for those at Walhachin they proved to be of special significance. When one is dependent on hard and soft fruit crops these conditions are abnormally critical. For most farmers, relying upon annual crops such as wheat or potatoes, one extreme climatic variation results in the failure of one season's crop. For some perennial crops, such as those at Walhachin, years of maturation are required before they approach a bearing state. An apple orchard "should begin paying after five years and after seven to nine years a profit will occur."[24]

Any reference to average or normal temperatures at Walhachin is of little significance; the importance is temperature extremes. As a result of its Dry Belt location, summer temperatures could be termed excessive. These high temperatures, combined with low humidity as

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[24] M. Smith, "Farmers Institute Report, Horticulture and Agriculture", British Columbia Sessional Papers, 1912, p. K20.

found in this semi-arid region, created a situation which resulted in heat scalding of the fruit; a condition practically unique to this area in the Canadian Fruit Industry. In 1917 intense summer heat was not only responsible for considerable orchard loss, from sun scalding, at Walhachin, but also for an outbreak of codling moth disease which resulted in large acreages being in quarantine for a number of years.[25]

Related to high temperature is moisture loss through evaporation. The importance of evaporation rate can hardly be overstated in the study of an agricultural settlement, especially one dependent upon irrigation. In order to measure evaporation, relative humidity (R/H) can give an approximation of the ability of the atmosphere to take up moisture although such factors as wind, amount of exposure, and kind of evaporating surface must also be taken into account. If, for example, an orchardist had decided to conserve water by irrigating at night when the R/H is high, his saving will be minimal if he fails to take note of a strong wind. From Figure 1, the R/H is seen to fluctuate considerably between summer and winter, and during the warm months may experience a daily range of more than 55%. This is due in part to the semi-arid condition of the valley as well as to the fact that Walhachin receives more hours of bright sunshine than practically any area of the province, with July receiving six times as

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[25] British Columbia, Department of Agriculture, 12th Annual Report, 1918, p. N15.

much sunshine as December.

The sensitiveness of the fruit blossoms at Walhachin made cold temperatures a frost hazard. Although some damage would occur during light frosts, the killing frosts came with temperatures less than 29°F. Two conditions bring frost to the valley. The most serious occur when either Polar Maritime or Polar Continental air masses lay over the plateau and descend into the valley. Much of Walhachin is composed of gently sloping terraces which, to the orchardist, were beneficial. As a rule the cold upland air discharges through tributary valleys such as Brassey Creek and Deadman Creek and tends to flow down these gullies, which cut through the terraces, until it reaches the valley floor. The terracesact as islands between flows of cold air. However, much of Walhachin is composed of draws and gullies opening onto the large terraces allowing the cold air masses to collect and lie over the orchards. Similarly, the orchards planted on the alluvial fans were subject to the cold air masses. Walhachin was less fortunate than orchard areas in the Okanagan Valley in that it had no lake to act as a moderating influence.

The second condition for frost entails air which to begin with, is near freezing, and is subsequently cooled to below freezing by contact with the ground which loses heat through radiation. This type of frost is especially harmful to ground crops and sometimes damages the buds on the lower branches of a tree.

Thus, Walhachin is susceptible to serious frosts: both inversion frost on clear calm nights in spring, which damages the young fruit, and more serious, the cutting icy winds of abnormally cold winters, against which there is no satisfactory defense. The trees of whole sections of carefully tended orchards may b e frost killed by the invasion of the unusually cold polar air.

Walhachin's marginality as a fruit-producing area is evident from Figure 6. Following the winter of 1949-50, when the temperature at Penticton sank as low as -16°F., widespread damage followed with only 5% of the trees yielding fruit the following year.[26] At Walhachin, the

Figure 6

JANUARY TEMPERATURE EXTREMES

	1916	1917	1918	1919	1920	1947	1948	1949	1950	1951	1952	1953	1954
Walhachin	-31	-28	-16	-23	-11	-26	4	-22	-35	-23	-22	-7	-27
Kelowna	-15	-11	-5	-15	6	-9	12	-9	-24	-5	-16	10	-3
Penticton	-9	-5	2	-3	6	-4	9	-4	-16	1	-7	15	-16

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[26] D. Kerr, "The Physical Basis of Agriculture in British Columbia", Economic Geography, 28 (July, 1952), p. 235.

temperature fell substantially lower, indicating the general relationship of Walhachin's temperature to those in the Okanagan Valley. The winter temperatures decrease as one moves northward in the Okanagan but the moderating effect of the lake system creates conditions so that in the central Okanagan at Kelowna, temperature extremes average 10°F. warmer than at Walhachin.

Soft fruits (with a critical bud-killing temperature of -12°F.) could not be grown at Walhachin. In 1912, 50 acres of peaches were planted as fillers in the apple orchards and that winter the entire crop was destroyed. The northern Okanagan is best suited to grow only apples. The northward adjustment in the Okanagan which employs the more hardy fruit crops is demonstrated by considering the recent regional distribution of apple acreage: 25% of the total acreage of the Osoyoos-Oliver area, 33% at Penticton, 50% at Kelowna and 75% at Vernon.[27] Further north, the B. C. Fruit Growers stated that "in favorable locations only -- McIntosh on hardy framework is the only recommended fruit."[28] This would refer to the Walhachin region where the McIntosh variety, however, amounted to only about 5% with the chief varieties being Wealthy,

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[27] E. Wahl, "Penticton and Its Region" (unpublished Master's thesis, Department of Geography, University of British Columbia, 1955), p. 159.

[28] British Columbia Fruit Growers Association, "Fruit Varieties, Rootstocks and Frameworks Recommended for Commercial Planting in Southern Interior of British Columbia", Quarterly Report, Vol. 2, No. 4, March 1958, p. 24.

Wagener, Jonathan, Spitzenberg and Rome Beauty. Climatic statistics suggest that Walhachin's potential based on tree-fruit economy was extremely limited since only the most hardy strains could survive the winter temperatures. The area was one of orchard marginality which is demonstrated by the fact that over the past 60 years, growers there have adjusted to the climate so that today less than 1% of British Columbia's present orchards are located in the Upper Fraser-Thompson Valley region.[29]

Having considered the availability of water and the topographic limitations in previous sections and now temperature variability, it will now be useful to comment on the soils at Walhachin.

No study had been made of soils in the area until 1953 when soil profiles from various terrace levels were studied. This study found that none of the soils tested were suitable for tree-fruits and only 159 acres at Walhachin were suitable for vegetable cultivation.[30]

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[29] R. R. Krueger, "The Geography of the Orchard Industry of Kelowna, Canada", Geographical Bulletin, Vol. 7, 1965, p. 62.

[30] British Columbia, Department of Agriculture, Proceedings of the Reclamation Committee, Brief No. 23 (March, 1953), p. 3. The best soils were categorized as:
- 222 acres are too rocky for any agriculture - fruit or vegetables.
- 72 acres had "good soil" potential but would be expensive and low yielding. (This likely refers to irrigation problems and/or topographic problems).
- 159 acres good for vegetables (potatoes, carrots, onions, beans, tomatoes, cucumbers, asparagus and peppers).

In 1962 a comprehensive classification of soils in the Walhachin area was undertaken by the Soil Survey Branch of the Department of Agriculture in order to determine the arable acreage and included a classification according to suitability for irrigation. These classifications are presented in Appendices 2 and 3. It was previously stated that overgrazing destroyed the original climax of bluebunch wheatgrass and seriously reduced the carrying capacity of the range. As a result of the soil survey, it was determined that the most economically feasible use for the valley lands would be to restore them to grazing.[31] The most important asset of the area is the hot summers which can be utilized to obtain yields of alfalfa, and which permit the production of heat-loving vegetables. About 200 acres or 4% of the total lands were found to have soil conditions that could produce vegetables and nearly 90% could grow alfalfa. The main types of vegetables that can be grown are tomatoes, cucumbers, onions and asparagus but their potential as an economic base for a settlement was very limited. They would not have produced sufficient profits. In 1913, the Marquis built a cannery and hired as manager an experienced canner from a New Westminster cannery. In

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[31] P. N. Sprout and C. C. Kelley, Soil Survey of the Ashcroft-Savona Area, Thompson River Valley British Columbia, British Columbia Department of Agriculture, Interim Report, Kelowna, March 1963, p. 59.

the fall of 1913 and 1914 tomatoes and pumpkins were canned there and sold to the C.P.R. The growers received only $11.00-$12.00 per ton for the vegetables. Considering that the 1963 soil survey indicated that approximately ten tons of tomatoes could be expected on the best soils, this would have grossed the grower less than $1200.00 for a ten-acre estate. Calculating the cost which this figure would have had to cover as well as the variance of soils over any one estate, this return would have been inadequate to provide an acceptable standard of living.

Walhachin had little potential as a commercial orchard region and a very limited future as a vegetable producing area. The only crop that could have been grown extensively was alfalfa which, had irrigation been available cheaply, would have supported at best, only a few families. Currently, about 100 acres of alfalfa and feeder-corn are grown on two terraces which provide winter feed for one rancher's cattle.

Fundamentally, the choice of C. E. Barnes to build a settlement at the Pennie Ranch was one of the leading factors relating to Walhachin's failure. The location was a poor one. Had he chosen instead the southern Okanagan, the Saanich Peninsula or the Lower Fraser Valley, events might have progressed much more favorably.

The environmental factors of settlement failure are relatively easy to recognize and to interpret; but more

complicated and more difficult to interpret are the reasons for economic failure. These are associated with problems of economic organization, the infringement of organization on the individual settler, distances from market, cost of land, cost of living, demand and value of products, cost of transportation, and the cost of the materials which must be purchased. Walhachin was located in as advantageous a position as any of the interior orchard regions in terms of transport facilities. Located on the mainlines of both the C.P.R. and C.N.R., it was closer in terms of distance and time to the prairie and coast markets than their of its two competitive areas -- the Okanagan and the Kootenays.

B. C. fruits were advertised widely and were in demand throughout all of Western Canada. As early as 1900, orders for specific varieties were received from Europe and Australia. During the time of Walhachin's development these orders were difficult to fulfil since the fruit industry in the province was just beginning.[32]

During 1919 and 1920, apple prices were high but began to fall in 1921 and continued to fall for a number

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[32] Commercial orchards were first planted in the Okanagan in 1892 with extensive fruit tree planting on the valley benches commencing around 1900. These continued on a comparatively large scale until 1914 after which time, plantings were on a smaller scale and more related to market requirements.

of years.[33] Although the overall decline was gradual, there were extreme fluctuations. For example, the average profit per b ox of fruit fell from 75¢ in 1921 to 27.5¢ a box in one season. This was due in large part to the change in labor conditions in the post-war period when seasonal labor became extremely difficult to procure. This drop in profit of 37% in one season is an indication of the variability in the pricing structure, since marketing was not governed by any legislation. For years, apple growers had been experimenting with schemes of co-op marketing, but the refusal of the independent growers to accept regulations voluntarily, eventually led to a demand for compulsory control of sales.[34] This demand was first met by the 1924 Produce Marketing Act which was concerned with sales of tree fruits and vegetables.

Walhachin's potential as a fruit-producing area can be assessed by hypothesizing that Walhachin could have produced fruit equivalent to average production in the Okanagan. If so, its annual production during its most productive years would have amounted to 146 packed boxes[35]

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[33] Concurrent with the post-war price decline was an increase in freight rates on the railroads.

[34] M. Ormsby, British Columbia: A History, Toronto, The Macmillan Company of Canada Ltd., 1958, p. 428.

[35] The weight of a box of fruit has varied a few pounds during the years of the B. C. fruit industry, with the weight in 1909 being 40 pounds in a box 20 inches long, 11 inches wide and 10 inches deep.

per acre.[36] The varieties comprising the most extensive acreages at Walhachin were Wagener, Wealthy, and Jonathon which would have brought a seasonal average price of just less than $2.00 per box. This would have resulted in a gross return of $292.00 per acre. The average operating cost of the Okanagan's most efficient operations in 1919 was $226.03 per acre with water cost amounting to only 2% of the total.[37] Assuming that water costs were equivalent at Walhachin, this would yield an annual profit of $659.70 for the average Walhachin estate. However, considering the assumptions held, as well as the fact that Okanagan orchards averaged 95% production level (acreage), and that orchardists did a good deal of their own work, the $659.70 represents an excessively optimistic figure for Walhachin's profits per estate.

For a further indication of the area's fruit potential, one could compare Walhachin's shipping figure with that of one orchard at Kelowna. Between 1902 and 1906 a Kelowna orchard of 16 acres averaged an annual production of 150 tons of fruit, whereas in its best two years of production, the whole acreage at Walhachin

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[36] W. A. Middleton, Cost of Producing Apples in the Okanagan and Average Yields and Prices for Leading Varieties, British Columbia Department of Agriculture, Circular No. 38, 1921, p. 10.

[37] Ibid., p. 5.

averaged only 38.3 tons of fruit and vegetables annually. Figure 4 portrays Walhachin's relatively productive years, and their decline. The nearly five-fold increase in production between 1916 and 1917 was a result of some trees reaching their mature bearing stage. However, the washout and drought-kill in 1918 is portrayed in that year's production figures. Vegetables came to account for virtually all the exports after 1920. The sudden increase in the vegetable production in 1924 was due to the efforts of the Chinese who leased land from the Marquis for vegetable cultivation.

The best adjustment made by the settlers to overcome the low productivity was increasing the scale of their operations. The average size of holding in the Okanagan Valley in 1920 was 22.8 acres,[38] whereas at Walhachin the average holding was 10 acres. However, those who succeeded in obtaining at least a portion of their living from the land at Walhachin had all increased their acreages to thirty to forty acres on which they could make use of only the best soils.[39] But this was still not an adequate

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[38] D. E. Lee, "Some Factors Making For The Success Or Failure of Agriculture", (Unpublished Master's Thesis, University of British Columbia, 1925), p. 53.

[39] The lands at Walhachin were surveyed, preceeding settlement, 1908 and 1910. The survey lines ignored the obvious soil differences completely, and little thought was given to the varied topography. Consequently, settlers arrived at their estates, usually purchased signt unseen, to find varying portions unarable.

adjustment when the high capital investment required for such a small acreage of arable land and the problem with irrigation water is taken into consideration.

B. C. Settlement Atmosphere

Essentially, the years of Walhachin's growth occurred during a period of an immigration boom and high optimism in the province. The years 1905 to 1912 were British Columbia's boom years and almost anywhere in the province in 1905 and 1906, one could feel a new spirit of optimism.[40] For those attempting some agricultural pursuit in the interior of the province, this optimism is easily understood since no accurate information relating to agriculture was available. What was available was an abundance of promotional literature expounding on the excellent potential of virtually every interior valley.

It was not until 1921 in the Okanagan and 1934 in the Thompson Valley that government experimental farms were founded. Most information available to prospective settlers (government reports and maps, promotional literature) was so inaccurate and/or biased that it usually rendered any judgment based on it unsound. One example of fact distortion was a pamphlet published by the Grand Trunk Railway, that stated "B. C. is the largest and most suitable

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[40] Ormsby, op. cit., p. 341

province in Canada ... its area being as large as Ontario, Nova Scotia, New Brunswick, Prince Edward Island and Manitoba combined."[41] Kamloops was advertised as the Los Angeles of Canada and brochures announced that there were "ten railways building or chartered -- some surveyed -- all heading to Fort George.[42] This was the period when Provincial politicians used the slogan "McBride Prosperity". The Conservative McBride government was closely associated with London. McBride himself acted as a one-man British Columbia public relations man. He founded British Columbia House in London and was renowned for his identification as a "British" British Columbian.[43] The literature distributed by the office of the Agent-General in London was so persuasive that even the Governor-General of Canada fell victim to the promise of high profits awaiting clever cultivators. He felt the fruit farmer was "par excellance, nature's gentleman".[44]

Hundreds of Britishers were similarly persuaded, and with capital, but little fruit-growing experience, purchased orchard lands throughout British Columbia. The province was regarded very highly by people from other parts of Canada and throughout the British Isles. The attitude of many is suggested by a comment made by his

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[42] Ormsby, op. cit., p. 359.

[43] Ibid., p. 371

[44] Ibid., p. 354.

[41] Grand Trunk Railway, General Information for Intending Settlers in British Columbia, Victoria, 1914, p. 1

excellency, Earl Grey, who upon the opening of the New Westminster Fruit Exhibition in London, described fruit farming as an art and went on to describe British Columbia saying, "Gentlemen, here is a state of things which appears to offer the opportunity of living under such ideal conditions as struggling humanity has only succeeded in reaching in one or two of the most favored parts of the earth."[45]

That some would choose Walhachin as a place to settle is not surprising. During the period 1905-1915 settlers arrived in the Thompson and neighboring valleys to start small farms on almost all the vacant land.[46] The prospects of successful fruit farming in the area were heightened by government reports indicating that, "It is now an established fact that apples of excellent quality will grow as far north as Hazelton, on the Skeena River, between 55 and 56 degrees north."[47] Therefore, in many aspects, Walhachin was merely a part of a larger process occurring at the time and it is only in this context of settlement activity and excitement that Walhachin's beginning and fate can be explained.

Earlier discussion dwelt upon the more visible factors which influenced the settlement's development but these alone are not sufficient to explain Walhachin's

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[45] F. Fairford, British Columbia, London, Sir Isaac Pitman and Sons, Ltd., 1914, p. 64.

[46] M. Balf et al. A History of the District to 1914, Kamloops, Kamloops Museum Association, 1969, p. 129.

[47] British Columbia, Handbook of British Columbia, Canada, Victoria, Bureau of Public Information, Bulletin No.23, 1913, p. 3

failure. The settlers obviously did not know the Walhachin reality but rather some mental images of what Walhachin could be and more accurately, what they wished it to be. They were aided in large by the Company promoters who emphasized a scene of prosperity, growth and excitement. They saw the positive aspect of the environment and negated the harsh realities of isolationism and artificialism. The choice to settle at Walhachin for many, was the result of one book, "Fruit Farming in the Dry Belt of British Columbia." Written by J. S. Redmayne, a Company promoter, it was published by the Times Book Club in 1909 and distributed widely throughout England. An examination of five of its statements will reveal its encouragement to settle not only in British Columbia's Dry Belt but specifically at Walhachin:

- Fruit growing has acquired the distinction of being a beautiful art as well as a most profitable industry.
- 10 acres should yield £600 from apples plus £400 additional from intermediate crops.
- Fruit farming in the Dry Belt of British Columbia is the best paying investment in the world.
- Those who take up fruit farming in the British Columbia 'Dry Belt' are ...men of the better class, people of education and refinement.
- Best location is where conditions are similar to Wenatchee and Yakima Valleys -- say somewhere in the Thompson River district between Kamloops and

Lytton.[48]

This subtle but misleading introduction to Walhachin was carried further by an inclusion at the end of the book of a chapter which explained the B.C.D.A. development at a location between Kamloops and Lytton. Anticipating that some parents might be reluctant to send their sons out to the Dry Belt with no agriculturalexperience, the author included a description of the Residential Practical Training School the Company planned to establish at Walhachin to teach horticulture. This was nothing more than a paper plan intended to entice more settlers to purchase the Company's properties.

Financial Decline

In the study of B. C. Settlement, the role of the land speculator on the frontier has not been adequately studied. These individuals or companies were directly responsible for the development of many of the populated areas in the interior and indirectly associated with the province's development. They capitalized upon the natural impetus of immigration and political development of the period and bought tracts of cheap land, made minimal improvements, and sold it to newly arrived settlers. Such was the case at Walhachin.

Walhachin was a land settlement scheme designed to make money for the shareholders of the London-based

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[48] J. S. Redmayne, Fruit Farming on the Dry Belt of British Columbia, London, The Times Book Club, 1909, pp. 10, 50, 79, 82, and 94.

B.C.D.A. The Company had issued 39,382 common shares at £1 each and had raised £166,433 in debenture loans to further its developments, of which Walhachin was by far the largest. Its intent was eventually to sell all its properties to the settlers at Walhachin, but it ran into financial difficulty. On June 7, 1912, the Company was ordered to wind-up on the petition of the debenture holders who eventually received only 9d on the £ after the Company had sold what it could to the residents of Walhachin.[49] Even to the debenture holders and the major stockholders in the B.C.D.A., Walhachin was a failure as an investment. The wind-up took nearly six years after which the Anglesey Estates owned most of the property formerly held by the Barnes Estates and British Columbia Horticultural Estates, both in turn, subsidiaries of the B.C.D.A. This gradual change in settlement control through land ownership had disastrous effects, the result of which is dealt with later in this chapter.

Most of the residents received monthly sums of money from either parents or relatives in Great Britain in order to finance their estates and activities at Walhachin. These funds usually were substantial enough to permit the recipients to live quite well but were discontinued when the men left for the Front or when conditions in England became such that support of those overseas was no longer

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[49] Great Britain, Public Record Office, British Columbia Development Association, Company Records, No.81-013, 1931, p.5.

possible. The war and post-war years were financially disastrous for Walhachin and although the B.C.D.A. had cajoled the Marquis into investing heavily in order that they could retrieve some of their expenses, he too was unable to make an adequate investment to revitalize the settlement.

In 1905, the Marquis had inherited not only the title from his cousin (Henry Cyril Paget, 5th Marquis of Anglesey) but also his debts. Upon his cousin's death at Monte Carlo, his debts were reported to be in excess of £544,000.[50] As a result of these debts and more likely the fact that the family (the Pagets) had a long history of scandals and financial blunders, various creditors had placed pressure on the Marquis to retrieve their money. This pressure was heightened when the Marquis found, in 1920, that he had been a victim of a Turner Valley Oil Field swindle.

During his last visit to Walhachin prior to the war, he had invested heavily[51] in one of the five hundred new oil companies formed in Calgary after the first Turner Valley naphtha and natural gas well began producing in 1914. Only fifty companies ever attempted any drilling

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[50] G. E. Cockayne, The Complete Peerage of England Scotland Ireland Great Britain and United Kingdom, London, The St. Catherine Press Ltd., Vol. 1, 1910, p. 141.

[51] The writer was unable to ascertain the exact figure. However, in personal interviews, members of the Paget family and the Marquis' son indicated the sum was indeed considerable.

and most never advanced beyond the paper stage. The financial losses experienced by the Marquis are indicated by the fact that in 1920 he advertised to sell the family's ancestral home and properties at Beaudesert, in Staffordshire. He succeeded eventually in selling the mansion and its furnishings, as well as part of the 17,500 acres of estate to cover the family's outstanding debts.

The Walhachin settlers, actually through little effort of their own but primarily through the B.C.D.A., managed to create an impression of success and viability. This was made possible as long as the settlement could rely upon England as a source of capital. This originally occurred through the B.C.D.A. and their speculative efforts and eventually, although to a lesser degree, through the settler's contacts[52] in England. When the flow of capital into Walhachin terminated, the settlement was unable to exist on its own resources.

Any beginning settler usually depends upon outside resources in order to establish himself. These take various forms such as savings or credit and are required for varying lengths of time depending upon the interval until returns are forthcoming from the enterprise in which the settler has invested. The resources and time

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[52] These contacts were usually families for the younger men and either families or Government Agencies (Pension sources), or both, for the older residents.

interval depend very much on each individual. At Walhachin, there were essentially two groups of settlers which in simple terms can be called the 'haves' and the 'have-nots'. Those with sufficient family support to enter Walhachin without reliance on credit were the fortunate group; even if they needed to borrow funds they were able to do so on their inherited security or over their family's signature. It is the men of the second group that had the problems, for they had little or no family support to acquire orchards and the required operating materials. However, with these groups, an interesting distinction occurred. Contrary to the expected outcome, it was the second group, the 'have-nots', who were most successful at Walhachin. Although their numbers were small and their success relative, they were the only settlers to obtain any return from their orchard lands. However, this group represented a small minority and was not representative of the Walhachin community. Considered as a whole, the community was relatively inept at dealing with the new environment, but in spite of it, development occurred.

Considering the formative years, development occurred at a phenomenal rate; 1083 acres planted and irrigated in four years. Plans for orchard monorails, unlimited expansion of commercial orchard, and large self-contained communities appeared to be possible since in four years Walhachin had developed acreage amounting to 1/10 of

all the commercial orchards in the Okanagan. Most of the development had been accomplished through the promotional efforts of the B.C.D.A. since the settlers had arrived possessing few skills and little ability or willingness. The development was carried out generally under the very capable leadership of C. E. Barnes, director for the B.C.D.A., with a work force at times numb ering more than 150 men.

Quality of the Settlers

The settlers' ability to pursue the duties of a horticulturist was limited since most had either recently completed public school at Eton and Marlborough or had retired from the British Military or Civil Service. None had any knowledge of farming practices and their willingness to learn is exemplified in that only two men ever attended the winter courses in horticulture offered at the Pullman Technical College in Pullman, Washington. Although the number itself suggests little, considered with the situation in which the men found themselves during the winter, it is indicative of the settler's lack of seriousness and attitude. There were large numbers of single men, most had more than adequate finances, and virtually none had any commitments at Walhachin during the winter. Therefore, all had the opportunity to attend the College if they desired. The fact that only two men attended leaves one to suspect that for most, the social life available at Walhachin was more appealing than studying

horticulture. Not surprisingly, the men who attended were largely 'on their own' and as a result of their limited success, were the last to leave their estates after the War.

The unpreparedness of the settlers resulted in a host of agricultural blunders and in poor resource utilization and management. Fruit varieties were planted simply because they were grown in Britain, with little consideration as to their suitability to the region and to the varying market conditions. Their major attempt at adjustment was eventually to plant as many varieties as possible to see which thrived best. This resulted in duplication of testing already done by their neighbors and necessitated more replanting than should have occurred, because the frozen tender varieties had to be replaced by those more hardy. The duplication happened since the settlers had little contact with their neighbors. This is one aspect that set Walhachin apart from the traditional settlement process in British Columbia.

Large areas of the province were settled by individuals possessing varied ethnic and occupational backgrounds, whose settlements were natural outgrowths of a competitive system, and whose outstanding personal characteristics were their individuality and cooperativeness. The result was the formation of a number of heterogeneous communities. Although local

institutions gradually evolved, the process of settlement under these conditions was usually long and arduous.

Walhachin, as previously discussed, was an ethnic settlement. As an English settlement, Walhachin differentiated itself well from the neighboring ranching centers of Ashcroft and Kamloops. Its unofficial name of Little England reflects its somewhat ethnocentric nature and with regard to attitudes, dress, and recreation, Walhachin was closer to London and Victoria than to any of the neighboring communities. The settlement was extremely self-centered and stood aloof from the frontier mentality which prevailed in the majority of other communities in British Columbia and was only partially susceptible to the play of forces which operated to break down the barriers that separated the honogeneous groups from their neighbors.[53]

The settlers themselves were extremely self-centred and wished little contact with the neighboring communities other than to participate in sporting events. Social contact was minimal outside the settlement and is best displayed by the Marquis himself. An older brother had emigrated earlier to a ranch in the Chilcotin district and often spoke highly of his brother in England. The Marquis, whose wife accompanied him only once and remained

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[53] Many inhabitants of neighboring towns and from nearby farms and ranches regarded Walhachin as being 'odd', and reiterated numerous instances to exemplify the Walhachin settler's ineptness in that frontier environment.

for a few days, visited the settlement each summer, yet never made any effort to contact his brother.[54]

This isolation of the settlement hindered development in many indirect ways and directly by creating a situation so that useful suggestions by neighbors were seldom offered. Any study of a frontier region indicates the usefulness of practical information and cooperation with those more experienced. As mentioned previously, the planting of as many varieties as possible to find those most suitable could have been avoided had better outside contacts been available. At Walhachin, the settlers were left alone to adjust to the new environment and had to depend essentially upon their own experience and very limited agriculture and business ability.

Just as most ethnic communities are viewed as being an alien element on the landscape, the neighboring people saw Walhachin as being different and unnatural and failed to understand it. They viewed the settlement with skepticism, and although they felt the whole scheme was an interesting experiment, they recognized it as being nothing more. They were unwilling to respect men who did little of their own work and spent most of their time pursuing leisure activities. The friendship rift

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[54] A partial explanation for the Marquis' behavior may be the fact that this brother was an illegitimate son of the Marquis' father and consequently was not considered an heir and not regarded highly by the family.

or contact rift was increased when twice, people from neighboring properties took the B.C.D.A. to court -- once when the Company violated a water rights agreement and once over the matter of a workman not permitted to drink in the Company's hotel. Neighboring settlers and communities accused the Walhachin settlers of riotous living using as a basis for such a statement the fact that they organized card nights to raise money for school and community facilities. A practice, thought by many, to be akin to saloon gambling. The attitude of the people in the area around Walhachin is identified precisely by an author writing about settlement in Western Canada about the time of Walhachin's development who remarks, "...that special class of emigrant, the English gentleman's son, who as a group can be consigned to have had little lasting influence on the landscape since a great majority of them have failed and passed from active rural life. Canadians have no viewof them collectively as settlers and ridicule them mercilessly...."[55]

Lands conquered for agriculture and settlement by hydraulic improvements are extraordinarily sensitive to variations in the natural and human environments.[56] It

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[55] Robert England, The Colonization of Western Canada, A Study of Contemporary Land Settlement, London, P. S. King and Son, Ltd., 1936, p. 193.

[56] A. Sestine, "Regressive Phases in the Development of the Cultural Landscape", Readings In Cultural Geography, eds. P. L. Wagner and M. W. Mikesell (Chicago: University of Chicago Press, 1967), p. 485.

is not enough to create improvements, but they must be maintained by a vigilant expenditure of energy and depend heavily upon strong leadership. Leadership may be in the form of a group or an individual and, as has often occurred, changes in leadership may result in a settlement's collapse.

After 1913, the Marquis continued to expand his holdings, until he eventually took control of the settlement in 1919. His estate director was R. Chetwynd who in 1919 replaced C. E. Barnes as Director of Walhachin. Chetwynd lacked Barnes' ability, charm, and general leadership qualities and was unable to hold the settlement together through the post-war years. Barnes was an older and more respected man: respected for his background, experience, and for his ability. Chetwynd, in contrast, was simply chosen from the rank and file of young men at Walhachin whose main qualification for the position was his relationship with the Marquis.[57] His ability is best described by an example. He was placed in the position to supervise the lining of the V-flume from Brassey Creek with a tarred roofing paper. The roofing sheets were placed in such a manner that the lower sheet overlapped the upper, so when the gates were opened the force of the flowing water ripped out all the lining in the two-mile flume. As a weak leader, Chetwynd

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[57] The Marquis' cousin, the 5th Marquis of Anglesey had married the eldest daughter of Sir George Chetwynd, baronet.

found it difficult to organize and motivate the settlers to care for the irrigation system as a whole. Each was satisfied provided that adequate water reached his property, and partially due to this attitude and Chetwynd's inability to deal with it, the entire system rapidly deteriorated after 1919.

Implicit in a discussion dealing with an individual's ability to be successful is the individual's quality in terms of some specific criteria. At Walhachin, the criterion is the ability to adjust to a new environment and quality refers to the training or background of the individual settlers. Their preparedness and attitude have been dealt with, both explicitly and implicitly, throughout this paper but one last statement is required. For many, Walhachin served as a last or only alternative. Settlers came to Walhachin for as many reasons as there were settlers, but for most, had they had a choice, few would have come. The young men usually had one of three backgrounds: one of repeated failure or behavioral problems at school, one of personal scandal or legal difficulties, or one of military service expulsion. Generally their families were at a loss as to what to do with them so the boys were encouraged[58] to go overseas to

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[58] Alternatives other than Walhachin were usually to join the clergy, civil service or the army and many eventually chose one of these after experiencing failure at Walhachin. However, some had no alternative since they were sent to Walhachin as a disciplinary measure and/or to learn self-discipline. An example would be Cecil Rhodes' nephew who was sent to Walhachin after inciting a revolution in Costa Rica.

manage the family's newly acquired properties at Walhachin. As to the potential of these boys being successful settlers, speaking of a similar settlement, W. A. Carrothers states that "...with a dozen, twenty or thirty public school boys ... of a class that produces the largest proportion of those who need a strong hand, success is practically impossible.[59] Indeed, the quality of settler at Walhachin left much to be desired: little willingness to work,[60] lack of useful skills, little motivation to succeed, or as one informant stated, "Walhachin was a catch-all for rejects."[61]

Many elderly settlers came to Walhachin to enjoy the wholesome climate during their retirement years. The air was thought to be extremely healthy due to its dryness and the promoters emphasized that the site had been chosen by the provincial government for the construction of a Consumptive Sanitorium but had been purchased by the B.C.D.A. before the Provincial Medical Officer could make his offer.[62] Thus, at least for some, Walhachin was regarded as being little more than a retirement home.

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[59]W. A. Carrothers, Emigration From the British Isles, London, P. S. King and Sons Ltd., 1929, p. 207.

[60]The attitude of the remittance man towards work was captured in the statement, "the western scheme of life, a know-nothing worship of hard work and dollars ... is not the life's ideal of the majority of the enlightened and cultivated people of the earth's surface today, nor will it ever be", quoted in Carrothers, op. cit., p. 193.

[61]Interview with Walhachin settler, B. Footner, May 17, 1969.

[62]J. S. Redmayne, Fruit Farming on The Dry Belt of British Columbia, London, The Times Book Club, 1909, p. 38.

The viability of a settlement is related to the settler's level of expectation. Expectations, including acceptable living standards, are relative. What one man accepts, another rejects.

The standard of living expected and sought by the settlers at Walhachin was fundamentally urban in origin and reflected conservatism and elitism. Unlike the majority of British immigrants who emigrated to British Columbia after the Boer War from the working and middle classes, these were from the ranks of British aristocracy. They were members of some of the wealthiest families in Britain including descendants of Cecil Rhodes, Prime Minister Asquith, Lord Nelson, and King George V. Consequently, upon arrival at Walhachin, the settlers expected a relatively high standard of living. The Marquis had his own swimming pool, families dined in the extravagant hotel, Paderewski's piano was purchased for concerts held in the elaborate town hall, and workmen were required to drink at a separate bar. Such conditions indicate the life-style expected by the residents. For Walhachin to provide this type of living and corresponding facilities, something more than apple orchards was required.

Having now reached the point where many factors associated with Walhachin's failure, decline and abandonment have been discussed, one factor remains which acted as a catalyst in the abandonment process -- the First World War.

Effect of World War I

The Walhachin Squadron of the 31st British Columbia Horse left on August 27, 1914 for Salisbury Plain where it remained in training for fourteen months before moving to the Front. The squadron included all the single men in the settlement, with only one exception. Their motives for immediate departure were essentially three. They were linked very closely to England through families and finance, and wished to contribute their share to the war cause. Along with this patriotic inducement was the opportunity to be involved in an actual combat situation. The troopers had been training for twenty-six months in tri-weekly exercises at Walhachin as well as summer field-camps at the Vernon Training Camp. Consequently, they were anxious to put their training to the test. Last, and possibly the most critical, was the fact that the War provided an excuse to leave Walhachin. In 1914 there were forty single men living at Walhachin not including the laborers, and very few single women. A glance at the settlement's population profile indicates this skewed sex proportion which was further emphasized by the fact that the settlers had little contact with neighboring communities. The men had spent five years at Walhachin and had become somewhat disenchanted with the settlement. They were receptive to any opportunity for a change and were provided with an opportunity by the declaration of war in 1914.

The care of the orchards was left to the older and the married men who managed as many as six ten-acre estates. Labor was difficult to obtain during the war years and what work that was done at Walhachin was done primarily by Chinese and local Indian laborers. With a decline in funds from England, a weakening leadership, and a labor shortage, the orchards began to deteriorate. This led to a number of family men volunteering and as more men left, the settlement began to decline through neglect of homes, services, orchards, and the water system. By the end of the War, when most settlers were returning, the fate of Walhachin had become increasingly clear.

The Marquis' plea to the government for aid to revitalize the settlement was refused. The War had not only changed Walhachin but the province as well.

> Never again would the province have the verve and the quality of life of the days of Sir Richard McBride. From this time forth, the relative proportion of British university graduates, remittance men and younger sons of noble families in its population would be diminishing. In the country districts, a few families would try to keep alive the ritual of the weekly tennis and cricket matches, but now there were few who had the leisure or the means to indulge a taste for fox-hunting and polo.[63]

John Oliver's Liberal Party had replaced McBride's pro-British Conservative government and the new Premier

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63 Ormsby, op. cit., p. 402.

had little in common with the Englishmen who were returning to Walhachin.[64] His attitude is suggested by his refusal of the Marquis' offer to give his extensive property at Walhachin to the government to be used as a Soldier's Resettlement Area and chose instead property belonging to the South Okanagan Land Company.[65] The settlers then suspected an anti-British attitude on the part of the government but were also aware that Oliver was likely a shareholder in the South Okanagan Land Company especially since the land was sold for a much greater price than the Company had it valued.

With Walhachin's future in doubt, the ultimate adjustment was attempted: the settlers sold or attempted to sell out. They recognized the futility in continuing since after eight to twelve years of capital and personal investment, few returns had occurred and most of their

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[64] Professor Ormsby brings this out with great clarity by mentioning that Oliver had little formal education and was proud of the fact that he was a plain "dirt farmer" who had "dug ditches by the side of Chinamen"; see p. 398, British Columbia, A History, Toronto, The Macmillan Company of Canada, Ltd., 1958.

[65] S. L. Medland, "Economic Aspects of the Southern Okanagan Lands Project," Transactions of the 7th British Columbia Natural Resources Conference, 1954, p. 50.

This property became the South Okanagan Lands Project which included 4800 acres (similar to Walhachin) and cost $2.5 million to prepare (Ormsby, p. 417). Although the government's decision to reject Walhachin was ultimately sound, considering that so little was known about both sites at the time, the decision was perplexing to those concerned.

holdings had been severely set back by the War. Facilitating this adjustment was the fact that many had received offers for lucrative positions and careers while overseas. Through renewed family and business contacts, opportunities had been offered them providing satisfactory incomes and prestige. Examples of positions which were eventually filled by Walhachin residents were: Plantation Director in Barbados, Secretary of the Royal Agricultural Society, Estate Director in Malaya, Police Chief in Sudan, M. P. in England, Cabinet Minister in British Columbia, and M.D. in Victoria.

The alternatives available to most Walhachin residents not on pension provided a relatively easy 'adjustment out' of the endeavor at which they had failed. For most, their experiences were considered as representing 'lost years' of their lives when their efforts had brought few returns. They saw the First World War and the attitudes held by the government and neighboring communities as the reason for their failure and that of Walhachin. Thus, the essence of Walhachin's abandonment: even in retrospect the settlers were unable to determine the most fundamental problem and cause for failure -- the people themselves!

Chapter 5

Conclusion

Through examining the hypothesis, regarding Walhachin's viability as an agricultural settlement, the following conclusions may be made:

1) A settlement, at that particular site, based on an agricultural economy, could likely never have endured as a self-supporting entity, regardless of the level of expectation held by the settlers.

2) Walhachin's failure and subsequent abandonment cannot be fully explained by the single factor analysis which would have suggested World War I as the sole cause of the settlement's fate.

3) A settler's behavioral pattern (emphasizing his mental set) is crucial in evaluating his potential to achieve success at agricultural settlement.

These conclusions were determined by examining, in depth, the processes of Walhachin's settlement and identifying and analyzing the most critical factors associated with the settlement's decline and abandonment. Although the identification of these factors was a relatively easy task, any attempt to establish a meaningful ranking of the factors proved impracticable as a result of the interrelationships and interdependencies among them.

Figure 7

A POSTERIORI PARADIGM: VARIABLES INFLUENCING SETTLEMENT FAILURE

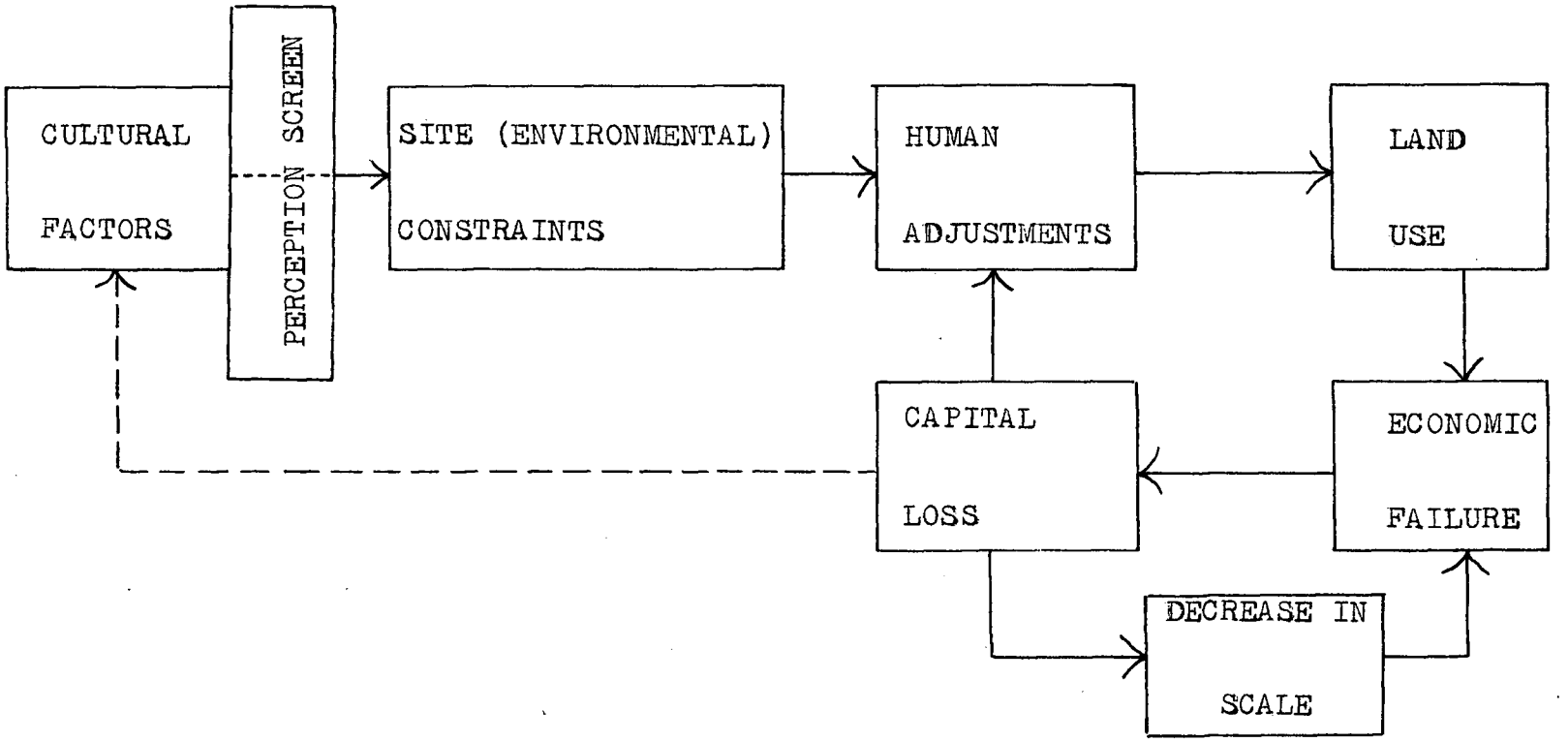

Figure 7 represents a posteriori paradigm which, through an inductive approach, suggests the fundamental factors inherent in the failure of any agricultural settlement.

Most agricultural settlements that have failed may be effectively analyzed by considering their inherent factors which would be included within the general categories presented in Figure 7. Out of the analysis should emerge an identification of more significant factors responsible for the settlement's deterioration. Perhaps some rank order would be recognized or alternatively, an ordering of factors directly and indirectly related to the failure process.

Walhachin may be recognized as paradigmatic of agricultural settlement failure. Figure 8, indicating variables which influenced Walhachin's failure process, is a specific example of a settlement which failed. It is particularly useful for its transferability to other settlements since the variables outlined in Figure 8 will be found in virtually any settlement to a greater or lesser degree[1]. By viewing how other settlements which

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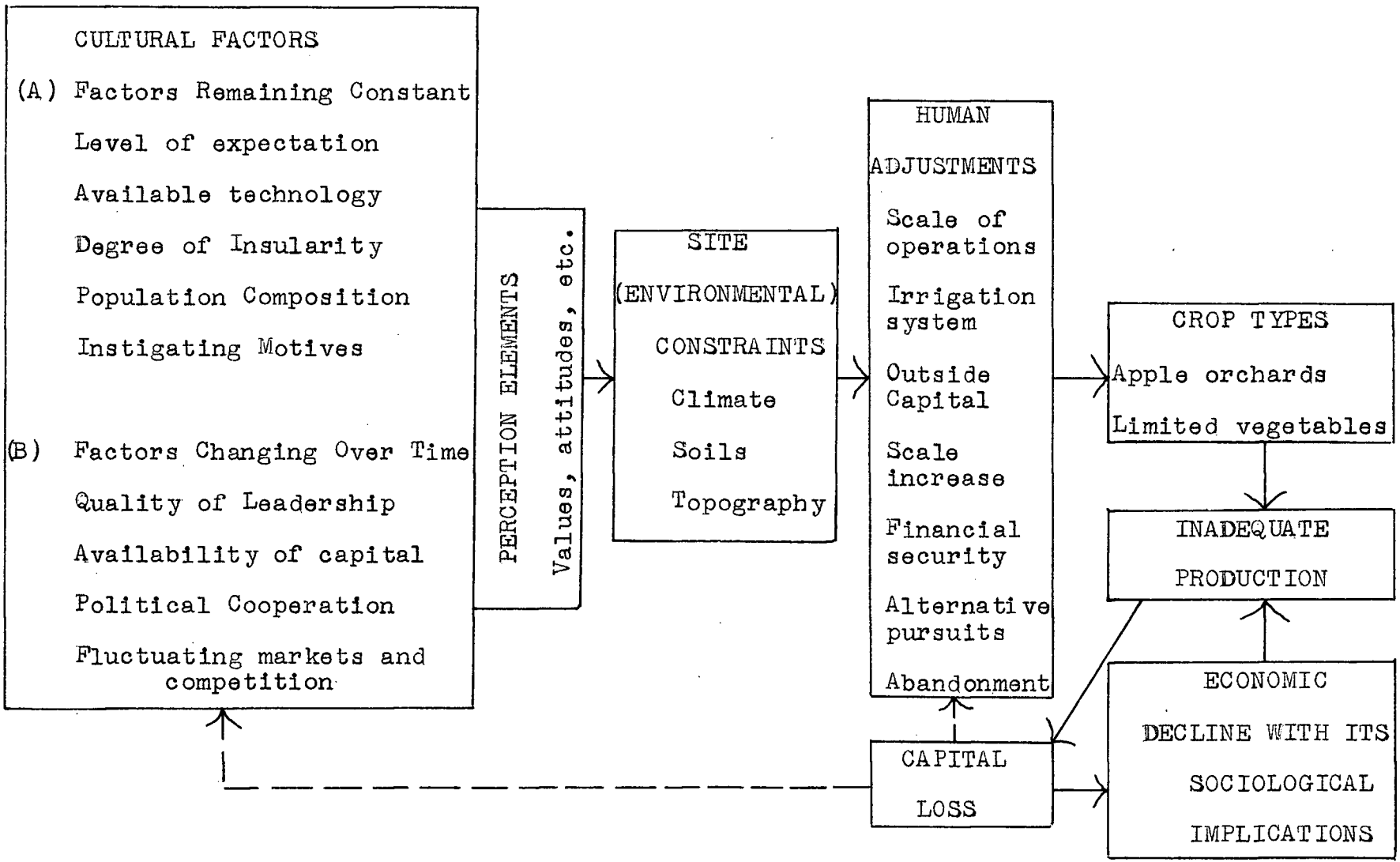
[1] The famous Barr Colony at Lloydminster and Cannington Manor (very similar to Walhachin) in S. E. Saskatchewan were both English settlements and eventually failed as a result of the very variables presented in Figure 8. Each are described by W. A. Carrothers in Emigration From the British Isles, London, P. S. King and Son Ltd., 1929, pp. 239-247.

Figure 8

VARIABLES INFLUENCING WALHACHIN'S FAILURE



have experienced failure were similar or different from Walhachin, explanation of their abandonment may be facilitated. How many of Walhachin's failure factors, for example, were also influential within other settlements? What settlement processes were similar?

The cultural factors in Figure 8 have been divided into two groups: the A-set which remained relatively consistent over time and the B-set which experienced alterations. Those in section A were all introduced into Walhachin in a negative state and remained so until the end. For example, the educational background of all the settlers was inadequate. They possessed no skills applicable to the endeavor with which they had become involved and over the years as a group they did little to improve themselves. In section B, the factors were originally of a positive nature but subsequently were transformed into factors detrimental to the success of the settlement. Leadership, which was so critical in such a settlement dependent upon irrigation, was largely responsible for the development that occurred before the "rejection mechanism" set in, and the production during Walhachin's formative years. However, as time progressed and leadership changed, the quality of authority and direction declined to such an extent that many of the settlement functions ceased to operate effectively.

In any discussion of how factors had transformed, or were transformed by, the landscape and settlement process, it is useful to view them as being influenced by a perception screen. Specifically the values and attitudes which serve as a filter through which the individual or group views the landscape and then proceeds to act upon it. Any study failing to recognize the influencing nature of the settlers' perception would indeed, be less than complete.

The site resulted in a poor mix of conditions. Neither the climate nor the soils were conducive to sustaining the community agriculturally. The crops most suitable to the existing conditions were similar to the natural vegetation climax, namely they were feed crops for livestock. But this type of agriculture could, at best, support a limited number of people. On the other hand, the topography was suitable for horticulture. The valley terraces provided ideal orchard locations had the climate been suitable. However, had they been 120-200 feet lower in elevation, water may have been supplied at a much lower cost which could have resulted in a higher net income for the settlers.

But it is the category of human adjustments that is most critical in an examination of frontier settlement. Adjustments are functions of the problems. The problems which confront the settler are of varying magnitude which require a corresponding degree of adjustment. For example, the problem of an enterprise which is too small-scale was easily overcome by an adjustment in the scale of operation. The climate, however, presented a

permanent drought condition which required a major adjustment in operations -- an elaborate and costly irrigation system -- to meet the demand created by the problem. Once the fate of Walhachin became evident, the obstacle created was nearly insurmountable and required the ultimate adjustment -- abandonment. Had the human and physical obstacles been less forbidding, the attempted adjustments at Walhachin might have been adequate to cope with them. However, considering the circumstances, the settlers were left with little choice but to leave their situation.

Repeatedly, inadequate production and overwhelming crop failure produced capital loss and subsequent decline in operations. The settlement entered a pattern of perpetual failure. Such a pattern will continue for varying periods of time depending on the individual settlement. In Walhachin's case, the settlers were not fully dependent on the settlement's production for their livelihood so it continued for a longer period than would normally be expected. Twelve years of continual failure were needed to make some recognize the futility of continuing. Indeed, one now would tend to agree with the statement made by A. P. King when he summarized his inquiry into group colonization schemes by saying, "yet of all emigrants...the Englishman is the last who should settle in groups."[2]

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[2] A. P. King, Horizons Abroad, London, A. A. Henry and Sons, Ltd., 1922, p. 211.

Although in many ways Walhachin may be considered *sui generis*, many of its characteristics can be found in other frontier settlements, not necessarily of a similar composition. Its characteristics are also found in individual's attempts at settlement and consequently serves as a useful case-study of frontier abandonment. With a good deal of British Columbia's sequent occupance relating to an advancing and receding frontier line, the failure factor analysis is useful for the explanation of settlement patterns, both past and present.

Appendix No. 1

Research Techniques

Information for the Walhachin study was derived through archival and field research and personal interviews, over a period of five months during the spring and summer of 1969. Archival research involved the study of journalistic accounts of Walhachin, Lands Service reports, Water Rights reports, promotional literature, general government reports, company files, and personal files. Although the two latter were often the most useful for gathering certain types of data, they also proved to be the greatest source of bias through selective deposit and selective retention. Personal records were occasionally selected for my scrutiny while many had been selectively destroyed. The reason for this action becomes evident in the study.

Interviews included the use of both open and closed questionnaire techniques depending upon the information desired. Factual data was usually elicited with a closed questionnaire; whereas the open-ended questionnaire and focused interview provided greater flexibility in obtaining subjective information and for probing the sentiments that underlay certain opinions and attitudes.

This particular study required interviews rather than mailed questionnaires as the number of reliable informants was extremely limited. Due to the relative lack

of written material, questionnaire credibility was important and during the interviews the interviewer had numerous opportunities to appraise the validity of the informant's responses. The types of informants could be classified into seven categories:

Numbers interviewed	
13	original English settlers at Walhachin
17	descendents of these settlers
7	those directly involved with the settlement (teachers, laborers, station agents)
7	settlers from adjacent lands and communities
6	people involved indirectly (agriculturists, salesmen, police)
3	people involved with the management of the scheme
11	others (people with an interest in and some knowledge of the area)

Although the numbers of interviews refer to personal interviews, every effort was made to complement this with informal group discussions made up usually of two or three informants from various categories. These often proved to be the most useful in terms of data collection as the individuals tended to jog one another's memories (very useful considering the mean age of the informants was 72 years) and would discuss questions freely with one another that had met reluctance in the personal

interview. This aspect of the research, as well as the archival, included work in both British Columbia and Great Britain.

Field research at Walhachin focused on the interpretation of air photographs using photos flown as early as July, 1928. As no detailed mapping had been done previously, the air photos, used in conjunction with archival, interview, and field information provided the basis for the maps used to illustrate this study. Unless otherwise indicated, the maps, figures, and diagrams used throughout this thesis are the result of the writer's research.

APPENDIX No. 2

CLASSIFICATION OF SOIL AT WALHACHIN

Parent Material	Orthic Regosols	Mull Regosols	Rego Brown	Orthic Brown
Medium to moderately fine textured glacial till deposits			Cheetsum (CT)	
Gravelly river and stream deposits	Thompson (TN)	Tsotin (TS)	Anglesey (AY)	Walhachin (WA)
Coarse textured Eolian deposits		Savona (SV)	Joeross (JS)	
Coarse to moderately coarse textured shallow (14-24") Eolian deposits overlying river gravels or fan deposits			Lopez (LZ)	
Coarse to moderately fine textured alluvial - colluvial fan deposits		Barnes (BS)	Taweel (TL)	Semlin (SE) Clemes (CM)

Description of Soil Subgroups[1]

1) Orthic Regosolic Soils

This subgroup includes mineral soils with little or no profile development. They either lack observable horizons or have very weakly developed AL horizons. These

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[1] These soil descriptions are taken from the Soil Survey of the Ashcroft-Savona Area, Thompson River Valley, British Columbia, by P. N. Sprout and C. C. Kelley.

soils occur on recently deposited material along the Thompson River and are subject to flooding most years; drainage is variable and dependent upon river levels. Vegetation cover varies from occasional Ponderosa Pine to moderately heavy deciduous growth.

2) Mull Regosolic Soils

The Mull Regosol subgroup consists of mineral soils whose profile development is restricted to a distinct AL horizon. The AL horizon is not of sufficient thickness, nor does it have the organic matter content or color to meet the requirements of a Rego-Chernozem. They occur on recently deposited materials, alluvial terraces and eolian sediments. Little leaching has occurred and free lime is at or near the surface; the reactions range from mildly to strongly alkaline. They vary from rapidly to moderately well drained, and they developed chiefly under bunchgrasses.

3) Rego-brown soils

These soils consist of mineral soils which develop in a dry climate under natural bunchgrasses. The profile development is restricted to the formation of a brownish AL horizon containing an accumulation of organic matter. A strongly calcareous Ck horizon is generally present beneath the AL horizon at from six to fourteen inches from the surface. Salts may or may not be present in the subsoil. Leaching is slight and the surface reactions

range from slightly to moderately alkaline. Cultivated soils are calcareous near the surface and are from rapidly to moderately well drained.

4) Ortho Brown Soils

This subgroup consists of mineral soils which developed in a dry climate under natural bunchgrasses. The profile is characterized by a brownish AL horizon underlaid by a structured Bm horizon, which is slightly brighter in color and free of carbonates. Slightly more leaching occurs than in the Rego-Brown soils with surface reactions ranging from neutral to slightly alkaline. These soils developed on a variety of parent materials, and range from rapidly to well drained.

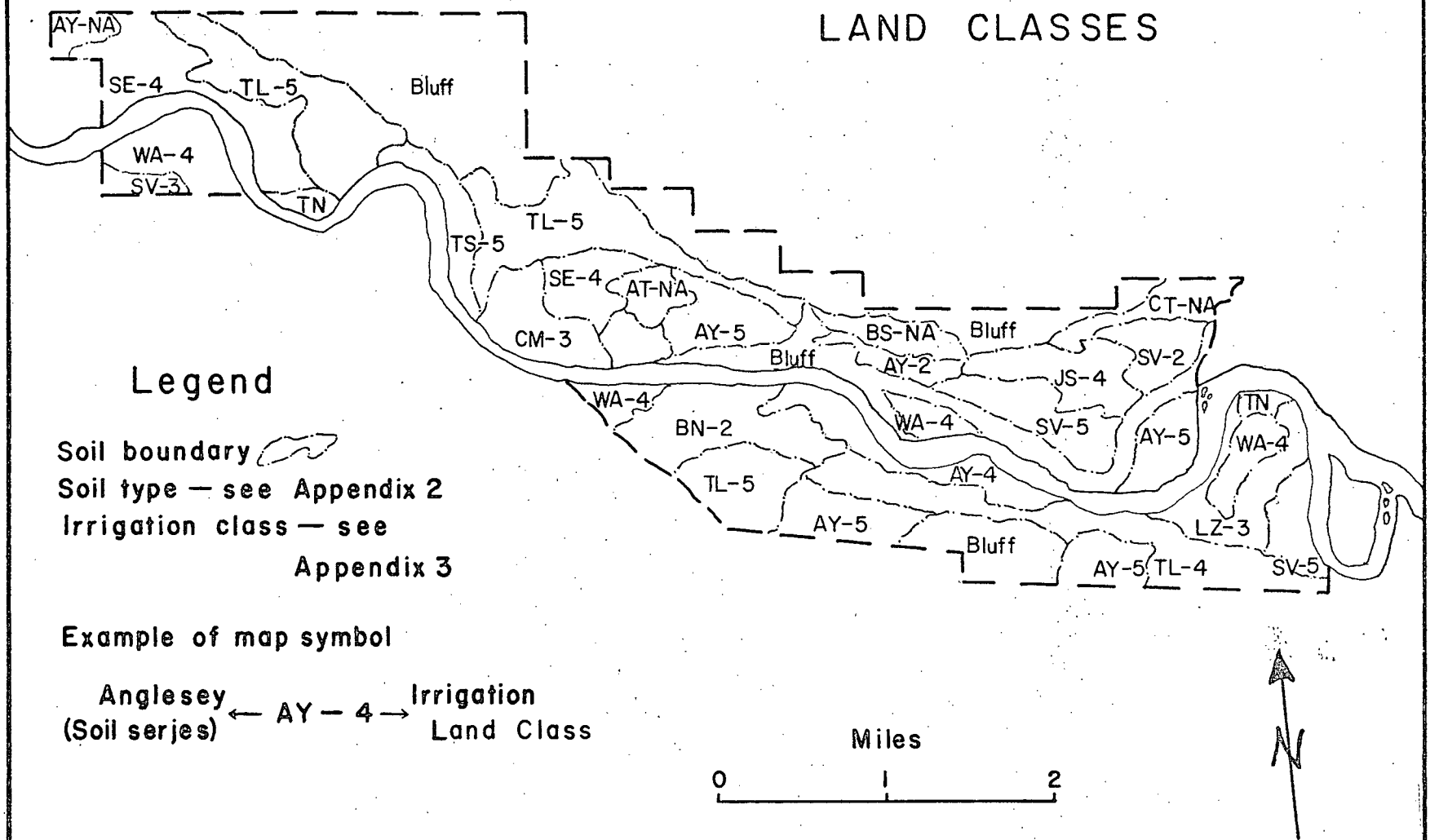
5) Miscellaneous Land Types

Bluff areas of steeply sloping land with gradients that generally exceed 50%. They include a variety of materials, including sandy and gravelly outwash, glacio-lacustrine silts, glacial till and bedrock. The topography is so steep that the bluffs are being constantly eroded. There is little or no profile development and generally a lack of vegetation.

Outcroppings of bedrock are frequent on the valley sides and form low hills in part of the valley.

Map to supplement
APPENDIX 2 and 3

SOILS AND IRRIGATION LAND CLASSES



APPENDIX No. 3

Classification According To Suitability For Irrigation[1]

Class I Soils

This class includes deep, uniform, well-drained soils of medium to moderately fine textures, such as fine sandy loam, silt loam, and silty clay loam. The soils have desirable structure and other profile features with little or no deduction for alkali, salinity, stoniness of adverse topography. Soils of this class are the most suitable for irrigation and are capable of producing most crops which can be grown under the prevailing climatic conditions.

Class II Soils

Included in this class are well-drained clays and sandy loams as well as soils of medium to moderately fine textures with moderate deductions for stoniness, adverse topography, impeded drainage, etc. Most Class II soils have crop adaptations similar to those of Class I, but are given a lower classification because of less uniformity.

Class III Soils

Class III, which includes soils with similar textures to those in Class I and II, has moderate to high deductions

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[1] The method of classification according to suitability for irrigation is outlined in B. C. Department of Agriculture, Proceedings of the Reclamation Committee, Brief No. 22, Kelowna, B. C., 1953.

for stoniness, adverse topography, impeded drainage, etc. Class III also includes moderately well-drained heavy clays and comparatively stone-free gravelly river terrace and channel deposits. These soils are classed by a more limited range of crop adaptation or less compatibility to irrigation practices.

Class IV Soils

This class includes soils having limited use as a result of thin solums, heavy concentrations of gravels or stones, adverse topography, salinity, poor drainage, etc. The range of crops is definitely limited, and good management is required for satisfactory results.

Class V Soils

This class includes soils of poor to doubtful suitability for irrigation. Such soils are characterized by coarse and shallow solums, or very rough topography, high salt content, extreme stoniness, etc. They are of very limited use, often restricted to growing only one crop, or to crops which form a permanent cover.

Non Irrigable

Soils not recommended for irrigation under present conditions.

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